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Volume 5, Part C*

*Earth-Mars Trajectories, 1973*

*R. J. Richard  
R. Y. Roth*

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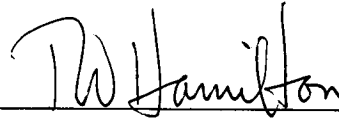
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A handwritten signature in cursive script, reading "T. W. Hamilton", written over a horizontal line.

T. W. Hamilton, Manager  
Systems Analysis Section

**JET PROPULSION LABORATORY  
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June 15, 1965



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## FOREWORD

This volume is one of a set of seven giving key characteristics of Earth-to-Mars ballistic trajectories during the period 1964-1977, which period is divided into seven launch intervals (one interval per volume), spaced about 25 months apart. Within each interval, trajectories are calculated for each launch date and further subdivided into flight time ranges graduated in 2-day increments. Launch dates and approximate flight times for this volume are as follows (only trajectories requiring *vis viva* geocentric energies of less than 40 km/sec are included).

Launch date (1973)	Flight time range (days)
May 7-September 20	90-320

The applicability of these books may be extended by noting the 15-year cyclic recurrence of Earth-Mars trajectories. Thus trajectories in 1979 approximate 1964 trajectories; 1982 trajectories approximate 1967 trajectories, etc. Simply by updating the trajectories by 15 years, the results may be reapplied.

It is intended that these books provide trajectory and guidance analysts with data, in volume, so that preliminary design studies, investigations of the properties of ballistic interplanetary trajectories, and interplanetary guidance and orbit determination analyses may be performed. While not exact, these trajectories are sufficiently accurate to be quite useful for the above purposes.

In generating such a large amount of data, it is impossible to check the correctness of each number. Should the reader detect any errors, the authors would appreciate being advised.

Companion volumes (Ref. 1) give the characteristics of Earth-Venus trajectories during the period 1964-1970.

This volume would be incomplete without an expression of gratitude to V. C. Clarke, Jr., W. E. Bollman, T. W. Hamilton, and C. G. Pfeiffer, who laid the foundation upon which this document is based.

## I. INTRODUCTION

This report presents the results of extensive machine computations of three-dimensional ballistic interplanetary trajectories. The analytic model used to represent these trajectories is based upon two-body, inverse-square, force field mechanics. A brief explanation of the model is presented in Section II.

Basically, the trajectories are calculated in two distinct parts: (1) the heliocentric transfer ellipse and (2) the launch-planet-centered escape trajectories. Following these trajectories, differential corrections or error coefficients and guidance and tracking parameters are given.

### A. Heliocentric Conic Computation

The heliocentric trajectory is obtained by specifying the launch date and flight time only. Given these, the positions of the launch planet on the launch date and the target planet on the arrival date may be obtained by interrogating the ephemerides. By assuming the planets to be massless, a unique heliocentric trajectory may then be computed which passes through the centers of the launch and target planets. Though this assumption may at first seem gross, experience has proved it to be perfectly reasonable for this purpose. After the solution has been obtained by an iterative procedure, the orbital elements, heliocentric position, and velocity vectors at launch and arrival are computed. Other heliocentric quantities of engineering interest are also computed.

### B. Planetocentric Conic Computation

After the heliocentric orbit is obtained, the launch and arrival hyperbolic-excess velocity vectors are computed by subtracting the velocity vectors of the launch and target planets from the heliocentric launch and arrival velocity vectors of the probe. The launch hyperbolic-excess vector is, in fact, the most important result of these computations because it yields the energy and direction of fire required to achieve interplanetary transfer.

Further computations are done to exhibit properties of the near-Earth portion of the trajectories. Given the launch hyperbolic-excess vector, a launch site (Cape Kennedy), a launch azimuth, and certain properties of a typical interplanetary boost vehicle, and assuming a 100-nm parking orbit, quantities such as launch time, injection position and velocity vectors, parking orbit coast time, and injection time are computed. In essence, then, approximate trajectories are obtained from the

launch pad to the target. The terminal portions of the trajectories are assumed to impact vertically on the target planet.

### C. Differential Corrections

To augment the trajectory parameters, differential corrections or error coefficients relating variations in the launch hyperbolic-excess velocity vector to variations in target miss and flight time are computed. Actually, the variables at launch in these coefficients are the square of the hyperbolic-excess speed, or *vis viva* energy  $C_3$ , and the declination and right ascension of a unit vector  $S$ , collinear with the outgoing asymptote of the escape hyperbola. The target variables are the components of the impact parameter  $B$ , defined below, and the flight time. These coefficients are obtained by a numerical differencing technique developed by William Kizner of JPL.

Based upon these error coefficients, guidance and tracking parameters are calculated as described below.

### D. Mid-Course Guidance

Interplanetary guidance is currently being accomplished by determining the orbit of the probe from radio tracking data and then applying one or more impulsive velocity corrections to null the predicted target error. The guidance task closely parallels the trajectory problem, for it is convenient to define the following guidance "phases":

1. Planetocentric phase, in which, after the launch vehicle has placed the probe on its escape hyperbola, the orbital elements of this trajectory are determined and the hyperbolic-excess velocity is corrected to the desired value.
2. Heliocentric phase, in which additional velocity corrections may be made to correct any error in orbit determination and/or maneuver execution in phase 1.
3. Approach phase, in which the probe is in the sphere of influence of the planet and the final vernier corrections may be made to trim the results of phase 2.

The preflight analysis of phase-1 guidance is primarily concerned with the statistical problem of determining how much propellant to carry aboard the spacecraft in

order to correct a "three-sigma" injection guidance error. These studies are well-documented elsewhere (Ref. 2-4) and will not be discussed here. Suffice it to say that correcting the hyperbolic-excess velocity is a reasonably good approximation to nulling the miss components at the planet. Such an analysis need only be concerned with the planetocentric phase of flight.

The analysis of the heliocentric phase is more complicated, since maneuvers there depend upon errors in applying the first midcourse maneuver (phase 1). In order to understand the effect of phase 1 errors, or to specify a tolerance on them, it is convenient to ask how a unit error in hyperbolic-excess velocity maps to miss at the target. This unit velocity error can be thought of as due to uncertainties in phase-1 maneuver execution and orbit determination. Conceptually, this analysis can be accomplished by letting a unit velocity error trace out a sphere at the tip of the hyperbolic-excess velocity vector and observing the semimajor and semiminor axes of the miss ellipse at the target (only two miss components are normally of interest). Mathematically, this is done by simply forming a matrix of the differential corrections, multiplying this matrix by its own transpose, diagonalizing the resulting symmetric matrix, and observing that the two diagonal terms are the desired semimajor and semiminor axes of the unit error ellipse.<sup>1</sup> It is easy to show that if the coordinate system chosen to describe the target error is collinear with these axes, the rows of the resulting differential correction matrix (which are gradient vectors) are orthogonal, and their norms are the magnitudes of the error-ellipse axes.

The approach guidance phase is not conveniently treated with this kind of analysis, and is not discussed further.

### E. Orbit Determination

A spacecraft boosted toward Mars or Venus by the current generation of launch vehicles requires the accuracy obtainable using Earth-based radio guidance in order to accomplish most planet-oriented experiments. The steps in radio guidance are:

1. Track the transponder signal from the spacecraft from several stations located at a spread of latitudes to determine the orbit of the spacecraft.

<sup>1</sup>It should be apparent to readers familiar with statistical concepts that this is equivalent to mapping a three-dimensional gaussian distribution of velocity errors, with unit standard deviation along each axis, to a two-dimensional gaussian distribution of position errors at the target.

2. Calculate the velocity changes required to alter the orbit to pass through the desired region at the target. The maneuver is then applied with a small rocket motor; the pointing direction and burning time (of the velocity increment) are calculated to perfectly correct the orbit if both the estimate of the orbit and the application of the maneuver are without error.
3. Track the spacecraft after the first maneuver for a sufficient interval to form a new estimate of the perturbed orbit.

This process of tracking and maneuvering may be repeated several times to achieve high accuracies at the target. There is, however, a limit to the process imposed by our uncertainties in the actual location of the target planet as well as the unpredictable forces acting on the spacecraft.

For extremely high accuracy at the target planet, on-board measurements must be used in conjunction with the Earth-based tracking in order to further reduce the above-mentioned uncertainties. It is not the function of this report to discuss on-board measurement systems but rather to describe the capabilities of current Earth-based radio guidance techniques when applied to interplanetary trajectories.

An adequate description of the accuracy to which orbits may be determined and maneuvers executed for the case of several corrective maneuvers is beyond the scope of this report. The results presented here may be strictly interpreted as corresponding to the accuracy capabilities for a single mid-course maneuver occurring anywhere between 1 and 14 days after injection. The relative contribution to the target uncertainty caused by orbit determination errors and mid-course execution errors depends directly upon the size of the correction required on a particular flight. For this reason, then, the two error sources are considered separately. While our results do correspond to the single maneuver case, they are very valuable in providing a general description of the way in which these errors vary over the selected set of trajectories. Such utilization of the results is discussed later herein.

### F. Accuracy of Computations

Extensive accuracy studies were performed to verify the adequacy of these trajectories for preliminary design use. Both Mars and Venus trajectories were computed on the JPL precision-integrating trajectory program using

initial conditions obtained from the approximate trajectories contained herein. Of 56 Mars cases run, 29 missed the target by less than 500,000 km; 16 missed by between 500,000 and 1,000,000 km; and 5 missed by between 1,000,000 and 1,500,000 km. The worst case missed by 3,500,000 km. For the flight time errors, 16 varied between 1 and 2 days; 14 varied between 2 and 3 days; and 9 were greater than 3 days. The worst case was 7.2 days. No systematic properties of these errors were noted except that they appear to get worse for the higher-energy trajectories.

For Venus, the accuracy was considerably better, averaging 322,000-km miss error and 0.67-day flight time errors. Based on these comparisons, the model used to generate the trajectories contained herein is considered to be adequate and the results suitable for preliminary mission design studies. These results are very useful for initializing a precision trajectory search program.

When used for the stated purposes, these trajectories provide an excellent source of data obtained at considerably less time and expense than precision cases.

## II. ANALYTICAL MODEL FOR INTERPLANETARY TRAJECTORIES

The analytical model consists of three distinct phases of two-body motion: (1) an escape hyperbola near the launch planet, (2) elliptical<sup>2</sup> motion under the attraction of the Sun, and (3) terminal hyperbolic motion near the target planet.

### A. Heliocentric Motion

Solution of the heliocentric elliptic motion is obtained first under the following assumptions:

1. The launch and target planets move in orbits about the Sun as given in the national ephemerides. Their velocity components are obtained by using two-body conic formulas, mean orbital elements, and their tabular positions as listed in the ephemerides.
2. The launch and target planets are massless. Thus the only force acting on the probe is that of the Sun.
3. The position of the probe at launch into the heliocentric orbit is the center of the massless launch planet. Its position at arrival on the heliocentric orbit is the center of the massless target planet.

Thus for solution to the heliocentric phase of motion, the attractions of the launch and target planets are temporarily disregarded. The primary result to be obtained from the solution of the heliocentric transfer problem is the hyperbolic-excess velocity vector relative to the launch planet.

### 1. Determination of Planar Orientation

Since the launch and arrival positions of the probe are assumed to be the centers of the launch and target planets, they can immediately be determined, given the launch and arrival<sup>3</sup> times, by consulting the ephemeris. Further, the orientation of the heliocentric transfer plane can immediately be found. Let  $R_L$  be the Sun-launch planet position vector at launch time  $T_L$ , and let  $R_p$  be the Sun-target planet position vector at arrival time  $T_p$  (Fig. 1). Then, planar orientation is found from the unit normal  $W$  to the plane as follows:

$$W = \frac{R_L \times R_p}{R_L R_p \sin \Psi} \quad (1)$$

<sup>2</sup>Hyperbolic heliocentric motion is not considered herein.

<sup>3</sup>Or, for convenience, the launch date and flight time can be specified.

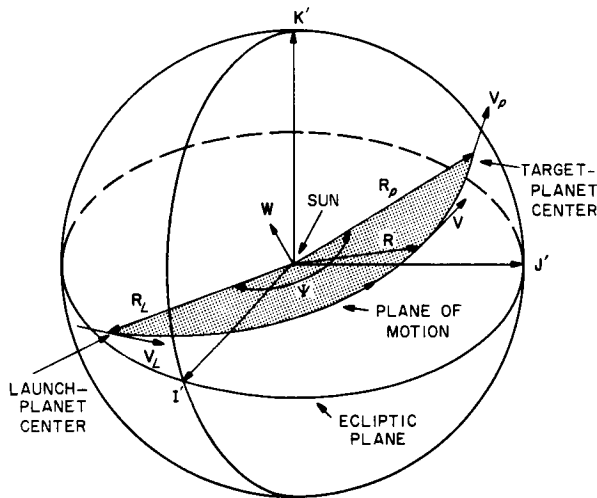


Fig. 1. Heliocentric transfer geometry

where the angle  $\psi$  is defined below. The inclination<sup>4</sup>  $i$  to the ecliptic plane can be found by

$$\cos i = \mathbf{W} \cdot \mathbf{K}' \quad (2)$$

where  $\mathbf{K}'$  is a unit vector pointing in the direction of the ecliptic north pole.

2. In-Plane Relations

The heliocentric central angle  $\psi$  (Fig. 1) is also readily determined by utilizing the positions of the launch and target planets. This angle may be obtained from

$$\cos \psi = \frac{\mathbf{R}_L \cdot \mathbf{R}_p}{|\mathbf{R}_L| |\mathbf{R}_p|} \quad (3)$$

$$\sin \psi = \text{sgn} [(\mathbf{R}_L \times \mathbf{R}_p) \cdot \mathbf{K}'] (1 - \cos^2 \psi)^{1/2} \quad (4)$$

The velocity vector  $\mathbf{V}$  of the spacecraft anywhere along its path may be obtained from

$$\mathbf{V} = \frac{V}{R} [(\mathbf{W} \times \mathbf{R}) \cos \Gamma + \mathbf{R} \sin \Gamma] \quad (5)$$

Here,  $\mathbf{R}$  is the heliocentric position vector,  $R = |\mathbf{R}|$ , and  $V$  is the heliocentric speed obtained from

$$V = \sqrt{(GM_s) \left( \frac{2}{R} - \frac{1}{a} \right)} \quad (6)$$

<sup>4</sup>In this report, we are interested only in transfers which have the same rotational motion about the Sun as the planets; thus,  $0 \leq i \leq \pi/2$ .

and the path angle  $\Gamma$  is found from

$$\sin \Gamma = \left[ \sqrt{\frac{R}{(1 - e^2)(2a - R)}} \right] e \sin v \quad (7)$$

In Eq. (6) and (7),  $GM_s$  is the universal gravitational constant times the mass of the Sun ( $= 2.959122083 \times 10^{-4}$  au<sup>3</sup>/day<sup>2</sup>),  $a$  and  $e$  are the semimajor axis and eccentricity of the transfer ellipse, respectively, and  $v$  is the true anomaly of the probe given by

$$\cos v = \frac{a(1 - e^2) - R}{eR} \quad (8)$$

3. Lambert's Theorem

Now there are two unknowns in Eq. (5)–(8) which prevent their immediate evaluation. These two unknowns are the semimajor axis  $a$  and the eccentricity  $e$ . The determination of these quantities is the main problem. Battin (Ref. 5) has shown that the eccentricity is actually a function of the semimajor axis. Thus it is first necessary to determine  $a$ . The semimajor axis is related to the time of flight  $T_F$  by Lambert's Theorem, which states: *The transfer time between any two points on an ellipse is a function of the sum of the distances of each point from the focus, the distance between the points, and the semimajor axis of the ellipse.* Functionally, the theorem is stated as

$$T_F = T_F(R_L + R_p, C, a) \quad (9)$$

where the distance  $C$  between the launch planet at launch time and the target planet at arrival time is shown in Fig. 2 and is obtained from

$$C = |\mathbf{R}_p - \mathbf{R}_L| \quad (10)$$

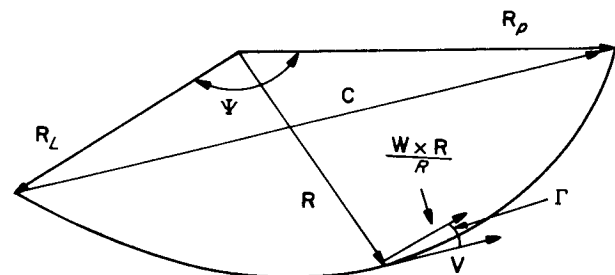


Fig. 2. In-plane transfer geometry

Since the time of flight  $T_F$  and the launch and arrival positions  $R_L$  and  $R_p$  are knowns, only the semimajor axis



remains to be found by iterative solution of Eq. (9). After the semimajor axis  $a$  is obtained, the heliocentric velocities of the probe at launch and arrival time  $\mathbf{V}_L$  and  $\mathbf{V}_p$  may be evaluated from Eq. (5) under the conditions  $R = R_L$  and  $R = R_p$ . The path angles  $\Gamma_L$ ,  $\Gamma_p$  and true anomalies<sup>5</sup>  $v_L$ ,  $v_p$  at launch and arrival times may also be evaluated from Eq. (8) and (7) under the same conditions.

Finally, the desired end result, the hyperbolic-excess velocity  $\mathbf{V}_{hL}$  relative to the launch planet may be found (Fig. 3) by

$$\mathbf{V}_{hL} = \mathbf{V}_L - \mathbf{V}_1 \quad (11)$$

where  $\mathbf{V}_1$  is the velocity of the launch planet at launch time.

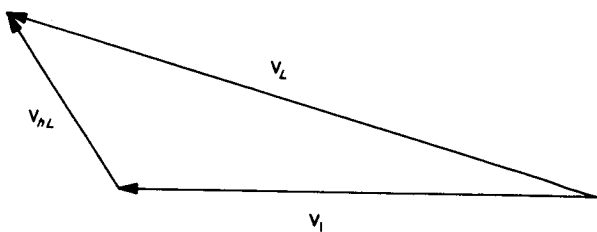


Fig. 3. Determination of the hyperbolic-excess velocity vector  $\mathbf{V}_{hL}$

### B. Launch Planet Escape Hyperbola

The key result from the solution of heliocentric transfer is the hyperbolic-excess velocity vector  $\mathbf{V}_{hL}$  at launch. The reason for the importance of this vector is that it tells the direction in which the probe must be traveling relative to the launch planet when just leaving its gravitational influence. There are an infinite number of escape trajectories (all hyperbolas) which can have the same hyperbolic-excess velocity vector. However, only a portion of these are practical for use when related to existing launch sites and boost vehicle constraints. For example, it would be ridiculously costly in payload—and impractical—to shoot a vehicle straight up. Criteria for selection of a family of feasible escape trajectories are given below.

#### 1. Assumptions

The solution of the escape phase of motion is obtained under the following assumptions: (1) The probe is acted on only by the gravitational force of the launch planet, and (2) the oblateness effects of the launch planet are neglected.

The direction of the asymptote of the escape hyperbola is found by normalizing the hyperbolic-excess vector  $\mathbf{V}_{hL}$ . The injection energy<sup>6</sup>  $C_3$  of the escape hyperbola is found by squaring the hyperbolic-excess speed, or

$$C_3 = V_{hL}^2 \quad (12)$$

Thus, in contrast to the heliocentric problem, the launch planet is now “massy,” while the influence of the Sun is neglected. However, the hyperbolic-excess velocity vectors found by solving the heliocentric problem are used as a starting point to solve the escape problem.

#### 2. Size and Shape of the Escape Hyperbola

As previously stated, only some of the infinite number of escape trajectories are practical. Two of the practical aspects of a set of trajectories are the sizes and shapes of the hyperbolas.

Size is basically determined by the energy  $C_3$ , which in turn is a function of boost vehicle capability. For boost vehicles in use (or shortly to be available) at this writing, values of energy less than or equal to  $25 \text{ km}^2/\text{sec}^2$  are considered reasonable. The larger the value of energy that the booster is required to deliver, the smaller the payload and launch period over which the vehicle may be fired.

The shape of the hyperbola is determined by its eccentricity, which is a function of both the energy and perifocal distance according to

$$e = 1 + \frac{R_p C_3}{GM} \quad (13)$$

where  $R_p$  is the perifocal distance and  $GM$  is the universal gravitational constant times the mass of the launch planet. From Eq. (13) it can be seen that for a fixed perifocal distance the eccentricity increases linearly with the energy. The value of perifocal distance is not arbitrary, but depends strongly on the boost vehicle trajectory. It has been shown (Ref. 6) that in the great majority of cases it is necessary and desirable to use a circular parking orbit as part of the preinjection phase of the escape trajectory. It is further an interesting fact that the altitude of the parking orbit determines the perifocal distance. If  $h$  is the parking orbit altitude and  $R_0$  is the launch planet's radius, then, to an extremely close degree of approximation,

$$R_p = R_0 + h \quad (14)$$

<sup>5</sup>The details of quadrant choice for these angles are found in Ref. 5.

<sup>6</sup> $C_3$  is actually twice the total energy per unit mass, i.e., the *vis viva* integral.

or the perifocal distance is equal to the launch-planet-centered radius of the parking orbit. In Ref. 6 it also has been shown that the lowest possible parking orbit (80-100 nm) allows greatest payload capability. Thus, using 100 nm for the parking orbit altitude, a practical value of perifocal distance is 6560 km. The perifocal distance will vary only slightly about this value for other parking orbit altitudes, or even for direct-ascent-type preinjection trajectories. Therefore, *both* the size and shape are essentially determined by the energy alone, which is found from Eq. (12).

Given the size and shape of the escape hyperbola, its planar orientation must be determined, and this can be done by considering two vectors: (1) the direction of the hyperbolic-excess vector, denoted by a unit vector  $S$ , and (2) a unit vector  $R_L^i$  directed from the center of the launch planet to the launch site. The vehicle's flight plane will essentially be determined by these two vectors, as shown in Fig. 4. A unit normal  $W$  to the launch-planet-centered flight plane is determined by

$$W = \frac{R_L^i \times S}{|R_L^i \times S|} \tag{15}$$

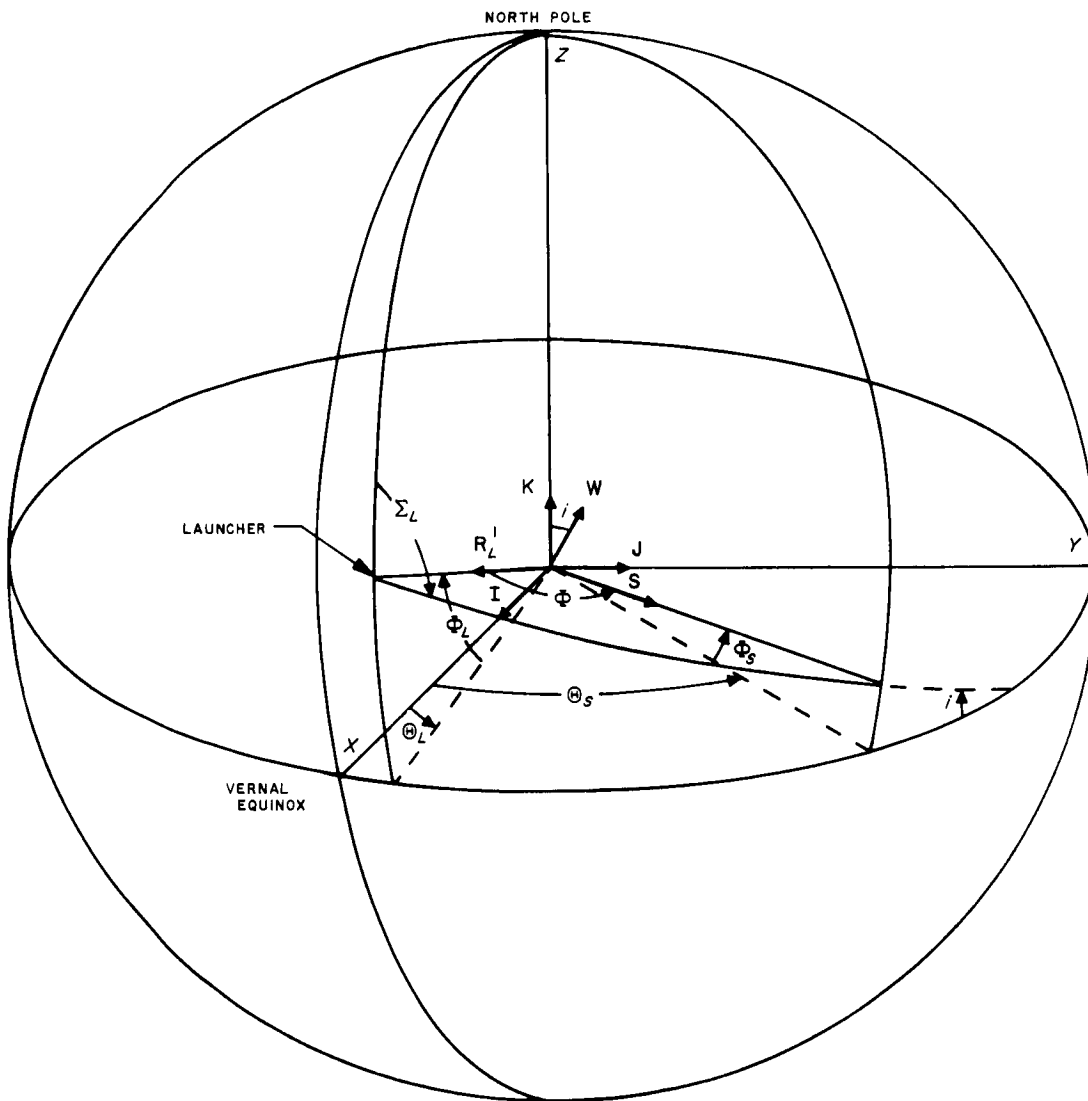


Fig. 4. Vehicle flight plane

with the constraint that the Z component of W is always positive.

Since  $R_L^i$  is a function of time, according to the rotation rate of the launch planet, the planar orientation must continually change. In effect, this says that the launch azimuth is a continuous function of launch time.

A detailed description of the geometrical aspects of the launch planet ascent trajectory is not given here but may be found in Ref. 6.

**C. Differential Corrections**

The calculation of differential corrections for interplanetary trajectories may be accomplished in several ways and depends on choice of independent and dependent variables. In this report, a numerical differencing scheme is used. Basically, the independent variables—the injection energy  $C_3$ , declination  $\Phi_s$ , and right ascension  $\Theta_s$  of the outgoing asymptote S of the escape hyperbola—are varied, one at a time, to produce variations in the dependent variables—the components of the impact parameter B and the time-of-flight  $T_F$ .

The impact parameter B is defined as a vector originating at the center of the target planet and directed perpendicular to the incoming asymptote of the target-centered approach hyperbola (Fig. 5). The impact parameter B is resolved into two components which lie in a

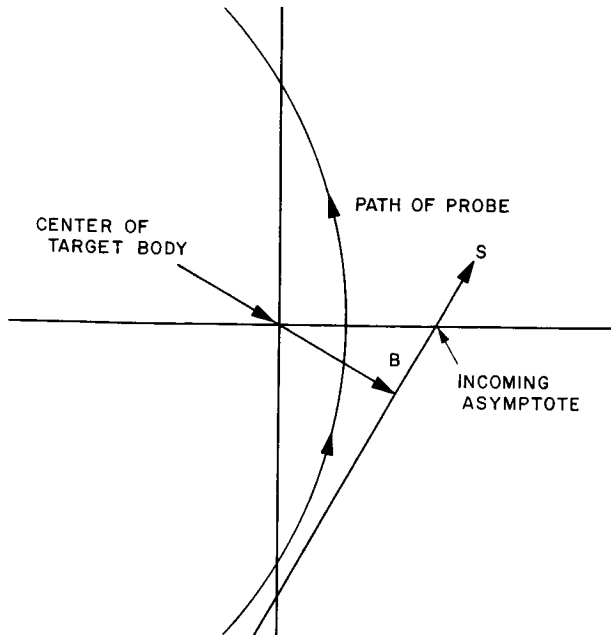


Fig. 5. Impact parameter B

plane normal to the incoming asymptote S. The orientations of the reference axes in this plane are arbitrary, but one is usually selected to lie in a fixed plane. Thus, define a unit vector T, lying in the ecliptic plane according to

$$T = \frac{S \times K'}{|S \times K'|} \tag{16}$$

where  $K'$  is a unit normal vector to the ecliptic plane. The remaining axis is then given by a unit vector R, defined by

$$R = S \times T \tag{17}$$

Figure 6 illustrates the orientation of the R, S, T target coordinates.

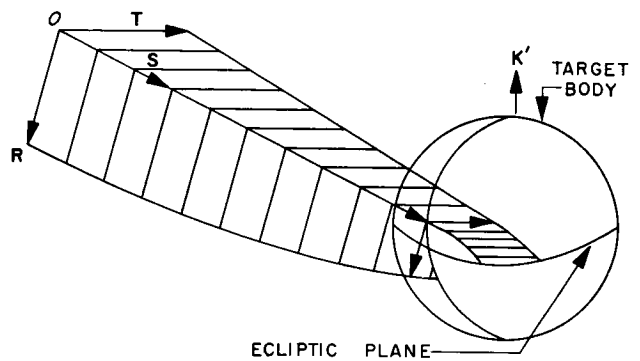


Fig. 6. The R, S, T target coordinate system

The impact parameter B lies in the R-T plane and has miss components  $B \cdot T$  and  $B \cdot R$ .  $B \cdot T = B \cdot R = 0$  denotes vertical impact on the target. Thus,  $B \cdot T$ ,  $B \cdot R$ , and  $T_F$  are the three target-dependent variables. If  $Q_i$  represents a set of generalized independent variables, such as injection position and velocity or other convenient variables, then the partial derivatives  $\partial B \cdot T / \partial Q_i$ ,  $\partial B \cdot R / \partial Q_i$ ,  $\partial T_F / \partial Q_i$  are first-order differential corrections or error coefficients relating miss at the target and flight time errors to the independent variables.

A convenient set of independent variables for interplanetary trajectories is the *vis viva* injection energy  $C_3$ , the declination  $\Phi_s$ , and the right ascension  $\Theta_s$  of the asymptote of the escape hyperbola. These variables essentially describe the launch hyperbolic-excess velocity vector since

$$V_{hL} = (C_3)^{1/2} (\cos \Phi_s \cos \Theta_s, \cos \Phi_s \sin \Theta_s, \sin \Phi_s) \tag{18}$$

As stated above, the differential corrections are calculated by a numerical differencing method which uses

quantities obtained from the conic trajectory. The basic idea is to compute a varied or perturbed trajectory and then difference it with the reference case. Let primed quantities denote variables on the perturbed trajectory. A small variation  $\Delta \mathbf{V}_{hL}$  in the hyperbolic-excess velocity vector is equivalent to a small variation  $\Delta \mathbf{V}_L$  in the launch heliocentric velocity vector. The launch heliocentric velocity on the perturbed trajectory is, then,

$$\mathbf{V}'_L = \mathbf{V}_L + \Delta \mathbf{V}_{hL} \quad (19)$$

where

$$\begin{aligned} \Delta \mathbf{V}_{hL} = & (C_3)^{1/2} \Delta \Phi_S [-\sin \Phi_S \cos \Theta_S, -\sin \Phi_S \sin \Theta_S, \cos \Phi_S] + \\ & (C_3)^{1/2} \Delta \Theta_S [-\cos \Phi_S \sin \Theta_S, \cos \Phi_S \cos \Theta_S, 0] + \\ & \frac{\Delta C_3}{2(C_3)^{1/2}} [\cos \Phi_S \cos \Theta_S, \cos \Phi_S \sin \Theta_S, \sin \Phi_S] \end{aligned}$$

where  $\Delta \Phi_S, \Delta \Theta_S$  are small angular variations (0.2 deg), and the energy variation is  $\Delta C_3 = 0.005 C_3$ .

The semimajor axis  $a'$  is obtained from

$$a' = \frac{R_L}{2 - \frac{V_L'^2 R_L}{GM_S}} \quad (20)$$

The radial rate  $\dot{R}_L'$  is

$$\dot{R}_L' = \frac{\mathbf{V}'_L \cdot \mathbf{R}_L}{R_L} \quad (21)$$

The semilatus rectum  $p'$  and eccentricity  $e'$  are

$$p' = \frac{R_L (V_L'^2 - \dot{R}_L'^2)}{GM_S} \quad (22)$$

$$e' = \left(1 - \frac{p'}{a'}\right)^{1/2} \quad (23)$$

The eccentric anomaly at launch  $E'_L$  is

$$\sin E'_L = \frac{R_L \dot{R}_L'}{e' (a' GM_S)^{1/2}} \quad (24)$$

$$\cos E'_L = \frac{1}{e'} \left(1 - \frac{R_L}{a'}\right)$$

The mean anomaly at launch  $M'_L$  is obtained from

$$M'_L = E'_L - e' \sin E'_L \quad (25)$$

The mean orbital rate  $n'$  is

$$n' = \frac{(GM_S)^{1/2}}{a'^{3/2}} \quad (26)$$

The mean anomaly at the target  $M'_p$  is

$$M'_p = n' T_p + M'_L \quad (27)$$

The eccentric anomaly at the target  $E'_p$  is obtained from the expansion

$$\begin{aligned} E'_p = & E_p + \left(\frac{1}{1 - e' \cos E_p}\right) \Delta M - \frac{1}{2} \left[\frac{e' \sin E_p}{(1 - e' \cos E_p)^3}\right] \Delta M^2 \\ & + \frac{1}{6} \left[\frac{3(e' \sin E_p)^2 - (1 - e' \cos E_p)(e' \cos E_p)}{(1 - e' \cos E_p)^5}\right] \Delta M^3 \end{aligned} \quad (28)$$

if

$$\cos E_p \geq 0$$

or

$$E'_p = E_p + \frac{e' \cos E_p - 1 + \sqrt{(e' \cos E_p - 1)^2 + (2e' \sin E_p) \Delta M}}{e' \sin E_p} \quad (29)$$

if

$$\cos E_p < 0$$

where

$$\Delta M = M'_p - (E_p - e' \sin E_p)$$

The true anomalies at launch and the target  $v'_L$  and  $v'_p$  are found from

$$\cos v'_L = \frac{p' - R_L}{e' R_L} \quad (30)$$

$$0 < v'_L < \pi \quad \text{if } \dot{R}_L' \text{ is positive}$$

$$\pi < v'_L < 2\pi \quad \text{if } \dot{R}_L' \text{ is negative}$$

$$\cos v'_p = \frac{\cos E'_p - e'}{1 - e' \cos E'_p} \quad (31)$$

$$\sin v'_p = \frac{(1 - e'^2)^{1/2} \sin E'_p}{1 - e' \cos E'_p}$$

The heliocentric central angle  $\Psi'$  is

$$\Psi' = v'_p - v'_L \quad (32)$$

The angular momentum  $\mathbf{h}'$  is

$$\mathbf{h}' = \mathbf{R}_L \times \mathbf{V}'_L \quad (33)$$

The heliocentric position vector at the target is

$$\mathbf{R}'_p = R'_p \left( \frac{\mathbf{R}_L}{R_L} \cos \Psi' + \frac{\mathbf{h}' \times \mathbf{R}_L}{h' R_L} \sin \Psi' \right) \quad (34)$$

where

$$R'_p = a' (1 - e' \cos E'_p) \quad (35)$$

A vector in the direction of perihelion with magnitude  $e'$  is

$$\boldsymbol{\varepsilon}' = \frac{\mathbf{V}'_L \times \mathbf{h}'}{GM_S} - \frac{\mathbf{R}_L}{R_L} \quad (36)$$

The heliocentric velocity at the target is

$$\mathbf{V}'_p = \frac{\mathbf{h}'}{p'} \times \left( \frac{\mathbf{R}'_p}{R'_p} + \boldsymbol{\varepsilon}' \right) \quad (37)$$

The hyperbolic-excess velocity at the target is

$$\mathbf{V}'_{hp} = \mathbf{V}'_p - \mathbf{V}_s \quad (38)$$

The difference between the heliocentric position vectors on the perturbed and reference trajectories is

$$\Delta \mathbf{R}'_p = \mathbf{R}'_p - \mathbf{R}_p \quad (39)$$

The impact parameter  $\mathbf{B}$  is

$$\mathbf{B} = - \frac{(\Delta \mathbf{R}'_p \cdot \mathbf{V}'_{hp}) \mathbf{V}'_{hp}}{V'^2_{hp}} + \Delta \mathbf{R}'_p$$

The flight time error is

$$\Delta T_F = - \frac{\Delta \mathbf{R}'_p \cdot \mathbf{V}'_{hp}}{V'^2_{hp}} \quad (40)$$

The partial derivatives are formed by dividing  $\Delta \Theta_s$ ,  $\Delta \Phi_s$ , and  $\Delta C_3$  into the miss components  $\mathbf{B} \cdot \mathbf{T}$ ,  $\mathbf{B} \cdot \mathbf{R}$ , and flight time error  $\Delta T_F$ . In addition to the component partials, the quantity  $\partial B / \partial Q_i$  is defined by

$$\frac{\partial B}{\partial Q_i} = \left[ \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial Q_i} \right)^2 + \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial Q_i} \right)^2 \right]^{1/2} \quad (41)$$

The three partials,  $\partial B / \partial \Theta_s$ ,  $\partial B / \partial \Phi_s$ ,  $\partial B / \partial C_3$ , are important measures of the error sensitivity of a trajectory.

The effect of uncertainty in the knowledge of the astronomical unit-to-kilometer conversion factor on target miss and flight time may be determined by the following formulae,

$$\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial au} = \frac{-2C_3}{au} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \quad (42)$$

$$\frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial au} = \frac{-2C_3}{au} \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3}$$

from whence

$$\frac{\partial B}{\partial au} = \frac{2C_3}{au} \frac{\partial B}{\partial C_3} \quad (43)$$

and

$$\frac{\partial T_F}{\partial au} = \frac{-2C_3}{au} \frac{\partial T_F}{\partial C_3} \quad (44)$$

where  $au$  is the astronomical unit-to-kilometer conversion factor.

The effect of solar radiation pressure acting on the probe may also be evaluated as follows: In Eq. (19) let  $\Delta \mathbf{V}_{hL} = 0$ , but in Eq. (20), (22), (24), (26), (36), vary  $GM_S$  by adding an increment  $\Delta GM_S$ . This procedure gives rise to a varied trajectory from which the impact parameter  $\mathbf{B}$  and flight time error  $\Delta T_F$  may be obtained. The partials  $\partial B / \partial GM_S$  and  $\partial T_F / \partial GM_S$  may then be calculated. Since the acceleration caused by solar radiation pressure acts opposite to the gravitational attraction of the Sun, radiation pressure has the effect of decreasing the Sun's gravitational attraction, or decreasing  $GM_S$ . A decrease,  $\Delta GM_S = -1.25 \times 10^6 \text{ km}^3/\text{sec}^2$  corresponds to the solar radiation pressure acting on a 3500-kg spacecraft having a perfectly reflecting area of 22 square meters. Thus the miss, always being a positive number, is obtained by  $\Delta B_{sp} = 1.25 \times 10^6 \partial B / \partial GM_S$ , and the corresponding flight time error is  $\Delta T_{F,sp} = -1.25 \times 10^6 \partial T_F / \partial GM_S$ , which is sign sensitive.

#### D. Mid-Course Execution Accuracy

The effect of mid-course execution errors on target accuracy can be rather simply described if it is assumed that the guidance maneuver is made on the asymptote of the escape hyperbola and that the velocity errors are spherically distributed (that is, the three-dimensional statistical distribution of velocity errors is composed of three orthogonal, independent velocity errors, each with the same variance). The mapping of these errors to the target (Fig. 7) results in a three-dimensional ellipsoid of position errors, which is the "one-sigma ellipsoid." The semiaxes are the respective standard deviations of the position errors. As pointed out above, this ellipsoid can be thought of as the locus of target errors that results from a unit velocity error at the mid-course point tracing out a sphere.

Let the differential corrections discussed above be expressed in matrix form as

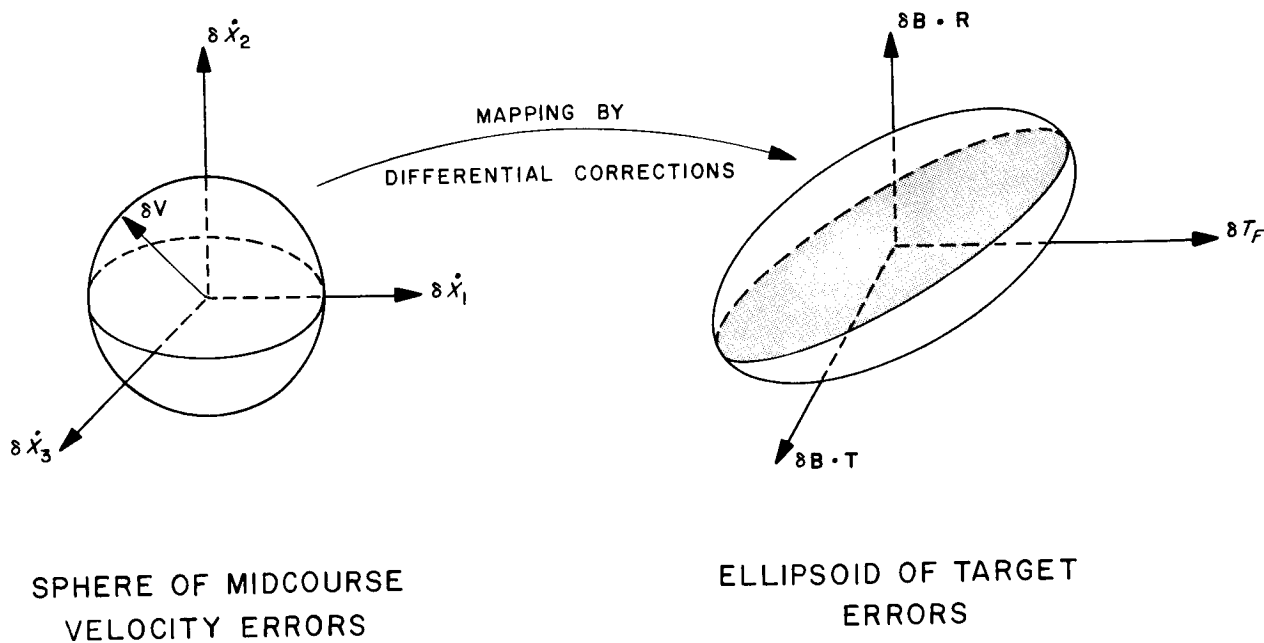


Fig. 7. The mapping of mid-course execution error

$$K = \begin{bmatrix} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_S} & \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_S} & \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \\ \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_S} & \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_S} & \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3} \\ \frac{\partial T_F}{\partial \Phi_S} & \frac{\partial T_F}{\partial \Theta_S} & \frac{\partial T_F}{\partial C_3} \end{bmatrix} \quad (45)$$

Now define a Cartesian coordinate system  $X_1, X_2, X_3$  such that

$$\left. \begin{aligned} \delta \dot{X}_1 &= V_{hL} \delta \Phi_S \\ \delta \dot{X}_2 &= - (V_{hL} \cos \Phi_S) \delta \Theta_S \\ \delta \dot{X}_3 &= \delta V_{hL} = \frac{\delta C_3}{2V_{hL}} \end{aligned} \right\} \quad (46)$$

Then a new matrix  $F$  can be formed,

$$F = \begin{bmatrix} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_1} & \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_2} & \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_3} \\ \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_1} & \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_2} & \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_3} \\ \frac{\partial T_F}{\partial \dot{X}_1} & \frac{\partial T_F}{\partial \dot{X}_2} & \frac{\partial T_F}{\partial \dot{X}_3} \end{bmatrix} \quad (47)$$

where

$$\left. \begin{aligned} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_1} &= \frac{1}{V_{hL}} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_S} \\ \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_2} &= \frac{-1}{V_{hL} \cos \Phi_S} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_S} \\ \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \dot{X}_3} &= 2V_{hL} \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \\ \\ \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_1} &= \frac{1}{V_{hL}} \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_S} \\ \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_2} &= \frac{-1}{V_{hL} \cos \Phi_S} \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_S} \\ \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \dot{X}_3} &= 2V_{hL} \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3} \\ \\ \frac{\partial T_F}{\partial \dot{X}_1} &= \frac{1}{V_{hL}} \frac{\partial T_F}{\partial \Phi_S} \\ \frac{\partial T_F}{\partial \dot{X}_2} &= \frac{-1}{V_{hL} \cos \Phi_S} \frac{\partial T_F}{\partial \Theta_S} \\ \frac{\partial T_F}{\partial \dot{X}_3} &= 2V_{hL} \frac{\partial T_F}{\partial C_3} \end{aligned} \right\} \quad (48)$$

Let the spherical distribution of midcourse velocity errors be described in the  $X_1, X_2, X_3$  system as

$$\text{statistical expectation } \left[ \delta \dot{X}_1^2 + \delta \dot{X}_2^2 + \delta \dot{X}_3^2 \right] = 3 \sigma_v^2 \quad (49)$$

where  $\sigma_v$  will be taken equal to 0.1 meters/sec. The resultant one-sigma ellipsoid of target errors is described by the quadratic form,

$$\delta \mathbf{M} \Lambda^{-1} \delta \mathbf{M}^T = 1 \quad (50)$$

where

$$\Lambda = \sigma_v^2 \mathbf{F} \mathbf{F}^T = \begin{bmatrix} \lambda_{11} & \lambda_{12} & \lambda_{13} \\ & \lambda_{22} & \lambda_{23} \\ \text{symmetric} & & \lambda_{33} \end{bmatrix} \quad (51)$$

and

$$\delta \mathbf{M} = (\delta \mathbf{B} \cdot \mathbf{T}, \delta \mathbf{B} \cdot \mathbf{R}, \delta T_F)$$

The elements of the  $\Lambda$  matrix are:

$$\begin{aligned} \lambda_{11} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_S} \right)^2 + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_S} \right)^2 + 4C_3 \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \right)^2 \right] \\ \lambda_{12} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_S} \right) \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_S} \right) + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_S} \right) \right. \\ &\quad \left. \times \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_S} \right) + 4C_3 \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \right) \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3} \right) \right] \\ \lambda_{13} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_S} \right) \left( \frac{\partial T_F}{\partial \Phi_S} \right) + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_S} \right) \left( \frac{\partial T_F}{\partial \Theta_S} \right) + 4C_3 \left( \frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3} \right) \left( \frac{\partial T_F}{\partial C_3} \right) \right] \\ \lambda_{22} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_S} \right)^2 + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_S} \right)^2 + 4C_3 \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3} \right)^2 \right] \\ \lambda_{23} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_S} \right) \left( \frac{\partial T_F}{\partial \Phi_S} \right) + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_S} \right) \left( \frac{\partial T_F}{\partial \Theta_S} \right) + 4C_3 \left( \frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3} \right) \left( \frac{\partial T_F}{\partial C_3} \right) \right] \\ \lambda_{33} &= \sigma_v^2 \left[ \frac{1}{C_3} \left( \frac{\partial T_F}{\partial \Phi_S} \right)^2 + \frac{1}{C_3 \cos^2 \Phi_S} \left( \frac{\partial T_F}{\partial \Theta_S} \right)^2 + 4C_3 \left( \frac{\partial T_F}{\partial C_3} \right)^2 \right] \end{aligned} \quad (52)$$

The quantities in the  $\Lambda$  matrix can be interpreted as standard deviations (sigmas) and correlation coefficients (rhos) according to

$$\left. \begin{aligned} \sigma_T &= (\lambda_{11})^{1/2} \\ \sigma_R &= (\lambda_{22})^{1/2} \\ \sigma_F &= (\lambda_{33})^{1/2} \\ \rho_{RT} &= \frac{\lambda_{12}}{(\lambda_{11} \lambda_{22})^{1/2}} \\ \rho_{TF} &= \frac{\lambda_{13}}{(\lambda_{11} \lambda_{33})^{1/2}} \\ \rho_{RF} &= \frac{\lambda_{23}}{(\lambda_{22} \lambda_{33})^{1/2}} \end{aligned} \right\} \quad (53)$$

Then the  $\Lambda$  matrix becomes

$$\Lambda = \begin{bmatrix} \sigma_T^2 & \rho_{RT} \sigma_R \sigma_T & \rho_{TF} \sigma_F \sigma_T \\ & \sigma_R^2 & \rho_{RF} \sigma_R \sigma_F \\ \text{symmetric} & & \sigma_F^2 \end{bmatrix} \quad (54)$$

It is often of interest when describing only miss components to consider

$$\sigma_B = (\sigma_R^2 + \sigma_T^2)^{1/2} \quad (55)$$

and to diagonalize the upper  $2 \times 2$  portion of the  $\Lambda$  (the miss component elements) to get

$$\Lambda^* = \mathbf{L} \Lambda \mathbf{L}^T = \begin{bmatrix} \sigma_1^2 & 0 & \rho_{13} \sigma_1 \sigma_3 \\ & \sigma_2^2 & \rho_{23} \sigma_2 \sigma_3 \\ \text{symmetric} & & \sigma_3^2 \end{bmatrix} \quad (56)$$

where the matrix  $\mathbf{L}$  is given by

$$L = \begin{bmatrix} \cos \theta & \sin \theta & 0 \\ -\sin \theta & \cos \theta & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad (57)$$

The angle  $\theta$  is positive when turned counterclockwise from the T axis, and has been chosen such that  $\sigma_1 \cong \sigma_2$ . This is accomplished by

$$\theta = \frac{1}{2} \tan^{-1} \left[ \frac{2\rho_{RT}}{\left(\frac{\sigma_T}{\sigma_R}\right) - \left(\frac{\sigma_R}{\sigma_T}\right)} \right] \quad (58)$$

where  $\theta$  is in first quadrant if  $\rho_{RT}$  is positive and  $\theta$  is in second quadrant if  $\rho_{RT}$  is negative. Notice that  $\sigma_3 = \sigma_F$ . The two-dimensional error ellipse described by  $\sigma_1, \sigma_2$ , and  $\theta$  is the projection of all points of the three-dimensional ellipsoid of position errors (discussed in Section IIE) onto the T-R plane, as shown in Fig. 8.

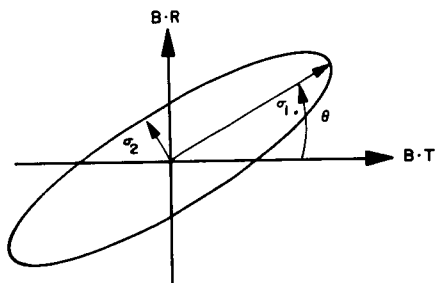


Fig. 8. Projection of three-dimensional error ellipsoid on the T-R plane

**E. Orbit Determination Accuracy**

In this section the analytic model used for describing orbit determination accuracy (tracking error) for interplanetary trajectories is discussed, and the factors upon which the tracking error depends are reviewed. The dominant error sources are defined for the easterly launchings from Cape Kennedy using tracking coverage supplied by NASA's Deep Space Instrumentation Facility (DSIF). Probable generalization to other situations is suggested. Finally, the method of describing target errors is presented along with all formulae relating the tracking errors to the target error parameters chosen.

**I. Method of Describing Orbit Determination Accuracy**

As discussed in Section IID, the uncertainties in our knowledge of an interplanetary trajectory are well described in terms of the direction and magnitude of the geocentric hyperbolic-excess velocity vector,  $V_{hL}$ . Figure 9 defines the right-handed Cartesian coordinate system we have adopted for describing uncertainties in  $V_{hL}$ . The  $X_3$  axis is along  $V_{hL}$ ; the  $X_1$  axis is in the direction of a positive differential change in asymptote declination  $\Phi_s$ ; and the  $X_2$  axis completes the system.

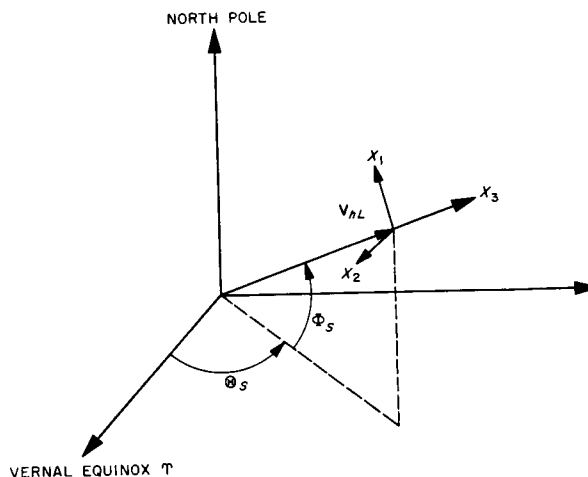


Fig. 9. Orientation of the  $X_i$  Cartesian coordinate system to describe uncertainties in the hyperbolic-excess velocity vector  $V_{hL}$

Let  $\dot{X}$  represent the vector of velocity errors in the  $X_i$  system just described;  $\dot{X} = (\delta\dot{X}_1, \delta\dot{X}_2, \delta\dot{X}_3)^T$ , where  $T$  indicates the transpose. The average of any function of  $\dot{X}$ ,  $f(\dot{X})$ , over an ensemble of randomly generated tracking runs may assist in describing our statistical knowledge of  $\dot{X}$  based on tracking noise, station location, and physical constant uncertainties. The ensemble average is usually written  $Ef(\dot{X})$  or as  $f(\dot{X})$ . When  $\dot{X}$  has a Gaussian (normal) probability density function, the distribution can be described completely by specifying  $E\dot{X}$  and  $E\{(\dot{X} - \dot{X})(\dot{X} - \dot{X})^T\}$ , the mean and covariance of  $\dot{X}$ , respectively.

When all parameters influencing our knowledge of  $\dot{X}$  have been considered,  $E\dot{X}$  should be zero and then the description of our uncertainties in  $\dot{X}$  can be adequately given by Covar  $\dot{X}$ , defined above. For convenience, the symbol  $\Lambda_{\dot{X}}$ , for Covar  $\dot{X}$ , is introduced.

$$\Lambda_{\dot{X}} = \text{Covar } \dot{X} = E \left[ (\dot{X} - \dot{X})(\dot{X} - \dot{X})^T \right] \quad (59)$$



Note that

$$\Lambda_{\dot{\mathbf{x}}} = \begin{pmatrix} \delta\dot{\mathbf{x}}_1\delta\dot{\mathbf{x}}_1 & \delta\dot{\mathbf{x}}_1\delta\dot{\mathbf{x}}_2 & \delta\dot{\mathbf{x}}_1\delta\dot{\mathbf{x}}_3 \\ \delta\dot{\mathbf{x}}_2\delta\dot{\mathbf{x}}_1 & \delta\dot{\mathbf{x}}_2\delta\dot{\mathbf{x}}_2 & \delta\dot{\mathbf{x}}_2\delta\dot{\mathbf{x}}_3 \\ \delta\dot{\mathbf{x}}_3\delta\dot{\mathbf{x}}_1 & \delta\dot{\mathbf{x}}_3\delta\dot{\mathbf{x}}_2 & \delta\dot{\mathbf{x}}_3\delta\dot{\mathbf{x}}_3 \end{pmatrix} \quad (60)$$

is a  $3 \times 3$  real symmetric matrix. The diagonal terms are the variances of the three components, and the off-diagonal terms measure the correlation between the three components.

Before describing how  $\Lambda_{\dot{\mathbf{x}}}$  has been "mapped" into target error uncertainties, a discussion is given of the dependence of  $\Lambda_{\dot{\mathbf{x}}}$  upon the relevant factors describing near-Earth tracking as well as the typical errors assumed in preparing the estimates given in this report.

### 2. Accuracy of Near-Earth Tracking

By expressing the accuracy of near-Earth tracking in terms of  $\dot{\mathbf{x}}$  and its associated covariance  $\Lambda_{\dot{\mathbf{x}}}$ , the dependence upon almost all trajectory parameters has been eliminated. The remaining relevant trajectory parameters are listed in Table 1.

**Table 1. Trajectory parameters influencing tracking accuracy**

1. Launch site	
2. Launch azimuth $\Sigma_L$ . . . . .	Depends on launch time.
3. Injection region . . . . .	Depends on time in parking orbit, short or long coast less than 1 revolution is current practice.
4. Declination of $V_{hL}$ , $\Phi_s$ . . . . .	Depends on target position at arrival date and injection energy, $C_s$ .
5. Magnitude of $V_{hL} = V_{hL} = (C_s)^{1/2}$	

Note the limited number of trajectory parameters on which  $\Lambda_{\dot{\mathbf{x}}}$  depends. Table 2 summarizes the key tracking station parameters which influence accuracy in the geocentric tracking phase.

The first three factors listed in Table 2 define the tracking configuration, whereas the last three are station performance factors. Usually, tracking accuracy studies are carried out with the tracking configuration relatively fixed, and the influence of the station performance factors are determined.

The final source of tracking error is uncertainty in physical constants. The influence of GM-Earth errors is somewhat smaller than the above-mentioned errors and should be reduced to negligible contribution in the next two

**Table 2. Tracking station parameters influencing tracking accuracy**

1. Station locations . . . . .	A spread of latitudes is very desirable.
2. Total tracking time	
3. Tracking data types . . . . .	Range $R$ , range rate $\dot{R}$ , and angles are most commonly taken.
4. Delay in acquiring first data . . . . .	Delay is measured from the injection region as well as station acquisition delays.
5. Tracking data accuracies . . . . .	Expressed in terms of equivalent uncorrelated noise at a given sampling rate.
6. Uncertainty in tracking . . . . .	Important when high data accuracies are available. Longitude errors usually are most important.

years. Sections IIC and IIIC describe how the uncertainty in the astronomical unit affects the target error; this error can be important for very long flights, but should also be reduced to a negligible contribution in the next two years. Errors in the target's mass cause minor variations in flight time  $T_F$  and negligible effect on  $\mathbf{B}$ . The last important target error source currently recognized is the uncertainty in the effect of the standard solar radiation pressure on spacecraft trajectory. The source of uncertainty is that effective reflecting area (largely solar panels) is not perfectly known. Techniques for the accurate measurement of this quantity are currently under development. Our studies show that unless this error is held below 5% it will be the dominant error source on many of our flights. Sections IIC and IIIC describe the calculation of the standard solar radiation pressure on a typical spacecraft deriving electrical power from the Sun.

The tracking accuracies reported here are representative of those foreseen for the 1971 time period. Range rate data were taken from the DSIF stations in South Africa, Australia, and the United States. The measurements were assigned standard deviations at 0.001 meters/sec, corresponding to a 60-sec sample rate. Station location uncertainties were assumed to be uncorrelated, with standard deviations of 0.001 deg in latitude, 0.0005 deg in longitude, and 30 meters in geocentric radius. Simultaneous tracking by more than one station was not allowed. The uncertainties quoted are those to be expected in the absence of other error sources, notably solar pressure and astronomical unit uncertainties.

The  $\Lambda_{\dot{\mathbf{x}}}$  matrix used in these calculations was assumed to be independent of the trajectory parameters listed in Table 1. This approximation is good for the range of energies and asymptotic declinations considered to be

most feasible. In the future these approximations will be refined as necessary. The  $\Lambda_{\dot{X}}$  used for orbit determination accuracy in this report is given in Section III E. The target accuracies calculated here are typical for any reasonable multistation tracking configuration, with the data types and accuracies corresponding to this conservative representation of DSIF capabilities.

### 3. Calculation of Target Errors

The representation of tracking accuracy in the geocentric phase in terms of  $\Lambda_{\dot{X}}$ , the covariance of the  $V_{hL}$  in a particular rectangular coordinate system, was developed earlier in this section. In order to express the effect of these uncertainties in  $V_{hL}$  in terms of target error, two steps must be performed. First, a set of coordinates  $M_1$  at the target planet for expressing the errors ( $M_1$  cannot exceed 3 dimensions) must be chosen. (A convenient set with desirable linearity properties is the T-R-S system defined previously.) The matrix  $U_1$ , which maps  $\dot{X}$  to the desired  $M_1$ , is then determined.

$$M_1 = U_1 \dot{X} = \begin{pmatrix} \delta B \cdot T \\ \delta B \cdot R \\ \delta S \end{pmatrix} \quad (61)$$

The covariance of  $M_1$  is given by

$$\text{Covar} [M_1] = \overline{M_1 M_1^T} = U_1 \Lambda_{\dot{X}} U_1^T = \Lambda_{M_1} \quad (62)$$

The determination of  $U_1$  for the coordinates chosen follows the lines of Section IID. It is presumed that the K-matrix is given, where

$$K = \begin{bmatrix} \frac{\partial B \cdot T}{\partial \Phi_S} & \frac{\partial B \cdot T}{\partial \Theta_S} & \frac{\partial B \cdot T}{\partial C_3} \\ \frac{\partial B \cdot R}{\partial \Phi_S} & \frac{\partial B \cdot R}{\partial \Theta_S} & \frac{\partial B \cdot R}{\partial C_3} \\ \frac{\partial T_F}{\partial \Phi_S} & \frac{\partial T_F}{\partial \Theta_S} & \frac{\partial T_F}{\partial C_3} \end{bmatrix} \quad (45)$$

By postmultiplying  $K$  by

$$A = \begin{bmatrix} \frac{1}{V_{hL}} & 0 & 0 \\ 0 & \frac{-1}{V_{hL} \cos \Phi_S} & 0 \\ 0 & 0 & 2V_{hL} \end{bmatrix} \quad (63)$$

the  $F$  matrix is obtained.

$$F = KA \quad (47)$$

The  $F$  matrix must now be adjusted to transform into the T-R-S coordinates used for  $M_1$ . This transformation  $B$  is simply

$$B = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -V_{hp} \end{bmatrix} \quad (64)$$

since  $\delta S = -V_{hp} \delta T_L$ . Thus our  $U_1$  matrix is given by

$$U_1 = B(KA) = BF \quad (65)$$

Now the mapping given in Eq. (62) to obtain  $\Lambda_{M_1}$  is applied. Since all of the coordinates of  $M_1$  have the same dimensions (length squared), the one-sigma ellipsoid described by the quadratic form

$$\delta M_1 \Lambda_{M_1}^{-1} \delta M_1^T = 1 \quad (66)$$

has physical significance. The three principal axes of this ellipsoid are the square roots of the 3-eigenvalues of the  $\Lambda_{M_1}$  matrix. The formulas used are standard and are not reproduced here. The projection of the three-dimensional ellipsoid on to the T-R plane is an ellipse. Its major and minor semiaxes and orientation of the major axis are calculated by the same procedure used in Section IID. It is often convenient to write  $\Lambda_{M_1}$  in an alternate form:

$$\Lambda_{M_1} = \begin{bmatrix} \sigma_T^2 & \rho_{RT} \sigma_T \sigma_R & \rho_{TS} \sigma_T \sigma_S \\ \rho_{RT} \sigma_R \sigma_T & \sigma_R^2 & \rho_{RS} \sigma_R \sigma_S \\ \rho_{TS} \sigma_S \sigma_T & \rho_{RS} \sigma_S \sigma_R & \sigma_S^2 \end{bmatrix} \quad (67)$$

It can be seen that  $\Lambda_{M_1}$  is completely described by  $\sigma_T, \sigma_R, \sigma_S, \rho_{TS}, \rho_{RS}, \rho_{TR}$ , because of its symmetry.

### III. EXPLANATION OF TRAJECTORY TABLES

Tabular listings of pertinent quantities of the heliocentric and planetocentric trajectories, differential corrections, guidance, and orbit determination parameters are given at 1-day launch date intervals and 2-day flight time intervals over the selected launch period. The launch period is selected to encompass the minimum energy transfer dates obtained from Ref. 7 and 8. A summary of the characteristics of these trajectories is given in Ref. 7.

Each trajectory begins with a header giving launch date, flight time (in days), and arrival date. All the heliocentric transfer trajectories are calculated assuming launch into the heliocentric orbit at 0 hours of the launch date and arrival at 0 hours of the arrival date. Later, however, when the launch-planet ascent trajectories are computed, the actual launch times during the launch day for each launch azimuth are given.

Each page lists four trajectories, each of which is divided into five basic print groups: HELIOCENTRIC CONIC, PLANETOCENTRIC CONIC, DIFFERENTIAL CORRECTIONS, MID-COURSE EXECUTION ACCURACY, and ORBIT DETERMINATION ACCURACY. Each quantity is assigned an identifying alphabetic symbol of no more than three letters. The definitions of the symbols and quantities they represent are given below. All pertinent quantities are referenced to the mean equinox and equator, or ecliptic, of *launch* date.

#### A. Heliocentric Conic Group

The HELIOCENTRIC CONIC group gives the characteristics of the heliocentric transfer ellipse, such as the position and velocity vectors at launch and arrival, some orbital elements, and other quantities of engineering interest. The printout array is as follows:

HELIOCENTRIC CONIC	DISTANCE
RL LAL LOL VL GAL AZL HCA SMA ECC INC V1	
RP LAP LOP VP GAP AZP TAL TAP RCA APO V2	
RC GL GP ZAL ZAP ETS ZAE ETE ZAC ETC LVI	

After the words HELIOCENTRIC CONIC, the heliocentric arc DISTANCE traveled by the spacecraft from launch to arrival is printed. The quantities are defined as follows (all angles are in deg; distances are in millions of km; speeds are in km/sec):

- Line 1
- RL,  $R_L = | \mathbf{R}_L |$  the heliocentric radius of the launch planet at 0 hours of the launch date.
- LAL,  $\beta_L$  the celestial latitude of the launch planet at 0 hours of the launch date.
- LOL,  $\lambda_L$  the celestial longitude of the launch planet at 0 hours of the launch date.
- VL,  $V_L = | \mathbf{V}_L |$  the heliocentric speed of the probe at 0 hours of the launch date.
- GAL,  $\Gamma_L$  the path angle of the probe at 0 hours of the launch date, i.e., the complement of the angle between the position and velocity vectors,  $\mathbf{R}_L$  and  $\mathbf{V}_L$ , defined by

$$\sin \Gamma_L = \frac{\mathbf{R}_L \cdot \mathbf{V}_L}{R_L V_L} \quad -\frac{\pi}{2} \leq \Gamma_L \leq \frac{\pi}{2}$$

- AZL,  $\Sigma_L$  the azimuth angle of the probe at 0 hours of the launch date, i.e., the angle, measured in a plane perpendicular to the radius vector  $\mathbf{R}_L$ , between the projection of the ecliptic north and the projection of the velocity vector  $\mathbf{V}_L$  on the plane perpendicular to  $\mathbf{R}_L$ , defined by

$$\cos \Sigma_L = \frac{\mathbf{V}_L \cdot \Psi^1}{V_L \cos \Gamma_L} \quad 0 \leq \Sigma_L \leq 2\pi$$

$$\sin \Sigma_L = \frac{(\mathbf{R}_L \times \mathbf{V}_L) \cdot \Psi^1}{| \mathbf{R}_L \times \mathbf{V}_L |}$$

where  $\Psi^1 = (\mathbf{K}' - \mathbf{R}_L^1 \sin \beta_L) \sec \beta_L$ , where the superscript 1 denotes a unit vector.

- HCA,  $\psi$  the heliocentric central angle, or angle between the position vector  $\mathbf{R}_L$ , of the launch planet at 0 hours of the launch date and the position vector  $\mathbf{R}_p$ , of the target planet at 0 hours of the arrival date. This angle is defined by Eq. (3) and (4) and illustrated in Fig. 1.
- SMA,  $a$  the semimajor axis of the heliocentric transfer ellipse.

ECC,  $e$  the eccentricity of the heliocentric transfer ellipse.

INC,  $i$  the inclination of the heliocentric transfer ellipse.

VI,  $V_1 = |V_1|$  the heliocentric speed of the launch planet at 0 hours of the launch date.

Line 2

RP,  $R_p = |R_p|$  the heliocentric radius of the target planet at 0 hours of the arrival date.

LAP,  $\beta_p$  the celestial latitude of the target planet at 0 hours of the arrival date.

LOP,  $\lambda_p$  the celestial longitude of the target planet at 0 hours of the arrival date.

VP,  $V_p = |V_p|$  the heliocentric speed of the probe at 0 hours of the arrival date.

GAP,  $\Gamma_p$  the path angle of the probe at 0 hours of the arrival date, defined the same as  $\Gamma_L$  except that  $R_p$  and  $V_p$  are substituted for  $R_L$  and  $V_L$ .

AZP,  $\Sigma_p$  the azimuth angle of the probe at 0 hours of the arrival date, defined the same as  $\Sigma_L$  except that  $R_p$  and  $V_p$  are substituted for  $R_L$  and  $V_L$ .

TAL,  $v_L$  the true anomaly of the probe in the heliocentric transfer ellipse at 0 hours of the launch date.

TAP,  $v_p$  the true anomaly of the probe in the heliocentric transfer ellipse at 0 hours of the arrival date.

RCA,  $R_{cA}$  the perihelion distance of the heliocentric transfer ellipse. This distance is printed even though the probe may not transit perihelion.

APO,  $R_A$  the aphelion distance of the heliocentric transfer ellipse. This distance is printed even though the probe may not transit aphelion.

V2,  $V_2 = |V_2|$  the heliocentric speed of the target planet at 0 hours of the arrival date.

Line 3

RC,  $R_c$  the communication distance, or distance between the launch and target planets at 0 hours of the arrival date.

GL,  $\gamma_L$  the angle between the launch hyperbolic-excess velocity vector  $V_{hL}$  and its projection on the orbital plane of the launch planet, defined by

$$\sin \gamma_L = \frac{W_1 \cdot V_{hL}}{V_{hL}} \quad -\frac{\pi}{2} \leq \gamma_L \leq \frac{\pi}{2}$$

where  $W_1$  is a unit normal to the launch planet's orbital plane. This angle is useful in describing the direction in which the probe leaves the launch planet.

GP,  $\gamma_p$  the angle between the incoming arrival hyperbolic-excess velocity vector  $V_{hp}$  and its projection on the target planet's orbital plane, defined by

$$\sin \gamma_p = \frac{W_2 \cdot V_{hp}}{V_{hp}} \quad -\frac{\pi}{2} \leq \gamma_p \leq \frac{\pi}{2}$$

where  $W_2$  is a unit normal to the target planet's orbital plane. This angle is useful in determining whether the probe is approaching from above or below the target planet. If  $\gamma_p$  is positive, the probe approaches from below —if negative, from above.

ZAL,  $\zeta_L$  the angle between the outgoing launch asymptote (or hyperbolic-excess velocity vector) and the launch heliocentric radius vector  $R_L$  at launch time. This parameter is a good approximation to the launch-planet-probe-Sun angle as the probe leaves the launch planet. It is an important quantity in the design of attitude control systems which use the Sun and launch planet as optical references. The quantity  $\zeta_L$  is defined as

$$\cos \zeta_L = \frac{V_{hL} \cdot R_L^1}{V_{hL}} \quad 0 \leq \zeta_L \leq \pi$$

The next six quantities, all angles, have the same general definition. They are important in the design of the near-target trajectory and are used in determining the aiming point for interplanetary flyby trajectories. Consider the target-centered geometry of Fig. 10.

In this diagram, the reference coordinate system is the same target R, S, T system defined in Section IIC. A unit

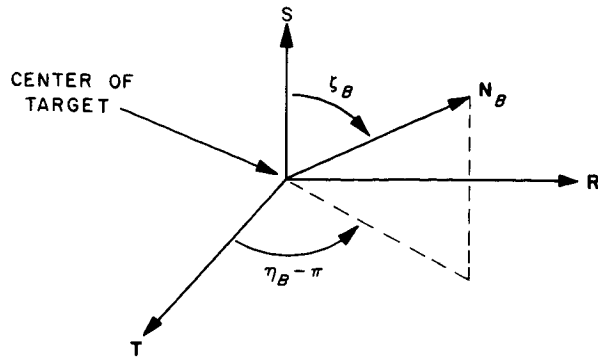


Fig. 10. Generalized geometry for aiming point angles

vector  $N_B$  (subscript  $B$  for body) is directed from the target center to another celestial body. The angular quantity  $\zeta_B$  is the angle subtended at the target center between the incoming asymptote  $S$  and the target-celestial body line  $N_B$ . Thus

$$\cos \zeta_B = S \cdot N_B = \frac{V_{hp} \cdot N_B}{V_{hp}} \quad 0 \leq \zeta_B \leq \pi$$

since

$$S = \frac{V_{hp}}{V_{hp}}$$

The angle  $\eta_B$  is the supplement of the angle between the  $T$  direction and the projection of  $N_B$  on the  $R - T$  plane, defined by

$$\sin \eta_B = \frac{-R \cdot N_B}{\sin \zeta_B} \quad 0 \leq \eta_B \leq 2\pi$$

$$\cos \eta_B = \frac{-T \cdot N_B}{\sin \zeta_B}$$

These quantities are computed for three celestial bodies: the Sun ( $\zeta_s$  and  $\eta_s$ ), the Earth ( $\zeta_E$  and  $\eta_E$ ), and the star Canopus ( $\zeta_c$  and  $\eta_c$ ). Thus,

ZAP,  $\zeta_s$  (or  $\zeta_p$ ) This angle is useful in that it indicates the direction of the probe's approach to the target. If  $\zeta_s < \pi/2$ , the probe approaches from the target planet's dark side. If  $\zeta_s > \pi/2$ , it approaches from the light side. Thus the parameter is equivalent to the Sun-probe-target angle a few days before encounter.

ETS,  $\eta_s$  defined as above.

ZAE,  $\zeta_E$  This angle is useful in locating the Earth as the probe approaches the target. The parameter is equivalent to the

Earth-probe-target angle a few days before encounter.

ETE,  $\eta_E$  defined as above.

ZAC,  $\zeta_c$  the Canopus-probe-target angle a few days before encounter.

ETC,  $\eta_c$  defined as above.

LVI,  $\Phi_I$  the declination (latitude) of the vertical impact point referenced to the target planet's equator. The vertical impact point is that point on the surface of the target planet that the incoming asymptote would intersect if it were to pass through the center of the planet. This quantity is defined by

$$\begin{aligned} \sin \Phi_I = & -(\cos \Theta_{sp} \cos \Phi_{sp} \cos \Theta_p \cos \Phi_p \\ & + \sin \Theta_{sp} \cos \Phi_{sp} \sin \Theta_p \cos \Phi_p \\ & + \sin \Phi_{sp} \sin \Phi_p) \end{aligned}$$

where  $\Theta_p$  and  $\Phi_p$  are the Earth equatorial right ascension and declination of the Mars north pole, and  $\Theta_{sp}$  and  $\Phi_{sp}$  are the right ascension and declination of the incoming asymptote with respect to the Earth's equator (Fig. 11).

<sup>†</sup> Because of its importance in trajectory studies, the parameter LVI has been substituted in place of CLP, which was given in previous volumes.

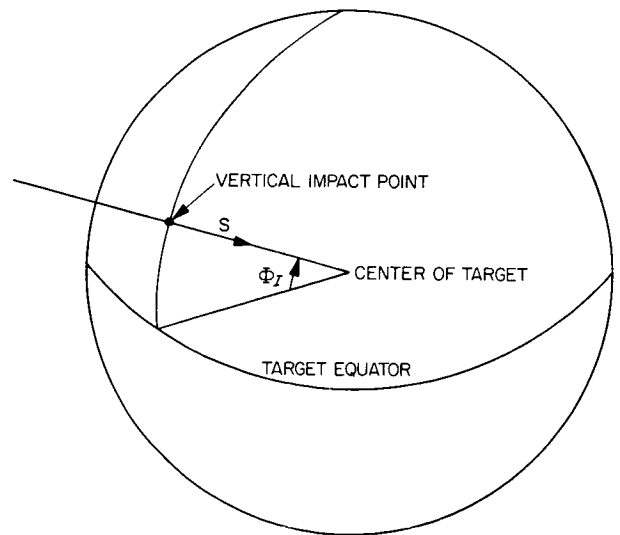


Fig. 11. Vertical impact point geometry

**B. Planetocentric Conic Group**

The second group, PLANETOCENTRIC CONIC, gives the characteristics of primarily the launch-planet ascent trajectories, but also includes the hyperbolic-excess vector at the target. Injection conditions are given for seven launch azimuths, assuming only short coast time parking orbits. As explained in Ref. 6, there may be two launch times per day for each launch azimuth, resulting in a short and long parking orbit. The injection conditions for each set are given in geocentric space-fixed spherical coordinates and, by assuming a 100-nm parking orbit altitude and typical boost vehicle trajectory characteristics, the longitude of injection is calculated, along with the latitude and longitude of ignition of final burn out of the parking orbit.

A special case may arise when the declination of the outgoing asymptote of the escape hyperbola is greater than the launch site latitude (Cape Kennedy). In this case, owing to geometrical restrictions, it may not be possible to fire in a symmetrical band of azimuths about due east, as explained in Ref. 6. This band of restricted azimuths may eliminate part or all of the selected launch azimuth band 50 to 110 deg. When this happens, only those trajectories with permissible azimuths are printed, in addition to the limiting azimuths, or the most northerly and southerly azimuths, that are possible.

The ascent trajectory profile is as shown in Fig. 12. Its characteristics are defined as follows:

- $\Phi_1$  the arc subtended at Earth's center during ascent from launch into parking orbit.
- $t_1$  the time from launch to parking-orbit injection.
- $\Phi_2$  the arc subtended at Earth's center during final burn out of the parking orbit, to injection.
- $t_2$  the time of final burn.
- $k_{\dot{\Phi}}$  the inverse parking orbital rate, equal to  $1/\dot{\Phi}_c$ .
- $v_1$  the true anomaly in the hyperbolic orbit at injection.
- $R_p$  the perifocal distance of the escape hyperbola, taken equal to the Earth-centered radius of the parking orbit.

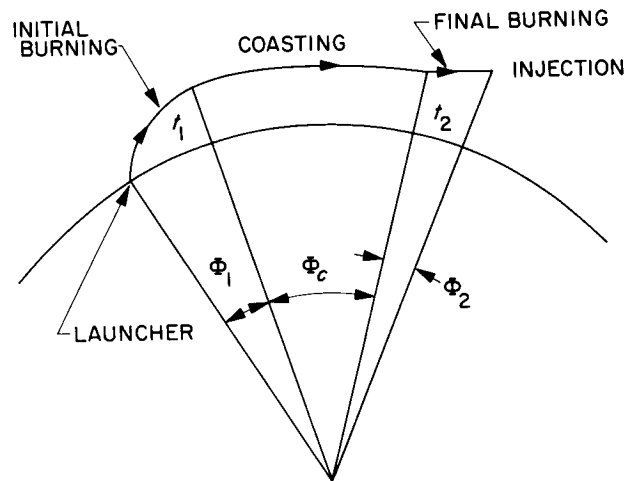
$\phi_L$  the longitude of the launch site.

$\theta_L$  the latitude of the launch site.

The values of these quantities for all trajectories contained herein are:

- $\Phi_1 = 23 \text{ deg}$
- $t_1 = 700 \text{ sec}$
- $\Phi_2 = 25 \text{ deg}$
- $t_2 = 300 \text{ sec}$
- $k_{\dot{\Phi}} = 14.689 \text{ sec/deg}$
- $v_1 = 12 \text{ deg}$
- $R_p = 6560 \text{ km}$
- $\phi_L = 28.28 \text{ deg}$
- $\theta_L = 279.5 \text{ deg}$

An inherent assumption here is that these quantities are relatively invariant with injection energy. This is a reasonable assumption and will affect the injection coordinates only slightly.



**Fig. 12. Ascent trajectory profile**

The print array for the PLANETOCENTRIC CONIC group is:

C3	VHL	DLA	RAL	RAD	VEL	PTH	VHP	DPA	RAP	ECC
LNCH AZMTH	LNCH TIME	L-1 TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG

The quantities are defined as follows (all angles are in deg; distances are in km; speeds are in km/sec, launch-injection (L-I)time and parking orbit coast time (PO CST TIM) are in sec; launch time and injection time are in hr, min, and sec, GMT):

Line 1

<p>C3, <math>C_3</math></p>	<p>the <i>vis viva</i> integral (Moulton), or twice the total energy per unit mass, expressed in <math>\text{km}^2/\text{sec}^2</math> and defined by <math>C_3 = V_{hL}^2</math>.</p>	<p>L-I TIME, <math>t_{LI}</math></p>	<p>the launch-to-injection time.</p>
<p>VHL, <math>V_{hL}</math></p>	<p>the launch hyperbolic-excess speed.</p>	<p>INJ LAT, <math>\phi</math></p>	<p>the injection latitude (or declination <math>\Phi</math>).</p>
<p>DLA, <math>\Phi_s</math></p>	<p>the declination of the outgoing asymptote of the escape hyperbola defined in Eq. (18).</p>	<p>INJ LONG, <math>\theta</math></p>	<p>the injection longitude, measured positive east of Greenwich, <math>0 \leq \theta \leq 2\pi</math>.</p>
<p>RAL, <math>\Theta_s</math></p>	<p>the right ascension of the outgoing asymptote of the escape hyperbola defined in Eq. (18).</p>	<p>INJ RT ASC, <math>\Theta</math></p>	<p>the injection right ascension.</p>
<p>RAD, <math>R =  \mathbf{R} </math></p>	<p>the launch-planet-centered injection radius.</p>	<p>INJ AZMTH, <math>\Sigma</math></p>	<p>the injection azimuth, or angle between the projection of the velocity vector <math>\mathbf{V}</math>, on the local horizontal plane and the projection of true north on this plane, measured positive east of true north.</p>
<p>VEL, <math>V =  \mathbf{V} </math></p>	<p>the inertial injection speed.</p>	<p>INJ TIME, <math>T_I</math></p>	<p>the injection time. The same comment applies to this quantity regarding launch date as applied to the launch time. However, both times must be consistent. For example, if launch time is on the previous day, injection time may fall on the launch date shown, or it may be on the following day.</p>
<p>PTH, <math>\Gamma</math></p>	<p>the injection path angle defined by</p> $\sin \Gamma = \frac{\mathbf{V} \cdot \mathbf{R}}{VR} \quad -\frac{\pi}{2} \leq \Gamma \leq \frac{\pi}{2}$	<p>PO CST TIM, <math>t_c</math></p>	<p>the coast time in the parking orbit, in sec.</p>
<p>VHP, <math>V_{hp}</math></p>	<p>the hyperbolic-excess speed at the target.</p>	<p>INJ 2 LAT, <math>\phi_2</math></p>	<p>the latitude of the start of final burn out of the parking orbit.</p>
<p>DPA, <math>\Phi_{sp}</math></p>	<p>the declination of the incoming asymptote at the target. The reference coordinate system here is vernal equinox, Earth equatorial, mean of <i>launch</i> date</p>	<p>INJ 2 LONG, <math>\theta_2</math></p>	<p>the longitude of the start of final burn out of the parking orbit, <math>0 \leq \theta_2 \leq 2\pi</math>.</p>
<p>RAP, <math>\Theta_{sp}</math></p>	<p>the right ascension of the incoming asymptote at the target. Same reference coordinates as for <math>\Phi_{sp}</math>.</p>		
<p>ECC, <math>e</math></p>	<p>the eccentricity of the escape hyperbola.</p>		

Line 2

<p>LNCH AZMTH, <math>\Sigma_L</math></p>	<p>the launch azimuth measured in a plane tangent to the surface of the launch planet at the launch site, positive east of true north.</p>
<p>LNCH TIME, <math>T_L</math></p>	<p>the launch time. For the range of launch azimuths given herein, launch time may cross 0 hours,</p>

or midnight. In this case, the launch date may be advanced to the following day for times after midnight, or it may be retarded to the previous day for times before midnight, whichever the reader wishes.

The quantities  $T_I, R, \Phi, \Theta, V, \Gamma, \Sigma$  form a consistent set of injection conditions; i.e., they are the time and the space-fixed spherical coordinates which can be used to initialize an integrating trajectory program.

**C. Differential Corrections Group**

The DIFFERENTIAL CORRECTIONS group is comprised of sixteen error coefficients relating variations in

injection energy  $C_3$ , declination  $\Phi_s$ , and right ascension  $\Theta_s$ , of the outgoing asymptote of the escape hyperbola, the astronomical unit, and solar radiation pressure to variations in the miss components  $\mathbf{B} \cdot \mathbf{T}$ ,  $\mathbf{B} \cdot \mathbf{R}$ , and the flight time. These coefficients are very useful in gaging the error sensitivity of an interplanetary trajectory. The printout array for this group is as follows:

DIFFERENTIAL CORRECTIONS

TDE	TRA	TC3	BAU
RDE	RRA	RC3	FAU
FDE	FRA	FC3	BSP
BDE	BRA	BC3	FSP

The symbols are defined as follows:

Line 1

- TDE,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_s}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in megakilometers/deg.
- TRA,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_s}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in megakilometers/deg.
- TC3,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the injection energy  $C_3$ , in megakilometers/km<sup>2</sup>/sec<sup>2</sup>.
- BAU,  $\frac{\partial \mathbf{B}}{\partial au}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the astronomical unit-to-kilometer conversion factor. This derivative is dimensionless and indicates the target miss caused by an uncertainty in the value of the astronomical unit.

Line 2

- RDE,  $\frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Phi_s}$  the partial derivative of the  $\mathbf{R}$  component of the impact parameter  $\mathbf{B}$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in megakilometers/deg.
- RRA,  $\frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_s}$  the partial derivative of the  $\mathbf{R}$  component of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch

escape asymptote  $\Theta_s$ , in megakilometers/deg.

- RC3,  $\frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial C_3}$  the partial derivative of the  $\mathbf{R}$  component of the impact parameter  $\mathbf{B}$ , with respect to the injection energy  $C_3$ , in megakilometers/km<sup>2</sup>/sec<sup>2</sup>.

- FAU,  $\frac{\partial T_F}{\partial au}$  the partial derivative of the flight time  $T_F$ , with respect to the astronomical unit-to-kilometer conversion factor. This derivative has dimensions of sec/km and indicates the error in flight time caused by an uncertainty in the value of the astronomical unit.

Line 3

- FDE,  $\frac{\partial T_F}{\partial \Phi_s}$  the partial derivative of flight time  $T_F$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in days/deg.
- FRA,  $\frac{\partial T_F}{\partial \Theta_s}$  the partial derivative of flight time  $T_F$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in days/deg.
- FC3,  $\frac{\partial T_F}{\partial C_3}$  the partial derivative of flight time  $T_F$ , with respect to the injection energy  $C_3$ , in days/km<sup>2</sup>/sec<sup>2</sup>.
- BSP,  $\Delta B_{sp}$  the target miss (in km) caused by solar radiation pressure acting on a 3500-kg spacecraft having an effective perfectly reflecting area of 22 square meters.

Line 4

- BDE,  $\frac{\partial \mathbf{B}}{\partial \Phi_s}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in megakilometers/deg.
- BRA,  $\frac{\partial \mathbf{B}}{\partial \Theta_s}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in megakilometers/deg.
- BC3,  $\frac{\partial \mathbf{B}}{\partial C_3}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the injection energy  $C_3$ , in megakilometers/km<sup>2</sup>/sec<sup>2</sup>.
- FSP,  $\Delta T_{F,sp}$  the flight time error (in sec) caused by solar radiation pressure acting on a 3500-kg spacecraft having an effective perfectly reflecting area of 22 square meters.



**D. Mid-Course Execution Accuracy Group**

The MID-COURSE EXECUTION ACCURACY group gives the parameters of the "one-sigma" three-dimensional ellipsoid of target errors, resulting from a spherically distributed mid-course guidance execution error with  $\sigma_v$  equal to 0.1 m/sec (see Eq. 49). It is assumed here that a single mid-course guidance maneuver is applied during the time the spacecraft is essentially traveling radially outward from the launch planet. This time is approximately from several hours to several days after launch and is a practical period in which to perform a mid-course maneuver. These quantities are quoted in the useful R, S, T coordinate system discussed above.

The print array for this group is:

MID-COURSE EXECUTION ACCURACY

SGT	SGR	SG3
RRT	RRF	RTF
SGB	R23	R13
SG1	SG2	THA

The quantities are defined as follows:

Line 1

- SGT,  $\sigma_T$  the standard deviation of position errors along the T axis, in km.
- SGR,  $\sigma_R$  the standard deviation of position errors along the R axis, in km.
- SG3,  $\sigma_3$  the standard deviation of flight time errors, in sec.

Line 2

- RRT,  $\rho_{RT}$  the linear correlation coefficient relating position errors in the R and T directions (dimensionless).
- RRF,  $\rho_{RF}$  the linear correlation coefficient relating position errors in the R direction and flight-time errors (dimensionless).
- RTF,  $\rho_{TF}$  the linear correlation coefficient relating position errors in the T direction and flight-time errors (dimensionless).

Line 3

- SGB,  $\sigma_B$  the square root of the sum of the squares of  $\sigma_R$  and  $\sigma_T$ .

- R23,  $\rho_{23}$  the linear correlation coefficient of  $\sigma_2$  and  $\sigma_3$  ( $= \sigma_F$ ). The same remarks apply to this number as to  $\rho_{13}$ , except that the  $\sigma_2$  direction replaces the  $\sigma_1$  direction.

- R13,  $\rho_{13}$  the linear correlation coefficient relating  $\sigma_1$  and  $\sigma_3$  ( $= \sigma_F$ ). This number statistically relates position errors in the  $\sigma_1$  direction to flight time errors. If  $\rho_{13} = 1$ , then a position error in the  $\sigma_1$  direction will always be accompanied by a flight-time error which is linearly related to that position error;  $\rho_{13}$  is dimensionless.

Line 4

- SG1,  $\sigma_1$  the semimajor axis of the error ellipse formed by projecting the three-dimensional error ellipsoid onto the T-R plane (Fig. 8), in km.
- SG2,  $\sigma_2$  the semiminor axis of this error ellipse (Fig. 8), in km.
- THA,  $\theta$  the angle between the T axis and the direction of the  $\sigma_1$  axis, measured in the T-R plane as shown in Fig. 8, in deg.

**E. Orbit Determination Accuracy Group**

The ORBIT DETERMINATION ACCURACY group is comprised of 12 numbers which describe the uncertainty in target coordinates due to tracking errors described in Section IIE. The printout array for this group is as follows:

ORBIT DETERMINATION ACCURACY

ST	SR	SS
CRT	CRS	CST
LSA	MSA	SSA
EL1	EL2	ALF

The first two lines describe the covariance of  $M_1$  by the method described in Section IIE (Eq. 67):

Line 1

- ST,  $\sigma_T$  the standard deviation of errors in the coordinate  $B \cdot T$ , in km.
- SR,  $\sigma_R$  the standard deviation of errors in the coordinate  $B \cdot R$ , in km.
- SS,  $\sigma_S$  the standard deviation of errors in S, in km.

Line 2

- CRT,  $\rho_{RT}$  the linear correlation coefficient relating errors in  $\mathbf{B} \cdot \mathbf{R}$  to errors in  $\mathbf{B} \cdot \mathbf{T}$ , dimensionless.
- CRS,  $\rho_{RS}$  the linear correlation coefficient relating errors in  $\mathbf{B} \cdot \mathbf{R}$  to errors in  $S$ , dimensionless.
- CST,  $\rho_{TS}$  the linear correlation coefficient relating errors in  $\mathbf{B} \cdot \mathbf{T}$  to errors in  $S$ , dimensionless.

The third line contains the three semiaxes of the one-sigma position ellipsoid described by  $\mathbf{M}_1 \Lambda^{-1} \mathbf{M}^T = 1$ .

Line 3

- LSA,  $\sqrt{\epsilon_{max}}$  the largest semiaxis of the position ellipsoid, in km. ( $\epsilon_{max}$  is the largest eigenvalue of  $\Lambda_{M_1}$ , in  $\text{km}^2$ .)
- MSA,  $\sqrt{\epsilon_{mid}}$  the middle semiaxis of the position ellipsoid, in km. ( $\epsilon_{mid}$  is the second-largest, or middle, eigenvalue of  $\Lambda_{M_1}$ , in  $\text{km}^2$ .)
- SSA,  $\sqrt{\epsilon_{min}}$  the smallest semiaxis of the position ellipsoid, in km. ( $\epsilon_{min}$  is the smallest eigenvalue of  $\Lambda_{M_1}$ , in  $\text{km}^2$ .)

The fourth line describes the projection of the above position ellipsoid on the  $\mathbf{T}$ - $\mathbf{R}$  plane. This projection is an ellipse with major and minor semiaxes and orientation as described below:

Line 4

- EL1 the major semiaxis of the target error ellipsoid projected onto the  $\mathbf{T}$ - $\mathbf{R}$  plane, in km.

- EL2 the minor semiaxis of the target error ellipsoid projected onto the  $\mathbf{T}$ - $\mathbf{R}$  plane, in km.

- ALF,  $\alpha$  the angle measured counterclockwise from the  $\mathbf{T}$ -axis to the major semiaxis direction, in deg ( $0 \cong \alpha \cong 180$  deg).

The  $\Lambda_{\dot{\mathbf{x}}}$  matrix used in generating the results for this report is

$$\Lambda_{\dot{\mathbf{x}}} = \begin{pmatrix} 25 \times 10^{-12} & 0 & 0 \\ 0 & 2.25 \times 10^{-12} & 0 \\ 0 & 0 & .0225 \times 10^{-12} \end{pmatrix} \left( \frac{\text{km}}{\text{sec}} \right)^2$$

In all cases  $\text{LSA} \gg \text{SSA}$ , so that the information contained in lines 3 and 4 of the printout is very useful in visualizing the error ellipsoid. The general shape of the ellipsoid is a thin elliptical "pancake." When  $\text{MSA} \ll \text{LSA}$ , the "pancake" degenerates to approach a pencil shape. By inspecting the "shadow" of the pancake or pencil shape on the  $\mathbf{T}$ - $\mathbf{R}$  plane, its orientation may be visualized.

If it is desired to estimate the flight time  $T_F$ , this can easily be done by the relation

$$\sigma_F = \frac{1}{V_{hp}} \sigma_S$$

The correlation coefficients between  $T_F$  and  $\mathbf{B} \cdot \mathbf{T}$  are those given by CST; those between  $T_F$  and  $\mathbf{B} \cdot \mathbf{R}$  are given by CRS.

## IV. CONSTANTS

Constants used in trajectory calculations at the Jet Propulsion Laboratory are given in Ref. 9. For purposes of ready reference those constants used in the calculations contained herein are given below.

### Gravitational Constants

#### 1. Sun

$$GM_S = 2.959122083 \times 10^{-4} \text{ au}^3/\text{day}^2$$

#### 2. Earth

$$GM_E = 3.986032 \times 10^5 \text{ km}^3/\text{sec}^2$$

### Astronomical Unit-to-Kilometer Conversion Factor

$$1 \text{ au} = 149.599 \times 10^6 \text{ km}$$

### Earth's Rotation Rate

$$\omega_E = 4.1780742 \times 10^{-3} \text{ deg/sec}$$

## REFERENCES

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3. Noton, A. R. M., *The Statistical Analysis of Space Guidance Systems*, Technical Memorandum No. 33-15, Jet Propulsion Laboratory, Pasadena, June 15, 1960.
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5. Battin, R. H., "The Determination of Round-Trip Planetary Reconnaissance Trajectories," *Journal of the Aero/Space Sciences*, Volume 26, No. 9, September 1959.
6. Clarke, V. C., Jr., *Design of Lunar and Interplanetary Ascent Trajectories*, Technical Report No. 32-30, Rev. 1, Jet Propulsion Laboratory, Pasadena, March 15, 1962.
7. Clarke, V. C., Jr., *A Summary of the Characteristics of Ballistic Interplanetary Trajectories, 1962-1977*, Technical Report No. 32-209, Jet Propulsion Laboratory, Pasadena, January 15, 1962.
8. Clarke, V. C., Jr., Roth, R. Y., Scholey, W. J., and Bollman, W. E., *Design Parameters for Ballistic Interplanetary Trajectories—Part I, One-Way Transfers to Mars and Venus*, Technical Report No. 32-77, Jet Propulsion Laboratory, Pasadena, January 16, 1963.
9. Clarke, V. C., Jr., *Constants and Related Data for Use in Trajectory Calculations—As Adopted by the Ad Hoc NASA Standard Constants Committee*, Technical Report No. 32-604, Jet Propulsion Laboratory, March 6, 1964.

## Earth-Mars Trajectories, 1973

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LAUNCH DATE AUG 8 1973

FLIGHT TIME 318.00

ARRIVAL DATE JUN 22 1974

HELIOCENTRIC CONIC										DISTANCE 684.180										EARTH TO MARS																																																																																				
RL	151.69	LAL	.00	LOL	315.31	VL	33.023	GAL	-.31	AZL	97.20	HCA	194.68	8MA	201.28	ECC	.24653	INC	7.1952	V1	29.372	RP	249.09	LAP	1.82	LOP	149.88	VP	20.156	GAP	-3.90	AZP	83.04	TAL	357.43	TAP	192.11	RCA	151.66	APO	250.90	V2	21.986	RC	351.261	GL	-30.66	GP	44.63	ZAL	90.24	ZAP	63.98	ETS	211.08	ZAE	78.23	ETE	193.37	ZAC	130.90	ETC	288.82	LVI	-65.07																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	28.603	VHL	5.348	DLA	-31.94	RAL	58.54	RAD	6646.5	VEL	12.188	PTH	7.15	VHP	3.638	DPA	47.21	RAP	356.13	ECC	1.4707	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	16	24	46	2549.01	-9.84	68.52	282.39	136.79	17	7	15	1549.0	8.55	52.76	60.00	17	54	33	2310.11	-2.77	53.75	289.13	130.22	18	33	3	1310.1	13.23	35.64	70.00	20	4	23	1927.84	6.30	29.61	295.94	123.64	20	36	31	927.8	19.40	8.96	74.50	22	5	40	1552.22	15.73	6.51	301.67	118.16	22	31	32	552.2	25.95	343.28	74.50	22	5	40	1552.22	15.73	6.51	301.67	118.16	22	31	32	552.2	25.95	343.28	74.50	22	5	40	1552.22	15.73	6.51	301.67	118.16	22	31	32	552.2	25.95	343.28	110.00	1	7	45	6262.70	6.30	296.43	295.94	123.64	2	52	8	5262.7	19.40	275.78
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-5.1216	TRA	2.7561	TC3	-6.2156	BAU	2.5567	SGT	9295.8	SGR	3986.1	SG3	743.2	ST	279.4	SR	106.5	SS	62.1	RDE	1.8879	RRA	-1.7453	RC3	2.4636	FAU	.18707	RRT	-.9792	RRF	-.9957	RTF	.9677	CRT	-.9918	CRS	.9976	CST	-.9815	FDE	-3.4214	FRA	3.8700	FC3	-5.6622	BSP	17774	SGB1D	114.4	R23	.2066	R13	-.9746	LSA	299.3	MSA	16.7	SSA	.4	BDE	5.4584	BRA	3.2622	BC3	6.6860	FSP	1262	SG110086.9	SG2	745.7	THA	157.09	EL1	298.8	EL2	12.7	ALF	159.28																										

LAUNCH DATE AUG 8 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 24 1974

HELIOCENTRIC CONIC										DISTANCE 687.918										EARTH TO MARS																																																																																				
RL	151.69	LAL	.00	LOL	315.31	VL	33.028	GAL	-.56	AZL	96.78	HCA	195.55	8MA	201.39	ECC	.24697	INC	6.7809	V1	29.372	RP	249.12	LAP	1.81	LOP	150.75	VP	20.161	GAP	-4.09	AZP	83.46	TAL	357.15	TAP	192.70	RCA	151.65	APO	251.12	V2	21.982	RC	352.974	GL	-48.71	GP	42.97	ZAL	90.61	ZAP	62.64	ETS	211.03	ZAE	77.03	ETE	193.82	ZAC	129.31	ETC	288.37	LVI	-63.53																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	26.937	VHL	5.190	DLA	-29.98	RAL	58.20	RAD	6645.8	VEL	12.120	PTH	7.09	VHP	3.544	DPA	45.86	RAP	357.53	ECC	1.4433	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	16	11	47	2580.65	-11.40	69.89	280.64	136.51	16	54	48	1580.6	6.97	54.10	60.00	17	35	26	2358.12	-4.88	56.05	286.84	130.05	18	14	44	1358.1	11.18	38.05	70.00	19	29	3	2023.84	2.66	34.65	292.53	124.06	20	2	47	1023.8	16.17	14.52	79.60	22	40	53	1421.66	15.29	356.46	299.90	116.11	23	4	34	421.7	24.73	333.01	79.60	22	40	53	1421.66	15.29	356.46	299.90	116.11	23	4	34	421.7	24.73	333.01	79.60	22	40	53	1421.66	15.29	356.46	299.90	116.11	23	4	34	421.7	24.73	333.01	110.00	0	32	26	1070.66	2.66	323.57	292.53	124.06	0	50	16	70.7	16.17	303.44
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-4.9032	TRA	2.7293	TC3	-6.6661	BAU	2.5618	SGT	9448.7	SGR	3823.4	SG3	793.6	ST	275.8	SR	99.5	SS	62.2	RDE	1.7074	RRA	-1.6495	RC3	2.4835	FAU	.19786	RRT	-.9786	RRF	-.9954	RTF	.9675	CRT	-.9913	CRS	.9976	CST	-.9797	FDE	-3.3984	FRA	4.0558	FC3	-6.3589	BSP	17900	SGB1D	193.0	R23	.2085	R13	-.9738	LSA	299.3	MSA	16.7	SSA	.4	BDE	5.1920	BRA	3.1891	BC3	7.1137	FSP	1345	SG110166.7	SG2	730.9	THA	158.28	EL1	292.9	EL2	12.4	ALF	160.28																										

LAUNCH DATE AUG •

LAUNCH DATE AUG 9 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 17 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 35.660 GAL .17 AZL 90.15 HCA 88.49 SMA 277.34 ECC .45316 INC .1475 V1 29.377  
 RP 218.71 LAP -.13 LOP 44.76 VP 27.113 GAP 24.21 AZP 90.00 TAL .34 TAP 89.03 RCA 151.66 APO 403.02 V2 25.127  
 RC 77.098 GL -.84 GP -5.06 ZAL 86.53 ZAP 174.54 ETS 249.69 ZAE 182.33 ETE 344.62 ZAC 78.32 ETC 282.78 LVI -12.01

PLANETOCENTRIC CONIC  
 C3 39.641 VHL 6.296 DLA 14.88 RAL 40.61 RAD 6650.5 VEL 12.630 PTH 7.48 VHP 9.044 DPA 10.68 RAP 42.04 ECC 1.6524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 54 42 3602.76 -47.35 137.78 289.34 95.32 12 54 44 2602.8 -39.80 105.83  
 60.00 12 17 30 3542.05 -40.28 132.91 289.93 91.56 13 16 32 2542.1 -35.25 103.01  
 70.00 12 50 35 3444.66 -34.13 125.04 289.95 88.66 13 48 0 2444.7 -31.11 96.72  
 80.00 13 40 52 3287.13 -29.69 112.88 289.73 86.67 14 35 39 2287.1 -28.05 85.57  
 90.00 14 54 13 3050.36 -28.01 95.35 289.61 85.94 15 45 3 2050.4 -26.88 68.40  
 100.00 16 23 43 2761.61 -29.69 74.25 289.73 86.67 17 9 45 1761.6 -28.05 46.94  
 110.00 17 50 2 2491.48 -34.13 53.95 289.95 88.66 18 31 33 1491.5 -31.11 25.64

MID-COURSE EXECUTION ACCURACY  
 SGT 1028.5 SGR 619.6 SG3 127.6  
 RRT -.1026 RRF .1215 RTF -.6059  
 SGB 1200.7 R23 -.0250 R13 .6083  
 SG1 1031.5 SG2 614.5 THA 174.51

ORBIT DETERMINATION ACCURACY  
 ST 20.2 SR 28.8 SS 9.6  
 CRT .6361 CR8 .7400 CST .9766  
 LSA 33.5 MSA 14.5 S5A 1.3  
 EL1 32.4 EL2 13.9 ALF 59.78

DIFFERENTIAL CORRECTIONS  
 TDE -.3203 TRA -.9947 TC3 .2455 BAV .1355  
 RDE -.6294 RRA .2319 RC3 -.0714 FAU .05048  
 FDE .2196 FRA .4908 FC3-1.1025 B8P 1374  
 BDE .7062 BRA 1.0214 BC3 .2557 FSP 148

LAUNCH DATE AUG 9 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 19 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 35.501 GAL .23 AZL 90.11 HCA 89.62 SMA 270.93 ECC .44023 INC .1108 V1 29.377  
 RP 219.08 LAP -.11 LOP 45.89 VP 26.865 GAP 23.82 AZP 90.00 TAL .76 TAP 90.39 RCA 151.66 APO 390.21 V2 25.087  
 RC 78.631 GL -.65 GP -5.18 ZAL 86.06 ZAP 174.09 ETS 243.07 ZAE 161.72 ETE 344.46 ZAC 78.13 ETC 282.75 LVI -11.79

PLANETOCENTRIC CONIC  
 C3 37.695 VHL 6.140 DLA 14.93 RAL 40.09 RAD 6649.9 VEL 12.553 PTH 7.43 VHP 8.767 DPA 10.67 RAP 42.42 ECC 1.6204  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 52 27 3590.91 -47.27 136.65 287.59 96.19 12 52 18 2590.9 -39.41 104.96  
 60.00 12 15 12 3530.35 -40.25 131.91 288.31 92.24 13 14 2 2530.4 -34.96 102.15  
 70.00 12 48 13 3433.16 -34.15 124.14 288.41 89.19 13 45 26 2433.2 -30.91 95.89  
 80.00 13 38 25 3275.84 -29.73 112.04 288.24 87.11 14 33 1 2275.8 -27.90 84.77  
 90.00 14 51 45 3039.17 -28.06 94.54 288.13 86.34 15 42 24 2039.2 -26.75 67.61  
 100.00 16 21 17 2750.31 -29.73 73.41 288.24 87.11 17 7 8 1750.3 -27.90 46.13  
 110.00 17 47 39 2479.98 -34.15 53.06 288.41 89.19 18 28 59 1480.0 -30.91 24.80

MID-COURSE EXECUTION ACCURACY  
 SGT 1052.7 SGR 624.4 SG3 135.8  
 RRT -.1065 RRF -.1301 RTF -.6235  
 SGB 1224.0 R23 -.0287 R13 .6261  
 SG1 1055.9 SG2 618.9 THA 174.48

ORBIT DETERMINATION ACCURACY  
 ST 20.8 SR 29.0 SS 10.0  
 CRT .6452 CR8 .7490 CST .9767  
 LSA 34.0 MSA 14.7 S5A 1.4  
 EL1 32.8 EL2 14.0 ALF 58.78

DIFFERENTIAL CORRECTIONS  
 TDE -.3250 TRA -.9820 TC3 .2783 BAV .1458  
 RDE -.8183 RRA .2305 RC3 -.0795 FAU .05243  
 FDE .2325 FRA .5025 FC3-1.2043 B8P 1494  
 BDE .6967 BRA 1.0087 BC3 .2894 FSP 166

LAUNCH DATE AUG 9 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 21 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 35.390 GAL .30 AZL 90.08 HCA 90.75 SMA 265.17 ECC .42808 INC .0740 V1 29.377  
 RP 219.45 LAP -.08 LOP 47.02 VP 26.628 GAP 23.44 AZP 90.00 TAL 1.00 TAP 91.75 RCA 151.66 APO 378.68 V2 25.046  
 RC 80.245 GL -.44 GP -5.32 ZAL 85.58 ZAP 173.96 ETS 237.44 ZAE 161.17 ETE 344.25 ZAC 77.93 ETC 282.72 LVI -11.57

PLANETOCENTRIC CONIC  
 C3 35.907 VHL 5.992 DLA 14.97 RAL 39.55 RAD 6649.2 VEL 12.482 PTH 7.37 VHP 8.500 DPA 10.65 RAP 42.78 ECC 1.5909  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 50 7 3579.55 -47.18 135.57 285.88 97.02 12 49 46 2579.6 -39.03 104.14  
 60.00 12 12 48 3519.14 -40.22 130.96 286.71 92.88 13 11 28 2519.1 -34.68 101.34  
 70.00 12 45 46 3422.15 -34.15 123.28 286.88 89.69 13 42 48 2422.2 -30.71 95.09  
 80.00 13 35 54 3265.05 -29.76 111.24 286.76 87.53 14 30 19 2265.0 -27.76 84.00  
 90.00 14 49 11 3028.48 -28.11 93.76 286.66 86.73 15 39 40 2028.5 -26.63 66.85  
 100.00 16 18 46 2739.52 -29.76 72.61 286.76 87.53 17 4 25 1739.5 -27.76 45.36  
 110.00 17 45 12 2468.97 -34.15 52.20 286.88 89.69 18 28 21 1469.0 -30.71 24.01

MID-COURSE EXECUTION ACCURACY  
 SGT 1078.0 SGR 629.0 SG3 144.8  
 RRT -.1195 RRF .1394 RTF -.6287  
 SGB 1248.1 R23 -.0269 R13 .6314  
 SG1 1081.9 SG2 622.2 THA 174.03

ORBIT DETERMINATION ACCURACY  
 ST 21.1 SR 29.1 SS 10.4  
 CRT .6403 CR8 .7598 CST .9729  
 LSA 34.3 MSA 14.9 S5A 1.4  
 EL1 32.9 EL2 14.3 ALF 58.47

DIFFERENTIAL CORRECTIONS  
 TDE -.3203 TRA -.9769 TC3 .3046 BAV .1523  
 RDE -.8038 RRA .2288 RC3 -.0888 FAU .05472  
 FDE .2450 FRA .5085 FC3-1.3193 B8P 1523  
 BDE .6833 BRA 1.0034 BC3 .3173 FSP 173

LAUNCH DATE AUG 9 1973

FLIGHT TIME 106.00

ARRIVAL DATE NOV 23 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 35.208 GAL .37 AZL 90.04 HCA 91.87 SMA 259.96 ECC .41664 INC .0357 V1 29.377  
 RP 219.82 LAP -.04 LOP 48.14 VP 26.401 GAP 23.06 AZP 90.00 TAL 1.24 TAP 93.12 RCA 151.65 APO 368.28 V2 25.005  
 RC 81.936 GL -.23 GP -5.45 ZAL 85.08 ZAP 172.98 ETS 232.69 ZAE 160.68 ETE 343.99 ZAC 77.74 ETC 282.69 LVI -11.34

PLANETOCENTRIC CONIC  
 C3 34.285 VHL 5.854 DLA 15.02 RAL 39.00 RAD 6648.8 VEL 12.417 PTH 7.32 VHP 8.243 DPA 10.63 RAP 43.14 ECC 1.5639  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 47 43 3568.68 -47.08 134.53 284.20 97.81 12 47 11 2568.7 -38.66 103.36  
 60.00 12 10 21 3508.43 -40.17 130.05 285.14 93.50 13 8 49 2508.4 -34.40 100.56  
 70.00 12 43 14 3411.65 -34.15 122.46 285.39 90.18 13 40 5 2411.7 -30.51 94.34  
 80.00 13 33 18 3254.78 -29.79 110.48 285.30 87.93 14 27 32 2254.8 -27.62 83.27  
 90.00 14 46 33 3018.32 -28.14 93.02 285.22 87.10 15 36 51 2018.3 -26.91 66.13  
 100.00 16 16 9 2729.25 -29.79 71.85 285.30 87.93 17 1 39 1729.2 -27.62 44.63  
 110.00 17 42 40 2458.47 -34.15 51.38 285.39 90.18 18 23 39 1458.5 -30.51 23.25

MID-COURSE EXECUTION ACCURACY  
 SGT 1101.3 SGR 633.6 SG3 154.7  
 RRT -.1273 RRF .1510 RTF -.6380  
 SGB 1270.6 R23 -.0312 R13 .6411  
 SG1 1105.7 SG2 626.0 THA 173.82

ORBIT DETERMINATION ACCURACY  
 ST 21.5 SR 29.1 SS 10.7  
 CRT .6450 CR8 .7675 CST .9717  
 LSA 34.7 MSA 15.0 S5A 1.5  
 EL1 33.2 EL2 14.4 ALF 57.71

DIFFERENTIAL CORRECTIONS  
 TDE -.3219 TRA -.9663 TC3 .3380 BAV .1605  
 RDE -.5913 RRA .2273 RC3 -.0991 FAU .05725  
 FDE .2572 FRA .5164 FC3-1.4464 B8P 1589  
 BDE .6732 BRA .9926 BC3 .3503 FSP 190

LAUNCH DATE AUG 9 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 25 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 38.074 GAL .43 AZL 90.00 HCA 92.99 SMA 255.25 ECC .40588 INC .0000 V1 29.377  
 RP 220.19 LAP -.00 LOP 49.28 VP 26.182 GAP 22.68 AZP 90.00 TAL 1.49 TAP 94.49 RCA 151.65 APO 358.85 V2 24.984  
 RC 83.701 GL -.02 GP -5.60 ZAL 84.98 ZAP 172.35 ETS 228.69 ZAE 160.26 ETE 343.88 ZAC 77.54 ETC 282.66 LVI -11.11

PLANETOCENTRIC CONIC  
 C3 32.755 VHL 5.723 DLA 15.07 RAL 38.43 RAD 6648.1 VEL 12.356 PTH 7.28 VHP 7.995 DPA 10.60 RAP 43.50 ECC 1.5391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 45 15 3538.32 -46.98 133.55 282.56 98.56 12 44 33 2558.3 -38.30 102.63  
 60.00 12 7 49 3498.24 -40.13 129.19 283.60 94.08 13 6 7 2498.2 -34.13 99.83  
 70.00 12 40 37 3401.68 -34.15 121.68 283.91 90.64 13 37 19 2401.7 -30.32 93.62  
 80.00 13 30 37 3245.04 -29.81 109.76 283.86 88.31 14 24 42 2245.0 -27.48 82.57  
 90.00 14 43 50 3008.71 -28.17 92.32 283.80 87.45 15 33 59 2008.7 -26.39 65.45  
 100.00 16 13 28 2719.51 -29.81 71.12 283.86 88.31 16 58 48 1719.5 -27.48 43.94  
 110.00 17 40 4 2448.50 -34.15 50.60 283.91 90.64 18 20 52 1448.5 -30.32 22.54

DIFFERENTIAL CORRECTIONS  
 TDE -.3249 TRA -.9593 TC3 .3691 BAU .1686 SGT 1128.5 SGR 637.9 SG3 164.7 ST 22.1 SR 29.2 SS 11.1  
 RDE -.5791 RRA .2261 RC3 -.1099 FAU .05971 RRT -.1357 RRF .1622 RTF -.6481 CRT .6497 CRS .7763 CST .9704  
 FDE .2719 FRA .5264 FC3-1.5783 BSP 1647 SGB 1296.3 R23 -.0348 R13 .6515 LSA 35.1 MSA 15.1 SSA 1.3  
 BDE .6841 BRA .9856 BC3 .3851 FSP 205 SG1 1133.3 SG2 629.3 THA 173.65 EL1 33.6 EL2 14.6 ALF 56.78

LAUNCH DATE AUG 9 1973

FLIGHT TIME 110.00

ARRIVAL DATE NOV 27 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 34.947 GAL .50 AZL 89.97 HCA 94.11 SMA 250.96 ECC .39575 INC .0321 V1 29.377  
 RP 220.57 LAP .03 LOP 50.38 VP 25.972 GAP 22.31 AZP 90.00 TAL 1.75 TAP 95.86 RCA 151.64 APO 350.28 V2 24.923  
 RC 85.536 GL .21 GP -5.75 ZAL 84.06 ZAP 171.68 ETS 225.31 ZAE 159.89 ETE 343.33 ZAC 77.33 ETC 282.63 LVI -10.87

PLANETOCENTRIC CONIC  
 C3 31.366 VHL 5.601 DLA 15.12 RAL 37.84 RAD 6647.5 VEL 12.300 PTH 7.24 VHP 7.756 DPA 10.55 RAP 43.84 ECC 1.5182  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 42 43 3548.47 -46.88 132.62 280.95 99.27 12 41 51 2548.5 -37.95 101.94  
 60.00 12 5 13 3488.57 -40.08 128.37 282.09 94.64 13 3 21 2488.6 -33.87 99.14  
 70.00 12 37 56 3392.25 -34.14 120.94 282.46 91.08 13 34 29 2392.2 -30.14 92.95  
 80.00 13 27 51 3235.86 -29.83 109.07 282.45 88.67 14 21 47 2235.9 -27.35 81.93  
 90.00 14 41 2 2999.65 -28.20 91.66 282.39 87.78 15 31 2 1999.7 -26.28 64.81  
 100.00 16 10 43 2710.33 -29.83 70.44 282.45 88.67 16 55 53 1710.3 -27.35 43.29  
 110.00 17 37 23 2439.07 -34.14 49.86 282.46 91.08 18 18 2 1439.1 -30.14 21.87

DIFFERENTIAL CORRECTIONS  
 TDE -.3253 TRA -.9474 TC3 .4046 BAU .1772 SGT 1130.7 SGR 641.9 SG3 175.3 ST 22.5 SR 29.2 SS 11.6  
 RDE -.5672 RRA .2247 RC3 -.1216 FAU .06233 RRT -.1458 RRF .1729 RTF -.6583 CRT .6533 CRS .7885 CST .9676  
 FDE .2889 FRA .5315 FC3-1.7205 BSP 1697 SGB 1317.7 R23 -.0357 R13 .6619 LSA 35.5 MSA 15.2 SSA 1.6  
 BDE .6539 BRA .9737 BC3 .4225 FSP 222 SG1 1156.2 SG2 632.0 THA 173.36 EL1 33.8 EL2 14.7 ALF 56.11

LAUNCH DATE AUG 9 1973

FLIGHT TIME 112.00

ARRIVAL DATE NOV 29 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 34.827 GAL .56 AZL 89.93 HCA 95.22 SMA 247.05 ECC .38621 INC .0674 V1 29.377  
 RP 220.95 LAP .07 LOP 51.49 VP 25.771 GAP 21.94 AZP 90.01 TAL 2.01 TAP 97.23 RCA 151.64 APO 342.46 V2 24.882  
 RC 87.440 GL .44 GP -5.90 ZAL 83.53 ZAP 170.97 ETS 222.44 ZAE 159.58 ETE 342.93 ZAC 77.12 ETC 282.60 LVI -10.64

PLANETOCENTRIC CONIC  
 C3 30.087 VHL 5.485 DLA 15.17 RAL 37.25 RAD 6647.0 VEL 12.248 PTH 7.19 VHP 7.525 DPA 10.50 RAP 44.18 ECC 1.4951  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 40 7 3539.15 -46.77 131.75 279.39 99.93 12 39 7 2539.1 -37.62 101.29  
 60.00 12 2 33 3479.43 -40.03 127.60 280.82 95.16 13 0 33 2479.4 -33.63 98.49  
 70.00 12 35 12 3383.36 -34.13 120.25 281.05 91.49 13 31 35 2383.4 -29.96 92.32  
 80.00 13 25 1 3227.25 -29.84 108.43 281.07 89.00 14 18 48 2227.2 -27.22 81.32  
 90.00 14 38 9 2991.17 -28.22 91.04 281.02 88.09 15 28 1 1991.2 -26.17 64.22  
 100.00 16 7 53 2701.72 -29.84 69.80 281.07 89.00 16 52 55 1701.7 -27.22 42.69  
 110.00 17 34 38 2430.18 -34.13 49.17 281.05 91.49 18 15 8 1430.2 -29.96 21.24

DIFFERENTIAL CORRECTIONS  
 TDE -.3278 TRA -.9375 TC3 .4408 BAU .1833 SGT 1174.9 SGR 645.9 SG3 186.6 ST 22.9 SR 29.3 SS 12.0  
 RDE -.5557 RRA .2237 RC3 -.1343 FAU .06507 RRT -.1555 RRF .1858 RTF -.6883 CRT .6586 CRS .7968 CST .9663  
 FDE .3050 FRA .5405 FC3-1.8723 BSP 1756 SGB 1340.8 R23 -.0395 R13 .6723 LSA 35.8 MSA 15.3 SSA 1.6  
 BDE .6452 BRA .9638 BC3 .4606 FSP 239 SG1 1180.9 SG2 634.8 THA 173.12 EL1 34.1 EL2 14.8 ALF 55.25

LAUNCH DATE AUG 9 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 1 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 34.714 GAL .62 AZL 89.89 HCA 96.33 SMA 243.47 ECC .37722 INC .1042 V1 29.377  
 RP 221.33 LAP .10 LOP 52.80 VP 25.577 GAP 21.57 AZP 90.01 TAL 2.28 TAP 98.61 RCA 151.63 APO 335.32 V2 24.840  
 RC 89.407 GL .68 GP -6.06 ZAL 83.00 ZAP 170.24 ETS 219.98 ZAE 159.33 ETE 342.48 ZAC 76.91 ETC 282.57 LVI -10.40

PLANETOCENTRIC CONIC  
 C3 28.908 VHL 5.377 DLA 15.23 RAL 36.85 RAD 6646.6 VEL 12.200 PTH 7.16 VHP 7.303 DPA 10.44 RAP 44.51 ECC 1.4758  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 37 29 3530.35 -46.87 130.92 277.86 100.56 12 36 19 2530.4 -37.31 100.69  
 60.00 11 59 50 3470.83 -39.97 126.88 279.17 95.65 12 57 41 2470.8 -33.39 97.88  
 70.00 12 32 23 3375.03 -34.11 119.60 279.66 91.87 13 28 39 2375.0 -29.79 91.73  
 80.00 13 22 7 3219.21 -29.85 107.84 279.71 89.32 14 15 46 2219.2 -27.10 80.75  
 90.00 14 35 13 2983.27 -28.24 90.46 279.67 88.38 15 24 56 1983.3 -26.06 63.66  
 100.00 16 4 59 2693.68 -29.85 69.21 279.71 89.32 16 49 52 1693.7 -27.10 42.12  
 110.00 17 31 50 2421.83 -34.11 48.52 279.66 91.87 18 12 11 1421.9 -29.79 20.65

DIFFERENTIAL CORRECTIONS  
 TDE -.3282 TRA -.9269 TC3 .4782 BAU .1935 SGT 1197.7 SGR 650.0 SG3 198.5 ST 23.3 SR 29.3 SS 12.4  
 RDE -.5446 RRA .2224 RC3 -.1481 FAU .06803 RRT -.1674 RRF .2001 RTF -.6769 CRT .6617 CRS .8045 CST .9642  
 FDE .3200 FRA .5457 FC3-2.0374 BSP 1804 SGB 1362.7 R23 -.0426 R13 .6812 LSA 36.2 MSA 15.3 SSA 1.6  
 BDE .6359 BRA .9532 BC3 .5006 FSP 258 SG1 1204.6 SG2 637.2 THA 172.78 EL1 34.3 EL2 14.9 ALF 54.59





LAUNCH DATE AUG 9 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC

RL 151.66 LAL	.00 LOL	316.27 VL	34.232 GAL	.92 AZL	89.71 HCA	101.81 SMA	229.49 ECC	.33947 INC	.2868 V1	29.377
RP 223.25 LAP	.28 LOP	58.08 VP	24.711 GAP	18.79 AZP	90.06 TAL	3.65 TAP	105.46 RCA	151.58 APO	307.39 V2	24.631
RC 100.104 GL	2.00 GP	-8.98 ZAL	80.30 ZAP	166.23 ETS	211.84 ZAE	158.89 ETE	339.30 ZAC	75.78 ETC	282.46 LVI	-9.15

PLANETOCENTRIC CONIC

C3 24.256 VHL	4.925 DLA	15.59 RAL	33.56 RAD	8644.7 VEL	12.010 PTH	7.00 VHP	6.302 DPA	9.96 RAP	46.01 ECC	1.3992
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	11 23 40	3494.33	-46.16	127.59	270.92	103.08	12 21 55	2494.3	-35.98	98.27
60.00	11 45 34	3436.07	-39.70	123.96	272.53	97.61	12 42 50	2436.1	-32.40	95.47
70.00	12 17 32	3341.94	-34.01	117.02	273.22	93.39	13 13 14	2341.9	-29.09	89.41
80.00	13 6 41	3187.94	-29.85	105.51	273.39	90.54	13 59 49	2187.9	-26.60	78.56
90.00	14 19 30	2952.90	-28.28	88.24	273.39	89.49	15 8 43	1952.9	-25.64	61.54
100.00	15 49 33	2662.41	-29.85	66.88	273.39	90.54	16 33 55	1662.4	-26.60	39.93
110.00	17 18 59	2388.76	-34.01	45.94	273.22	93.39	17 56 47	1388.8	-29.09	18.33

DIFFERENTIAL CORRECTIONS

TDE	-.3345 TRA	-.8699 TC3	.6849 BAU	.2347
RDE	-.4915 RRA	.2170 RC3	-.2339 FAU	.08537
FDE	.4269 FRA	.5666 FC3	-3.0469 BSP	2005
BDE	.5945 BRA	.8965 BC3	.7238 FSP	371

MID-COURSE EXECUTION ACCURACY

SGT	1307.8 SGR	869.9 SG3	269.4
RRT	-.2378 RRF	.2810 RTF	-.7202
SGB	1469.4 R23	-.0562 R13	.7269
SGI	1320.6 SG2	644.4 THA	170.86

ORBIT DETERMINATION ACCURACY

ST	25.1 SR	28.9 SS	14.8
CRT	.6830 CRS	.8496 CST	.9513
LSA	38.0 MSA	15.3 SSA	1.9
EL1	35.1 EL2	15.0 ALF	50.87

LAUNCH DATE AUG 9 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC

RL 151.66 LAL	.00 LOL	316.27 VL	34.151 GAL	.98 AZL	89.68 HCA	102.90 SMA	227.30 ECC	.33316 INC	.3233 V1	29.377
RP 223.64 LAP	.32 LOP	50.17 VP	24.556 GAP	19.44 AZP	90.07 TAL	3.93 TAP	106.82 RCA	151.57 APO	303.03 V2	24.590
RC 102.397 GL	2.28 GP	-7.19 ZAL	79.77 ZAP	165.37 ETS	210.75 ZAE	158.95 ETE	338.56 ZAC	75.54 ETC	282.45 LVI	-8.88

PLANETOCENTRIC CONIC

C3 23.528 VHL	4.851 DLA	15.68 RAL	32.93 RAD	6644.4 VEL	11.980 PTH	6.98 VHP	6.122 DPA	9.83 RAP	46.27 ECC	1.3872
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	11 20 50	3488.72	-46.08	127.08	269.67	103.47	12 18 58	2488.7	-35.77	97.90
60.00	11 42 36	3430.77	-39.65	123.52	271.33	97.90	12 39 46	2430.8	-32.25	95.11
70.00	12 14 26	3337.07	-33.99	116.64	272.04	93.61	13 10 3	2337.1	-28.98	89.07
80.00	13 3 26	3183.52	-29.85	105.18	272.22	90.71	13 56 29	2183.5	-26.52	78.25
90.00	14 16 11	2948.70	-28.28	87.93	272.23	89.64	15 5 19	1948.7	-25.57	61.25
100.00	15 46 18	2657.99	-29.85	66.55	272.22	90.71	16 30 36	1658.0	-26.52	39.62
110.00	17 13 52	2383.89	-33.99	45.56	272.04	93.61	17 53 36	1383.9	-28.98	17.99

DIFFERENTIAL CORRECTIONS

TDE	-.3374 TRA	-.8601 TC3	.7225 BAU	.2410
RDE	-.4815 RRA	.2159 RC3	-.2549 FAU	.08938
FDE	.4518 FRA	.5671 FC3	-3.2889 BSP	2069
BDE	.5879 BRA	.8868 BC3	.7662 FSP	399

MID-COURSE EXECUTION ACCURACY

SGT	1328.1 SGR	874.3 SG3	285.9
RRT	-.2525 RRF	.3001 RTF	-.7244
SGB	1489.5 R23	-.0624 R13	.7318
SGI	1342.3 SG2	645.6 THA	170.47

ORBIT DETERMINATION ACCURACY

ST	25.5 SR	28.7 SS	15.4
CRT	.6882 CRS	.8578 CST	.9467
LSA	38.4 MSA	15.2 SSA	2.0
EL1	35.3 EL2	15.0 ALF	49.96

LAUNCH DATE AUG 9 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC

RL 151.66 LAL	.00 LOL	316.27 VL	34.074 GAL	1.03 AZL	89.64 HCA	103.98 SMA	225.28 ECC	.32721 INC	.3602 V1	29.377
RP 224.03 LAP	.35 LOP	60.25 VP	24.407 GAP	19.10 AZP	90.09 TAL	4.20 TAP	108.18 RCA	151.56 APO	298.99 V2	24.548
RC 104.735 GL	2.57 GP	-7.40 ZAL	79.24 ZAP	164.50 ETS	209.79 ZAE	159.05 ETE	337.66 ZAC	75.29 ETC	282.43 LVI	-8.82

PLANETOCENTRIC CONIC

C3 22.858 VHL	4.781 DLA	15.78 RAL	32.31 RAD	6644.1 VEL	11.952 PTH	6.95 VHP	5.948 DPA	9.68 RAP	46.52 ECC	1.3762
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
90.00	11 17 57	3483.64	-46.00	126.82	268.47	103.82	12 16 1	2483.6	-35.57	97.57
60.00	11 39 36	3426.02	-39.60	123.12	270.16	98.17	12 36 42	2426.0	-32.11	94.78
70.00	12 11 17	3332.77	-33.97	116.31	270.90	93.81	13 6 50	2332.8	-28.89	88.77
80.00	13 0 8	3179.71	-29.85	104.90	271.10	90.86	13 53 7	2179.7	-26.46	77.99
90.00	14 12 48	2945.14	-28.28	87.67	271.11	89.77	15 1 53	1945.1	-25.52	61.00
100.00	15 42 59	2654.18	-29.85	66.27	271.10	90.86	16 27 14	1654.2	-26.46	39.36
110.00	17 10 43	2379.59	-33.97	45.23	270.90	93.81	17 50 23	1379.6	-28.89	17.69

DIFFERENTIAL CORRECTIONS

TDE	-.3404 TRA	-.8492 TC3	.7832 BAU	.2481
RDE	-.4715 RRA	.2148 RC3	-.2775 FAU	.09372
FDE	.4793 FRA	.5685 FC3	-3.5499 BSP	2119
BDE	.5816 BRA	.8760 BC3	.8121 FSP	426

MID-COURSE EXECUTION ACCURACY

SGT	1348.2 SGR	879.2 SG3	303.7
RRT	-.2686 RRF	.3208 RTF	-.7302
SGB	1509.6 R23	-.0682 R13	.7384
SGI	1364.1 SG2	646.8 THA	170.03

ORBIT DETERMINATION ACCURACY

ST	25.9 SR	28.5 SS	16.0
CRT	.6940 CRS	.8656 CST	.9465
LSA	38.8 MSA	15.1 SSA	2.0
EL1	35.5 EL2	15.0 ALF	49.04

LAUNCH DATE AUG 9 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC

RL 151.66 LAL	.00 LOL	316.27 VL	34.001 GAL	1.09 AZL	89.60 HCA	105.06 SMA	223.39 ECC	.32160 INC	.3974 V1	29.377
RP 224.42 LAP	.38 LOP	61.33 VP	24.263 GAP	18.76 AZP	90.10 TAL	4.47 TAP	109.53 RCA	151.55 APO	295.24 V2	24.506
RC 107.119 GL	2.87 GP	-7.62 ZAL	78.72 ZAP	163.60 ETS	208.92 ZAE	159.20 ETE	336.68 ZAC	75.04 ETC	282.42 LVI	-8.36

PLANETOCENTRIC CONIC

C3 22.235 VHL	4.715 DLA	15.88 RAL	31.70 RAD	6643.8 VEL	11.926 PTH	6.93 VHP	5.780 DPA	9.52 RAP	46.76 ECC	1.3659
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	11 15 4	3479.08	-45.92	126.20	267.31	104.13	12 13 4	2479.1	-35.40	97.27
60.00	11 36 35	3421.82	-39.56	122.77	269.04	98.40	12 33 37	2421.8	-31.98	94.50
70.00	12 8 6	3329.05	-33.95	116.02	269.80	93.98	13 3 35	2329.1	-28.80	88.51
80.00	12 56 46	3176.52	-29.84	104.66	270.00	90.98	13 49 43	2176.5	-26.40	77.77
90.00	14 9 22	2942.22	-28.28	87.46	270.02	89.88	14 58 24	1942.2	-25.48	60.80
100.00	15 39 38	2651.00	-29.84	66.03	270.00	90.98	16 23 49	1651.0	-26.40	39.14
110.00	17 7 32	2375.87	-33.95	44.94	269.80	93.98	17 47 8	1375.9	-28.80	17.43

DIFFERENTIAL CORRECTIONS

TDE	-.3430 TRA	-.8303 TC3	.8039 BAU	.2552
RDE	-.4617 RRA	.2136 RC3	-.3014 FAU	.09822
FDE	.5079 FRA	.5667 FC3	-3.8242 BSP	2173
BDE	.5752 BRA	.8651 BC3	.8585 FSP	457

MID-COURSE EXECUTION ACCURACY

SGT	1367.5 SGR	884.3 SG3	322.1
RRT	-.2858 RRF	.3419 RTF	-.7354
SGB	1529.1 R23	-.0738 R13	.7445
SGI	1385.4 SG2	647.3 THA	169.56

ORBIT DETERMINATION ACCURACY

ST	26.2 SR	28.3 SS	16.5
CRT	.6992 CRS	.8733 CST	.9438
LSA	39.2 MSA	15.0 SSA	2.1
EL1	35.6 EL2	14.9 ALF	48.16

LAUNCH DATE AUG 9 1973 FLIGHT TIME 132.00 ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC DISTANCE 339.541 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.932 GAL 1.14 AZL 89.56 HCA 106.13 SMA 221.65 ECC .31631 INC .4348 V1 29.377
RP 224.81 LAP .42 LOP 62.40 VP 24.124 GAP 18.42 AZP 90.12 TAL 4.74 TAP 110.87 RCA 151.54 APO 291.76 V2 24.464
RC 109.544 GL 3.17 GP -7.86 ZAL 78.21 ZAP 162.69 ETS 206.15 ZAE 159.38 ETE 339.59 ZAC 74.78 ETC 282.42 LVI -8.09

PLANETOCENTRIC CONIC
C3 21.661 VHL 4.684 DLA 15.99 RAL 31.08 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 5.618 DPA 9.35 RAP 46.99 ECC 1.3565
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 12 11 3475.03 -45.05 125.84 266.20 104.41 12 10 6 2475.0 -35.25 97.01
60.00 11 33 32 3418.16 -39.53 122.47 267.95 98.61 12 30 30 2418.2 -31.87 94.25
70.00 12 4 53 3323.92 -33.93 115.78 268.73 94.12 13 0 19 2325.9 -28.73 88.30
80.00 12 53 22 3173.96 -29.84 104.47 268.95 91.08 13 48 16 2174.0 -26.36 77.59
90.00 14 5 52 2939.94 -28.28 87.29 268.97 89.96 14 54 32 1939.9 -25.44 60.64
100.00 15 36 14 2648.43 -29.84 65.84 268.95 91.08 16 20 22 1648.4 -26.36 39.98
110.00 17 4 19 2372.74 -33.93 44.69 268.73 94.12 17 43 52 1372.7 -28.73 17.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3448 TRA -.8266 TC3 .8425 BAV .2617 SGT 1384.1 SGR 690.0 SG3 341.5 ST 26.5 SR 28.1 SS 17.1
RDE -.4519 RRA .2124 RC3 -.3268 FAU .10293 RRT -.3040 RRF .3642 RTF -.7403 CRT .7038 CRS .8803 CST .9412
FDE .5361 FRA .5652 FC3-4.1137 BSP 2222 SGB 1546.5 R23 -.0795 R13 .7504 LSA 39.5 MSA 14.9 SSA 2.2
BDE .5684 BRA .6534 BC3 .9036 FSP 489 SGI 1404.3 SG2 647.8 THA 169.02 EL1 35.7 EL2 14.8 ALF 47.36

LAUNCH DATE AUG 9 1973 FLIGHT TIME 134.00 ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC DISTANCE 338.955 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.867 GAL 1.19 AZL 89.53 HCA 107.20 SMA 220.02 ECC .31132 INC .4724 V1 29.377
RP 225.20 LAP .45 LOP 63.47 VP 23.989 GAP 18.09 AZP 90.14 TAL 5.01 TAP 112.21 RCA 151.53 APO 286.52 V2 24.422
RC 112.011 GL 3.48 GP -8.10 ZAL 77.70 ZAP 161.76 ETS 207.45 ZAE 159.61 ETE 334.41 ZAC 74.52 ETC 282.41 LVI -7.81

PLANETOCENTRIC CONIC
C3 21.131 VHL 4.597 DLA 16.11 RAL 30.48 RAD 6643.3 VEL 11.880 PTH 6.89 VHP 5.462 DPA 9.16 RAP 47.20 ECC 1.3478
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 9 16 3471.50 -45.79 125.52 265.14 104.64 12 7 8 2471.5 -35.11 96.78
60.00 11 30 29 3415.05 -39.49 122.21 266.91 98.78 12 27 24 2415.0 -31.78 94.04
70.00 12 1 37 3323.37 -33.92 115.58 267.71 94.24 12 57 1 2323.4 -28.67 88.12
80.00 12 49 55 3172.02 -29.84 104.33 267.93 91.16 13 42 47 2172.0 -26.33 77.46
90.00 14 2 20 2938.31 -28.28 87.17 267.95 90.02 14 51 18 1938.3 -25.42 60.53
100.00 15 32 47 2646.49 -29.84 65.70 267.93 91.16 16 16 53 1646.5 -26.33 38.82
110.00 17 1 4 2370.18 -33.92 44.50 267.71 94.24 17 40 34 1370.2 -28.67 17.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3481 TRA -.8150 TC3 .8809 BAV .2682 SGT 1400.7 SGR 696.0 SG3 382.1 ST 26.9 SR 27.9 SS 17.9
RDE -.4420 RRA .2111 RC3 -.3540 FAU .10793 RRT -.3223 RRF .3871 RTF -.7449 CRT .7097 CRS .8877 CST .9387
FDE .5731 FRA .5622 FC3-4.4219 BSP 2254 SGB 1564.1 R23 -.0859 R13 .7561 LSA 39.9 MSA 14.8 SSA 2.3
BDE .5626 BRA .8419 BC3 .9494 FSP 523 SGI 1423.4 SG2 648.4 THA 168.48 EL1 35.8 EL2 14.7 ALF 46.41

LAUNCH DATE AUG 9 1973 FLIGHT TIME 136.00 ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC DISTANCE 342.401 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.805 GAL 1.24 AZL 89.49 HCA 108.27 SMA 218.51 ECC .30860 INC .5104 V1 29.377
RP 225.59 LAP .48 LOP 64.54 VP 23.859 GAP 17.76 AZP 90.16 TAL 5.27 TAP 113.54 RCA 151.51 APO 285.50 V2 24.380
RC 114.516 GL 3.80 GP -8.35 ZAL 77.21 ZAP 160.81 ETS 206.81 ZAE 159.86 ETE 333.11 ZAC 74.25 ETC 282.41 LVI -7.53

PLANETOCENTRIC CONIC
C3 20.640 VHL 4.543 DLA 16.24 RAL 29.88 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 5.311 DPA 8.96 RAP 47.40 ECC 1.3397
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 6 22 3468.47 -45.74 125.24 264.12 104.85 12 4 10 2468.5 -34.99 96.59
60.00 11 27 24 3412.47 -39.47 122.00 265.92 98.92 12 24 16 2412.5 -31.70 93.86
70.00 11 58 20 3321.39 -33.91 115.42 266.72 94.33 12 53 42 2321.4 -28.63 87.99
80.00 12 46 25 3170.71 -29.84 104.23 266.95 91.21 13 39 16 2170.7 -26.31 77.37
90.00 13 58 43 2937.33 -28.28 87.10 266.97 90.06 14 47 41 1937.3 -25.40 60.46
100.00 15 29 17 2645.18 -29.84 65.60 266.95 91.21 16 13 22 1645.2 -26.31 38.73
110.00 16 57 47 2368.21 -33.91 44.34 266.72 94.33 17 37 15 1368.2 -28.63 16.90

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3506 TRA -.8040 TC3 .9191 BAV .2747 SGT 1417.1 SGR 703.0 SG3 383.8 ST 27.2 SR 27.6 SS 18.8
RDE -.4322 RRA .2098 RC3 -.3830 FAU .11319 RRT -.3420 RRF .4114 RTF -.7491 CRT .7145 CRS .8942 CST .9361
FDE .6086 FRA .5582 FC3-4.7476 BSP 2291 SGB 1581.9 R23 -.0924 R13 .7615 LSA 40.3 MSA 14.7 SSA 2.3
BDE .5565 BRA .8309 BC3 .9957 FSP 557 SGI 1442.7 SG2 648.9 THA 167.88 EL1 35.9 EL2 14.6 ALF 45.51

LAUNCH DATE AUG 9 1973 FLIGHT TIME 138.00 ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC DISTANCE 345.876 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.746 GAL 1.28 AZL 89.45 HCA 109.33 SMA 217.10 ECC .30218 INC .5487 V1 29.377
RP 225.98 LAP .52 LOP 65.60 VP 23.733 GAP 17.44 AZP 90.18 TAL 5.52 TAP 114.86 RCA 151.50 APO 282.70 V2 24.338
RC 117.057 GL 4.12 GP -8.61 ZAL 76.73 ZAP 159.84 ETS 206.24 ZAE 160.14 ETE 331.88 ZAC 73.97 ETC 282.41 LVI -7.25

PLANETOCENTRIC CONIC
C3 20.186 VHL 4.493 DLA 16.37 RAL 29.28 RAD 6642.9 VEL 11.840 PTH 6.86 VHP 5.185 DPA 8.74 RAP 47.58 ECC 1.3322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 3 27 3465.95 -45.70 125.02 263.16 105.02 12 1 12 2466.0 -34.90 96.42
60.00 11 24 18 3410.43 -39.44 121.83 264.96 99.03 12 21 8 2410.4 -31.64 93.72
70.00 11 55 1 3320.00 -33.90 115.32 265.78 94.39 12 50 21 2320.0 -28.60 87.89
80.00 12 42 52 3170.03 -29.83 104.18 266.01 91.24 13 35 42 2170.0 -26.29 77.32
90.00 13 55 4 2937.01 -28.28 87.08 266.03 90.07 14 44 1 1937.0 -25.40 60.44
100.00 15 25 44 2644.50 -29.83 65.55 266.01 91.24 16 9 49 1644.5 -26.29 38.69
110.00 16 54 27 2366.81 -33.90 44.23 265.78 94.39 17 33 54 1366.8 -28.60 16.81

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3526 TRA -.7925 TC3 .9546 BAV .2808 SGT 1431.0 SGR 710.7 SG3 406.6 ST 27.5 SR 27.3 SS 19.3
RDE -.4224 RRA .2085 RC3 -.4137 FAU .11869 RRT -.3624 RRF .4364 RTF -.7528 CRT .7190 CRS .9003 CST .9334
FDE .6469 FRA .5531 FC3-5.0904 BSP 2341 SGB 1597.7 R23 -.0992 R13 .7666 LSA 40.7 MSA 14.5 SSA 2.4
BDE .5502 BRA .8195 BC3 1.0404 FSP 597 SGI 1459.9 SG2 649.3 THA 167.23 EL1 35.9 EL2 14.5 ALF 44.63

LAUNCH DATE AUG 9 1973

FLIGHT TIME 140.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 33.691 GAL 1.32 AZL 89.41 MCA 110.39 SMA 219.78 ECC .29797 INC .5873 V1 29.377  
 RP 226.37 LAP .55 LOP 66.66 VP 23.612 GAP 17.11 AZP 90.20 TAL 5.77 TAP 116.17 RCA 151.49 APO 280.08 V2 24.297  
 RC 119.633 GL 4.46 GP -0.89 ZAL 76.26 ZAP 156.85 ETS 205.71 ZAE 160.45 ETE 330.11 ZAC 73.69 ETC 282.41 LVI -6.96

DISTANCE 349.379 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.786 VHL 4.446 DLA 16.52 RAL 28.70 RAD 6642.7 VEL 11.823 PTH 6.84 VHP 5.024 DPA 6.51 RAP 47.75 ECC 1.3253  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 0 31 3463.92 -45.66 124.83 262.23 105.16 11 58 15 2463.9 -34.82 96.29  
 60.00 11 21 11 3408.91 -39.43 121.70 264.05 99.12 12 18 0 2408.9 -31.59 93.62  
 70.00 11 51 40 3319.18 -33.90 115.23 264.87 94.43 12 46 59 2319.2 -28.58 87.83  
 80.00 12 39 17 3169.98 -29.83 104.18 265.11 91.24 13 32 7 2170.0 -26.29 77.32  
 90.00 13 51 21 2937.34 -26.28 87.10 265.13 90.06 14 40 18 1937.3 -25.40 60.46  
 100.00 15 22 8 2644.46 -29.83 65.55 265.11 91.24 16 6 13 1644.3 -26.29 38.68  
 110.00 16 51 7 2366.00 -33.90 44.17 264.87 94.43 17 30 33 1366.0 -28.58 16.75

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3550 TRA -.7805 TC3 .9895 BAU .2868 SGT 1443.7 SGR 719.3 SG3 430.5 ST 27.8 SR 26.9 SS 20.1  
 RDE -.4125 RRA .2089 RC3 -.4462 FAU .12447 RRT -.3830 RRF .4621 RTF -.7563 CRT .7240 CRS .9063 CST .9309  
 FDE .6880 FRA .5454 FC3-5.4517 BSP 2373 SGB 1613.0 R23 -.1065 R13 .7717 LSA 41.1 MSA 14.4 S8A 2.5  
 BDE .5442 BRA .8075 BC3 1.0854 FSP 636 SG1 1476.3 SG2 849.8 THA 166.54 EL1 35.9 EL2 14.4 ALF 43.71

LAUNCH DATE AUG 9 1973

FLIGHT TIME 142.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 33.639 GAL 1.37 AZL 89.37 MCA 111.45 SMA 214.56 ECC .29401 INC .6284 V1 29.377  
 RP 226.76 LAP .58 LOP 67.72 VP 23.494 GAP 16.79 AZP 90.23 TAL 6.02 TAP 117.47 RCA 151.47 APO 277.64 V2 24.255  
 RC 122.240 GL 4.79 GP -9.17 ZAL 75.81 ZAP 157.84 ETS 205.23 ZAE 160.78 ETE 329.39 ZAC 73.40 ETC 282.42 LVI -6.67

DISTANCE 352.907 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.378 VHL 4.402 DLA 16.67 RAL 28.13 RAD 6642.6 VEL 11.806 PTH 6.83 VHP 4.888 DPA 6.26 RAP 47.90 ECC 1.3189  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 57 36 3462.39 -45.63 124.70 261.36 105.26 11 55 18 2462.4 -34.76 96.20  
 60.00 11 18 3 3407.93 -39.42 121.62 263.18 99.17 12 14 51 2407.9 -31.56 93.56  
 70.00 11 48 17 3318.94 -33.90 115.23 264.00 94.44 12 43 36 2318.9 -28.57 87.82  
 80.00 12 35 38 3170.57 -29.84 104.22 264.24 91.22 13 28 28 2170.6 -26.30 77.36  
 90.00 13 47 35 2938.35 -26.28 87.18 264.26 90.02 14 36 33 1938.3 -25.42 60.53  
 100.00 15 18 30 2645.04 -29.84 65.59 264.24 91.22 16 2 35 1645.0 -26.30 38.72  
 110.00 16 47 44 2365.76 -33.90 44.15 264.00 94.44 17 27 9 1365.8 -28.57 16.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3585 TRA -.7689 TC3 1.0200 BAU .2921 SGT 1454.5 SGR 728.7 SG3 455.3 ST 28.1 SR 26.5 SS 21.0  
 RDE -.4023 RRA .2054 RC3 -.4805 FAU .13044 RRT -.4030 RRF .4879 RTF -.7599 CRT .7295 CRS .9121 CST .9288  
 FDE .7346 FRA .5375 FC3-5.8276 BSP 2405 SGB 1626.8 R23 -.1147 R13 .7761 LSA 41.6 MSA 14.2 S8A 2.6  
 BDE .5388 BRA .7958 BC3 1.1275 FSP 678 SG1 1491.1 SG2 650.5 THA 165.84 EL1 36.0 EL2 14.2 ALF 42.68

LAUNCH DATE AUG 9 1973

FLIGHT TIME 144.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 33.589 GAL 1.41 AZL 89.33 MCA 112.50 SMA 213.41 ECC .29028 INC .6658 V1 29.377  
 RP 227.15 LAP .62 LOP 68.77 VP 23.381 GAP 16.48 AZP 90.25 TAL 6.26 TAP 118.76 RCA 151.46 APO 275.36 V2 24.214  
 RC 124.878 GL 5.13 GP -9.47 ZAL 75.37 ZAP 156.82 ETS 204.79 ZAE 161.13 ETE 326.50 ZAC 73.10 ETC 282.43 LVI -6.38

DISTANCE 356.458 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.019 VHL 4.361 DLA 16.63 RAL 27.56 RAD 6642.4 VEL 11.791 PTH 6.81 VHP 4.756 DPA 7.99 RAP 48.04 ECC 1.3130  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 54 41 3461.35 -45.61 124.60 260.53 105.33 11 52 22 2461.3 -34.72 96.13  
 60.00 11 14 55 3407.46 -39.41 121.58 262.35 99.20 12 11 42 2407.5 -31.53 93.52  
 70.00 11 44 53 3319.27 -33.90 115.26 263.17 94.43 12 40 12 2319.3 -28.58 87.84  
 80.00 12 31 56 3171.79 -29.84 104.31 263.41 91.17 13 24 48 2171.8 -26.32 77.44  
 90.00 13 43 44 2940.02 -26.28 87.30 263.43 89.96 14 32 44 1940.0 -25.43 60.65  
 100.00 15 14 48 2646.27 -29.84 65.68 263.41 91.17 15 58 54 1646.3 -26.32 38.81  
 110.00 16 44 19 2366.09 -33.90 44.16 263.17 94.43 17 23 45 1366.1 -28.58 16.76

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3803 TRA -.7568 TC3 1.0505 BAU .2977 SGT 1463.8 SGR 739.6 SG3 481.6 ST 28.4 SR 26.1 SS 21.8  
 RDE -.3922 RRA .2036 RC3 -.5170 FAU .13679 RRT -.4248 RRF .5149 RTF -.7514 CRT .7337 CRS .9172 CST .9262  
 FDE .7808 FRA .5262 FC3-6.2266 BSP 2432 SGB 1640.0 R23 -.1227 R13 .7807 LSA 41.9 MSA 14.0 S8A 2.6  
 BDE .5326 BRA .7837 BC3 1.1708 FSP 722 SG1 1503.2 SG2 651.2 THA 165.03 EL1 35.9 EL2 14.0 ALF 41.77

LAUNCH DATE AUG 9 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 33.843 GAL 1.45 AZL 89.29 MCA 113.55 SMA 212.34 ECC .28877 INC .7057 V1 29.377  
 RP 227.54 LAP .65 LOP 69.82 VP 23.270 GAP 16.18 AZP 90.28 TAL 6.49 TAP 120.04 RCA 151.45 APO 273.23 V2 24.172  
 RC 127.544 GL 5.48 GP -9.77 ZAL 74.94 ZAP 155.77 ETS 204.38 ZAE 161.49 ETE 324.42 ZAC 72.79 ETC 282.45 LVI -6.08

DISTANCE 360.030 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.688 VHL 4.323 DLA 17.01 RAL 27.01 RAD 6642.2 VEL 11.777 PTH 6.80 VHP 4.630 DPA 7.71 RAP 48.16 ECC 1.3078  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 51 46 3460.78 -45.60 124.55 259.74 105.37 11 49 26 2460.8 -34.70 96.09  
 60.00 11 11 46 3407.53 -39.41 121.59 261.57 99.20 12 8 33 2407.5 -31.55 93.53  
 70.00 11 41 26 3320.19 -33.90 115.33 262.38 94.39 12 36 46 2320.2 -28.60 87.90  
 80.00 12 28 11 3173.66 -29.84 104.45 262.61 91.10 13 21 5 2173.7 -26.36 77.57  
 90.00 13 39 50 2942.37 -26.28 87.47 262.63 89.87 14 28 53 1942.4 -25.48 60.81  
 100.00 15 11 3 2648.13 -29.84 65.82 262.61 91.10 15 55 11 1648.1 -26.36 38.94  
 110.00 16 40 52 2367.01 -33.90 44.25 262.38 94.39 17 20 19 1367.0 -28.60 16.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3632 TRA -.7453 TC3 1.0768 BAU .3027 SGT 1471.6 SGR 751.6 SG3 509.0 ST 28.7 SR 25.7 SS 22.8  
 RDE -.3817 RRA .2018 RC3 -.5555 FAU .14337 RRT -.4453 RRF .5418 RTF -.7630 CRT .7384 CRS .9219 CST .9241  
 FDE .8330 FRA .5147 FC3-6.6417 BSP 2466 SGB 1652.5 R23 -.1319 R13 .7847 LSA 42.4 MSA 13.8 S8A 2.7  
 BDE .5269 BRA .7722 BC3 1.2117 FSP 769 SG1 1518.3 SG2 652.3 THA 164.20 EL1 35.9 EL2 13.8 ALF 40.72

LAUNCH DATE AUG 9 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC DISTANCE 363.621 EARTH TO MARS  
 RL 151.66 LAL .00 LOL 316.27 VL 33.499 GAL 1.48 AZL 89.25 HCA 114.59 SMA 211.34 ECC .28345 INC .7461 V1 29.377  
 RP 227.93 LAP .68 LOP 70.86 VP 23.164 GAP 15.85 AZP 90.31 TAL 6.72 TAP 121.31 RCA 151.43 APO 271.24 V2 24.131  
 RC 130.237 GL 5.84 GP -10.09 ZAL 74.54 ZAP 154.70 ETS 204.00 ZAE 161.85 ETE 322.15 ZAC 72.47 ETC 282.47 LVI -5.77

PLANETOCENTRIC CONIC  
 C3 18.381 VHL 4.287 DLA 17.19 RAL 26.47 RAD 6642.1 VEL 11.765 PTH 6.79 VHP 4.907 DPA 7.40 RAP 48.26 ECC 1.3025  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 48 50 3460.70 -45.60 124.54 259.00 105.37 11 46 31 2460.7 -34.69 96.09  
 60.00 11 8 36 3408.10 -39.42 121.65 260.82 99.16 12 5 24 2408.1 -31.57 93.57  
 70.00 11 37 57 3321.68 -33.91 115.45 261.63 94.32 12 33 19 2321.7 -26.64 88.01  
 80.00 12 24 23 3176.17 -29.84 104.64 261.86 91.00 13 17 19 2176.2 -26.40 77.74  
 90.00 13 35 52 2945.40 -26.28 87.69 261.87 89.76 14 24 58 1945.4 -25.53 61.02  
 100.00 15 7 15 2650.65 -29.84 66.01 261.86 91.00 15 51 25 1650.6 -26.40 39.11  
 110.00 16 37 23 2368.50 -33.91 44.37 261.63 94.32 17 16 52 1368.5 -26.64 16.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3651 TRA -.7342 TC3 1.1014 BAU .3078 SGT 1478.1 SGR 765.5 SG3 537.8 ST 28.9 SR 25.2 SS 23.7  
 RDE -.3712 RRA .2000 RC3 -.5965 FAU .15031 RRT -.4668 RRF .5695 RTF -.7644 CRT .7419 CR8 .9259 CST .9218  
 FDE .8866 FRA .5024 FC3 -7.0796 BSP 2499 SGB 1664.6 R23 -.1412 R13 .7888 LSA 42.8 MSA 13.7 SSA 2.8  
 BDE .5207 BRA .7610 BC3 1.2525 FSP 821 SG1 1530.9 SG2 653.6 THA 163.27 EL1 35.8 EL2 13.6 ALF 39.72

LAUNCH DATE AUG 9 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC DISTANCE 367.230 EARTH TO MARS  
 RL 151.66 LAL .00 LOL 316.27 VL 33.457 GAL 1.52 AZL 89.21 HCA 115.63 SMA 210.40 ECC .28032 INC .7871 V1 29.377  
 RP 228.32 LAP .71 LOP 71.90 VP 23.060 GAP 15.55 AZP 90.34 TAL 6.93 TAP 122.57 RCA 151.42 APO 269.38 V2 24.090  
 RC 132.954 GL 6.20 GP -10.43 ZAL 74.14 ZAP 153.60 ETS 203.64 ZAE 162.22 ETE 319.65 ZAC 72.15 ETC 282.49 LVI -5.46

PLANETOCENTRIC CONIC  
 C3 18.098 VHL 4.254 DLA 17.38 RAL 25.94 RAD 6642.0 VEL 11.753 PTH 6.78 VHP 4.389 DPA 7.08 RAP 48.34 ECC 1.2978  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 45 55 3461.06 -45.61 124.58 258.30 105.35 11 43 36 2461.1 -34.71 96.11  
 60.00 11 5 24 3409.17 -39.43 121.72 260.12 99.10 12 2 13 2409.2 -31.60 93.64  
 70.00 11 34 26 3323.72 -33.92 115.61 260.92 94.22 12 29 50 2323.7 -26.68 88.15  
 80.00 12 20 31 3179.30 -29.85 104.87 261.13 90.88 13 13 30 2179.3 -26.45 77.96  
 90.00 13 31 50 2949.09 -26.28 87.96 261.14 89.63 14 20 59 1949.1 -25.58 61.28  
 100.00 15 3 22 2653.77 -29.85 66.24 261.13 90.88 15 47 36 1653.8 -26.45 39.33  
 110.00 16 33 52 2370.53 -33.92 44.52 260.92 94.22 17 13 23 1370.5 -26.68 17.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3564 TRA -.7115 TC3 1.1473 BAU .3179 SGT 1480.4 SGR 781.5 SG3 568.6 ST 28.4 SR 24.7 SS 24.6  
 RDE -.3607 RRA .1975 RC3 -.6406 FAU .15778 RRT -.5002 RRF .5977 RTF -.7761 CRT .7415 CR8 .9301 CST .9170  
 FDE .9410 FRA .4823 FC3 -7.5476 BSP 2384 SGB 1674.0 R23 -.1339 R13 .8018 LSA 42.8 MSA 13.5 SSA 2.8  
 BDE .5071 BRA .7384 BC3 1.3140 FSP 865 SG1 1543.0 SG2 649.3 THA 161.89 EL1 35.1 EL2 13.4 ALF 39.63

LAUNCH DATE AUG 9 1973 FLIGHT TIME 152.00 ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC DISTANCE 370.655 EARTH TO MARS  
 RL 151.66 LAL .00 LOL 316.27 VL 33.417 GAL 1.55 AZL 89.17 HCA 116.67 SMA 209.52 ECC .27737 INC .8287 V1 29.377  
 RP 226.70 LAP .74 LOP 72.94 VP 22.960 GAP 15.24 AZP 90.37 TAL 7.14 TAP 123.81 RCA 151.41 APO 267.64 V2 24.049  
 RC 135.694 GL 6.57 GP -10.77 ZAL 73.77 ZAP 152.49 ETS 203.31 ZAE 162.57 ETE 316.93 ZAC 71.82 ETC 282.52 LVI -5.14

PLANETOCENTRIC CONIC  
 C3 17.837 VHL 4.223 DLA 17.59 RAL 25.42 RAD 6641.9 VEL 11.742 PTH 6.77 VHP 4.276 DPA 6.74 RAP 48.41 ECC 1.2935  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 43 0 3461.93 -45.62 124.65 257.65 105.29 11 40 42 2461.9 -34.74 96.17  
 60.00 11 2 12 3410.79 -39.45 121.86 259.46 99.01 11 59 3 2410.8 -31.65 93.75  
 70.00 11 30 53 3326.38 -33.94 115.81 260.25 94.10 12 26 19 2326.4 -26.74 88.33  
 80.00 12 16 35 3183.14 -29.85 105.16 260.45 90.73 13 9 38 2183.1 -26.52 78.23  
 90.00 13 27 43 2953.53 -26.28 88.29 260.45 89.47 14 16 56 1953.5 -25.65 61.59  
 100.00 14 59 27 2657.62 -29.85 66.53 260.45 90.73 15 43 44 1657.6 -26.52 39.60  
 110.00 16 30 19 2373.20 -33.94 44.73 260.25 94.10 17 9 52 1373.2 -26.74 17.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3635 TRA -.7051 TC3 1.1542 BAU .3202 SGT 1483.4 SGR 798.4 SG3 599.7 ST 28.9 SR 24.1 SS 25.8  
 RDE -.3494 RRA .1954 RC3 -.6858 FAU .16321 RRT -.5151 RRF .6245 RTF -.7715 CRT .7470 CR8 .9335 CST .9163  
 FDE 1.0064 FRA .4671 FC3 -8.0188 BSP 2469 SGB 1684.7 R23 -.1516 R13 .8015 LSA 43.5 MSA 13.3 SSA 2.9  
 BDE .5042 BRA .7317 BC3 1.3426 FSP 923 SG1 1552.6 SG2 653.9 THA 161.01 EL1 35.3 EL2 13.1 ALF 38.06

LAUNCH DATE AUG 9 1973 FLIGHT TIME 154.00 ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC DISTANCE 374.495 EARTH TO MARS  
 RL 151.66 LAL .00 LOL 316.27 VL 33.380 GAL 1.58 AZL 89.13 HCA 117.70 SMA 208.70 ECC .27459 INC .8708 V1 29.377  
 RP 229.09 LAP .77 LOP 73.98 VP 22.863 GAP 14.94 AZP 90.40 TAL 7.34 TAP 125.05 RCA 151.39 APO 266.01 V2 24.008  
 RC 138.457 GL 6.94 GP -11.13 ZAL 73.41 ZAP 151.38 ETS 203.00 ZAE 162.90 ETE 313.96 ZAC 71.48 ETC 282.55 LVI -4.82

PLANETOCENTRIC CONIC  
 C3 17.596 VHL 4.195 DLA 17.80 RAL 24.92 RAD 6641.7 VEL 11.731 PTH 6.76 VHP 4.167 DPA 6.38 RAP 48.45 ECC 1.2896  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 40 5 3463.26 -45.65 124.77 257.05 105.20 11 37 48 2463.3 -34.79 96.25  
 60.00 10 58 59 3412.93 -39.47 122.03 258.84 98.90 11 55 52 2412.9 -31.71 93.89  
 70.00 11 27 17 3329.62 -33.95 116.06 259.61 93.96 12 22 47 2329.6 -26.82 88.55  
 80.00 12 12 35 3187.65 -29.85 105.49 259.80 90.55 13 5 43 2187.6 -26.59 78.54  
 90.00 13 23 31 2958.69 -26.27 88.66 259.80 89.28 14 12 49 1958.7 -25.72 61.94  
 100.00 14 55 27 2662.12 -29.85 66.86 259.80 90.55 15 39 49 1662.1 -26.59 39.91  
 110.00 16 26 43 2376.44 -33.95 44.98 259.61 93.96 17 6 20 1376.4 -26.82 17.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3681 TRA -.6969 TC3 1.1615 BAU .3232 SGT 1483.9 SGR 817.6 SG3 632.2 ST 29.3 SR 23.5 SS 26.9  
 RDE -.3378 RRA .1932 RC3 -.7336 FAU .17297 RRT -.5315 RRF .6513 RTF -.7681 CRT .7509 CR8 .9363 CST .9150  
 FDE 1.0740 FRA .4501 FC3 -8.5105 BSP 2521 SGB 1694.2 R23 -.1668 R13 .8028 LSA 44.2 MSA 13.2 SSA 3.0  
 BDE .4996 BRA .7232 BC3 1.3738 FSP 980 SG1 1561.1 SG2 658.3 THA 159.97 EL1 35.3 EL2 12.9 ALF 36.68



LAUNCH DATE AUG 9 1973 FLIGHT TIME 164.00 ARRIVAL DATE JAN 20 1974

DISTANCE 392.880 EARTH TO MARS

Heliocentric Conic  
 RL 151.86 LAL .00 LOL 316.27 VL 33.223 GAL 1.71 AZL 88.91 HCA 122.82 SMA 205.32 ECC .26293 INC 1.0924 V1 29.377  
 RP 231.01 LAP .92 LOP 79.10 VP 22.420 GAP 13.48 AZP 90.59 TAL 8.21 TAP 131.04 RCA 151.34 APO 259.31 V2 23.007  
 RC 152.572 GL 8.93 GP -13.14 ZAL 71.91 ZAP 145.32 ETS 201.62 ZAE 163.90 ETE 295.34 ZAC 69.63 ETC 282.79 LVI -3.12

Planetocentric Conic  
 C3 16.650 VHL 4.080 DLA 19.06 RAL 22.59 RAD 6641.3 VEL 11.691 PTH 6.73 VHP 3.679 DPA 4.26 RAP 48.41 ECC 1.2740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 25 27 3476.82 -45.88 126.00 254.66 104.28 11 23 24 2476.8 -35.31 97.12  
 60.00 10 42 33 3431.28 -39.65 123.56 256.32 97.88 11 39 44 2431.3 -32.26 95.14  
 70.00 11 8 33 3354.71 -34.05 118.02 256.97 92.80 12 4 28 2354.7 -29.36 90.30  
 80.00 11 51 21 3220.55 -29.85 107.94 257.06 89.26 12 45 2 2220.5 -27.12 80.85  
 90.00 13 1 1 2995.70 -28.21 91.37 257.02 87.92 13 50 56 1995.7 -26.23 64.54  
 100.00 14 34 13 2695.02 -29.85 69.30 257.06 89.26 15 19 8 1695.0 -27.12 42.21  
 110.00 16 8 0 2401.52 -34.05 46.93 256.97 92.80 16 48 1 1401.5 -29.36 19.22

Differential Corrections  
 TDE -.3794 TRA -.6488 TC3 1.1556 BAU .3423  
 RDE -.2727 RRA .1786 RC3-1.0148 FAU .21662  
 FDE 1.4903 FRA .3285 FC-11.2634 BSP 2638  
 BDE .4672 BRA .6729 BC3 1.5380 FSP 1304

MID-COURSE EXECUTION ACCURACY  
 SGT 1449.9 SGR 950.2 SG3 815.6  
 RRT -.6045 RRF .7738 RTF -.7492  
 SGB 1733.5 R23 -.2307 R13 .8188  
 SG1 1590.2 SG2 690.2 THA 152.88

ORBIT DETERMINATION ACCURACY  
 ST 30.3 SR 19.6 SS 33.6  
 CRT .7581 CRS .9441 CST .9073  
 LSA 47.6 MSA 12.5 SSA 3.3  
 EL1 34.3 EL2 11.3 ALF 29.62

LAUNCH DATE AUG 9 1973 FLIGHT TIME 166.00 ARRIVAL DATE JAN 22 1974

DISTANCE 396.588 EARTH TO MARS

Heliocentric Conic  
 RL 151.66 LAL .00 LOL 316.27 VL 33.197 GAL 1.73 AZL 88.86 HCA 123.84 SMA 204.77 ECC .26099 INC 1.1393 V1 29.377  
 RP 231.39 LAP .95 LOP 80.11 VP 22.339 GAP 13.19 AZP 90.63 TAL 8.36 TAP 132.20 RCA 151.33 APO 258.22 V2 23.767  
 RC 155.447 GL 9.35 GP -13.59 ZAL 71.67 ZAP 144.04 ETS 201.36 ZAE 163.90 ETE 290.96 ZAC 69.23 ETC 282.85 LVI -2.76

Planetocentric Conic  
 C3 16.505 VHL 4.063 DLA 19.35 RAL 22.16 RAD 6641.2 VEL 11.685 PTH 6.72 VHP 3.593 DPA 3.76 RAP 48.34 ECC 1.2716  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 22 30 3480.91 -45.95 126.37 254.31 104.00 11 20 31 2480.9 -35.47 97.39  
 60.00 10 39 10 3436.51 -39.70 124.00 255.93 97.58 11 36 27 2436.5 -32.41 95.50  
 70.00 11 4 37 3361.56 -34.07 118.55 256.55 92.49 12 0 39 2361.6 -29.51 90.78  
 80.00 11 46 48 3229.32 -29.84 108.59 256.61 88.92 12 40 38 2229.3 -27.25 81.46  
 90.00 12 56 8 3005.51 -28.18 92.09 256.55 87.57 13 46 14 2005.5 -26.35 65.23  
 100.00 14 29 40 2703.80 -29.84 69.96 256.61 88.92 15 14 44 1703.8 -27.25 42.83  
 110.00 16 4 4 2408.38 -34.07 47.47 256.55 92.49 16 44 12 1408.4 -29.51 19.70

Differential Corrections  
 TDE -.3795 TRA -.6389 TC3 1.1405 BAU .3465  
 RDE -.2580 RRA .1749 RC3-1.0796 FAU .22615  
 FDE 1.5892 FRA .2967 FC-11.8617 BSP 2645  
 BDE .4589 BRA .6624 BC3 1.5705 FSP 1375

MID-COURSE EXECUTION ACCURACY  
 SGT 1434.4 SGR 985.0 SG3 855.8  
 RRT -.6143 RRF .7949 RTF -.7429  
 SGB 1740.0 R23 -.2413 R13 .8232  
 SG1 1593.1 SG2 699.8 THA 151.03

ORBIT DETERMINATION ACCURACY  
 ST 30.4 SR 18.7 SS 35.1  
 CRT .7565 CRS .9441 CST .9055  
 LSA 48.4 MSA 12.4 SSA 3.3  
 EL1 33.9 EL2 10.9 ALF 28.07

LAUNCH DATE AUG 9 1973 FLIGHT TIME 168.00 ARRIVAL DATE JAN 24 1974

DISTANCE 400.304 EARTH TO MARS

Heliocentric Conic  
 RL 151.66 LAL .00 LOL 316.27 VL 33.172 GAL 1.75 AZL 88.81 HCA 124.85 SMA 204.26 ECC .25916 INC 1.1871 V1 29.377  
 RP 231.77 LAP .97 LOP 81.12 VP 22.260 GAP 12.91 AZP 90.68 TAL 8.50 TAP 133.34 RCA 151.32 APO 257.19 V2 23.728  
 RC 158.336 GL 9.77 GP -14.05 ZAL 71.44 ZAP 142.74 ETS 201.11 ZAE 163.80 ETE 286.44 ZAC 68.82 ETC 282.92 LVI -2.39

Planetocentric Conic  
 C3 16.374 VHL 4.048 DLA 19.86 RAL 21.75 RAD 6641.2 VEL 11.680 PTH 6.72 VHP 3.511 DPA 3.25 RAP 48.26 ECC 1.2695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 19 31 3485.47 -46.02 126.78 253.99 103.69 11 17 37 2485.5 -35.64 97.69  
 60.00 10 35 45 3442.28 -39.75 124.48 255.58 97.26 11 33 7 2442.3 -32.58 95.90  
 70.00 11 0 37 3369.05 -34.09 119.13 256.16 92.15 11 56 46 2369.0 -29.67 91.31  
 80.00 11 42 8 3238.88 -29.83 109.30 256.19 88.55 12 36 7 2238.9 -27.39 82.14  
 90.00 12 51 7 3016.19 -28.15 92.86 256.12 87.18 13 41 23 2016.2 -26.48 65.98  
 100.00 14 25 0 2713.36 -29.83 70.67 256.19 88.55 15 10 13 1713.4 -27.39 43.51  
 110.00 16 0 3 2415.86 -34.09 48.05 256.16 92.15 16 40 19 1415.9 -29.67 20.22

Differential Corrections  
 TDE -.3801 TRA -.6302 TC3 1.1200 BAU .3511  
 RDE -.2422 RRA .1711 RC3-1.1479 FAU .23600  
 FDE 1.6973 FRA .2646 FC-12.4781 BSP 2659  
 BDE .4507 BRA .6531 BC3 1.6038 FSP 1450

MID-COURSE EXECUTION ACCURACY  
 SGT 1417.5 SGR 1023.1 SG3 897.5  
 RRT -.6215 RRF .8147 RTF -.7051  
 SGB 1748.1 R23 -.2516 R13 .8281  
 SG1 1596.8 SG2 711.3 THA 149.05

ORBIT DETERMINATION ACCURACY  
 ST 30.5 SR 17.6 SS 36.8  
 CRT .7534 CRS .9431 CST .9039  
 LSA 49.3 MSA 12.4 SSA 3.3  
 EL1 33.6 EL2 10.5 ALF 28.34

LAUNCH DATE AUG 9 1973 FLIGHT TIME 170.00 ARRIVAL DATE JAN 26 1974

DISTANCE 404.027 EARTH TO MARS

Heliocentric Conic  
 RL 151.66 LAL .00 LOL 316.27 VL 33.149 GAL 1.76 AZL 88.76 HCA 125.85 SMA 203.77 ECC .25745 INC 1.2360 V1 29.377  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.184 GAP 12.63 AZP 90.72 TAL 8.62 TAP 134.48 RCA 151.31 APO 256.23 V2 23.689  
 RC 161.258 GL 10.21 GP -14.53 ZAL 71.24 ZAP 141.41 ETS 200.86 ZAE 163.59 ETE 281.85 ZAC 68.40 ETC 283.00 LVI -2.01

Planetocentric Conic  
 C3 16.254 VHL 4.032 DLA 19.97 RAL 21.35 RAD 6641.1 VEL 11.675 PTH 6.71 VHP 3.432 DPA 2.71 RAP 48.15 ECC 1.2675  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 16 32 3490.50 -46.10 127.24 253.72 103.35 11 14 43 2490.5 -35.83 98.02  
 60.00 10 32 17 3448.58 -39.80 125.01 255.28 96.90 11 29 45 2448.6 -32.76 96.33  
 70.00 10 56 31 3377.19 -34.11 119.77 255.80 91.77 11 52 48 2377.2 -29.83 91.68  
 80.00 11 37 20 3249.26 -29.81 110.07 255.80 88.14 12 31 29 2249.3 -27.54 82.87  
 90.00 12 45 56 3027.79 -28.11 93.71 255.71 86.76 13 36 24 2027.8 -26.62 66.80  
 100.00 14 20 11 2723.73 -29.81 71.44 255.80 88.14 15 5 35 1723.7 -27.54 44.24  
 110.00 15 55 57 2424.01 -34.11 48.69 255.80 91.77 16 36 21 1424.0 -29.83 20.80

Differential Corrections  
 TDE -.3795 TRA -.6216 TC3 1.0939 BAU .3560  
 RDE -.2259 RRA .1669 RC3-1.2193 FAU .24610  
 FDE 1.8083 FRA .2283 FC-13.1079 BSP 2670  
 BDE .4416 BRA .6436 BC3 1.6381 FSP 1526

MID-COURSE EXECUTION ACCURACY  
 SGT 1397.2 SGR 1064.6 SG3 940.3  
 RRT -.6261 RRF .8332 RTF -.7256  
 SGB 1756.6 R23 -.2602 R13 .8336  
 SG1 1600.1 SG2 724.9 THA 146.87

ORBIT DETERMINATION ACCURACY  
 ST 30.5 SR 16.6 SS 38.4  
 CRT .7485 CRS .9413 CST .9018  
 LSA 50.1 MSA 12.4 SSA 3.3  
 EL1 33.2 EL2 10.1 ALF 24.56

LAUNCH DATE AUG 9 1973

FLIGHT TIME 172.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC										DISTANCE 407.758										EARTH TO MARS																							
RL	151.66	LAL	.00	LOL	316.27	VL	33.127	GAL	1.78	AZL	88.71	HCA	126.86	SMA	203.32	ECC	.25584	INC	1.2659	V1	29.377	RC	184.150	GL	10.66	GP	-15.03	ZAL	71.05	ZAP	140.05	ETS	200.60	ZAE	163.28	ETE	277.25	ZAC	67.97	ETC	283.08	LVI	-1.62
RP	232.91	LAP	1.03	LOP	83.13	VP	22.109	GAP	12.33	AZP	90.77	TAL	8.74	TAP	135.60	RCA	151.30	AP0	255.34	V2	23.650	RC	184.150	GL	10.66	GP	-15.03	ZAL	71.05	ZAP	140.05	ETS	200.60	ZAE	163.28	ETE	277.25	ZAC	67.97	ETC	283.08	LVI	-1.62
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	16.147	VHL	4.018	DLA	20.31	RAL	20.96	RAD	6641.1	VEL	11.670	PTH	6.71	VHP	3.356	DPA	2.15	RAP	48.02	ECC	1.2657	SGT	1372.3	SGR	1110.6	SG3	984.8	ST	30.0	SR	15.5	SS	40.0										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-6351	RRF	.8506	RTF	-.7201	CRT	.7406	CRS	.9390	CST	.8980						
90.00	10	13	31	3495.99	-46.19	127.74	253.49	102.97	11	11	47	2496.0	-36.04	98.38	SGB	1765.4	R23	-.2592	R13	.8429	LSA	50.7	MSA	12.3	SSA	3.3																	
60.00	10	28	45	3455.41	-39.86	125.58	254.98	96.92	11	26	21	2455.4	-32.96	96.81	SG1	1608.1	SG2	753.1	THA	144.28	EL1	32.3	EL2	9.6	ALF	23.08																	
70.00	10	32	20	3385.98	-34.13	120.45	255.47	91.36	11	48	46	2386.0	-30.01	92.50																													
80.00	11	32	22	3260.46	-29.78	110.90	255.43	87.71	12	26	43	2260.5	-27.70	83.67																													
90.00	12	40	33	3040.32	-28.06	94.62	255.33	86.30	13	31	14	2040.3	-26.77	67.69																													
100.00	14	15	14	2734.93	-29.78	72.27	255.43	87.71	15	0	49	1734.9	-27.70	45.04																													
110.00	15	51	46	2432.80	-34.13	49.37	255.47	91.36	16	32	19	1432.8	-30.01	21.42																													

LAUNCH DATE AUG 9 1973

FLIGHT TIME 174.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC										DISTANCE 411.494										EARTH TO MARS																							
RL	151.66	LAL	.00	LOL	316.27	VL	33.106	GAL	1.79	AZL	88.66	HCA	127.86	SMA	202.90	ECC	.25432	INC	1.3369	V1	29.377	RC	167.073	GL	11.11	GP	-15.54	ZAL	70.89	ZAP	136.67	ETS	200.35	ZAE	162.85	ETE	272.70	ZAC	67.53	ETC	283.16	LVI	-1.23
RP	232.89	LAP	1.06	LOP	84.14	VP	22.037	GAP	12.08	AZP	90.82	TAL	8.85	TAP	136.71	RCA	151.30	AP0	254.50	V2	23.612	RC	167.073	GL	11.11	GP	-15.54	ZAL	70.89	ZAP	136.67	ETS	200.35	ZAE	162.85	ETE	272.70	ZAC	67.53	ETC	283.16	LVI	-1.23
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	16.050	VHL	4.006	DLA	20.65	RAL	20.58	RAD	6641.0	VEL	11.666	PTH	6.70	VHP	3.284	DPA	1.57	RAP	47.88	ECC	1.2641	SGT	1348.2	SGR	1157.7	SG3	1028.2	ST	30.2	SR	14.2	SS	41.9										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.6271	RRF	.8659	RTF	-.7014	CRT	.7308	CRS	.9337	CST	.8967						
50.00	10	10	29	3501.97	-46.28	128.29	253.31	102.55	11	8	51	2502.0	-36.27	98.77	SGB	1777.0	R23	-.2701	R13	.8474	LSA	52.0	MSA	12.4	SSA	3.3																	
60.00	10	25	10	3462.83	-39.91	126.20	254.74	96.10	11	22	53	2462.8	-33.17	97.32	SG1	1608.2	SG2	755.9	THA	141.85	EL1	32.1	EL2	9.1	ALF	20.69																	
70.00	10	48	2	3395.50	-34.14	121.20	255.18	90.93	11	44	38	2395.5	-30.20	93.18																													
80.00	11	27	14	3272.58	-29.74	111.80	255.10	87.24	12	21	47	2272.6	-27.86	84.53																													
90.00	12	34	58	3053.92	-27.99	95.61	254.98	85.81	13	25	52	2053.9	-26.91	68.86																													
100.00	14	10	6	2747.06	-29.74	73.17	255.10	87.24	14	55	53	1747.1	-27.86	45.90																													
110.00	15	47	28	2442.32	-34.14	50.12	255.18	90.93	16	28	11	1442.3	-30.20	22.10																													

LAUNCH DATE AUG 9 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC										DISTANCE 415.236										EARTH TO MARS																							
RL	151.66	LAL	.00	LOL	316.27	VL	33.087	GAL	1.80	AZL	88.61	HCA	128.86	SMA	202.90	ECC	.25290	INC	1.3893	V1	29.377	RC	170.003	GL	11.58	GP	-16.07	ZAL	70.74	ZAP	137.27	ETS	200.09	ZAE	162.31	ETE	268.28	ZAC	67.08	ETC	283.25	LVI	-.82
RP	235.25	LAP	1.06	LOP	85.13	VP	21.928	GAP	11.81	AZP	90.87	TAL	8.95	TAP	137.80	RCA	151.29	AP0	253.72	V2	23.573	RC	170.003	GL	11.58	GP	-16.07	ZAL	70.74	ZAP	137.27	ETS	200.09	ZAE	162.31	ETE	268.28	ZAC	67.08	ETC	283.25	LVI	-.82
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	15.964	VHL	3.995	DLA	21.01	RAL	20.21	RAD	6641.0	VEL	11.662	PTH	6.70	VHP	3.216	DPA	.96	RAP	47.72	ECC	1.2627	SGT	1321.1	SGR	1209.2	SG3	1073.5	ST	30.2	SR	12.9	SS	43.9										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.6206	RRF	.8801	RTF	-.6545	CRT	.7163	CRS	.9261	CST	.8947						
50.00	10	7	24	3508.43	-46.37	128.89	253.16	102.10	11	5	53	2508.4	-36.51	99.21	SGB	1791.0	R23	-.2724	R13	.8552	LSA	53.3	MSA	12.4	SSA	3.2																	
60.00	10	21	32	3470.81	-39.97	126.88	254.53	95.65	11	19	23	2470.8	-33.39	97.88	SG1	1614.1	SG2	776.1	THA	139.08	EL1	31.7	EL2	8.6	ALF	18.33																	
70.00	10	43	38	3405.72	-34.15	122.00	254.92	90.45	11	40	23	2405.7	-30.40	93.91																													
80.00	11	21	56	3285.63	-29.69	112.77	254.79	86.73	12	16	41	2285.6	-28.03	85.47																													
90.00	12	29	10	3068.58	-27.92	96.68	254.64	85.28	13	20	18	2068.6	-27.07	69.70																													
100.00	14	4	48	2760.10	-29.69	74.13	254.79	86.73	14	50	48	1760.1	-28.03	46.83																													
110.00	15	43	4	2452.54	-34.15	50.91	254.92	90.45	16	23	57	1452.5	-30.40	22.83																													

LAUNCH DATE AUG 9 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC										DISTANCE 418.984										EARTH TO MARS																							
RL	151.66	LAL	.00	LOL	316.27	VL	33.069	GAL	1.81	AZL	88.56	HCA	129.85	SMA	202.14	ECC	.25157	INC	1.4430	V1	29.377	RC	172.841	GL	12.05	GP	-16.61	ZAL	70.61	ZAP	135.84	ETS	199.82	ZAE	161.65	ETE	263.98	ZAC	66.62	ETC	283.35	LVI	-.41
RP	233.62	LAP	1.11	LOP	86.13	VP	21.900	GAP	11.84	AZP	90.92	TAL	9.04	TAP	138.89	RCA	151.28	AP0	252.99	V2	23.538	RC	172.841	GL	12.05	GP	-16.61	ZAL	70.61	ZAP	135.84	ETS	199.82	ZAE	161.65	ETE	263.98	ZAC	66.62	ETC	283.35	LVI	-.41
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	15.888	VHL	3.986	DLA	21.39	RAL	19.86	RAD	6640.9	VEL	11.659	PTH	6.70	VHP	3.151	DPA	.32	RAP	47.54	ECC	1.2615	SGT	1289.7	SGR	1264.4	SG3	1119.0	ST	30.0	SR	11.5	SS	45.8										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.6113	RRF	.8930	RTF	-.6652	CRT	.6956	CRS	.9153	CST	.8912						
50.00	10	4	17	3515.39	-46.47	129.53	253.05	101.62	11	2	53	2515.4	-36.76	99.67	SGB	1806.1	R23	-.2695	R13	.8646	LSA	54.4	MSA	12.5	SSA	3.2																	
60.00	10	17	49	3479.37	-40.03	127.60	254.35	95.16	11	15	48	2479.4	-33.63	98.49	SG1	1621.3	SG2	796.0	THA	135.93	EL1	31.1	EL2	8.0	ALF	16.00																	
70.00	10	39	6	3416.68	-34.15	122.85	254.68	89.95	11	36	2	2416.7	-30.61	94.70																													
80.00	11	16	25	3299.66	-29.64	113.81	254.50	86.19	12	11	24	2299.7	-28.20	86.47																													
90.00	12	23	5	3084.39	-27.82	97.82	254.34	84.71	13	14	30	2084.4	-27.22	70.83																													
100.00	13	59	17	2774.14	-29.64	75.17	254.50	86.19	14	45	31	1774.1	-28.20	47.84																													
110.00	15	38	32	2463.50	-34.15	51.77	254.68	89.95	16	19	35	1463.5	-30.61	23.61																													

LAUNCH DATE AUG 9 1973

FLIGHT TIME 100.00

ARRIVAL DATE FEB 5 1974

DISTANCE 422.737

EARTH TO MARS

RL 131.86 LAL .00 LOL 316.27 VL 33.052 GAL 1.82 AZL 88.50 HCA 130.84 SMA 201.79 ECC .25032 INC 1.4980 V1 29.377  
 RP 233.89 LAP 1.13 LOP 87.12 VP 21.833 GAP 11.27 AZP 90.98 TAL 9.12 TAP 139.96 RCA 151.28 APO 252.30 V2 23.488  
 RC 175.886 GL 12.54 GP -17.18 ZAL 70.51 ZAP 134.39 ETS 199.55 ZAE 160.88 ETE 259.90 ZAC 66.14 ETC 283.45 LVI .02

PLANETOCENTRIC CONIC

C3 15.821 VHL 3.978 DLA 21.79 RAL 19.51 RAD 6640.9 VEL 11.656 PTH 6.69 VHP 3.089 DPA -.34 RAP 47.34 ECC 1.2604  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 8 3522.84 -46.57 130.22 252.98 101.09 10 59 50 2522.8 -37.03 100.18  
 60.00 10 14 0 3488.53 -40.08 128.37 254.21 94.64 11 12 9 2488.5 -33.87 99.14  
 70.00 10 34 25 3428.42 -34.15 123.77 254.47 89.41 11 31 33 2428.4 -30.82 95.54  
 80.00 11 10 40 3314.75 -29.56 114.92 254.24 85.60 12 5 55 2314.7 -28.38 87.56  
 90.00 12 16 44 3101.46 -27.71 99.06 254.05 84.11 13 8 25 2101.5 -27.38 72.06  
 100.00 13 53 32 2789.22 -29.56 76.29 254.24 85.60 14 40 1 1789.2 -28.38 48.93  
 110.00 15 33 51 2475.23 -34.15 52.69 254.47 89.41 16 15 7 1475.2 -30.82 24.46

DIFFERENTIAL CORRECTIONS

TDE -.3666 TRA -.5853 TC3 .8688 BAV .3696  
 RDE -.1289 RRA .1416 RC3-1.6239 FAU .29879  
 FDE 2.4722 FRA .0166 FC-16.3495 BSP 2754  
 BDE .3686 BRA .8022 BC3 1.8417 FSP 1933

MID-COURSE EXECUTION ACCURACY

SGT 1257.4 SGR 1323.5 SG3 1165.1  
 RRT -.5975 RRF .9047 RTF -.6425  
 SGB 1825.6 R23 -.2625 R13 .8751  
 SG1 1632.3 SG2 817.6 THA 132.55

ORBIT DETERMINATION ACCURACY

ST 29.7 SR 10.0 SS 47.8  
 CRT .6642 CRS .6974 CST .8877  
 LSA 55.7 HSA 12.6 SSA 3.1  
 EL1 30.5 EL2 7.3 ALF 13.42

LAUNCH DATE AUG 9 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 7 1974

DISTANCE 426.494

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 33.036 GAL 1.83 AZL 88.45 HCA 131.83 SMA 201.47 ECC .24915 INC 1.5545 V1 29.377  
 RP 234.35 LAP 1.16 LOP 88.11 VP 21.769 GAP 11.00 AZP 91.04 TAL 9.19 TAP 141.01 RCA 151.27 APO 251.67 V2 23.461  
 RC 178.836 GL 13.04 GP -17.76 ZAL 70.42 ZAP 132.92 ETS 199.26 ZAE 160.00 ETE 256.04 ZAC 65.66 ETC 283.56 LVI .45

PLANETOCENTRIC CONIC

C3 15.765 VHL 3.970 DLA 22.20 RAL 19.17 RAD 6640.9 VEL 11.654 PTH 6.69 VHP 3.031 DPA -1.02 RAP 47.13 ECC 1.2594  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 57 55 3530.80 -46.67 130.97 252.95 100.53 10 56 45 2530.8 -37.32 100.72  
 60.00 10 10 7 3498.30 -40.13 129.20 254.10 94.08 11 8 25 2498.3 -34.13 99.83  
 70.00 10 29 35 3440.95 -34.14 124.75 254.29 88.83 11 26 56 2440.9 -31.05 96.45  
 80.00 11 4 39 3330.95 -29.47 116.12 254.00 84.98 12 0 10 2331.0 -28.56 88.73  
 90.00 12 10 2 3119.88 -27.57 100.39 253.78 83.45 13 2 2 2119.9 -27.53 73.38  
 100.00 13 47 31 2805.43 -29.47 77.48 254.00 84.98 14 34 17 1805.4 -28.56 50.10  
 110.00 15 29 1 2487.77 -34.14 53.66 254.29 88.83 16 10 29 1487.8 -31.05 25.37

DIFFERENTIAL CORRECTIONS

TDE -.3585 TRA -.5769 TC3 .8122 BAV .4002  
 RDE -.1065 RRA .1349 RC3-1.7165 FAU .30994  
 FDE 2.6192 FRA -.0386 FC-17.0208 BSP 2758  
 BDE .3740 BRA .5924 BC3 1.8989 FSP 2012

MID-COURSE EXECUTION ACCURACY

SGT 1221.4 SGR 1387.7 SG3 1212.6  
 RRT -.5833 RRF .9155 RTF -.6194  
 SGB 1848.7 R23 -.2477 R13 .8876  
 SG1 1649.5 SG2 834.7 THA 128.81

ORBIT DETERMINATION ACCURACY

ST 29.2 SR 8.6 SS 49.8  
 CRT .6178 CRS .8694 CST .8825  
 LSA 56.9 HSA 12.7 SSA 3.1  
 EL1 29.7 EL2 6.6 ALF 10.81

LAUNCH DATE AUG 9 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 9 1974

DISTANCE 430.254

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 33.022 GAL 1.83 AZL 88.39 HCA 132.81 SMA 201.17 ECC .24805 INC 1.6126 V1 29.377  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.707 GAP 10.74 AZP 91.10 TAL 9.24 TAP 142.06 RCA 151.27 APO 251.07 V2 23.424  
 RC 181.791 GL 13.55 GP -18.36 ZAL 70.35 ZAP 131.42 ETS 198.96 ZAE 159.02 ETE 252.43 ZAC 65.16 ETC 283.68 LVI .89

PLANETOCENTRIC CONIC

C3 15.718 VHL 3.965 DLA 22.62 RAL 18.85 RAD 6640.9 VEL 11.652 PTH 6.69 VHP 2.978 DPA -1.73 RAP 46.90 ECC 1.2587  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 54 38 3539.31 -46.78 131.76 252.96 99.92 10 53 38 2539.3 -37.63 101.30  
 60.00 10 6 7 3508.73 -40.16 130.00 254.03 93.48 11 4 36 2508.7 -34.41 100.98  
 70.00 10 24 34 3454.36 -34.11 125.79 254.14 88.21 11 22 9 2454.4 -31.28 97.43  
 80.00 10 58 21 3348.41 -29.38 117.40 253.77 84.31 11 54 10 2348.4 -28.74 89.99  
 90.00 12 2 57 3139.85 -27.41 101.83 253.52 82.75 12 55 17 2139.8 -27.68 74.82  
 100.00 13 41 13 2822.88 -29.36 78.77 253.77 84.31 14 28 18 1822.9 -28.74 51.36  
 110.00 15 24 1 2501.18 -34.11 54.71 254.14 88.21 16 5 42 1501.2 -31.28 26.34

DIFFERENTIAL CORRECTIONS

TDE -.3561 TRA -.5753 TC3 .7315 BAV .4098  
 RDE -.0810 RRA .1291 RC3-1.8081 FAU .32027  
 FDE 2.7919 FRA -.0820 FC-17.6408 BSP 2823  
 BDE .3652 BRA .5896 BC3 1.9505 FSP 2101

MID-COURSE EXECUTION ACCURACY

SGT 1188.5 SGR 1452.6 SG3 1257.8  
 RRT -.5522 RRF .9247 RTF -.5522  
 SGB 1876.8 R23 -.2344 R13 .8986  
 SG1 1666.2 SG2 863.8 THA 124.95

ORBIT DETERMINATION ACCURACY

ST 29.1 SR 6.9 SS 52.2  
 CRT .5344 CRS .8115 CST .8789  
 LSA 58.7 HSA 12.8 SSA 3.0  
 EL1 29.3 EL2 5.8 ALF 7.56

LAUNCH DATE AUG 9 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 11 1974

DISTANCE 434.019

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 33.008 GAL 1.84 AZL 88.33 HCA 133.78 SMA 200.89 ECC .24703 INC 1.6725 V1 29.377  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.646 GAP 10.47 AZP 91.16 TAL 9.29 TAP 143.09 RCA 151.27 APO 250.92 V2 23.387  
 RC 184.750 GL 14.07 GP -18.97 ZAL 70.29 ZAP 129.91 ETS 198.65 ZAE 157.95 ETE 249.05 ZAC 64.66 ETC 283.80 LVI 1.35

PLANETOCENTRIC CONIC

C3 15.679 VHL 3.960 DLA 23.07 RAL 18.53 RAD 6640.9 VEL 11.650 PTH 6.69 VHP 2.924 DPA -2.46 RAP 46.65 ECC 1.2580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 18 3548.35 -46.88 132.61 253.01 99.28 10 50 26 2548.4 -37.95 101.93  
 60.00 10 2 0 3519.82 -40.22 131.02 253.98 92.84 11 0 40 2519.8 -34.69 101.39  
 70.00 10 19 22 3468.66 -34.08 126.91 254.01 87.55 11 17 11 2468.7 -31.52 98.47  
 80.00 10 51 44 3367.18 -29.23 118.78 253.57 83.60 11 47 51 2367.2 -28.92 91.38  
 90.00 11 55 26 3161.48 -27.21 103.38 253.28 82.00 12 48 8 2161.5 -27.83 76.39  
 100.00 13 34 35 2841.66 -29.23 80.15 253.57 83.60 14 21 57 1841.7 -28.92 52.73  
 110.00 15 18 49 2515.48 -34.08 55.82 254.01 87.55 16 0 44 1515.5 -31.52 27.39

DIFFERENTIAL CORRECTIONS

TDE -.3486 TRA -.5710 TC3 .6525 BAV .4219  
 RDE -.0551 RRA .1223 RC3-1.9042 FAU .33080  
 FDE 2.9593 FRA -.1339 FC-18.2652 BSP 2873  
 BDE .3529 BRA .5840 BC3 2.0129 FSP 2186

MID-COURSE EXECUTION ACCURACY

SGT 1152.4 SGR 1522.3 SG3 1303.5  
 RRT -.5198 RRF .9331 RTF -.5433  
 SGB 1909.3 R23 -.2127 R13 .9111  
 SG1 1691.2 SG2 886.2 THA 120.76

ORBIT DETERMINATION ACCURACY

ST 28.6 SR 5.4 SS 54.4  
 CRT .3864 CRS .6976 CST .8730  
 LSA 60.2 HSA 12.9 SSA 2.9  
 EL1 28.7 EL2 5.0 ALF 4.31



LAUNCH DATE AUG 9 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC

DISTANCE 437.786

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.995 GAL 1.84 AZL 88.27 HCA 134.77 SMA 200.64 ECC .24607 INC 1.7341 V1 29.377
RP 235.42 LAP 1.23 LOP 91.06 VP 21.587 GAP 10.21 AZP 91.22 TAL 9.34 TAP 144.11 RCA 151.27 APO 250.01 V2 23.351
RC 187.714 GL 14.61 GP -19.60 ZAL 70.26 ZAP 120.37 ETS 189.33 ZAE 156.79 ETE 245.92 ZAC 84.14 ETC 283.92 LVI 1.82

PLANETOCENTRIC CONIC

C3 15.650 VHL 3.958 DLA 23.53 RAL 18.22 RAD 6640.8 VEL 11.649 PTH 6.69 VHP 2.876 DPA -3.21 RAP 46.39 ECC 1.2576
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 47 53 3587.95 -46.98 133.92 253.10 98.59 10 47 11 2558.0 -38.28 102.60
60.00 9 57 46 3531.61 -40.25 132.02 253.97 92.17 10 56 38 2531.6 -34.99 102.25
70.00 10 13 57 3483.91 -34.03 128.10 253.90 86.85 11 12 1 2483.9 -31.78 99.59
80.00 10 44 43 3387.43 -29.06 120.26 253.38 82.84 11 41 10 2387.4 -29.10 92.84
90.00 11 47 24 3185.01 -26.98 105.06 253.05 81.19 12 40 29 2185.0 -27.96 78.10
100.00 13 27 35 2861.90 -29.06 81.63 253.38 82.84 14 15 17 1861.9 -29.10 54.21
110.00 15 13 24 2530.73 -34.03 57.01 253.90 66.85 15 55 34 1530.7 -31.76 28.51

DIFFERENTIAL CORRECTIONS

TDE -.3395 TRA -.5675 TC3 .5674 BAW .4357
RDE -.0277 RRA .1151 RC3-2.0038 FAU .34131
FDE 3.1319 FRA -.1879 FC-18.8802 BSP 2934
BDE .3407 BRA .5791 BC3 2.0826 FSP 2270

MID-COURSE EXECUTION ACCURACY

SGT 1116.7 SGR 1596.3 SG3 1349.1
RRF -.4796 RRF .9407 RTF -.4972
SGB 1948.2 R23 -.1867 R13 .9235
SG1 1723.9 SG2 907.4 THA 116.37

ORBIT DETERMINATION ACCURACY

ST 28.0 SR 4.1 SS 56.6
CRT .0952 CRS .4387 CST .8657
LSA 61.9 MSA 13.1 SBA 2.8
EL1 28.0 EL2 4.1 ALF .82

LAUNCH DATE AUG 9 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC

DISTANCE 441.557

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.983 GAL 1.84 AZL 88.20 HCA 135.75 SMA 200.40 ECC .24518 INC 1.7976 V1 29.377
RP 235.77 LAP 1.25 LOP 92.03 VP 21.530 GAP 9.96 AZP 91.29 TAL 9.37 TAP 145.12 RCA 151.26 APO 249.53 V2 23.315
RC 190.60 GL 15.16 GP -20.23 ZAL 70.25 ZAP 126.82 ETS 197.99 ZAE 155.54 ETE 243.01 ZAC 63.61 ETC 284.05 LVI 2.30

PLANETOCENTRIC CONIC

C3 15.630 VHL 3.954 DLA 24.01 RAL 17.91 RAD 6640.8 VEL 11.648 PTH 6.69 VHP 2.830 DPA -3.99 RAP 46.12 ECC 1.2572
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 44 22 3568.13 -47.08 134.48 253.23 97.85 10 43 31 2568.1 -38.64 103.32
60.00 9 53 23 3544.12 -40.28 133.09 253.99 91.45 10 52 27 2544.1 -35.30 103.16
70.00 10 8 18 3500.20 -33.96 129.36 253.82 86.10 11 6 38 2500.2 -32.01 100.80
80.00 10 37 16 3409.30 -28.87 121.86 253.20 82.02 11 34 9 2409.3 -29.27 94.44
90.00 11 38 45 3210.74 -26.70 108.89 252.82 80.31 12 32 16 2210.7 -28.08 79.97
100.00 13 20 8 2883.78 -28.87 83.23 253.20 82.02 14 8 12 1883.8 -29.27 55.81
110.00 15 7 44 2547.02 -33.96 58.28 253.82 86.10 15 50 11 1547.0 -32.01 29.72

DIFFERENTIAL CORRECTIONS

TDE -.3292 TRA -.5647 TC3 .4738 BAW .4509
RDE .0015 RRA .1072 RC3-2.1051 FAU .35143
FDE 3.3114 FRA -.2455 FC-19.4653 BSP 3002
BDE .3292 BRA .5747 BC3 2.1578 FSP 2350

MID-COURSE EXECUTION ACCURACY

SGT 1081.9 SGR 1673.2 SG3 1393.4
RRF -.4292 RRF .9474 RTF -.4417
SGB 1992.5 R23 -.1571 R13 .9351
SG1 1763.7 SG2 927.1 THA 111.82

ORBIT DETERMINATION ACCURACY

ST 27.4 SR 3.6 SS 59.0
CRT -.3906 CRS -.0790 CST .8569
LSA 63.7 MSA 13.3 SBA 2.7
EL1 27.4 EL2 3.3 ALF 177.04

LAUNCH DATE AUG 9 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

DISTANCE 445.330

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.972 GAL 1.84 AZL 88.14 HCA 136.72 SMA 200.18 ECC .24435 INC 1.8633 V1 29.377
RP 236.12 LAP 1.28 LOP 93.01 VP 21.474 GAP 9.70 AZP 91.36 TAL 9.39 TAP 146.11 RCA 151.26 APO 249.09 V2 23.279
RC 193.649 GL 15.73 GP -20.92 ZAL 70.25 ZAP 125.25 ETS 197.63 ZAE 154.22 ETE 240.31 ZAC 63.07 ETC 284.19 LVI 2.79

PLANETOCENTRIC CONIC

C3 15.619 VHL 3.952 DLA 24.51 RAL 17.81 RAD 6640.8 VEL 11.648 PTH 6.69 VHP 2.788 DPA -4.80 RAP 45.84 ECC 1.2571
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 40 46 3578.92 -47.17 135.51 253.39 97.07 10 40 28 2578.9 -39.00 104.09
60.00 9 48 51 3557.40 -40.30 134.21 254.04 90.68 10 48 8 2557.4 -35.61 104.15
70.00 10 2 22 3517.58 -33.87 130.71 253.75 85.31 11 0 59 2517.6 -32.26 102.09
80.00 10 29 19 3433.03 -28.63 123.58 253.03 81.14 11 26 32 2433.0 -29.43 96.19
90.00 11 29 22 3239.05 -26.36 108.89 252.59 79.36 12 23 22 2239.1 -28.18 82.03
100.00 13 12 10 2907.50 -28.63 84.95 253.03 81.14 14 0 38 1907.5 -29.43 57.55
110.00 15 1 48 2564.40 -33.87 59.63 253.75 85.31 15 44 32 1564.4 -32.26 31.01

DIFFERENTIAL CORRECTIONS

TDE -.3174 TRA -.5623 TC3 .3756 BAW .4880
RDE .0328 RRA .0891 RC3-2.2095 FAU .36138
FDE 3.5006 FRA -.3019 FC-20.0303 BSP 3089
BDE .3181 BRA .8710 BC3 2.2412 FSP 2432

MID-COURSE EXECUTION ACCURACY

SGT 1050.1 SGR 1754.2 SG3 1437.1
RRF -.3701 RRF .9833 RTF -.5.81
SGB 2044.5 R23 -.1258 R13 .8484
SG1 1813.8 SG2 943.5 THA 107.31

ORBIT DETERMINATION ACCURACY

ST 26.7 SR 4.3 SS 61.4
CRT -.7729 CRS -.5972 CST .8468
LSA 65.7 MSA 13.4 SBA 2.6
EL1 26.8 EL2 2.7 ALF 172.89

LAUNCH DATE AUG 9 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

DISTANCE 449.105

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.982 GAL 1.84 AZL 88.07 HCA 137.69 SMA 199.97 ECC .24357 INC 1.9311 V1 29.377
RP 236.46 LAP 1.30 LOP 93.98 VP 21.420 GAP 9.44 AZP 91.43 TAL 9.40 TAP 147.10 RCA 151.26 APO 248.68 V2 23.244
RC 198.619 GL 16.32 GP -21.60 ZAL 70.27 ZAP 123.66 ETS 197.26 ZAE 152.83 ETE 237.81 ZAC 62.53 ETC 284.34 LVI 3.29

PLANETOCENTRIC CONIC

C3 15.617 VHL 3.952 DLA 25.04 RAL 17.32 RAD 6640.8 VEL 11.647 PTH 6.69 VHP 2.749 DPA -5.62 RAP 45.54 ECC 1.2570
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 37 4 3590.33 -47.26 136.59 253.60 96.23 10 36 54 2590.3 -39.39 104.92
60.00 9 44 8 3571.48 -40.30 135.41 254.11 89.87 10 43 40 2571.5 -35.94 105.20
70.00 9 56 7 3536.16 -33.76 132.15 253.71 84.47 10 55 3 2536.2 -32.51 103.48
80.00 10 20 45 3458.87 -28.35 125.45 252.86 80.20 11 18 24 2458.9 -29.58 98.09
90.00 11 19 5 3270.49 -25.94 111.10 252.34 78.33 12 13 35 2270.5 -28.25 84.33
100.00 13 3 37 2933.34 -28.35 86.82 252.86 80.20 13 52 30 1933.3 -29.58 59.46
110.00 14 55 33 2582.98 -33.76 61.07 253.71 84.47 15 38 36 1583.0 -32.51 32.40

DIFFERENTIAL CORRECTIONS

TDE -.3031 TRA -.5602 TC3 .2719 BAW .4670
RDE .0654 RRA .0901 RC3-2.3166 FAU .37106
FDE 3.6892 FRA -.3640 FC-20.5692 BSP 3177
BDE .3100 BRA .5674 BC3 2.3325 FSP 2504

MID-COURSE EXECUTION ACCURACY

SGT 1021.1 SGR 1839.1 SG3 1479.8
RRF -.3005 RRF .9586 RTF -.3043
SGB 2103.6 R23 -.0941 R13 .9541
SG1 1873.9 SG2 955.9 THA 102.88

ORBIT DETERMINATION ACCURACY

ST 25.8 SR 5.9 SS 63.8
CRT -.8840 CRS -.8316 CST .8331
LSA 67.7 MSA 13.6 SBA 2.5
EL1 26.3 EL2 2.7 ALF 168.44

LAUNCH DATE AUG 9 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 21 1974

DISTANCE 452.883 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.992 GAL 1.83 AZL 88.00 HCA 138.66 SMA 199.78 ECC .24285 INC 2.0013 V1 29.377  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.368 GAP 9.19 AZP 91.50 TAL 9.41 TAP 148.07 RCA 151.26 APO 248.30 V2 23.209  
 RC 199.589 GL 16.92 GP -22.29 ZAL 70.31 ZAP 122.06 ETS 196.86 ZAE 151.38 ETE 235.50 ZAC 61.97 ETC 284.48 LVI 3.81

PLANETOCENTRIC CONIC  
 C3 15.625 VHL 3.953 DLA 25.58 RAL 17.03 RAD 6640.8 VEL 11.648 PTH 6.69 VHP 2.714 DPA -6.47 RAP 45.24 ECC 1.2571  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 33 14 3602.39 -47.35 137.75 253.84 95.35 10 33 16 2602.4 -39.78 105.80  
 60.00 9 39 14 3586.41 -40.29 136.68 254.21 89.00 10 39 0 2586.4 -36.28 106.32  
 70.00 9 49 32 3556.04 -33.62 133.68 253.67 83.57 10 48 48 2556.0 -32.76 104.98  
 80.00 10 11 28 3487.17 -28.00 127.48 252.68 79.19 11 9 35 2487.2 -29.70 100.19  
 90.00 11 7 37 3305.84 -25.43 113.56 252.08 77.20 12 2 42 2305.8 -28.28 86.92  
 100.00 12 54 20 2961.65 -28.00 88.85 252.68 79.19 13 43 42 1961.6 -29.70 61.55  
 110.00 14 48 58 2602.86 -33.62 62.60 253.67 83.57 15 32 21 1602.9 -32.76 33.89

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 994.2 SGR 1928.3 SG3 1521.0 ST 24.6 SR 8.0 SS 66.1  
 RRT -.2220 RRF .9633 RTF -.2216 CRT -.8894 CRS -.9199 CST .8148  
 SGB 2169.8 R23 -.0644 R13 .9612 LSA 69.6 MSA 13.7 SSA 2.4  
 SG1 1945.1 SG2 981.1 THA 98.66 EL1 25.6 EL2 3.5 ALF 163.62

DIFFERENTIAL CORRECTIONS  
 TDE -.2848 TRA -.5569 TC3 .1860 BAU .5082  
 RDE .0992 RRA .0796 RC3-2.4270 FAU .38055  
 FDE 3.8740 FRA -.4365 FC-21.0852 BSP 3272  
 BDE .3016 BRA .5625 BC3 2.4327 FSP 2568

LAUNCH DATE AUG 9 1973

FLIGHT TIME 198.00

ARRIVAL DATE FEB 23 1974

DISTANCE 456.663 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.943 GAL 1.83 AZL 87.93 HCA 139.62 SMA 199.61 ECC .24218 INC 2.0741 V1 29.377  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.317 GAP 8.94 AZP 91.58 TAL 9.41 TAP 149.03 RCA 151.27 APO 247.95 V2 23.174  
 RC 202.557 GL 17.54 GP -23.01 ZAL 70.37 ZAP 120.45 ETS 196.44 ZAE 149.87 ETE 233.34 ZAC 61.40 ETC 284.64 LVI 4.34

PLANETOCENTRIC CONIC  
 C3 15.642 VHL 3.955 DLA 26.14 RAL 16.74 RAD 6640.8 VEL 11.649 PTH 6.69 VHP 2.681 DPA -7.34 RAP 44.92 ECC 1.2574  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 29 15 3615.14 -47.42 138.97 254.12 94.41 10 29 30 2615.1 -40.19 106.75  
 60.00 9 34 6 3602.24 -40.26 138.03 254.34 88.09 10 34 8 2602.2 -36.62 107.53  
 70.00 9 42 32 3577.34 -33.44 135.32 253.65 82.61 10 42 10 2577.3 -33.01 106.59  
 80.00 10 1 18 3518.43 -27.58 129.71 252.49 78.09 10 59 57 2518.4 -29.80 102.50  
 90.00 10 54 34 3346.36 -24.79 116.36 251.77 75.94 11 50 21 2346.4 -28.24 89.68  
 100.00 12 44 10 2992.90 -27.58 91.08 252.49 78.09 13 34 3 1992.9 -29.80 63.87  
 110.00 14 41 59 2624.15 -33.44 64.24 253.65 82.61 15 25 43 1624.2 -33.01 35.51

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 967.5 SGR 2023.7 SG3 1582.1 ST 23.1 SR 10.2 SS 68.2  
 RRT -.1381 RRF .9676 RTF -.1329 CRT -.8624 CRS -.9566 CST .7886  
 SGB 2243.1 R23 -.0395 R13 .9668 LSA 71.4 MSA 13.8 SSA 2.3  
 SG1 2029.3 SG2 955.6 THA 94.86 EL1 24.8 EL2 4.8 ALF 158.26

DIFFERENTIAL CORRECTIONS  
 TDE -.2608 TRA -.5511 TC3 .0635 BAU .5320  
 RDE .1331 RRA .0673 RC3-2.5430 FAU .39020  
 FDE 4.0455 FRA -.5215 FC-21.5961 BSP 3350  
 BDE .2928 BRA .5532 BC3 2.5438 FSP 2606

LAUNCH DATE AUG 9 1973

FLIGHT TIME 200.00

ARRIVAL DATE FEB 25 1974

DISTANCE 460.442 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.935 GAL 1.82 AZL 87.85 HCA 140.59 SMA 199.45 ECC .24157 INC 2.1494 V1 29.377  
 RP 237.48 LAP 1.38 LOP 96.87 VP 21.267 GAP 8.69 AZP 91.66 TAL 9.39 TAP 149.98 RCA 151.27 APO 247.63 V2 23.140  
 RC 205.523 GL 18.17 GP -23.73 ZAL 70.44 ZAP 118.84 ETS 196.00 ZAE 148.32 ETE 231.34 ZAC 60.82 ETC 284.80 LVI 4.88

PLANETOCENTRIC CONIC  
 C3 15.669 VHL 3.958 DLA 26.73 RAL 16.46 RAD 6640.8 VEL 11.650 PTH 6.69 VHP 2.652 DPA -8.22 RAP 44.61 ECC 1.2579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 25 8 3628.65 -47.48 140.27 254.45 93.41 10 25 37 2628.6 -40.62 107.76  
 60.00 9 28 43 3619.09 -40.22 139.46 254.49 87.12 10 29 2 2619.1 -36.97 108.82  
 70.00 9 35 5 3600.32 -33.23 137.08 253.63 81.60 10 35 6 2600.3 -33.25 108.34  
 80.00 9 50 0 3553.52 -27.06 132.19 252.28 76.88 10 49 13 2553.5 -29.85 105.11  
 90.00 10 39 12 3394.55 -23.96 119.84 251.40 74.51 11 35 46 2394.5 -28.11 93.40  
 100.00 12 32 51 3027.99 -27.06 93.56 252.28 76.88 13 23 19 2028.0 -29.85 66.48  
 110.00 14 34 32 2647.14 -33.23 66.00 253.63 81.60 15 18 39 1647.1 -33.25 37.26

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 985.1 SGR 2109.7 SG3 1592.7 ST 22.8 SR 13.3 SS 71.5  
 RRT -.0178 RRF .9710 RTF -.0334 CRT -.8384 CRS -.9759 CST .7706  
 SGB 2328.3 R23 -.0088 R13 .9709 LSA 74.9 MSA 14.1 SSA 2.2  
 SG1 2109.7 SG2 984.9 THA 90.61 EL1 25.6 EL2 6.5 ALF 152.00

DIFFERENTIAL CORRECTIONS  
 TDE -.2520 TRA -.5630 TC3 -.0891 BAU .5538  
 RDE .1774 RRA .0615 RC3-2.6420 FAU .39624  
 FDE 4.2942 FRA -.5416 FC-21.8932 BSP 3378  
 BDE .3082 BRA .5864 BC3 2.6435 FSP 2722

LAUNCH DATE AUG 9 1973

FLIGHT TIME 202.00

ARRIVAL DATE FEB 27 1974

DISTANCE 464.224 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.928 GAL 1.82 AZL 87.77 HCA 141.54 SMA 199.30 ECC .24100 INC 2.2279 V1 29.377  
 RP 237.81 LAP 1.39 LOP 97.83 VP 21.219 GAP 8.44 AZP 91.75 TAL 9.37 TAP 150.92 RCA 151.27 APO 247.33 V2 23.106  
 RC 208.485 GL 18.83 GP -24.47 ZAL 70.54 ZAP 117.22 ETS 195.54 ZAE 146.72 ETE 229.47 ZAC 60.23 ETC 284.96 LVI 5.44

PLANETOCENTRIC CONIC  
 C3 15.706 VHL 3.963 DLA 27.34 RAL 16.18 RAD 6640.9 VEL 11.651 PTH 6.69 VHP 2.626 DPA -9.13 RAP 44.29 ECC 1.2585  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 51 3642.90 -47.53 141.65 254.81 92.35 10 21 34 2642.9 -41.06 108.84  
 60.00 9 23 4 3636.96 -40.14 140.97 254.67 86.10 10 23 41 2637.0 -37.32 110.21  
 70.00 9 27 6 3625.06 -32.96 138.96 253.62 80.51 10 27 32 2625.1 -33.48 110.24  
 80.00 9 37 12 3593.37 -26.42 134.97 252.02 75.55 10 37 5 2593.4 -29.84 108.07  
 90.00 10 19 58 3455.13 -22.79 123.70 250.89 72.79 11 17 33 2455.1 -27.80 97.80  
 100.00 12 20 4 3067.84 -26.42 96.34 252.02 75.55 13 11 12 2067.8 -29.84 69.44  
 110.00 14 26 33 2671.88 -32.96 67.88 253.62 80.51 15 11 5 1671.9 -33.48 39.15

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 993.9 SGR 2205.3 SG3 1625.0 ST 21.6 SR 16.2 SS 74.1  
 RRT -.0908 RRF .9742 RTF -.0970 CRT -.7979 CRS -.9851 CST .7364  
 SGB 2418.9 R23 .0138 R13 .9741 LSA 77.6 MSA 14.3 SSA 2.1  
 SG1 2207.6 SG2 988.7 THA 87.07 EL1 25.7 EL2 8.2 ALF 144.99

DIFFERENTIAL CORRECTIONS  
 TDE -.2300 TRA -.5654 TC3 -.2204 BAU .5796  
 RDE .2192 RRA .0511 RC3-2.7514 FAU .40328  
 FDE 4.5012 FRA -.6004 FC-22.2291 BSP 3741  
 BDE .3177 BRA .5677 BC3 2.7602 FSP 2784

LAUNCH DATE AUG 9 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 1 1974

**HELIOCENTRIC CONIC**

DISTANCE 468.007

EARTH TO MARS

RL 131.66 LAL .00 LOL 316.27 VL 32.921 GAL 1.81 AZL 87.69 HCA 142.50 SMA 199.17 ECC .24048 INC 2.3094 V1 29.377  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.172 GAP 8.19 AZP 91.83 TAL 9.34 TAP 151.84 RCA 151.27 APO 247.06 V2 23.073  
 RC 211.443 GL 19.52 GP -25.23 ZAL 70.83 ZAP 115.60 ETS 195.05 ZAE 145.07 ETE 227.71 ZAC 59.64 ETC 285.13 LVI 6.01

**PLANETOCENTRIC CONIC**

C3 15.754 VHL 3.969 DLA 27.97 RAL 15.90 RAD 6640.9 VEL 11.653 PTH 8.69 VHP 2.603 DPA -10.06 RAP 43.96 ECC 1.2593  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 22 3687.98 -47.56 143.10 255.20 91.23 10 17 20 2658.0 -41.51 110.01  
 60.00 9 17 7 3655.97 -40.04 142.58 254.86 85.01 10 18 3 2650.0 -37.68 111.70  
 70.00 9 18 30 3651.87 -32.64 140.99 253.60 79.39 10 19 22 2651.9 -33.69 112.30  
 80.00 9 22 17 3639.97 -25.59 138.18 251.69 74.06 10 22 57 2640.0 -29.74 111.53  
 90.00 9 31 27 3543.62 -20.85 129.62 250.04 70.45 10 50 33 2545.6 -27.05 104.31  
 100.00 12 5 9 3114.44 -25.59 99.55 251.69 74.06 12 57 3 2114.4 -29.74 72.90  
 110.00 14 17 96 2698.69 -32.64 69.91 253.60 79.35 15 2 55 1698.7 -33.69 41.22

**DIFFERENTIAL CORRECTIONS**

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2052 TRA -.5685 TC3 -.3553 BAU .6075 SGT 1015.3 SGR 2304.7 SCS 1655.0 ST 20.3 SR 19.3 SS 76.7  
 RDE .2632 RRA .0398 RC3-2.8624 FAU .40979 RRT .1999 RRF .9770 RTF .2075 CRT -.7467 CRS -.9903 CST .6908  
 FDE 4.7066 FRA -.6620 FC-22.5193 BSP 3913 SGB 2518.5 R23 .0327 R13 .9765 LSA 80.4 MSA 14.5 SSA 2.0  
 BDE .3338 BRA .5699 BC3 2.8844 FSP 2836 SGI 2315.7 SGI 990.1 THA 83.84 EL1 26.2 EL2 10.0 ALF 136.96

LAUNCH DATE AUG 9 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 3 1974

**HELIOCENTRIC CONIC**

DISTANCE 471.791

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.915 GAL 1.80 AZL 87.61 HCA 143.45 SMA 199.05 ECC .23999 INC 2.3942 V1 29.377  
 RP 238.47 LAP 1.43 LOP 99.75 VP 21.126 GAP 7.95 AZP 91.92 TAL 9.31 TAP 152.76 RCA 151.28 APO 246.82 V2 23.040  
 RC 214.394 GL 20.22 GP -26.00 ZAL 70.78 ZAP 113.97 ETS 194.54 ZAE 143.40 ETE 226.06 ZAC 59.03 ETC 285.31 LVI 6.59

**PLANETOCENTRIC CONIC**

C3 15.814 VHL 3.977 DLA 28.63 RAL 15.61 RAD 6640.9 VEL 11.656 PTH 6.69 VHP 2.584 DPA -11.00 RAP 43.64 ECC 1.2603  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 40 3673.88 -47.58 144.64 255.63 90.04 10 12 54 2673.9 -41.97 111.25  
 60.00 9 10 48 3678.20 -39.91 144.29 255.07 83.86 10 12 4 2676.2 -36.03 113.30  
 70.00 9 9 8 3681.09 -32.26 143.18 253.56 78.11 10 10 29 2681.1 -33.87 114.56  
 80.00 9 4 0 3697.26 -24.46 142.06 251.23 72.32 10 5 37 2697.3 -29.48 115.77  
 85.34 8 34 41 3791.81 -18.14 146.54 248.75 67.46 9 37 53 2791.8 -25.86 122.08  
 100.00 11 46 52 3171.73 -24.46 103.43 251.23 72.32 12 39 44 2171.7 -29.48 77.14  
 110.00 14 8 35 2727.91 -32.26 72.10 253.56 78.11 14 54 3 1727.9 -33.87 43.48

**DIFFERENTIAL CORRECTIONS**

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1779 TRA -.5723 TC3 -.4962 BAU .6370 SGT 1050.7 SGR 2405.9 SCS 1681.1 ST 19.1 SR 22.6 SS 79.3  
 RDE .3099 RRA .0272 RC3-2.9720 FAU .41534 RRT .3071 RRF .9795 RTF .3153 CRT -.6809 CRS -.9935 CST .6299  
 FDE 4.9126 FRA -.7292 FC-22.7381 BSP 4101 SGB 2625.4 R23 .0490 R13 .9784 LSA 83.4 MSA 14.7 SSA 1.9  
 BDE .3573 BRA .5730 BC3 3.0132 FSP 2882 SGI 2431.8 SGI 989.3 THA 80.83 EL1 27.2 EL2 11.6 ALF 127.91

LAUNCH DATE AUG 9 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 5 1974

**HELIOCENTRIC CONIC**

DISTANCE 475.576

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.909 GAL 1.79 AZL 87.52 HCA 144.40 SMA 198.94 ECC .23955 INC 2.4828 V1 29.377  
 RP 238.79 LAP 1.44 LOP 100.70 VP 21.082 GAP 7.71 AZP 92.02 TAL 9.26 TAP 153.67 RCA 151.28 APO 246.59 V2 23.008  
 RC 217.340 GL 20.95 GP -26.79 ZAL 70.92 ZAP 112.35 ETS 194.01 ZAE 141.69 ETE 224.51 ZAC 58.41 ETC 285.49 LVI 7.19

**PLANETOCENTRIC CONIC**

C3 15.885 VHL 3.986 DLA 29.32 RAL 15.33 RAD 6640.9 VEL 11.659 PTH 6.70 VHP 2.567 DPA -11.96 RAP 43.32 ECC 1.2614  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 6 44 3690.73 -47.56 146.27 256.09 88.79 10 8 15 2690.7 -42.45 112.59  
 60.00 9 4 5 3687.79 -39.74 146.10 255.28 82.64 10 5 43 2697.8 -38.39 113.02  
 70.00 8 58 52 3713.18 -31.78 145.56 253.50 76.78 10 0 45 2713.2 -34.02 117.05  
 80.00 8 38 47 3776.46 -22.72 147.30 250.48 70.09 9 41 44 2776.5 -28.87 121.57  
 81.94 8 6 6 3881.27 -18.53 153.29 248.71 66.87 9 10 47 2881.3 -26.45 128.82  
 100.00 11 21 39 3290.93 -22.72 108.67 250.48 70.09 12 15 50 2250.9 -28.87 82.94  
 110.00 13 58 19 2780.00 -31.78 74.48 253.50 76.78 14 44 19 1760.0 -34.02 45.97

**DIFFERENTIAL CORRECTIONS**

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1466 TRA -.5788 TC3 -.6384 BAU .6886 SGT 1099.0 SGR 2510.7 SCS 1704.1 ST 17.8 SR 26.0 SS 81.8  
 RDE .3581 RRA .0144 RC3-3.0827 FAU .42029 RRT .4037 RRF .9817 RTF .4.46 CRT -.5923 CRS -.9953 CST .3453  
 FDE 5.1084 FRA -.7924 FC-22.9056 BSP 4302 SGB 2740.7 R23 .0615 R13 .9800 LSA 86.4 MSA 14.8 SSA 1.8  
 BDE .3869 BRA .5770 BC3 3.1481 FSP 2919 SGI 2557.1 SGI 986.3 THA 78.14 EL1 28.7 EL2 13.0 ALF 118.29

LAUNCH DATE AUG 9 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 7 1974

**HELIOCENTRIC CONIC**

DISTANCE 479.362

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.904 GAL 1.77 AZL 87.42 HCA 145.35 SMA 198.84 ECC .23915 INC 2.5753 V1 29.377  
 RP 239.10 LAP 1.46 LOP 101.63 VP 21.039 GAP 7.46 AZP 92.12 TAL 9.21 TAP 154.56 RCA 151.29 APO 246.39 V2 22.975  
 RC 220.278 GL 21.70 GP -27.59 ZAL 71.08 ZAP 110.73 ETS 193.44 ZAE 139.96 ETE 223.03 ZAC 57.78 ETC 285.67 LVI 7.81

**PLANETOCENTRIC CONIC**

C3 15.970 VHL 3.996 DLA 30.03 RAL 15.03 RAD 6641.0 VEL 11.662 PTH 6.70 VHP 2.554 DPA -12.94 RAP 43.00 ECC 1.2628  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 32 3708.55 -47.52 147.99 256.58 87.46 10 3 20 2708.5 -42.93 114.03  
 60.00 8 56 55 3720.84 -39.52 148.02 255.50 81.36 9 58 56 2720.8 -38.73 116.89  
 70.00 8 47 28 3748.76 -31.20 148.17 253.40 75.34 9 49 57 2748.8 -34.12 119.83  
 79.46 7 45 47 3943.70 -18.92 158.10 248.69 66.24 8 51 31 2943.7 -27.06 133.61  
 79.46 7 45 47 3943.70 -18.92 158.10 248.69 66.24 8 51 31 2943.7 -27.06 133.61  
 79.46 7 45 47 3943.70 -18.92 158.10 248.69 66.24 8 51 31 2943.7 -27.06 133.61  
 110.00 13 46 54 2795.58 -31.20 77.09 253.40 75.34 14 33 30 1795.6 -34.12 48.74

**DIFFERENTIAL CORRECTIONS**

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1078 TRA -.5773 TC3 -.7717 BAU .7032 SGT 1148.2 SGR 2624.2 SCS 1727.1 ST 16.3 SR 29.3 SS 83.8  
 RDE .4033 RRA -.0044 RC3-3.2017 FAU .42571 RRT .4963 RRF .9838 RTF .5065 CRT -.4591 CRS -.9968 CST .4161  
 FDE 5.2736 FRA -.8954 FC-23.0777 BSP 4477 SGB 2864.3 R23 .0679 R13 .9817 LSA 89.0 MSA 14.8 SSA 1.8  
 BDE .4194 BRA .5773 BC3 3.2934 FSP 2915 SGI 2694.9 SGI 970.6 THA 75.88 EL1 30.5 EL2 13.9 ALF 108.26

LAUNCH DATE AUG 9 1973 FLIGHT TIME 212.00 ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.66	LAL	.00	LOL	316.27	VL	32.900	GAL	1.76	AZL	87.33	HCA	146.30	SMA	198.75	ECC	.23879	INC	2.6720	V1	29.377				
RP	239.42	LAP	1.48	LOP	102.60	VP	20.998	GAP	7.22	AZP	92.22	TAL	9.15	TAP	155.45	RCA	151.29	APO	246.21	V2	22.944				
RC	223.209	GL	22.49	GP	-28.40	ZAL	71.27	ZAP	109.13	ETS	192.85	ZAE	138.22	ETE	221.64	ZAC	57.14	ETC	285.86	LVI	8.44				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	16.068	VHL	4.009	DLA	30.77	RAL	14.74	RAD	6641.0	VEL	11.667	PTH	6.70	VHP	2.544	DPA	-13.93	RAP	42.70	ECC	1.2644				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	56	2	3727.47		-47.45		149.82		257.11			86.06		9	58	9		2727.5			-43.42		115.59
60.00		8	49	13	3745.63		-39.24		150.07		255.73			79.99		9	51	39		2745.6			-39.07		116.91
70.00		8	34	33	3788.95		-30.47		151.07		253.24			73.76		9	37	42		2789.0			-34.15		122.96
77.33		7	28	55	3994.95		-19.32		162.12		248.69			65.57		8	35	30		2994.9			-27.69		137.62
77.33		7	28	55	3994.95		-19.32		162.12		248.69			65.57		8	35	30		2994.9			-27.69		137.62
77.33		7	28	55	3994.95		-19.32		162.12		248.69			65.57		8	35	30		2994.9			-27.69		137.62
110.00		13	34	0	2835.77		-30.47		79.99		253.24			73.76		14	21	18		1835.8			-34.15		51.88
DIFFERENTIAL CORRECTIONS										ORBIT DETERMINATION ACCURACY															
TDE	-.0788	TRA	-.5922	TC3	-1.9424	BAU	.7356			SGT	1246.6	SGR	2722.3	SG3	1735.8	ST	15.9	SR	33.6	SS	87.1				
RDE	.4671	RRA	-.0126	RC3	-3.2919	FAU	.42627			RRT	.5714	RRF	.9854	RTF	.5795	CRT	-.3356	CRS	-.9977	CST	.2994				
FDE	5.5229	FRA	-.9098	FC	-22.9668	BSP	4768			SGB	2994.2	R23	.0829	R13	.9821	LSA	93.5	MSA	15.2	SSA	1.7				
BDE	.4737	BRA	.5923	BC3	3.4241	FSP	2990			SG1	2827.5	SG2	985.0	THA	73.24	EL1	34.1	EL2	14.7	ALF	101.08				

LAUNCH DATE AUG 9 1973 FLIGHT TIME 214.00 ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.66	LAL	.00	LOL	316.27	VL	32.896	GAL	1.74	AZL	87.23	HCA	147.24	SMA	198.67	ECC	.23846	INC	2.7734	V1	29.377				
RP	239.73	LAP	1.50	LOP	103.54	VP	20.957	GAP	6.99	AZP	92.33	TAL	9.08	TAP	156.32	RCA	151.30	APO	246.05	V2	22.912				
RC	226.132	GL	23.30	GP	-29.23	ZAL	71.47	ZAP	107.54	ETS	192.24	ZAE	136.45	ETE	220.31	ZAC	56.49	ETC	286.05	LVI	9.09				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	16.182	VHL	4.023	DLA	31.54	RAL	14.43	RAD	6641.1	VEL	11.671	PTH	6.71	VHP	2.538	DPA	-14.94	RAP	42.40	ECC	1.2663				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	50	11	3747.53		-47.34		151.75		257.65			84.58		9	52	38		2747.5			-43.91		117.27
60.00		8	40	55	3772.27		-38.91		152.25		255.94			78.54		9	43	47		2772.3			-39.39		121.10
70.00		8	19	37	3835.23		-29.54		154.36		252.97			72.02		9	23	32		2835.2			-34.08		126.58
75.41		7	14	4	4039.45		-19.73		165.68		248.71			64.87		8	21	24		3039.4			-28.35		141.16
75.41		7	14	4	4039.45		-19.73		165.68		248.71			64.87		8	21	24		3039.4			-28.35		141.16
75.41		7	14	4	4039.45		-19.73		165.68		248.71			64.87		8	21	24		3039.4			-28.35		141.16
110.00		13	19	3	2882.05		-29.54		83.27		252.97			72.02		14	7	5		1882.0			-34.08		55.49
DIFFERENTIAL CORRECTIONS										ORBIT DETERMINATION ACCURACY															
TDE	-.0384	TRA	-.6008	TC3	-1.0948	BAU	.7716			SGT	1336.5	SGR	2831.7	SG3	1745.5	ST	15.4	SR	37.6	SS	89.6				
RDE	.9249	RRA	-.0273	RC3	-3.3942	FAU	.42794			RRT	.6369	RRF	.9869	RTF	.6446	CRT	-.1497	CRS	-.9983	CST	.1133				
FDE	5.7135	FRA	-.9699	FC	-22.8943	BSP	5017			SGB	3131.2	R23	.0899	R13	.9831	LSA	97.1	MSA	15.3	SSA	1.6				
BDE	.5263	BRA	.6012	BC3	3.5664	FSP	3009			SG1	2973.5	SG2	981.2	THA	71.14	EL1	37.7	EL2	15.2	ALF	94.17				

LAUNCH DATE AUG 9 1973 FLIGHT TIME 216.00 ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.66	LAL	.00	LOL	316.27	VL	32.892	GAL	1.73	AZL	87.12	HCA	148.18	SMA	198.60	ECC	.23816	INC	2.8799	V1	29.377				
RP	240.03	LAP	1.52	LOP	104.48	VP	20.918	GAP	6.75	AZP	92.45	TAL	9.01	TAP	157.19	RCA	151.30	APO	245.90	V2	22.882				
RC	229.048	GL	24.14	GP	-30.08	ZAL	71.68	ZAP	105.96	ETS	191.59	ZAE	134.66	ETE	219.03	ZAC	55.83	ETC	286.25	LVI	9.76				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	16.313	VHL	4.039	DLA	32.35	RAL	14.11	RAD	6641.1	VEL	11.677	PTH	6.71	VHP	2.534	DPA	-15.96	RAP	42.12	ECC	1.2685				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	43	57	3768.85		-47.18		153.78		258.22			83.02		9	46	46		2768.8			-44.40		119.08
60.00		8	31	53	3801.07		-38.49		154.59		256.13			77.01		9	35	14		2801.1			-39.68		123.49
70.00		8	1	35	3890.72		-28.31		158.21		252.53			70.05		9	6	26		2890.7			-33.84		130.89
73.60		7	0	35	4079.47		-20.14		168.93		248.75			64.13		8	8	34		3079.5			-29.02		144.40
73.60		7	0	35	4079.47		-20.14		168.93		248.75			64.13		8	8	34		3079.5			-29.02		144.40
73.60		7	0	35	4079.47		-20.14		168.93		248.75			64.13		8	8	34		3079.5			-29.02		144.40
110.00		13	1	2	2937.54		-28.31		87.12		252.53			70.05		13	49	59		1937.5			-33.84		59.81
DIFFERENTIAL CORRECTIONS										ORBIT DETERMINATION ACCURACY															
TDE	.0055	TRA	-.8103	TC3	-1.2487	BAU	.8088			SGT	1438.0	SGR	2941.8	SG3	1750.0	ST	15.5	SR	41.8	SS	92.0				
RDE	.5865	RRA	-.0437	RC3	-3.4920	FAU	.42834			RRT	.6919	RRF	.9883	RTF	.6191	CRT	.0610	CRS	-.9987	CST	-.0928				
FDE	5.9005	FRA	-1.0308	FC	-22.7330	BSP	5270			SGB	3274.4	R23	.0957	R13	.9839	LSA	101.1	MSA	15.4	SSA	1.8				
BDE	.5865	BRA	.6119	BC3	3.7085	FSP	3014			SG1	3125.2	SG2	977.3	THA	69.19	EL1	41.8	EL2	15.4	ALF	88.51				

LAUNCH DATE AUG 9 1973 FLIGHT TIME 218.00 ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.66	LAL	.00	LOL	316.27	VL	32.889	GAL	1.71	AZL	87.01	HCA	149.12	SMA	198.54	ECC	.23790	INC	2.9918	V1	29.377				
RP	240.34	LAP	1.54	LOP	105.42	VP	20.880	GAP	6.51	AZP	92.57	TAL	8.93	TAP	158.04	RCA	151.31	APO	245.78	V2	22.851				
RC	231.935	GL	25.02	GP	-30.93	ZAL	71.92	ZAP	104.40	ETS	190.92	ZAE	132.90	ETE	217.80	ZAC	55.16	ETC	286.46	LVI	10.45				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	16.481	VHL	4.057	DLA	33.19	RAL	13.78	RAD	6641.2	VEL	11.683	PTH	6.72	VHP	2.535	DPA	-16.99	RAP	41.84	ECC	1.2709				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	37	17	3791.54		-46.97		155.93		258.79			81.37		9	40	28		2791.5			-44.89		121.04
60.00		8	21	59	3832.37		-37.98		157.09		256.29			75.38		9	25	52		2832.4			-39.93		126.12
70.00		7	37	56	3962.99		-26.54		163.07		251.77			67.67		8	43	59		2963.0			-33.27		136.45
71.86		6	48	3	4116.21		-20.56		171.97		248.81			63.36		7	56	40		3116.2			-29.72		147.44
71.86		6	48	3	4116.21		-20.56		171.97		248.81			63.36		7	56	40		3116.2			-29.72		147.44
71.86		6	48	3	4116.21		-20.56		171.97		248.81			63.36		7	56	40		3116.2			-29.72		147.44
110.00		12	37	23	3009.80		-26.54		91.99		251.77			67.67		13	27	33		2009.8			-33.27		65.37
DIFFERENTIAL CORRECTIONS										ORBIT DETERMINATION ACCURACY															
TDE	.0527	TRA	-.6217	TC3	-1.4042	BAU	.8476			SGT	1550.6	SGR	3053.7	SG3	1749.9	ST	16.3	SR	46.2	SS	9				

LAUNCH DATE AUG 9 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 17 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.886 GAL 1.69 AZL 86.89 HCA 150.05 SMA 198.49 ECC .23767 INC 3.1098 V1 29.377  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.843 GAP 6.28 AZP 92.70 TAL 8.84 TAP 158.89 RCA 151.32 APO 245.67 V2 22.821  
 RC 234.882 GL 25.93 GP -31.81 ZAL 72.17 ZAP 102.86 ETS 180.23 ZAE 131.11 ETE 216.62 ZAC 54.47 ETC 286.67 LVI 11.16

Distance 498.289

Planetocentric Conic: C3 16.630 VHL 4.078 DLA 34.06 RAL 13.43 RAD 6641.3 VEL 11.091 PTH 6.72 VHP 2.539 DPA -18.04 RAP 41.59 ECC 1.2737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 6 3815.74 -46.70 158.21 259.37 79.64 9 33 42 2815.7 -45.38 123.18  
 60.00 8 11 3 3866.66 -37.36 159.79 256.39 73.64 9 15 30 2866.7 -40.13 129.01  
 70.00 6 54 18 4095.45 -22.83 171.97 249.88 63.88 8 2 33 3095.4 -31.54 146.39  
 70.18 6 36 14 4150.53 -20.98 174.86 248.88 62.53 7 45 25 3150.5 -30.43 150.34  
 70.18 6 36 14 4150.53 -20.98 174.86 248.88 62.53 7 45 25 3150.5 -30.43 150.34  
 70.18 6 36 14 4150.53 -20.98 174.86 248.88 62.53 7 45 25 3150.5 -30.43 150.34  
 110.00 11 53 44 3142.27 -22.83 100.49 249.88 63.88 12 46 6 2142.3 -31.54 75.30

Differential Corrections: TDE .1043 TRA -.6344 TC3-1.5594 BAU .8870 SGT 1672.3 SGR 3163.9 SG3 1743.4 ST 17.8 SR 50.8 SS 96.7  
 RDE .7199 RRA -.0786 RC3-3.6720 FAU .42545 RRT .7750 RRF .9906 RTF .7810 CRT .4543 CRS -.9993 CST -.4759  
 FDE 6.2479 FRA-1.1462 FC-22.1480 BSP 5827 SGB 3578.7 R23 .1044 R13 .9853 LSA 109.5 MSA 15.7 SSA 1.3  
 BDE .7274 BRA .6393 BC3 3.9894 FSP 3012 SGI 3444.5 SG2 970.7 THA 65.67 EL1 51.5 EL2 15.7 ALF 80.01

Orbit Determination Accuracy: ST 17.8 SR 50.8 SS 96.7 CRT .4543 CRS -.9993 CST -.4759 LSA 109.5 MSA 15.7 SSA 1.3 EL1 51.5 EL2 15.7 ALF 80.01

LAUNCH DATE AUG 9 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.884 GAL 1.67 AZL 86.77 HCA 150.99 SMA 198.45 ECC .23746 INC 3.2343 V1 29.377  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.807 GAP 6.04 AZP 92.83 TAL 8.74 TAP 159.73 RCA 151.32 APO 245.57 V2 22.792  
 RC 237.739 GL 26.88 GP -32.70 ZAL 72.43 ZAP 101.35 ETS 189.50 ZAE 129.33 ETE 215.48 ZAC 53.76 ETC 286.89 LVI 11.89

Distance 502.074

Planetocentric Conic: C3 16.821 VHL 4.101 DLA 34.97 RAL 13.06 RAD 6641.4 VEL 11.699 PTH 6.73 VHP 2.546 DPA -19.09 RAP 41.36 ECC 1.2768  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 21 3841.63 -46.36 160.61 259.94 77.81 9 26 23 2841.6 -45.84 125.50  
 60.00 7 58 48 3904.59 -36.59 162.72 256.40 71.78 9 3 53 2904.6 -40.27 132.23  
 68.52 6 25 0 4182.80 -21.41 177.64 248.97 61.67 7 34 42 3182.8 -31.17 153.12  
 68.52 6 25 0 4182.80 -21.41 177.64 248.97 61.67 7 34 42 3182.8 -31.17 153.12  
 68.52 6 25 0 4182.80 -21.41 177.64 248.97 61.67 7 34 42 3182.8 -31.17 153.12  
 68.52 6 25 0 4182.80 -21.41 177.64 248.97 61.67 7 34 42 3182.8 -31.17 153.12  
 68.52 6 25 0 4182.80 -21.41 177.64 248.97 61.67 7 34 42 3182.8 -31.17 153.12

Differential Corrections: TDE .1601 TRA -.6488 TC3-1.7119 BAU .9280 SGT 1801.3 SGR 3277.2 SG3 1732.8 ST 20.1 SR 55.6 SS 98.9  
 RDE .7927 RRA -.0973 RC3-3.7548 FAU .42234 RRT .8057 RRF .9915 RTF .8110 CRT .5992 CRS -.9994 CST -.6162  
 FDE 6.4077 FRA-1.1983 FC-21.7363 BSP 6113 SGB 3759.6 R23 .1074 R13 .9859 LSA 114.1 MSA 15.8 SSA 1.2  
 BDE .8087 BRA .6559 BC3 4.1266 FSP 2983 SGI 3612.1 SG2 968.0 THA 64.12 EL1 57.0 EL2 15.7 ALF 76.75

Orbit Determination Accuracy: ST 20.1 SR 55.6 SS 98.9 CRT .5992 CRS -.9994 CST -.6162 LSA 114.1 MSA 15.8 SSA 1.2 EL1 57.0 EL2 15.7 ALF 76.75

LAUNCH DATE AUG 9 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.882 GAL 1.65 AZL 86.63 HCA 151.92 SMA 198.41 ECC .23729 INC 3.3680 V1 29.377  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.773 GAP 5.81 AZP 92.97 TAL 8.64 TAP 160.56 RCA 151.33 APO 245.49 V2 22.763  
 RC 240.615 GL 27.88 GP -33.60 ZAL 72.72 ZAP 99.87 ETS 188.75 ZAE 127.55 ETE 214.37 ZAC 53.04 ETC 287.11 LVI 12.64

Distance 505.859

Planetocentric Conic: C3 17.038 VHL 4.128 DLA 35.92 RAL 12.86 RAD 6641.5 VEL 11.708 PTH 6.74 VHP 2.557 DPA -20.16 RAP 41.15 ECC 1.2804  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 56 3889.41 -45.93 163.16 260.49 75.90 9 18 26 2889.4 -46.28 128.03  
 60.00 7 44 52 3947.17 -35.64 165.93 256.30 69.78 8 50 39 2947.2 -40.30 135.85  
 66.87 6 14 12 4213.44 -21.84 180.33 249.08 60.75 7 24 25 3213.4 -31.93 155.83  
 66.87 6 14 12 4213.44 -21.84 180.33 249.08 60.75 7 24 25 3213.4 -31.93 155.83  
 66.87 6 14 12 4213.44 -21.84 180.33 249.08 60.75 7 24 25 3213.4 -31.93 155.83  
 66.87 6 14 12 4213.44 -21.84 180.33 249.08 60.75 7 24 25 3213.4 -31.93 155.83  
 66.87 6 14 12 4213.44 -21.84 180.33 249.08 60.75 7 24 25 3213.4 -31.93 155.83

Differential Corrections: TDE .2208 TRA -.8643 TC3-1.8619 BAU .9699 SGT 1937.2 SGR 3389.8 SG3 1716.2 ST 23.1 SR 60.6 SS 100.9  
 RDE .8691 RRA -.1178 RC3-3.8298 FAU .41785 RRT .8313 RRF .9924 RTF .8260 CRT .7062 CRS -.9996 CST -.7194  
 FDE 6.5926 FRA-1.2522 FC-21.2322 BSP 6406 SGB 3904.3 R23 .1099 R13 .9865 LSA 118.9 MSA 16.0 SSA 1.2  
 BDE .8987 BRA .6748 BC3 4.2582 FSP 2984 SGI 3783.2 SG2 964.9 THA 62.66 EL1 62.9 EL2 15.7 ALF 73.93

Orbit Determination Accuracy: ST 23.1 SR 60.6 SS 100.9 CRT .7062 CRS -.9996 CST -.7194 LSA 118.9 MSA 16.0 SSA 1.2 EL1 62.9 EL2 15.7 ALF 73.93

LAUNCH DATE AUG 9 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.881 GAL 1.63 AZL 86.49 HCA 152.85 SMA 198.39 ECC .23714 INC 3.5057 V1 29.377  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.739 GAP 5.58 AZP 93.12 TAL 8.53 TAP 161.38 RCA 151.34 APO 245.43 V2 22.734  
 RC 243.479 GL 28.91 GP -34.52 ZAL 73.02 ZAP 98.42 ETS 187.97 ZAE 125.78 ETE 213.30 ZAC 52.30 ETC 287.35 LVI 13.41

Distance 509.644

Planetocentric Conic: C3 17.282 VHL 4.157 DLA 36.91 RAL 12.25 RAD 6641.6 VEL 11.718 PTH 6.75 VHP 2.573 DPA -21.24 RAP 40.97 ECC 1.2844  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 44 3899.32 -45.40 165.84 260.99 73.89 9 9 43 2899.3 -46.69 130.81  
 60.00 7 28 38 3996.00 -34.43 169.51 256.01 67.61 8 35 14 2996.0 -40.18 140.00  
 65.23 6 3 43 4242.83 -22.28 182.96 249.20 59.78 7 14 26 3242.8 -32.71 158.49  
 65.23 6 3 43 4242.83 -22.28 182.96 249.20 59.78 7 14 26 3242.8 -32.71 158.49  
 65.23 6 3 43 4242.83 -22.28 182.96 249.20 59.78 7 14 26 3242.8 -32.71 158.49  
 65.23 6 3 43 4242.83 -22.28 182.96 249.20 59.78 7 14 26 3242.8 -32.71 158.49  
 65.23 6 3 43 4242.83 -22.28 182.96 249.20 59.78 7 14 26 3242.8 -32.71 158.49

Differential Corrections: TDE .2860 TRA -.8615 TC3-2.0076 BAU 1.0129 SGT 2078.8 SGR 3503.3 SG3 1694.6 ST 26.6 SR 65.8 SS 102.8  
 RDE .9505 RRA -.1405 RC3-3.8971 FAU .41215 RRT .8526 RRF .9931 RTF .8568 CRT .7827 CRS -.9997 CST -.7928  
 FDE 6.6882 FRA-1.3083 FC-20.6464 BSP 6709 SGB 4073.7 R23 .1116 R13 .9870 LSA 123.9 MSA 16.1 SSA 1.1  
 BDE .9926 BRA .6958 BC3 4.3838 FSP 2926 SGI 3958.6 SG2 961.4 THA 61.32 EL1 69.2 EL2 15.7 ALF 71.47

Orbit Determination Accuracy: ST 26.6 SR 65.8 SS 102.8 CRT .7827 CRS -.9997 CST -.7928 LSA 123.9 MSA 16.1 SSA 1.1 EL1 69.2 EL2 15.7 ALF 71.47

LAUNCH DATE AUG 9 1973 FLIGHT TIME 228.00 ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.880 GAL 1.61 AZL 86.35 HCA 193.77 SMA 198.37 ECC .23701 INC 3.6540 V1 29.377  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.707 GAP 5.35 AZP 93.28 TAL 8.42 TAP 162.19 RCA 151.35 APO 245.38 V2 22.706  
 RC 246.330 GL 29.99 GP -35.47 ZAL 73.35 ZAP 97.01 ETS 187.17 ZAE 124.02 ETE 212.24 ZAC 51.55 ETC 287.59 LVI 14.21

Planetary Conic: C3 17.558 VHL 4.180 DLA 37.94 RAL 11.79 RAD 6641.7 VEL 11.730 PTH 6.76 VHP 2.592 DPA -22.33 RAP 40.82 ECC 1.2890  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 35 3931.69 -44.75 168.69 261.43 71.78 9 0 7 2931.7 -47.04 133.85  
 60.00 7 8 56 4054.13 -32.84 173.62 255.43 65.20 8 16 30 3054.1 -39.83 144.90  
 63.59 5 53 29 4271.16 -22.71 185.54 249.34 58.76 7 4 40 3271.2 -33.51 161.12  
 63.59 5 53 29 4271.16 -22.71 185.54 249.34 58.76 7 4 40 3271.2 -33.51 161.12  
 63.59 5 53 29 4271.16 -22.71 185.54 249.34 58.76 7 4 40 3271.2 -33.51 161.12  
 63.59 5 53 29 4271.16 -22.71 185.54 249.34 58.76 7 4 40 3271.2 -33.51 161.12

Differential Corrections: TDE .3562 TRA -.7009 TC3-2.1491 BAU 1.0567 SGT 2226.5 SGR 3616.0 SG3 1666.9 ORBIT DETERMINATION ACCURACY ST 30.5 SR 71.1 SS 104.6  
 RDE 1.0358 RRA -.1635 RC3-3.9556 FAU .40514 RRT .8700 RRF .9938 RTF .8738 CRT .8359 CRS -.9997 CST -.8438  
 FDE 6.8000 FRA -1.3546 FC-19.9758 BSP 7016 SGB 4246.5 R23 .1133 R13 .9875 LSA 129.1 MSA 16.2 SSA 1.0  
 BDE 1.0954 BRA .7197 BC3 4.5017 FSP 2879 SGI 4136.7 SG2 959.6 THA 60.05 EL1 75.8 EL2 15.7 ALF 69.32

LAUNCH DATE AUG 9 1973 FLIGHT TIME 230.00 ARRIVAL DATE MAR 27 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.879 GAL 1.59 AZL 86.19 HCA 154.70 SMA 198.35 ECC .23692 INC 3.8121 V1 29.377  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.675 GAP 5.12 AZP 93.45 TAL 8.30 TAP 163.00 RCA 151.36 APO 245.34 V2 22.679  
 RC 249.167 GL 31.13 GP -36.43 ZAL 73.69 ZAP 95.63 ETS 186.34 ZAE 122.28 ETE 211.22 ZAC 50.77 ETC 287.84 LVI 15.03

Planetary Conic: C3 17.871 VHL 4.227 DLA 39.01 RAL 11.30 RAD 6641.9 VEL 11.743 PTH 6.77 VHP 2.618 DPA -23.43 RAP 40.71 ECC 1.2941  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 20 3966.91 -43.95 171.71 261.77 69.56 8 49 27 2966.9 -47.33 137.21  
 60.00 6 43 5 4128.88 -30.59 178.68 254.32 62.37 7 51 54 3128.9 -39.05 151.10  
 61.93 5 43 25 4298.66 -23.13 188.10 249.50 57.67 6 55 4 3298.7 -34.32 163.74  
 61.93 5 43 25 4298.66 -23.13 188.10 249.50 57.67 6 55 4 3298.7 -34.32 163.74  
 61.93 5 43 25 4298.66 -23.13 188.10 249.50 57.67 6 55 4 3298.7 -34.32 163.74  
 61.93 5 43 25 4298.66 -23.13 188.10 249.50 57.67 6 55 4 3298.7 -34.32 163.74

Differential Corrections: TDE .4319 TRA -.7221 TC3-2.2830 BAU 1.1016 SGT 2378.0 SGR 3730.0 SG3 1634.6 ORBIT DETERMINATION ACCURACY ST 35.0 SR 76.7 SS 106.1  
 RDE 1.1264 RRA -.1901 RC3-4.0062 FAU .39706 RRT .8849 RRF .9944 RTF .8882 CRT .8742 CRS -.9998 CST -.8803  
 FDE 6.8974 FRA -1.4090 FC-19.2353 BSP 7328 SGB 4423.6 R23 .1143 R13 .9880 LSA 134.5 MSA 16.3 SSA .9  
 BDE 1.2063 BRA .7467 BC3 4.6110 FSP 2823 SGI 4318.9 SG2 956.4 THA 58.87 EL1 82.8 EL2 15.7 ALF 67.41

LAUNCH DATE AUG 9 1973 FLIGHT TIME 232.00 ARRIVAL DATE MAR 29 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.879 GAL 1.56 AZL 86.02 HCA 155.62 SMA 198.34 ECC .23684 INC 3.9810 V1 29.377  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.645 GAP 4.89 AZP 93.63 TAL 8.17 TAP 163.79 RCA 151.37 APO 245.32 V2 22.652  
 RC 251.989 GL 32.31 GP -37.41 ZAL 74.05 ZAP 94.31 ETS 185.48 ZAE 120.55 ETE 210.21 ZAC 49.96 ETC 288.11 LVI 15.89

Planetary Conic: C3 18.224 VHL 4.269 DLA 40.13 RAL 10.77 RAD 6642.0 VEL 11.758 PTH 6.79 VHP 2.644 DPA -24.55 RAP 40.63 ECC 1.2999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 42 4005.55 -42.98 174.92 261.98 67.24 8 37 27 3005.6 -47.52 140.92  
 60.00 5 57 14 4258.56 -26.21 186.85 251.54 58.22 7 8 13 3258.6 -36.87 161.42  
 60.25 5 33 28 4325.42 -23.55 190.65 249.66 56.51 6 45 33 3325.4 -35.16 166.36  
 60.25 5 33 28 4325.42 -23.55 190.65 249.66 56.51 6 45 33 3325.4 -35.16 166.36  
 60.25 5 33 28 4325.42 -23.55 190.65 249.66 56.51 6 45 33 3325.4 -35.16 166.36  
 60.25 5 33 28 4325.42 -23.55 190.65 249.66 56.51 6 45 33 3325.4 -35.16 166.36

Differential Corrections: TDE .5138 TRA -.7450 TC3-2.4089 BAU 1.1469 SGT 2532.9 SGR 3842.8 SG3 1596.3 ORBIT DETERMINATION ACCURACY ST 39.8 SR 82.5 SS 107.5  
 RDE 1.2239 RRA -.2188 RC3-4.0444 FAU .38752 RRT .8971 RRF .9949 RTF .8999 CRT .9017 CRS -.9998 CST -.9084  
 FDE 6.9830 FRA -1.4499 FC-18.4090 BSP 7653 SGB 4602.9 R23 .1133 R13 .9884 LSA 140.3 MSA 16.4 SSA .9  
 BDE 1.3273 BRA .7759 BC3 4.7074 FSP 2760 SGI 4502.3 SG2 955.1 THA 57.78 EL1 90.2 EL2 15.7 ALF 65.72

LAUNCH DATE AUG 9 1973 FLIGHT TIME 234.00 ARRIVAL DATE MAR 31 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 32.879 GAL 1.54 AZL 85.84 HCA 156.54 SMA 198.34 ECC .23679 INC 4.1619 V1 29.377  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.615 GAP 4.66 AZP 93.82 TAL 8.04 TAP 164.58 RCA 151.38 APO 245.31 V2 22.625  
 RC 254.795 GL 33.55 GP -38.42 ZAL 74.42 ZAP 93.02 ETS 184.60 ZAE 118.85 ETE 209.23 ZAC 49.14 ETC 288.39 LVI 16.77

Planetary Conic: C3 18.625 VHL 4.316 DLA 41.30 RAL 10.18 RAD 6642.2 VEL 11.775 PTH 6.80 VHP 2.677 DPA -25.67 RAP 40.59 ECC 1.3065  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 19 4048.39 -41.80 178.34 261.98 64.81 8 23 48 3048.4 -47.57 145.07  
 58.55 5 23 35 4351.61 -23.95 193.19 249.83 55.29 6 36 6 3351.6 -36.00 169.01  
 58.55 5 23 35 4351.61 -23.95 193.19 249.83 55.29 6 36 6 3351.6 -36.00 169.01  
 58.55 5 23 35 4351.61 -23.95 193.19 249.83 55.29 6 36 6 3351.6 -36.00 169.01  
 58.55 5 23 35 4351.61 -23.95 193.19 249.83 55.29 6 36 6 3351.6 -36.00 169.01  
 58.55 5 23 35 4351.61 -23.95 193.19 249.83 55.29 6 36 6 3351.6 -36.00 169.01

Differential Corrections: TDE .6012 TRA -.7703 TC3-2.5248 BAU 1.1931 SGT 2690.6 SGR 3955.6 SG3 1552.9 ORBIT DETERMINATION ACCURACY ST 44.9 SR 88.4 SS 108.6  
 RDE 1.3263 RRA -.2469 RC3-4.0725 FAU .37691 RRT .9076 RRF .9954 RTF .9100 CRT .9218 CRS -.9999 CST -.9255  
 FDE 7.0420 FRA -1.4934 FC-17.5192 BSP 7971 SGB 4784.0 R23 .1159 R13 .9888 LSA 146.2 MSA 16.5 SSA .8  
 BDE 1.4562 BRA .8089 BC3 4.7916 FSP 2683 SGI 4688.1 SG2 953.0 THA 56.76 EL1 98.0 EL2 15.7 ALF 64.18

LAUNCH DATE AUG 9 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.879 GAL 1.31 AZL 85.64 HCA 157.46 SMA 198.35 ECC .23675 INC 4.3582 V1 29.377  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.587 GAP 4.44 AZP 94.02 TAL 7.91 TAP 165.36 RCA 151.39 APO 245.31 V2 22.599  
 RC 237.584 GL 34.86 GP -39.45 ZAL 74.82 ZAP 91.79 ETS 183.70 ZAE 117.17 ETE 208.26 ZAC 48.28 ETC 288.68 LVI 17.68

DISTANCE 528.554  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.082 VHL 4.368 DLA 42.52 RAL 9.54 RAD 6642.4 VEL 11.794 PTH 6.82 VHP 2.716 DPA -26.81 RAP 40.60 ECC 1.3140  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 59 40 4096.64 -40.33 182.04 261.70 62.25 8 7 56 3096.6 -47.44 149.72  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71  
 56.81 5 13 39 4377.46 -24.33 195.75 250.01 53.98 6 26 36 3377.5 -36.86 171.71

DIFFERENTIAL CORRECTIONS  
 TDE .6949 TRA -.7980 TC3-2.6299 BAU 1.2399 SGT 2850.7 SGR 4066.8 SG3 1503.7 ORBIT DETERMINATION ACCURACY  
 RDE 1.4347 RRA -.2786 RC3-4.0875 FAU .36303 RRT .9164 RRF .9958 RTF .9185 CRT .9367 CRS -.9999 CST -.9395  
 FDE 7.0761 FRA -1.5289 FC-16.5615 BSP 8314 SGB 4966.5 R23 .1165 R13 .9891 LSA 152.3 MSA 16.6 SBA .8  
 BDE 1.5941 BRA .8452 BC3 4.8604 FSP 2607 SG1 4874.4 SG2 952.0 THA 55.80 EL1 106.0 EL2 15.8 ALF 62.80

LAUNCH DATE AUG 9 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.879 GAL 1.48 AZL 85.43 HCA 158.37 SMA 198.36 ECC .23674 INC 4.5656 V1 29.377  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.560 GAP 4.21 AZP 94.25 TAL 7.76 TAP 166.13 RCA 151.40 APO 245.32 V2 22.573  
 RC 260.356 GL 36.22 GP -40.51 ZAL 75.23 ZAP 90.61 ETS 182.78 ZAE 115.52 ETE 207.31 ZAC 47.40 ETC 288.99 LVI 18.63

DISTANCE 532.333  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.602 VHL 4.427 DLA 43.80 RAL 8.82 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.761 DPA -27.96 RAP 40.65 ECC 1.3226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 48 4152.32 -38.49 186.10 261.01 59.53 7 49 1 3152.3 -47.04 155.04  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46  
 55.05 5 3 39 4403.00 -24.69 198.32 250.18 52.60 6 17 2 3403.0 -37.72 174.46

DIFFERENTIAL CORRECTIONS  
 TDE .7955 TRA -.8285 TC3-2.7219 BAU 1.2876 SGT 3012.5 SGR 4179.7 SG3 1450.3 ORBIT DETERMINATION ACCURACY  
 RDE 1.5510 RRA -.3161 RC3-4.0905 FAU .35214 RRT .9243 RRF .9962 RTF .9260 CRT .9481 CRS -.9999 CST -.9503  
 FDE 7.0897 FRA -1.5729 FC-15.5524 BSP 8639 SGB 5152.2 R23 .1165 R13 .9895 LSA 158.6 MSA 16.6 SBA .7  
 BDE 1.7432 BRA .8867 BC3 4.9134 FSP 2512 SG1 5064.0 SG2 949.0 THA 54.92 EL1 114.4 EL2 15.8 ALF 61.56

LAUNCH DATE AUG 9 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.880 GAL 1.46 AZL 85.21 HCA 159.28 SMA 198.37 ECC .23675 INC 4.7921 V1 29.377  
 RP 243.37 LAP 1.69 LOP 115.62 VP 20.533 GAP 3.99 AZP 94.48 TAL 7.62 TAP 166.90 RCA 151.41 APO 245.34 V2 22.548  
 RC 263.112 GL 37.66 GP -41.59 ZAL 75.67 ZAP 89.50 ETS 181.83 ZAE 113.90 ETE 206.37 ZAC 46.48 ETC 289.33 LVI 19.62

DISTANCE 536.111  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.197 VHL 4.494 DLA 45.13 RAL 8.02 RAD 6642.9 VEL 11.841 PTH 6.86 VHP 2.812 DPA -29.13 RAP 40.76 ECC 1.3324  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 58 4219.58 -36.06 190.70 259.67 56.57 7 25 17 3219.6 -46.20 161.32  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28  
 53.24 4 53 31 4428.36 -25.02 200.92 250.34 51.14 6 7 19 3428.4 -38.58 177.28

DIFFERENTIAL CORRECTIONS  
 TDE .9022 TRA -.8821 TC3-2.8001 BAU 1.3358 SGT 3175.6 SGR 4289.8 SG3 1391.3 ORBIT DETERMINATION ACCURACY  
 RDE 1.6735 RRA -.3593 RC3-4.0784 FAU .33805 RRT .9308 RRF .9965 RTF .9222 CRT .9566 CRS -.9999 CST -.9583  
 FDE 7.0702 FRA -1.6052 FC-14.4902 BSP 8967 SGB 5337.3 R23 .1168 R13 .9897 LSA 165.0 MSA 16.7 SBA .7  
 BDE 1.9012 BRA .9325 BC3 4.9471 FSP 2411 SG1 5252.5 SG2 947.8 THA 54.08 EL1 123.0 EL2 15.8 ALF 60.45

LAUNCH DATE AUG 9 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC  
 RL 151.66 LAL .00 LOL 316.27 VL 32.881 GAL 1.43 AZL 84.96 HCA 160.19 SMA 198.39 ECC .23678 INC 5.0381 V1 29.377  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.508 GAP 3.77 AZP 94.74 TAL 7.46 TAP 167.66 RCA 151.42 APO 245.37 V2 22.523  
 RC 265.850 GL 39.18 GP -42.71 ZAL 76.12 ZAP 88.44 ETS 180.87 ZAE 112.32 ETE 205.45 ZAC 45.53 ETC 289.69 LVI 20.64

DISTANCE 539.888  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.881 VHL 4.570 DLA 46.51 RAL 7.12 RAD 6643.2 VEL 11.869 PTH 6.88 VHP 2.870 DPA -30.31 RAP 40.93 ECC 1.3437  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 40 6 4310.32 -32.50 196.43 257.04 53.12 6 51 56 3310.3 -44.50 169.39  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19  
 51.39 4 43 7 4453.79 -25.31 203.56 250.48 49.58 5 57 21 3453.8 -39.43 180.19

DIFFERENTIAL CORRECTIONS  
 TDE 1.0165 TRA -.8990 TC3-2.8617 BAU 1.3847 SGT 3338.7 SGR 4400.8 SG3 1328.0 ORBIT DETERMINATION ACCURACY  
 RDE 1.8056 RRA -.4006 RC3-4.0512 FAU .32293 RRT .9368 RRF .9968 RTF .9378 CRT .9634 CRS -1.0000 CST -.9646  
 FDE 7.0259 FRA -1.6404 FC-13.3886 BSP 9309 SGB 5523.9 R23 .1167 R13 .9901 LSA 171.6 MSA 16.8 SBA .6  
 BDE 2.0720 BRA .9842 BC3 4.9600 FSP 2305 SG1 5442.6 SG2 944.6 THA 53.31 EL1 131.9 EL2 15.8 ALF 59.45

LAUNCH DATE AUG 9 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 10 1974

**HELIOCENTRIC CONIC**  
 RL 151.66 LAL .00 LOL 316.27 VL 32.883 GAL 1.40 AZL 84.69 HCA 161.10 SMA 198.42 ECC .23682 INC 5.3060 V1 29.377  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.483 GAP 3.55 AZP 95.02 TAL 7.31 TAP 168.41 RCA 151.43 APO 245.41 V2 22.499  
 RC 268.570 GL 40.77 GP -43.87 ZAL 76.60 ZAP 87.45 ETS 179.89 ZAE 110.77 ETE 204.54 ZAC 44.54 ETC 290.07 LVI 21.70

**PLANETOCENTRIC CONIC**  
 C3 21.671 VHL 4.655 DLA 47.98 RAL 6.10 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 2.936 DPA -31.50 RAP 41.16 ECC 1.3567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21  
 49.50 4 32 27 4479.28 -25.55 206.23 250.59 47.92 5 47 6 3479.3 -40.27 183.21

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.1359 TRA -.9411 TC3-2.9086 BAU 1.4356  
 RDE 1.9452 RRA -.4512 RC3-4.0114 FAU .30710  
 FDE 6.9449 FRA-1.6714 FC-12.2684 BSP 9629  
 BDE 2.2526 BRA 1.0436 BC3 4.9349 FSP 2187

**MID-COURSE EXECUTION ACCURACY**  
 SGT 3504.1 SGR 4513.1 SG3 1280.9  
 RRT .9419 RRF .9971 RTF .9424  
 SGB 5713.8 R23 .1168 R13 .9903  
 SG1 5635.4 SG2 943.0 THA 52.60

**ORBIT DETERMINATION ACCURACY**  
 ST 74.7 SR 120.5 SS 109.1  
 CRT .9685 CRS-1.0000 CST -.9694  
 LSA 178.1 MSA 16.9 SSA .6  
 EL1 140.8 EL2 15.9 ALF 58.58

LAUNCH DATE AUG 9 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 12 1974

**HELIOCENTRIC CONIC**  
 RL 151.66 LAL .00 LOL 316.27 VL 32.884 GAL 1.37 AZL 84.40 HCA 162.01 SMA 198.45 ECC .23688 INC 5.5995 V1 29.377  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.460 GAP 3.32 AZP 95.53 TAL 7.15 TAP 169.16 RCA 151.44 APO 245.45 V2 22.475  
 RC 271.273 GL 42.45 GP -45.05 ZAL 77.09 ZAP 86.53 ETS 178.90 ZAE 109.26 ETE 203.64 ZAC 43.51 ETC 290.49 LVI 22.81

**PLANETOCENTRIC CONIC**  
 C3 22.888 VHL 4.753 DLA 49.48 RAL 4.95 RAD 6644.0 VEL 11.941 PTH 6.94 VHP 3.012 DPA -32.71 RAP 41.45 ECC 1.3717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37  
 47.57 4 21 20 4505.12 -25.71 208.96 250.64 46.17 5 36 25 3505.1 -41.06 186.37

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.2632 TRA -.9861 TC3-2.9334 BAU 1.4858  
 RDE 2.0953 RRA -.5067 RC3-3.9501 FAU .28998  
 FDE 6.8316 FRA-1.6937 FC-11.1143 BSP 9959  
 BDE 2.4466 BRA 1.1087 BC3 4.9202 FSP 2063

**MID-COURSE EXECUTION ACCURACY**  
 SGT 3665.9 SGR 4621.9 SG3 1188.8  
 RRT .9464 RRF .9973 RTF .9466  
 SGB 5899.3 R23 .1167 R13 .9905  
 SG1 5823.9 SG2 940.0 THA 51.94

**ORBIT DETERMINATION ACCURACY**  
 ST 81.0 SR 127.2 SS 107.8  
 CRT .9726 CRS-1.0000 CST -.9732  
 LSA 184.7 MSA 16.9 SSA .5  
 EL1 150.0 EL2 16.0 ALF 57.81

LAUNCH DATE AUG 9 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 14 1974

**HELIOCENTRIC CONIC**  
 RL 151.66 LAL .00 LOL 316.27 VL 32.886 GAL 1.34 AZL 84.08 HCA 162.91 SMA 198.48 ECC .23696 INC 5.9223 V1 29.377  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.437 GAP 3.10 AZP 95.66 TAL 6.98 TAP 169.89 RCA 151.45 APO 245.51 V2 22.452  
 RC 273.957 GL 44.22 GP -46.28 ZAL 77.61 ZAP 85.68 ETS 177.90 ZAE 107.80 ETE 202.76 ZAC 42.45 ETC 290.95 LVI 23.95

**PLANETOCENTRIC CONIC**  
 C3 23.659 VHL 4.864 DLA 51.02 RAL 3.63 RAD 6644.4 VEL 11.985 PTH 6.98 VHP 3.098 DPA -33.93 RAP 41.82 ECC 1.3894  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66  
 45.58 4 9 43 4531.36 -25.80 211.74 250.62 44.32 5 25 14 3531.4 -41.81 189.66

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.3953 TRA -1.0372 TC3-2.9393 BAU 1.5383  
 RDE 2.2542 RRA -.5711 RC3-3.8746 FAU .27230  
 FDE 6.6756 FRA-1.7154 FC3-9.9640 BSP 10277  
 BDE 2.6511 BRA 1.1841 BC3 4.8634 FSP 1931

**MID-COURSE EXECUTION ACCURACY**  
 SGT 3827.6 SGR 4733.1 SG3 1113.6  
 RRT .9505 RRF .9975 RTF .503  
 SGB 6087.1 R23 .1163 R13 .9908  
 SG1 6014.7 SG2 935.9 THA 51.34

**ORBIT DETERMINATION ACCURACY**  
 ST 87.3 SR 133.9 SS 106.1  
 CRT .9758 CRS-1.0000 CST -.9761  
 LSA 191.1 MSA 17.0 SSA .5  
 EL1 159.0 EL2 16.1 ALF 57.15

LAUNCH DATE AUG 9 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 16 1974

**HELIOCENTRIC CONIC**  
 RL 151.66 LAL .00 LOL 316.27 VL 32.888 GAL 1.30 AZL 83.72 HCA 163.81 SMA 198.52 ECC .23706 INC 6.2793 V1 29.377  
 RP 244.58 LAP 1.75 LOP 120.17 VP 20.415 GAP 2.89 AZP 96.03 TAL 6.81 TAP 170.63 RCA 151.46 APO 245.58 V2 22.430  
 RC 276.823 GL 46.09 GP -47.54 ZAL 78.14 ZAP 84.91 ETS 176.90 ZAE 106.39 ETE 201.90 ZAC 41.33 ETC 291.45 LVI 25.15

**PLANETOCENTRIC CONIC**  
 C3 24.918 VHL 4.992 DLA 52.65 RAL 2.10 RAD 6645.0 VEL 12.037 PTH 7.02 VHP 3.196 DPA -35.17 RAP 42.28 ECC 1.4101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11  
 43.55 3 57 26 4558.20 -25.79 214.57 250.48 42.36 5 13 24 3558.2 -42.49 193.11

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.5324 TRA -1.0942 TC3-2.9235 BAU 1.5920  
 RDE 2.4263 RRA -.6429 RC3-3.7803 FAU .25380  
 FDE 6.4846 FRA-1.7265 FC3-8.8179 BSP 10612  
 BDE 2.8697 BRA 1.2691 BC3 4.7789 FSP 1798

**MID-COURSE EXECUTION ACCURACY**  
 SGT 3987.1 SGR 4845.5 SG3 1035.2  
 RRT .9540 RRF .9977 RTF .9534  
 SGB 6275.0 R23 .1163 R13 .9909  
 SG1 6205.2 SG2 933.1 THA 50.81

**ORBIT DETERMINATION ACCURACY**  
 ST 93.4 SR 140.6 SS 103.7  
 CRT .9782 CRS-1.0000 CST -.9783  
 LSA 197.3 MSA 17.1 SSA .4  
 EL1 168.0 EL2 16.2 ALF 56.63



LAUNCH DATE AUG 9 1973

FLIGHT TIME 292.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

DISTANCE 558.747

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.890 GAL 1.27 AZL 83.32 MCA 164.71 SMA 198.96 ECC .23717 INC 6.6764 V1 29.377
RP 244.79 LAP 1.76 LOP 121.08 VP 20.393 GAP 2.67 AZP 96.44 TAL 6.64 TAP 171.35 RCA 151.47 APO 245.65 V2 22.407
RC 279.288 GL 48.07 GP -48.85 ZAL 78.70 ZAP 84.23 ETS 175.90 ZAE 105.03 ETE 201.05 ZAC 40.17 ETC 292.01 LVI 26.39

PLANETOCENTRIC CONIC

C3 28.409 VHL 5.139 DLA 54.32 RAL .33 RAD 6648.6 VEL 12.008 PTH 7.07 VHP 3.308 DPA -36.42 RAP 42.82 ECC 1.4346
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73
41.48 3 44 17 4585.91 -25.65 217.45 250.18 40.32 5 0 43 3585.9 -43.06 196.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6713 TRA-1.1573 TC3-2.8833 BAU 1.8468 SGT 4141.0 SGR 4955.4 SG3 953.3 ST 99.0 SR 146.8 SS 100.8
RDE 2.6057 RRA -.7252 RC3-3.6656 FAU .23431 RRT .9573 RRF .9979 RTF .8562 CRT .9801 CRS-1.0000 CST -.9799
FDE 6.2387 FRA-1.7299 FC3-7.6878 BSP 10948 SGB 6645.8 R23 .1160 R13 .9911 LSA 202.9 MSA 17.3 S8A .4
BDE 3.0956 BRA 1.3657 BC3 4.6637 F8P 1659 SG1 6390.8 SG2 927.9 THA 50.34 EL1 176.3 EL2 16.4 ALF 56.21

LAUNCH DATE AUG 9 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 562.513

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.892 GAL 1.24 AZL 82.88 MCA 165.61 SMA 198.61 ECC .23730 INC 7.1211 V1 29.377
RP 245.01 LAP 1.77 LOP 121.98 VP 20.375 GAP 2.45 AZP 96.90 TAL 6.47 TAP 172.07 RCA 151.48 APO 245.73 V2 22.386
RC 281.893 GL 30.15 GP -50.20 ZAL 79.28 ZAP 83.63 ETS 174.91 ZAE 103.73 ETE 200.23 ZAC 38.97 ETC 292.62 LVI 27.68

PLANETOCENTRIC CONIC

C3 28.193 VHL 5.310 DLA 56.05 RAL 358.26 RAD 6646.3 VEL 12.171 PTH 7.13 VHP 3.437 DPA -37.68 RAP 43.45 ECC 1.4640
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51
39.36 3 30 6 4614.60 -25.36 220.37 249.66 38.18 4 47 1 3614.6 -43.50 200.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8085 TRA-1.2292 TC3-2.8202 BAU 1.7045 SGT 4291.5 SGR 5071.8 SG3 870.1 ST 104.0 SR 152.8 SS 96.5
RDE 2.7963 RRA -.8226 RC3-3.5350 FAU .21487 RRT .9605 RRF .9980 RTF .9588 CRT .9814 CRS-1.0000 CST -.9810
FDE 5.9456 FRA-1.7294 FC3-6.5981 BSP 11265 SGB 6643.8 R23 .1155 R13 .9913 LSA 207.8 MSA 17.4 S8A .4
BDE 3.3301 BRA 1.4781 BC3 4.5221 F8P 1513 SG1 6579.7 SG2 920.8 THA 49.96 EL1 184.1 EL2 16.6 ALF 55.96

LAUNCH DATE AUG 9 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

DISTANCE 566.279

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.895 GAL 1.21 AZL 82.38 MCA 166.50 SMA 198.68 ECC .23744 INC 7.6227 V1 29.377
RP 245.22 LAP 1.77 LOP 122.89 VP 20.356 GAP 2.23 AZP 97.41 TAL 6.29 TAP 172.79 RCA 151.49 APO 245.82 V2 22.365
RC 284.497 GL 32.36 GP -51.58 ZAL 79.87 ZAP 83.12 ETS 173.94 ZAE 102.49 ETE 199.43 ZAC 37.72 ETC 293.30 LVI 29.02

PLANETOCENTRIC CONIC

C3 30.347 VHL 5.509 DLA 57.81 RAL 355.81 RAD 6647.1 VEL 12.259 PTH 7.20 VHP 3.586 DPA -38.95 RAP 44.18 ECC 1.4994
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45
37.23 3 14 35 4644.61 -24.90 223.31 248.83 35.97 4 31 59 3644.6 -43.78 204.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9372 TRA-1.3094 TC3-2.7308 BAU 1.7894 SGT 4432.3 SGR 5203.2 SG3 787.0 ST 107.9 SR 157.6 SS 91.2
RDE 2.9818 RRA -.9475 RC3-3.4004 FAU .19576 RRT .9647 RRF .9980 RTF .527 CRT .9826 CRS-1.0000 CST -.8680
FDE 5.5719 FRA-1.7393 FC3-5.8846 BSP 11453 SGB 6635.1 R23 .1115 R13 .9918 LSA 210.9 MSA 17.4 S8A .3
BDE 3.5556 BRA 1.8182 BC3 4.3811 F8P 1336 SG1 6776.0 SG2 896.6 THA 49.74 EL1 190.3 EL2 16.8 ALF 55.78

LAUNCH DATE AUG 9 1973

FLIGHT TIME 258.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 570.038

EARTH TO MARS

RL 151.66 LAL .00 LOL 316.27 VL 32.898 GAL 1.17 AZL 81.81 MCA 167.40 SMA 198.71 ECC .23759 INC 8.1926 V1 29.377
RP 245.43 LAP 1.78 LOP 123.79 VP 20.337 GAP 2.02 AZP 98.00 TAL 6.11 TAP 173.50 RCA 151.50 APO 245.92 V2 22.344
RC 287.079 GL 54.70 GP -53.01 ZAL 80.49 ZAP 82.71 ETS 173.00 ZAE 101.33 ETE 198.87 ZAC 36.42 ETC 294.09 LVI 30.40

PLANETOCENTRIC CONIC

C3 32.979 VHL 5.743 DLA 59.60 RAL 352.91 RAD 6648.1 VEL 12.365 PTH 7.29 VHP 3.759 DPA -40.23 RAP 45.03 ECC 1.5427
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53
35.07 2 57 26 4676.17 -24.23 226.25 247.61 33.71 4 15 22 3676.2 -43.83 208.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0459 TRA-1.4033 TC3-2.6202 BAU 1.8318 SGT 4569.2 SGR 5320.4 SG3 699.8 ST 110.3 SR 162.2 SS 85.4
RDE 3.1860 RRA -1.0753 RC3-3.2236 FAU .17468 RRT .9665 RRF .9981 RTF .9636 CRT .9822 CRS-1.0000 CST -.9813
FDE 5.1701 FRA-1.7013 FC3-4.5855 BSP 11777 SGB 7013.2 R23 .1134 R13 .9916 LSA 213.1 MSA 17.9 S8A .3
BDE 3.7863 BRA 1.7679 BC3 4.1542 F8P 1193 SG1 6955.6 SG2 896.9 THA 49.49 EL1 195.4 EL2 17.2 ALF 55.96

LAUNCH DATE AUG 9 1973 FLIGHT TIME 260.00 ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC DISTANCE 573.795 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 32.900 GAL 1.14 AZL 81.15 MCA 166.26 SMA 196.77 ECC .23776 INC 8.8469 V1 29.377
RP 245.63 LAP 1.79 LOP 124.69 VP 20.320 GAP 1.80 AZP 96.67 TAL 5.92 TAP 174.21 RCA 151.51 APO 246.02 V2 22.324
RC 289.637 GL 57.18 GP -54.46 ZAL 81.12 ZAP 82.41 ETS 172.12 ZAE 100.25 ETE 197.96 ZAC 35.07 ETC 294.90 LVI 31.63

PLANETOCENTRIC CONIC
C3 36.236 VHL 6.020 DLA 61.39 RAL 349.42 RAD 6648.3 VEL 12.495 PTH 7.30 VHP 3.961 DPA -41.50 RAP 45.99 ECC 1.5963
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70
32.94 2 38 12 4709.65 -23.31 229.17 245.84 31.42 3 56 41 3709.7 -43.62 212.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.1235 TRA-1.5087 TC3-2.4816 BAU 1.8966 SGT 4688.5 SGR 5442.2 SG3 612.2 ST 110.7 SR 165.3 SS 76.5
RDE 3.3865 RRA-1.2258 RC3-3.0281 FAU 1.5336 RRT .9682 RRF .9980 RTF .9641 CRT .9810 CRS-1.0000 CST -.9795
FDE 4.7028 FRA-1.6465 FC3-3.6639 BSP 12147 SGB 7183.3 R23 .1185 R13 .8913 LSA 213.1 MSA 10.6 SSA .3
BDE 3.9972 BRA 1.9424 BC3 3.9151 FSP 1050 SGI 7127.3 SG2 885.4 THA 49.39 EL1 198.2 EL2 17.9 ALP 56.40

LAUNCH DATE AUG 9 1973 FLIGHT TIME 312.00 ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC DISTANCE 672.108 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.013 GAL -.19 AZL 99.17 MCA 191.57 SMA 201.00 ECC .24549 INC 9.1659 V1 29.377
RP 248.97 LAP 1.83 LOP 147.69 VP 20.146 GAP -3.40 AZP 81.02 TAL 359.01 TAP 190.58 RCA 151.66 APO 250.35 V2 21.997
RC 348.831 GL -36.52 GP 50.96 ZAL 88.47 ZAP 68.79 ETS 211.16 ZAE 81.96 ETE 191.83 ZAC 136.78 ETC 290.84 LVI -70.52

PLANETOCENTRIC CONIC
C3 38.025 VHL 6.166 DLA -39.78 RAL 80.38 RAD 6850.0 VEL 12.566 PTH 7.43 VHP 4.162 DPA 52.54 RAP 350.76 ECC 1.6259
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 17 27 15 2410.53 -2.92 62.65 292.59 137.31 18 7 26 1410.5 15.37 46.68
60.00 20 4 26 1989.45 11.24 38.26 305.85 126.96 20 37 36 989.5 25.93 18.08
60.77 20 51 40 1856.14 16.26 30.99 309.86 126.82 21 22 37 856.1 29.79 9.30
60.77 20 51 40 1856.14 16.26 30.99 309.86 126.82 21 22 37 856.1 29.79 9.30
60.77 20 51 40 1856.14 16.26 30.99 309.86 126.82 21 22 37 856.1 29.79 9.30
60.77 20 51 40 1856.14 16.26 30.99 309.86 126.82 21 22 37 856.1 29.79 9.30
60.77 20 51 40 1856.14 16.26 30.99 309.86 126.82 21 22 37 856.1 29.79 9.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE-6.2217 TRA 2.8295 TC3-4.6134 BAU 2.6099 SGT 8803.1 SGR 4581.6 SG3 315.9 ST 293.7 SR 135.8 SS 56.1
RDE 2.8048 RRA-2.1060 RC3 2.2525 FAU 1.3741 RRT -.9814 RRF -.9959 RTF .9674 CRT -.9940 CRS .9984 CST -.9882
FDE-3.1607 FRA 2.8817 FC3-3.1264 BSP 17439 SGB 9924.0 R23 .2022 R13 -.9765 LSA 328.0 MSA 15.7 SSA .3
BDE 6.8246 BRA 3.5272 BC3 5.1339 FSP 872 SGI 9893.0 SG2 783.3 THA 152.76 EL1 323.3 EL2 13.5 ALP 155.26

LAUNCH DATE AUG 9 1973 FLIGHT TIME 314.00 ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC DISTANCE 675.841 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.018 GAL -.25 AZL 98.31 MCA 192.43 SMA 201.11 ECC .24590 INC 8.5128 V1 29.377
RP 249.02 LAP 1.83 LOP 148.57 VP 20.149 GAP -3.59 AZP 81.68 TAL 358.74 TAP 191.17 RCA 151.66 APO 250.56 V2 21.992
RC 348.628 GL -56.12 GP 49.08 ZAL 88.70 ZAP 67.28 ETS 211.37 ZAE 80.71 ETE 192.57 ZAC 135.03 ETC 290.17 LVI -68.93

PLANETOCENTRIC CONIC
C3 34.659 VHL 5.887 DLA -37.43 RAL 59.63 RAD 6648.8 VEL 12.432 PTH 7.34 VHP 3.985 DPA 51.01 RAP 352.52 ECC 1.5704
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 17 3 44 2455.51 -5.17 64.54 288.77 137.36 17 44 39 1455.5 13.17 46.69
60.00 19 3 32 2136.02 4.68 45.42 298.35 130.05 19 39 8 1136.0 20.37 26.49
64.38 21 6 14 1782.22 16.32 24.91 307.12 124.17 21 35 56 782.2 28.85 2.63
64.38 21 6 14 1782.22 16.32 24.91 307.12 124.17 21 35 56 782.2 28.85 2.63
64.38 21 6 14 1782.22 16.32 24.91 307.12 124.17 21 35 56 782.2 28.85 2.63
64.38 21 6 14 1782.22 16.32 24.91 307.12 124.17 21 35 56 782.2 28.85 2.63
64.38 21 6 14 1782.22 16.32 24.91 307.12 124.17 21 35 56 782.2 28.85 2.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE-5.9159 TRA 2.7684 TC3-5.0893 BAU 2.5929 SGT 8976.1 SGR 4396.0 SG3 581.3 ST 292.5 SR 127.5 SS 59.0
RDE 2.5111 RRA-1.9733 RC3 2.3264 FAU 1.5175 RRT -.9805 RRF -.9959 RTF .5473 CRT -.9936 CRS .9983 CST -.9854
FDE-3.3095 FRA 3.1569 FC3-3.7906 BSP 17613 SGB 9994.8 R23 .2047 R13 -.9758 LSA 324.1 MSA 15.9 SSA .3
BCE 6.4268 BRA 3.3997 BC3 5.5956 FSP 988 SGI 9964.5 SG2 777.5 THA 154.18 EL1 318.8 EL2 13.3 ALP 156.53

LAUNCH DATE AUG 9 1973 FLIGHT TIME 316.00 ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC DISTANCE 679.576 EARTH TO MARS
RL 151.66 LAL .00 LOL 316.27 VL 33.024 GAL -.30 AZL 97.94 MCA 193.29 SMA 201.21 ECC .24631 INC 7.9436 V1 29.377
RP 249.07 LAP 1.82 LOP 149.44 VP 20.153 GAP -3.79 AZP 82.27 TAL 358.47 TAP 191.78 RCA 151.65 APO 250.78 V2 21.988
RC 350.392 GL -53.86 GP 47.26 ZAL 88.96 ZAP 65.80 ETS 211.48 ZAE 79.48 ETE 193.19 ZAC 133.32 ETC 289.57 LVI -87.34

PLANETOCENTRIC CONIC
C3 31.933 VHL 5.851 DLA -35.20 RAL 59.03 RAD 6647.7 VEL 12.323 PTH 7.25 VHP 3.838 DPA 49.52 RAP 354.17 ECC 1.5255
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 18 44 22 2494.84 -7.14 66.20 285.75 137.17 17 25 57 1494.8 11.24 50.42
60.00 18 26 21 2217.89 1.29 49.34 293.80 130.28 19 5 19 1217.9 17.07 30.89
68.10 21 23 54 1701.93 16.20 18.38 304.69 121.69 21 52 16 701.9 27.78 355.65
68.10 21 23 54 1701.93 16.20 18.38 304.69 121.69 21 52 16 701.9 27.78 355.65
68.10 21 23 54 1701.93 16.20 18.38 304.69 121.69 21 52 16 701.9 27.78 355.65
68.10 21 23 54 1701.93 16.20 18.38 304.69 121.69 21 52 16 701.9 27.78 355.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE-5.6337 TRA 2.7132 TC3-5.5708 BAU 2.5881 SGT 9143.4 SGR 4216.1 SG3 642.7 ST 290.2 SR 119.1 SS 60.7
RDE 2.2485 RRA-1.8506 RC3 2.3914 FAU 1.6563 RRT -.9798 RRF -.9958 RTF .9670 CRT -.9930 CRS .9982 CST -.9842
FDE-3.3861 FRA 3.3972 FC3-4.4903 BSP 17663 SGB10068.7 R23 .2078 R13 -.9748 LSA 319.1 MSA 16.2 SSA .3
BDE 6.0658 BRA 3.2842 BC3 6.0624 FSP 1084 SGI10039.3 SG2 768.4 THA 155.53 EL1 313.4 EL2 13.0 ALP 157.78

LAUNCH DATE AUG 9 1973

FLIGHT TIME 318.00

ARRIVAL DATE JUN 23 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 33.029 GAL -.36 AZL 97.44 HCA 194.16 SMA 201.32 ECC .24674 INC 7.4430 V1 29.377  
 RP 249.11 LAP 1.82 LOP 150.32 VP 20.157 GAP -3.98 AZP 82.78 TAL 338.19 TAP 192.35 RCA 151.65 APO 250.99 V2 21.984  
 RC 352.122 GL -81.73 GP 45.49 ZAL 89.26 ZAP 84.38 ETS 211.51 ZAE 78.25 ETE 193.74 ZAC 131.65 ETC 289.03 LVI -65.75

Distance 683.313

Planetocentric Conic: C3 29.698 VHL 5.490 DLA -33.08 RAL 58.54 RAD 6646.9 VEL 12.233 PTH 7.18 VHP 3.715 DPA 48.08 RAP 355.72 ECC 1.4888  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 28 1 2330.46 -8.92 67.72 283.32 136.93 17 10 11 1530.5 9.47 51.98  
 60.00 18 2 2 2280.19 -1.45 52.32 290.44 130.28 18 40 2 1280.2 14.49 34.12  
 70.00 20 28 24 1848.77 9.26 25.40 298.40 123.02 20 59 13 848.8 21.91 4.20  
 72.08 21 45 51 1810.85 15.93 11.11 302.54 119.38 22 12 42 610.8 26.62 348.03  
 72.08 21 45 51 1810.85 15.93 11.11 302.54 119.38 22 12 42 610.8 26.62 348.03  
 72.08 21 45 51 1610.85 15.93 11.11 302.54 119.38 22 12 42 610.8 26.62 348.03  
 110.00 1 31 46 6183.63 9.26 292.22 298.40 123.02 3 14 50 5183.6 21.91 271.02

Differential Corrections: TDE-5.3700 TRA 2.6758 TC3-6.0355 BAW 2.5834 SGT 9296.4 SGR 4038.8 SG3 698.8 ST 286.9 SR 111.1 S8 61.7  
 RDE 2.0173 RRA-1.7443 RC3 2.4314 FAU .17780 RRT -.9790 RRF -.9956 RTF .9665 CRT -.9924 CRS .9980 CST -.9827  
 FDE-3.4140 FRA 3.6187 FC3-5.1831 B8P 17891 SGB10135.8 R23 .2110 R13 -.9738 LSA 313.4 MSA 16.4 SSA .4  
 BDE 5.7364 BRA 3.1942 BC3 6.5069 F8P 1189 SGI10107.4 SG2 757.9 THA 156.82 EL1 307.4 EL2 12.8 ALF 158.94

Mid-course Execution Accuracy: SGT 9296.4 SGR 4038.8 SG3 698.8  
 RRT -.9790 RRF -.9956 RTF .9665  
 SGB10135.8 R23 .2110 R13 -.9738  
 SGI10107.4 SG2 757.9 THA 156.82

Orbit Determination Accuracy: ST 286.9 SR 111.1 S8 61.7  
 CRT -.9924 CRS .9980 CST -.9827  
 LSA 313.4 MSA 16.4 SSA .4  
 EL1 307.4 EL2 12.8 ALF 158.94

LAUNCH DATE AUG 9 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 25 1974

Heliocentric Conic: RL 151.66 LAL .00 LOL 316.27 VL 33.034 GAL -.42 AZL 97.00 HCA 195.03 SMA 201.43 ECC .24716 INC 6.9990 V1 29.377  
 RP 249.14 LAP 1.81 LOP 151.19 VP 20.162 GAP -4.17 AZP 83.24 TAL 357.90 TAP 192.93 RCA 151.64 APO 251.21 V2 21.981  
 RC 353.817 GL -49.71 GP 43.80 ZAL 89.59 ZAP 63.01 ETS 211.48 ZAE 77.04 ETE 194.20 ZAC 130.02 ETC 288.55 LVI -64.19

Distance 687.050

Planetocentric Conic: C3 27.844 VHL 5.277 DLA -31.06 RAL 58.15 RAD 6646.2 VEL 12.157 PTH 7.12 VHP 3.612 DPA 46.70 RAP 357.18 ECC 1.4582  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 13 56 2563.42 -10.55 69.14 281.35 136.67 16 36 40 1563.4 7.83 53.37  
 60.00 17 40 48 2332.30 -3.75 54.81 287.82 130.16 18 19 40 1332.3 12.28 36.76  
 70.00 19 42 14 1974.94 4.52 32.09 294.05 123.89 20 15 9 974.9 17.84 11.71  
 76.59 22 14 37 1500.10 15.54 2.46 300.64 117.24 22 39 37 500.1 25.41 339.13  
 76.59 22 14 37 1500.10 15.54 2.46 300.64 117.24 22 39 37 500.1 25.41 339.13  
 76.59 22 14 37 1500.10 15.54 2.46 300.64 117.24 22 39 37 500.1 25.41 339.13  
 110.00 0 45 36 1021.75 4.52 321.00 294.05 123.89 1 2 38 21.8 17.84 300.63

Differential Corrections: TDE-5.1324 TRA 2.6429 TC3-6.5005 BAW 2.5875 SGT 9452.1 SGR 3873.4 SG3 751.2 ST 283.3 SR 103.6 S8 62.0  
 RDE 1.8176 RRA-1.6469 RC3 2.4619 FAU .18929 RRT -.9783 RRF -.9953 RTF .9661 CRT -.9917 CRS .9977 CST -.9809  
 FDE-3.4039 FRA 3.8132 FC3-5.8854 B8P 17959 SGB10215.0 R23 .2136 R13 -.9728 LSA 307.5 MSA 16.6 SSA .4  
 BDE 5.4447 BRA 3.1140 BC3 6.9511 F8P 1267 SGI10187.8 SG2 745.3 THA 158.03 EL1 301.4 EL2 12.5 ALF 160.03

Mid-course Execution Accuracy: SGT 9452.1 SGR 3873.4 SG3 751.2  
 RRT -.9783 RRF -.9953 RTF .9661  
 SGB10215.0 R23 .2136 R13 -.9728  
 SGI10187.8 SG2 745.3 THA 158.03

Orbit Determination Accuracy: ST 283.3 SR 103.6 S8 62.0  
 CRT -.9917 CRS .9977 CST -.9809  
 LSA 307.5 MSA 16.6 SSA .4  
 EL1 301.4 EL2 12.5 ALF 160.03

LAUNCH DATE		AUG 10 1973		FLIGHT TIME		100.00		ARRIVAL DATE		NOV 18 1973	
<p>Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 35.814 GAL .44 AZL 90.13 HCA 88.10 SMA 275.30 ECC .44924 INC .1292 V1 29.382                      RP 218.89 LAP -.13 LOP 45.33 VP 27.028 GAP 24.11 AZP 90.00 TAL 1.41 TAP 89.51 RCA 151.62 APO 398.97 V2 25.107                      RC 77.855 GL -.74 GP -5.10 ZAL 84.91 ZAP 174.40 ETS 247.46 ZAE 181.89 ETE 344.75 ZAC 78.22 ETC 282.75 LVI -11.88</p>											
<p>Planetary Centric Conic: C3 39.157 VHL 6.258 DLA 14.78 RAL 39.93 RAD 6650.4 VEL 12.611 PTH 7.47 VHP 8.959 DPA 10.74 RAP 42.36 ECC 1.6444                      LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG                      50.00 11 48 28 3597.50 -47.31 137.28 288.24 95.71 12 48 26 2597.5 -39.62 105.44                      60.00 12 11 25 3536.44 -40.26 132.43 288.89 91.89 13 10 21 2536.4 -35.11 102.60                      70.00 12 44 40 3438.58 -34.14 124.56 288.94 88.94 13 41 58 2438.6 -31.01 96.28                      80.00 13 35 6 3280.54 -29.71 112.39 288.78 86.93 14 29 46 2280.5 -27.96 85.10                      90.00 14 48 32 3043.53 -28.04 94.86 288.64 86.19 15 39 15 2043.5 -26.80 67.92                      100.00 16 17 58 2755.02 -29.71 73.76 288.76 86.93 17 3 53 1755.0 -27.96 46.47                      110.00 17 44 6 2485.40 -34.14 53.48 288.94 88.94 18 25 31 1485.4 -31.01 25.20</p>											
<p>Differential Corrections: TDE -.3177 TRA -.9757 TC3 .2579 BAU .1405 SGT 1021.0 SGR 620.8 SG3 129.0 ST 20.1 SR 28.9 SS 9.4                      RDE -.6283 RRA .2313 RC3 -.0739 FAU .05107 RRT -.1032 RRF .1219 RTF -.6036 CRT .6404 CRS .7523 CST .9734                      FDE .2171 FRA .4643 FC3-1.1290 BSP 1412 SGB 1195.0 R23 -.0241 R13 .6061 LSA 33.4 MSA 14.3 SSA 1.4                      BDE .7023 BRA 1.0028 BC3 .2683 FSP 151 SG1 1024.2 SGT 615.6 THA 174.37 EL1 32.4 EL2 13.8 ALF 60.01</p>											

LAUNCH DATE		AUG 10 1973		FLIGHT TIME		102.00		ARRIVAL DATE		NOV 20 1973	
<p>Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 35.457 GAL .50 AZL 90.09 HCA 89.23 SMA 269.07 ECC .43651 INC .0923 V1 29.382                      RP 219.26 LAP -.09 LOP 46.48 VP 28.783 GAP 23.72 AZP 90.00 TAL 1.84 TAP 90.87 RCA 151.62 APO 386.52 V2 25.067                      RC 79.428 GL -.54 GP -5.23 ZAL 84.42 ZAP 173.93 ETS 241.13 ZAE 181.31 ETE 344.96 ZAC 78.03 ETC 282.72 LVI -11.66</p>											
<p>Planetary Centric Conic: C3 37.282 VHL 6.104 DLA 14.82 RAL 39.39 RAD 6649.7 VEL 12.536 PTH 7.41 VHP 8.684 DPA 10.73 RAP 42.72 ECC 1.6132                      LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG                      50.00 11 46 9 3585.74 -47.23 136.16 286.49 96.57 12 45 55 2585.7 -39.23 104.59                      60.00 12 9 3 3524.81 -40.23 131.44 287.26 92.56 13 7 48 2524.8 -34.82 101.75                      70.00 12 42 14 3427.12 -34.15 123.67 287.40 89.47 13 39 21 2427.1 -30.80 95.45                      80.00 13 32 37 3269.27 -29.75 111.55 287.25 87.36 14 27 6 2269.3 -27.82 84.30                      90.00 14 46 1 3032.34 -28.09 94.04 287.15 86.59 15 36 34 2032.3 -26.87 67.12                      100.00 16 15 29 2743.74 -29.75 72.92 287.25 87.36 17 1 13 1743.7 -27.82 45.66                      110.00 17 41 41 2473.94 -34.15 52.58 287.40 89.47 18 22 55 1473.9 -30.80 24.37</p>											
<p>Differential Corrections: TDE -.3191 TRA -.9683 TC3 .2886 BAU .1486 SGT 1046.9 SGR 625.7 SG3 137.7 ST 20.6 SR 29.0 SS 9.8                      RDE -.8139 RRA .2296 RC3 -.0826 FAU .05328 RRT -.1105 RRF .1302 RTF -.6133 CRT .6437 CRS .7641 CST .9711                      FDE .2302 FRA .4707 FC3-1.2378 BSP 1467 SGB 1219.6 R23 -.0260 R13 .6159 LSA 33.9 MSA 14.3 SSA 1.4                      BDE .6918 BRA .9951 BC3 .2982 FSP 166 SG1 1050.4 SGT 619.8 THA 174.19 EL1 32.7 EL2 14.0 ALF 59.23</p>											

LAUNCH DATE		AUG 10 1973		FLIGHT TIME		104.00		ARRIVAL DATE		NOV 22 1973	
<p>Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 35.309 GAL .56 AZL 90.06 HCA 90.35 SMA 263.46 ECC .42454 INC .0546 V1 29.382                      RP 219.63 LAP -.08 LOP 47.58 VP 26.548 GAP 23.33 AZP 90.00 TAL 1.89 TAP 92.24 RCA 151.61 APO 375.32 V2 25.026                      RC 81.081 GL -.34 GP -5.36 ZAL 83.92 ZAP 173.38 ETS 235.77 ZAE 180.80 ETE 344.32 ZAC 77.84 ETC 282.68 LVI -11.44</p>											
<p>Planetary Centric Conic: C3 35.523 VHL 5.960 DLA 14.85 RAL 38.83 RAD 6649.1 VEL 12.467 PTH 7.36 VHP 8.420 DPA 10.71 RAP 43.08 ECC 1.5846                      LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG                      50.00 11 43 46 3574.47 -47.14 135.08 284.77 97.39 12 43 21 2574.5 -38.85 103.78                      60.00 12 6 36 3513.67 -40.20 130.50 285.66 93.20 13 5 10 2513.7 -34.54 100.94                      70.00 12 39 44 3416.16 -34.15 122.81 285.87 89.97 13 36 40 2416.2 -30.60 94.66                      80.00 13 30 3 3258.50 -29.78 110.75 285.77 87.78 14 24 22 2258.5 -27.67 83.53                      90.00 14 43 26 3021.66 -28.13 93.26 285.68 86.98 15 33 48 2021.7 -26.55 66.37                      100.00 16 12 55 2732.97 -29.78 72.12 285.77 87.78 16 58 28 1733.0 -27.67 44.90                      110.00 17 39 11 2462.98 -34.15 51.73 285.87 89.97 18 20 14 1463.0 -30.60 23.58</p>											
<p>Differential Corrections: TDE -.3208 TRA -.9596 TC3 .3185 BAU .1574 SGT 1072.4 SGR 630.5 SG3 146.7 ST 21.0 SR 29.1 SS 10.1                      RDE -.6012 RRA .2282 RC3 -.0919 FAU .05355 RRT -.1183 RRF .1406 RTF -.6252 CRT .6478 CRS .7719 CST .9699                      FDE .2419 FRA .4788 FC3-1.3537 BSP 1531 SGB 1244.0 R23 -.0290 R13 .6282 LSA 34.3 MSA 14.7 SSA 1.4                      BDE .6814 BRA .9863 BC3 .3315 FSP 179 SG1 1076.3 SGT 623.8 THA 174.00 EL1 33.0 EL2 14.1 ALF 58.48</p>											

LAUNCH DATE		AUG 10 1973		FLIGHT TIME		106.00		ARRIVAL DATE		NOV 24 1973	
<p>Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 35.188 GAL .63 AZL 90.02 HCA 91.48 SMA 258.40 ECC .41329 INC .0171 V1 29.382                      RP 220.00 LAP -.02 LOP 48.70 VP 26.322 GAP 22.95 AZP 90.00 TAL 2.14 TAP 93.62 RCA 151.61 APO 365.19 V2 24.985                      RC 82.809 GL -.13 GP -5.50 ZAL 83.41 ZAP 172.78 ETS 231.25 ZAE 180.35 ETE 344.04 ZAC 77.64 ETC 282.65 LVI -11.21</p>											
<p>Planetary Centric Conic: C3 33.925 VHL 5.825 DLA 14.90 RAL 38.26 RAD 6648.5 VEL 12.403 PTH 7.31 VHP 8.164 DPA 10.68 RAP 43.44 ECC 1.5583                      LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG                      50.00 11 41 19 3563.71 -47.04 134.06 283.09 98.17 12 40 42 2563.7 -38.48 103.01                      60.00 12 4 8 3503.05 -40.15 129.60 284.08 93.81 13 2 29 2503.0 -34.26 100.17                      70.00 12 37 10 3405.72 -34.15 122.00 284.36 90.45 13 33 58 2405.7 -30.40 93.91                      80.00 13 27 25 3248.26 -29.81 109.99 284.30 88.18 14 21 33 2248.3 -27.53 82.80                      90.00 14 40 46 3011.52 -28.17 92.52 284.23 87.35 15 30 57 2011.5 -26.43 65.65                      100.00 16 10 17 2722.73 -29.81 71.36 284.30 88.18 16 55 40 1722.7 -27.53 44.17                      110.00 17 36 36 2452.54 -34.15 50.91 284.36 90.45 18 17 29 1452.5 -30.40 22.83</p>											
<p>Differential Corrections: TDE -.3216 TRA -.9481 TC3 .3519 BAU .1662 SGT 1095.2 SGR 635.1 SG3 156.5 ST 21.5 SR 29.2 SS 10.4                      RDE -.5892 RRA .2268 RC3 -.1022 FAU .05800 RRT -.1269 RRF .1516 RTF -.6370 CRT .6519 CRS .7803 CST .9684                      FDE .2546 FRA .4862 FC3-1.4800 BSP 1574 SGB 1266.0 R23 -.0315 R13 .6402 LSA 34.6 MSA 14.8 SSA 1.5                      BDE .6712 BRA .9749 BC3 .3664 FSP 193 SG1 1099.6 SGT 627.4 THA 173.75 EL1 33.3 EL2 14.3 ALF 57.81</p>											

LAUNCH DATE AUG 10 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 28 1973

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 35.038 GAL .69 AZL 89.98 HCA 92.59 SMA 253.81 ECC .40270 INC .0000 V1 29.382  
 RP 220.38 LAP .02 LOP 49.82 VP 26.106 GAP 22.58 AZP 90.00 TAL 2.40 TAP 95.00 RCA 151.60 APO 356.01 V2 24.944  
 RC 84.610 GL .09 GP -5.64 ZAL 82.88 ZAP 172.13 ETS 227.44 ZAE 159.95 ETE 343.71 ZAC 77.44 ETC 282.62 LVI -10.90

Distance 297.363

Planetocentric Conic: C3 32.457 VHL 5.897 DLA 14.94 RAL 37.67 RAD 6647.9 VEL 12.344 PTH 7.27 VHP 7.919 DPA 10.65 RAP 43.78 ECC 1.5342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 38 47 3853.45 -46.93 133.09 281.44 98.91 12 38 1 2533.5 -38.13 102.29  
 60.00 12 1 31 3492.94 -40.10 128.74 282.54 94.39 12 59 44 2492.9 -33.99 99.45  
 70.00 12 34 31 3395.82 -34.14 121.22 282.89 90.91 13 31 7 2395.8 -30.21 93.20  
 80.00 13 24 42 3238.57 -29.83 109.28 282.86 88.56 14 18 41 2238.6 -27.39 82.12  
 90.00 14 38 1 3001.93 -28.19 91.82 282.80 87.70 15 28 3 2001.9 -26.31 64.97  
 100.00 16 7 34 2713.04 -29.83 70.64 282.86 88.56 16 52 47 1713.0 -27.39 43.48  
 110.00 17 33 57 2442.64 -34.14 50.14 282.89 90.91 18 14 40 1442.6 -30.21 22.12

Differential Corrections: TDE -.3222 TRA -.9381 TC3 .3850 BAU .1741  
 RDE -.5773 RRA .2254 RC3 -.1132 FAU .06052  
 FDE .2677 FRA .4916 FC3-1.6144 BSP 1620  
 BDE .6613 BRA .9648 BC3 .4013 FSP 209

Mid-Course Execution Accuracy: SGT 1118.5 SGR 639.5 SG3 166.6  
 RRT -.1363 RRF .1630 RTF -.6463  
 SGB 1288.4 R23 -.0341 R13 .6499  
 SGI 1123.4 SGI 630.7 THA 173.48

Orbit Determination Accuracy: ST 21.9 SR 29.3 SS 10.8  
 CRT .6552 CRS .7892 CST .9663  
 LSA 35.0 MSA 14.9 SBA 1.5  
 EL1 33.6 EL2 14.4 ALF 57.15

LAUNCH DATE AUG 10 1973

FLIGHT TIME 110.00

ARRIVAL DATE NOV 28 1973

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 34.911 GAL .75 AZL 89.95 HCA 93.71 SMA 249.63 ECC .39273 INC .0499 V1 29.382  
 RP 220.76 LAP .05 LOP 50.94 VP 25.898 GAP 22.20 AZP 90.00 TAL 2.67 TAP 96.38 RCA 151.59 APO 347.66 V2 24.902  
 RC 86.480 GL .32 GP -5.79 ZAL 82.35 ZAP 171.44 ETS 224.22 ZAE 159.62 ETE 343.34 ZAC 77.24 ETC 282.60 LVI -10.75

Distance 300.036

Planetocentric Conic: C3 31.106 VHL 5.577 DLA 14.99 RAL 37.07 RAD 6647.4 VEL 12.290 PTH 7.23 VHP 7.682 DPA 10.60 RAP 44.12 ECC 1.5119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 36 13 3543.72 -46.83 132.18 279.84 99.61 12 35 16 2543.7 -37.78 101.61  
 60.00 11 58 53 3483.37 -40.05 127.93 281.03 94.93 12 56 56 2483.4 -33.73 98.77  
 70.00 12 31 48 3386.46 -34.13 120.49 281.44 91.34 13 28 15 2386.5 -30.02 92.54  
 80.00 13 21 55 3229.43 -29.84 108.60 281.45 88.92 14 15 45 2229.4 -27.25 81.47  
 90.00 14 35 12 2992.91 -28.22 91.17 281.40 88.03 15 25 5 1992.9 -26.19 64.34  
 100.00 16 4 47 2703.91 -29.84 69.96 281.45 88.92 16 49 51 1703.9 -27.25 42.84  
 110.00 17 31 15 2433.27 -34.13 49.41 281.44 91.34 18 11 48 1433.3 -30.02 21.46

Differential Corrections: TDE -.3234 TRA -.9290 TC3 .4199 BAU .1822  
 RDE -.5660 RRA .2241 RC3 -.1253 FAU .06328  
 FDE .2835 FRA .4973 FC3-1.7607 BSP 1674  
 BDE .6518 BRA .9556 BC3 .4382 FSP 225

Mid-Course Execution Accuracy: SGT 1142.7 SGR 643.7 SG3 177.5  
 RRT -.1465 RRF .1748 RTF -.6555  
 SGB 1311.6 R23 -.0365 R13 .6594  
 SGI 1148.5 SGI 633.7 THA 173.20

Orbit Determination Accuracy: ST 22.3 SR 29.3 SS 11.2  
 CRT .6588 CRS .7994 CST .9638  
 LSA 35.4 MSA 15.0 SBA 1.6  
 EL1 33.8 EL2 14.8 ALF 56.42

LAUNCH DATE AUG 10 1973

FLIGHT TIME 112.00

ARRIVAL DATE NOV 30 1973

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 34.793 GAL .82 AZL 89.91 HCA 94.82 SMA 245.81 ECC .38335 INC .0862 V1 29.382  
 RP 221.14 LAP .09 LOP 52.05 VP 25.698 GAP 21.83 AZP 90.01 TAL 2.94 TAP 97.76 RCA 151.58 APO 340.05 V2 24.861  
 RC 88.416 GL .56 GP -5.95 ZAL 81.81 ZAP 170.72 ETS 221.49 ZAE 159.34 ETE 342.92 ZAC 77.03 ETC 282.57 LVI -10.51

Distance 302.815

Planetocentric Conic: C3 29.864 VHL 5.465 DLA 15.04 RAL 36.46 RAD 6647.0 VEL 12.239 PTH 7.19 VHP 7.453 DPA 10.54 RAP 44.45 ECC 1.4915  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 33 35 3534.51 -46.72 131.31 278.28 100.27 12 32 29 2534.5 -37.46 100.97  
 60.00 11 56 11 3474.33 -39.89 127.17 279.55 95.45 12 54 5 2474.3 -33.49 98.13  
 70.00 12 29 2 3377.65 -34.11 119.80 280.02 91.75 13 25 20 2377.6 -29.84 91.91  
 80.00 13 19 4 3220.87 -29.85 107.96 280.06 89.25 14 12 45 2220.9 -27.12 80.87  
 90.00 14 32 19 2984.47 -28.23 90.55 280.02 88.33 15 22 3 1984.5 -26.08 63.75  
 100.00 16 1 56 2695.34 -29.85 69.33 280.06 89.25 16 46 51 1695.3 -27.12 42.24  
 110.00 17 28 29 2424.47 -34.11 48.72 280.02 91.75 18 8 53 1424.5 -29.84 20.83

Differential Corrections: TDE -.3231 TRA -.9185 TC3 .4569 BAU .1906  
 RDE -.5548 RRA .2228 RC3 -.1382 FAU .06609  
 FDE .2988 FRA .5023 FC3-1.9158 BSP 1728  
 BDE .6431 BRA .9451 BC3 .4773 FSP 243

Mid-Course Execution Accuracy: SGT 1166.1 SGR 647.9 SG3 188.9  
 RRT -.1567 RRF .1878 RTF -.653  
 SGB 1334.0 R23 -.0397 R13 .6695  
 SGI 1172.4 SGI 636.5 THA 172.93

Orbit Determination Accuracy: ST 22.7 SR 29.3 SS 11.8  
 CRT .6638 CRS .8083 CST .9618  
 LSA 35.8 MSA 15.0 SBA 1.6  
 EL1 34.1 EL2 14.6 ALF 55.68

LAUNCH DATE AUG 10 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 2 1973

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 34.681 GAL .88 AZL 89.88 HCA 95.92 SMA 242.33 ECC .37451 INC .1229 V1 29.382  
 RP 221.52 LAP .12 LOP 53.15 VP 25.508 GAP 21.46 AZP 90.01 TAL 3.22 TAP 99.14 RCA 151.57 APO 333.08 V2 24.819  
 RC 90.414 GL .80 GP -6.11 ZAL 81.26 ZAP 168.88 ETS 219.14 ZAE 159.12 ETE 342.45 ZAC 76.82 ETC 282.54 LVI -10.27

Distance 305.688

Planetocentric Conic: C3 28.719 VHL 5.359 DLA 15.09 RAL 35.84 RAD 6646.5 VEL 12.193 PTH 7.15 VHP 7.233 DPA 10.48 RAP 44.77 ECC 1.4726  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 30 54 3525.84 -46.81 130.50 276.76 100.88 12 29 40 2525.8 -37.14 100.38  
 60.00 11 53 26 3465.84 -39.94 126.46 278.11 95.93 12 51 12 2465.8 -33.25 97.53  
 70.00 12 26 12 3369.40 -34.10 119.16 278.63 92.13 13 22 22 2369.4 -29.67 91.33  
 80.00 13 16 9 3212.88 -29.85 107.37 278.70 89.56 14 9 42 2212.9 -27.00 80.31  
 90.00 14 29 21 2976.61 -28.25 89.97 278.67 88.62 15 18 58 1976.6 -25.97 63.20  
 100.00 15 59 1 2687.36 -29.85 68.74 278.70 89.56 16 43 49 1687.4 -27.00 41.68  
 110.00 17 25 39 2416.22 -34.10 48.08 278.63 92.13 18 5 55 1416.2 -29.67 20.25

Differential Corrections: TDE -.3237 TRA -.9077 TC3 .4948 BAU .1988  
 RDE -.5449 RRA .2216 RC3 -.1521 FAU .06908  
 FDE .3149 FRA .5066 FC3-2.0824 BSP 1776  
 BDE .6341 BRA .9343 BC3 .5177 FSP 262

Mid-Course Execution Accuracy: SGT 1188.6 SGR 652.0 SG3 201.0  
 RRT -.1685 RRF .2016 RTF -.6746  
 SGB 1355.7 R23 -.0423 R13 .6791  
 SGI 1195.7 SGI 638.8 THA 172.59

Orbit Determination Accuracy: ST 23.0 SR 29.3 SS 11.9  
 CRT .6671 CRS .8169 CST .9594  
 LSA 36.1 MSA 15.1 SBA 1.7  
 EL1 34.3 EL2 14.7 ALF 55.00

LAUNCH DATE AUG 10 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 4 1973

HELIOCENTRIC CONIC										DISTANCE 308.645										EARTH TO MARS																																													
RL	151.84	LAL	.00	L0L	317.23	VL	34.575	GAL	.94	AZL	89.84	HCA	97.03	SMA	239.13	ECC	.36819	INC	.1590	V1	29.382	RP	221.90	LAP	.14	L0P	54.23	VP	25.321	GAP	21.10	AZP	90.02	TAL	3.50	TAP	100.92	RCA	151.56	APO	326.89	V2	24.778	RC	92.473	GL	1.03	GP	-6.28	ZAL	80.71	ZAP	189.21	ETS	217.12	ZAE	189.96	ETE	341.92	ZAC	76.60	ETC	282.52	LVI	-10.03
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.665	VHL	5.280	DLA	15.15	RAL	35.22	RAD	6646.1	VEL	12.150	PTH	7.12	VHP	7.020	DPA	10.40	RAP	45.09	ECC	1.4553	SGT	1211.6	SGR	656.0	SG3	213.9	ST	23.4	SR	29.3	SS	12.4	CR	.6720	CR5	.8266	CST	.9567																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.1804	RRF	.2161	RTF	-.6834	CRT	.6720	CR5	.8266	CST	.9567	LSA	36.5	MSA	15.1	SSA	1.7																						
50.00	11	20	11	3517.69	-46.50	129.75	275.29	101.45	12	26	49	2517.7	-36.85	99.83	SG8	1377.8	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24	SG1	1219.6	SG2	641.0	THA	172.27																																	
60.00	11	50	39	3457.89	-39.88	125.79	276.71	96.38	12	48	17	2457.9	-33.03	96.98	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							
70.00	12	23	19	3361.72	-34.07	118.56	277.28	92.48	13	19	21	2361.7	-29.51	90.79	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							
80.00	13	13	11	3205.49	-29.86	106.82	277.38	89.85	14	6	36	2205.5	-26.88	79.79	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							
90.00	14	26	20	2969.35	-28.26	89.44	277.36	88.89	15	15	50	1969.4	-25.87	62.69	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							
100.00	15	56	3	2679.96	-29.86	68.19	277.38	89.85	16	40	43	1680.0	-26.88	41.18	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							
110.00	17	22	46	2408.54	-34.07	47.48	277.28	92.48	18	2	54	1408.5	-29.51	19.71	SG6	1219.6	R23	-.0455	R13	.6884	EL1	34.5	EL2	14.7	ALF	54.24																																							

LAUNCH DATE AUG 10 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 6 1973

HELIOCENTRIC CONIC										DISTANCE 311.677										EARTH TO MARS																																													
RL	151.64	LAL	.00	L0L	317.23	VL	34.475	GAL	1.00	AZL	89.80	HCA	98.12	SMA	236.18	ECC	.35833	INC	.1950	V1	29.382	RP	222.28	LAP	.19	L0P	55.35	VP	25.143	GAP	20.74	AZP	90.03	TAL	3.78	TAP	101.90	RCA	151.55	APO	320.82	V2	24.736	RC	94.587	GL	1.30	GP	-8.46	ZAL	80.16	ZAP	168.42	ETS	215.37	ZAE	158.85	ETE	341.34	ZAC	76.38	ETC	282.50	LVI	-9.79
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.692	VHL	5.166	DLA	15.21	RAL	34.59	RAD	6645.7	VEL	12.110	PTH	7.08	VHP	6.814	DPA	10.31	RAP	45.39	ECC	1.4393	SGT	1220.4	SGR	659.7	SG3	227.0	ST	23.3	SR	29.2	SS	12.9	CR	.6700	CR5	.8369	CST	.9517																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2014	RRF	.2299	RTF	-.7038	CRT	.6700	CR5	.8369	CST	.9517	LSA	36.5	MSA	15.0	SSA	1.8																						
50.00	11	25	25	3510.06	-46.40	129.04	273.86	101.99	12	23	55	2510.1	-36.57	99.31	SG8	1394.4	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40	SG1	1238.3	SG2	641.1	THA	171.55																																	
60.00	11	47	48	3450.47	-39.82	125.17	275.35	96.80	12	45	19	2450.5	-32.82	96.46	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							
70.00	12	20	23	3354.58	-34.05	118.01	275.95	92.81	13	16	18	2354.6	-29.36	90.29	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							
80.00	13	10	9	3198.65	-29.86	106.31	276.08	90.12	14	3	27	2198.7	-26.77	79.31	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							
90.00	14	23	16	2962.67	-28.27	88.96	276.07	89.13	15	12	38	1962.7	-25.78	62.22	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							
100.00	15	53	1	2673.12	-29.86	67.68	276.08	90.12	16	37	34	1673.1	-26.77	40.66	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							
110.00	17	19	49	2401.40	-34.05	46.92	275.95	92.81	17	59	51	1401.4	-29.36	19.21	SG6	1238.3	R23	-.0397	R13	.7087	EL1	34.4	EL2	14.7	ALF	54.40																																							

LAUNCH DATE AUG 10 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 8 1973

HELIOCENTRIC CONIC										DISTANCE 314.778										EARTH TO MARS																																													
RL	151.64	LAL	.00	L0L	317.23	VL	34.380	GAL	1.05	AZL	89.77	HCA	99.22	SMA	233.48	ECC	.35095	INC	.2313	V1	29.382	RP	222.67	LAP	.23	L0P	56.45	VP	24.972	GAP	20.38	AZP	90.04	TAL	4.08	TAP	103.28	RCA	151.54	APO	315.41	V2	24.694	RC	96.756	GL	1.57	GP	-6.64	ZAL	79.61	ZAP	167.61	ETS	213.84	ZAE	158.80	ETE	340.70	ZAC	76.16	ETC	282.47	LVI	-9.54
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	25.796	VHL	5.079	DLA	15.28	RAL	33.96	RAD	6645.3	VEL	12.073	PTH	7.05	VHP	6.616	DPA	10.21	RAP	45.68	ECC	1.4245	SGT	1252.1	SGR	664.0	SG3	241.5	ST	23.8	SR	29.2	SS	13.3	CR	.6768	CR5	.8449	CST	.9498																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2123	RRF	.2472	RTF	-.7167	CRT	.6768	CR5	.8449	CST	.9498	LSA	37.0	MSA	15.1	SSA	1.8																						
50.00	11	22	38	3502.99	-46.30	128.39	272.48	102.48	12	21	1	2503.0	-36.30	98.84	SG8	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35	SG1	1262.8	SG2	643.3	THA	171.30																																	
60.00	11	44	56	3443.64	-39.78	124.59	274.03	97.18	12	42	20	2443.6	-32.62	95.99	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							
70.00	12	17	24	3348.05	-34.03	117.50	274.67	93.11	13	13	13	2348.1	-29.22	89.84	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							
80.00	13	7	4	3192.46	-29.86	105.85	274.82	90.36	14	0	16	2192.5	-26.67	78.88	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							
90.00	14	20	7	2956.64	-28.27	88.51	274.82	89.35	15	9	24	1956.6	-25.69	61.80	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							
100.00	15	49	56	2666.93	-29.86	67.22	274.82	90.36	16	34	22	1666.9	-26.67	40.25	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							
110.00	17	16	51	2394.87	-34.03	46.42	274.67	93.11	17	56	46	1394.9	-29.22	18.75	SG6	1417.3	R23	-.0442	R13	.7123	EL1	34.7	EL2	14.8	ALF	53.35																																							

LAUNCH DATE AUG 10 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 10 1973

HELIOCENTRIC CONIC										DISTANCE 317.940										EARTH TO MARS																																													
RL	151.64	LAL	.00	L0L	317.23	VL	34.291	GAL	1.11	AZL	89.73	HCA	100.31	SMA	230.98	ECC	.34398	INC	.2675	V1	29.382	RP	223.06	LAP	.26	L0P	57.54	VP	24.807	GAP	20.03	AZP	90.05	TAL	4.34	TAP	104.85	RCA	151.53	APO	310.43	V2	24.652	RC	98.976	GL	1.84	GP	-8.83	ZAL	79.06	ZAP	166.77	ETS	212.50	ZAE	158.79	ETE	340.00	ZAC	75.93	ETC	282.46	LVI	-9.29
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.969	VHL	4.997	DLA	15.35	RAL	33.33	RAD	6645.0	VEL	12.039	PTH	7.03	VHP	6.425	DPA	10.10	RAP	45.96	ECC	1.4109	SGT	1274.5	SGR	668.2	SG3	256.9	ST	24.3	SR	29.1	SS	13.8	CR	.6840	CR5	.8539	CST	.9475																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2242	RRF	.2648	RTF	-.7109	CRT	.6840	CR5	.8539	CST	.9475	LSA	37.4	MSA	15.0	SSA	1.9																						
50.00	11	19	49	3496.46	-46.20	127.79	271.15	102.94	12	18	6	2496.5	-36.06	98.41	SG8	1439.0	R23	-.0516	R13	.7172	EL1	34.9	EL2	14.8	ALF	52.32	SG1	1286.2	SG2	645.2	THA	171.02																																	
60.00	11	42	2	3437.35	-39.71	124.07	272.75	97.54	12	39	19	2437.4	-32.44	95.56	SG6	1439.0	R23	-.0516	R13	.7172	EL1	34.9	EL2	14.8	ALF	52.32																																							
70.00	12	14	23	3342.10	-34.01	117.03	273.43	93.38	13	10	5	2342.1	-29.09	89.42	SG6	1439.0	R23	-.0516	R13	.7172	EL1	34.9	EL2	14.8	ALF	52.32																																							
80.00	13	3	56	3186.88	-29.85	105.43	273.60	90.58	13	57	2	2186.9	-26.58	78.49																																																			

LAUNCH DATE AUG 10 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 34.206 GAL 1.17 AZL 89.70 HCA 101.40 SMA 226.67 ECC .33741 INC .3039 V1 29.382
RP 223.44 LAP .30 LOP 58.63 VP 24.848 GAP 19.68 AZP 90.06 TAL 4.62 TAP 106.02 RCA 151.51 APO 309.93 V2 24.611
RC 101.244 GL 2.12 GP -7.03 ZAL 78.51 ZAP 165.92 ETS 211.32 ZAE 158.83 ETE 339.22 ZAC 75.69 ETC 282.44 LVI -9.03

PLANETOCENTRIC CONIC

C3 24.206 VHL 4.920 DLA 15.43 RAL 32.70 RAD 6644.7 VEL 12.008 PTH 7.00 VHP 6.241 DPA 9.98 RAP 46.23 ECC 1.3994
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 16 59 3490.45 -46.10 127.24 269.86 103.35 12 15 10 2490.4 -35.83 98.01
60.00 11 39 5 3431.61 -39.66 123.59 271.51 97.86 12 36 17 2431.6 -32.27 95.16
70.00 12 11 20 3336.73 -33.98 116.82 272.22 93.63 13 6 56 2336.7 -28.97 89.05
80.00 13 0 44 3181.89 -29.85 105.06 272.41 90.77 15 53 46 2181.9 -26.50 78.14
90.00 14 13 41 2946.45 -26.28 87.77 272.41 89.73 15 2 47 1946.4 -25.54 61.09
100.00 15 43 36 2656.37 -29.85 66.43 272.41 90.77 16 27 53 1656.4 -26.50 39.51
110.00 17 10 46 2383.55 -33.98 45.53 272.22 93.63 17 50 30 1383.5 -29.97 17.98

DIFFERENTIAL CORRECTIONS

TDE -.3325 TRA -.8506 TC3 .6983 BAU .2389
RDE -.4927 RRA .2156 RC3 -.2390 FAU .08683
FDE .4185 FRA .5135 FC3-3.1056 B8P 1988
BDE .5944 BRA .8775 BC3 .7381 F8P 377

MID-COURSE EXECUTION ACCURACY

SGT 1293.4 SGR 672.6 SG3 272.7
RRT -.2376 RRF .2829 RTF -.7157
SGB 1459.6 R23 -.0579 R13 .7227
SG1 1308.5 SG2 646.8 THA 170.67

ORBIT DETERMINATION ACCURACY

ST 24.8 SR 29.0 SS 14.3
CRT .6900 CRS .8621 CST .9451
LSA 37.8 MSA 15.0 SSA 2.0
EL1 35.1 EL2 14.8 ALF 51.40

LAUNCH DATE AUG 10 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 34.126 GAL 1.22 AZL 89.66 HCA 102.48 SMA 226.53 ECC .33122 INC .3406 V1 29.382
RP 223.83 LAP .33 LOP 59.71 VP 24.495 GAP 19.33 AZP 90.07 TAL 4.90 TAP 107.38 RCA 151.50 APO 301.57 V2 24.569
RC 103.560 GL 2.40 GP -7.24 ZAL 77.97 ZAP 165.06 ETS 210.27 ZAE 158.92 ETE 338.37 ZAC 75.45 ETC 282.42 LVI -8.78

PLANETOCENTRIC CONIC

C3 23.502 VHL 4.848 DLA 15.51 RAL 32.07 RAD 6644.4 VEL 11.978 PTH 6.98 VHP 6.062 DPA 9.84 RAP 46.48 ECC 1.3868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 14 8 3484.96 -46.02 126.74 268.62 103.73 12 12 13 2485.0 -35.63 97.65
60.00 11 36 8 3426.42 -39.61 123.16 270.31 98.15 12 33 14 2426.4 -32.12 94.81
70.00 12 8 14 3331.93 -33.96 116.24 271.05 93.85 13 3 46 2331.9 -28.87 88.71
80.00 12 57 30 3177.52 -29.84 104.74 271.25 90.95 13 50 28 2177.5 -26.42 77.84
90.00 14 10 23 2942.28 -26.28 87.47 271.27 89.88 14 59 25 1942.3 -25.48 60.80
100.00 15 40 22 2651.99 -29.84 66.11 271.25 90.95 16 24 34 1652.0 -26.42 39.21
110.00 17 7 40 2378.75 -33.96 45.16 271.05 93.85 17 47 19 1378.7 -28.87 17.63

DIFFERENTIAL CORRECTIONS

TDE -.3355 TRA -.8396 TC3 .7378 BAU .2458
RDE -.4830 RRA .2141 RC3 -.2603 FAU .09104
FDE .4433 FRA .5094 FC3-3.3536 B8P 2043
BDE .5881 BRA .8665 BC3 .7824 F8P 404

MID-COURSE EXECUTION ACCURACY

SGT 1315.1 SGR 677.1 SG3 289.6
RRT -.2923 RRF .3021 RTF -.7207
SGB 1479.2 R23 -.0638 R13 .7285
SG1 1329.7 SG2 648.0 THA 170.27

ORBIT DETERMINATION ACCURACY

ST 25.2 SR 28.8 SS 14.8
CRT .6961 CRS .8710 CST .9420
LSA 38.2 MSA 14.9 SSA 2.0
EL1 35.3 EL2 14.7 ALF 50.53

LAUNCH DATE AUG 10 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 34.090 GAL 1.27 AZL 89.62 HCA 103.56 SMA 224.55 ECC .32538 INC .3772 V1 29.382
RP 224.22 LAP .37 LOP 60.79 VP 24.347 GAP 18.99 AZP 90.09 TAL 5.18 TAP 108.74 RCA 151.49 APO 297.62 V2 24.527
RC 103.921 GL 2.69 GP -7.45 ZAL 77.44 ZAP 164.17 ETS 209.34 ZAE 159.05 ETE 337.44 ZAC 75.21 ETC 282.41 LVI -8.52

PLANETOCENTRIC CONIC

C3 22.851 VHL 4.780 DLA 15.61 RAL 31.44 RAD 6644.1 VEL 11.952 PTH 6.95 VHP 5.890 DPA 9.69 RAP 46.73 ECC 1.3761
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 11 16 3480.00 -45.94 126.29 267.43 104.07 12 9 16 2480.0 -35.44 97.33
60.00 11 33 8 3421.78 -39.56 122.77 269.15 98.41 12 30 10 2421.8 -31.98 94.49
70.00 12 5 6 3327.71 -33.94 115.92 269.92 94.04 13 0 34 2327.7 -28.77 88.42
80.00 12 54 14 3173.78 -29.84 104.46 270.14 91.09 13 47 7 2173.8 -26.36 77.58
90.00 14 7 2 2938.75 -26.28 87.21 270.15 90.01 14 56 1 1938.8 -25.43 60.56
100.00 15 37 5 2648.23 -29.84 65.83 270.14 91.09 16 21 14 1648.2 -26.36 38.95
110.00 17 4 32 2374.53 -33.94 44.83 269.92 94.04 17 44 7 1374.5 -28.77 17.34

DIFFERENTIAL CORRECTIONS

TDE -.3380 TRA -.8293 TC3 .7765 BAU .2525
RDE -.4734 RRA .2129 RC3 -.2828 FAU .09540
FDE .4892 FRA .5074 FC3-3.6141 B8P 2096
BDE .5817 BRA .8561 BC3 .8264 F8P 433

MID-COURSE EXECUTION ACCURACY

SGT 1334.2 SGR 682.1 SG3 307.3
RRT -.2684 RRF .3225 RTF -.1157
SGB 1498.5 R23 -.0897 R13 .7344
SG1 1350.6 SG2 649.1 THA 169.81

ORBIT DETERMINATION ACCURACY

ST 25.5 SR 28.6 SS 15.3
CRT .7013 CRS .8784 CST .9393
LSA 38.5 MSA 14.8 SSA 2.1
EL1 35.4 EL2 14.7 ALF 49.69

LAUNCH DATE AUG 10 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 33.978 GAL 1.32 AZL 89.59 HCA 104.64 SMA 222.71 ECC .31988 INC .4143 V1 29.382
RP 224.61 LAP .40 LOP 61.87 VP 24.204 GAP 18.65 AZP 90.10 TAL 5.46 TAP 110.10 RCA 151.47 APO 293.95 V2 24.485
RC 108.328 GL 2.99 GP -7.68 ZAL 76.91 ZAP 163.27 ETS 208.90 ZAE 159.22 ETE 336.42 ZAC 74.96 ETC 282.40 LVI -8.25

PLANETOCENTRIC CONIC

C3 22.250 VHL 4.717 DLA 15.70 RAL 30.82 RAD 6643.8 VEL 11.927 PTH 6.93 VHP 5.724 DPA 9.53 RAP 46.96 ECC 1.3662
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 8 23 3475.55 -45.86 125.88 266.29 104.37 12 6 19 2475.6 -35.27 97.04
60.00 11 30 8 3417.67 -39.52 122.43 268.04 98.63 12 27 6 2417.7 -31.86 94.21
70.00 12 1 56 3324.07 -33.92 115.63 268.83 94.21 12 57 20 2324.1 -28.69 88.17
80.00 12 50 54 3170.62 -29.84 104.23 269.06 91.21 13 43 45 2170.6 -26.30 77.36
90.00 14 3 38 2935.86 -26.28 86.99 269.06 90.11 14 52 34 1935.9 -25.38 60.36
100.00 15 33 46 2645.09 -29.84 65.59 269.06 91.21 16 17 51 1645.1 -26.30 38.73
110.00 17 1 22 2370.88 -33.92 44.55 268.83 94.21 17 40 53 1370.9 -28.69 17.09

DIFFERENTIAL CORRECTIONS

TDE -.3405 TRA -.8181 TC3 .8154 BAU .2592
RDE -.4638 RRA .2116 RC3 -.3069 FAU .10001
FDE .4984 FRA .5036 FC3-3.8913 B8P 2138
BDE .5754 BRA .8450 BC3 .8713 F8P 463

MID-COURSE EXECUTION ACCURACY

SGT 1352.2 SGR 687.3 SG3 326.1
RRT -.2854 RRF .3437 RTF -.7309
SGB 1516.9 R23 -.0752 R13 .7406
SG1 1370.6 SG2 649.9 THA 169.32

ORBIT DETERMINATION ACCURACY

ST 25.9 SR 28.5 SS 15.9
CRT .7067 CRS .8860 CST .9364
LSA 38.9 MSA 14.7 SSA 2.2
EL1 35.6 EL2 14.6 ALF 48.85

LAUNCH DATE AUG 10 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC										DISTANCE 334.485										EARTH TO MARS																																													
RL	151.64	LAL	.00	LOL	317.23	VL	33.910	GAL	1.37	AZL	89.55	HCA	105.71	SMA	221.00	ECC	.31469	INC	.4913	V1	20.382	RP	225.00	LAP	.43	LOP	62.94	VP	24.066	GAP	18.31	AZP	90.12	TAL	5.73	TAP	111.44	RCA	151.46	APO	290.55	V2	24.443	RC	110.773	GL	3.29	GP	-7.91	ZAL	76.40	ZAP	162.34	ETS	207.75	ZAE	159.43	ETE	335.30	ZAC	74.70	ETC	282.40	LVI	-7.98
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	21.695	VHL	4.658	DLA	15.81	RAL	30.21	RAD	6643.6	VEL	11.903	PTH	6.91	VHP	5.563	DPA	9.35	RAP	47.17	ECC	1.3570	SGT	1369.1	SGR	693.0	SG3	346.0	ST	26.2	SR	28.2	SS	16.6	CRT	.7127	CR8	.8939	C8T	.9333	LSA	39.2	MSA	14.6	SSA	2.3																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3031	RRF	.3655	RTF	-.7360	EL1	35.7	EL2	14.5	ALF	47.99	BDE	.5693	BRA	.8331	BC3	.9170	F8P	496																				
50.00	11	5	30	3471.62	-45.79	125.53	265.19	104.64	12	3	22	2471.6	-35.11	96.79	SG1	1369.7	SG2	650.6	THA	168.79	EL1	35.7	EL2	14.5	ALF	47.99																																							
60.00	11	27	6	3414.11	-39.48	122.13	266.97	98.83	12	24	1	2414.1	-31.75	93.97																																																			
70.00	11	58	44	3321.00	-33.91	115.39	267.78	94.35	12	54	5	2321.0	-28.62	87.96																																																			
80.00	12	47	32	3168.09	-29.83	104.04	268.01	91.31	13	40	20	2168.1	-26.26	77.18																																																			
90.00	14	0	11	2933.60	-28.28	86.83	268.04	90.20	14	49	5	1933.6	-23.35	60.20																																																			
100.00	15	30	24	2642.56	-29.83	65.41	268.01	91.31	16	14	27	1642.6	-26.26	36.55																																																			
110.00	16	58	11	2367.82	-33.91	44.31	267.78	94.35	17	37	39	1367.8	-28.62	16.68																																																			

LAUNCH DATE AUG 10 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC										DISTANCE 337.912										EARTH TO MARS																																													
RL	151.64	LAL	.00	LOL	317.23	VL	33.846	GAL	1.42	AZL	89.51	HCA	106.78	SMA	219.41	ECC	.30979	INC	.4889	V1	29.382	RP	225.39	LAP	.47	LOP	64.01	VP	23.933	GAP	17.98	AZP	90.14	TAL	6.00	TAP	112.78	RCA	151.44	APO	287.39	V2	24.401	RC	113.259	GL	3.60	GP	-8.15	ZAL	75.89	ZAP	161.40	ETS	207.07	ZAE	159.68	ETE	334.07	ZAC	74.44	ETC	282.39	LVI	-7.71
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	21.182	VHL	4.602	DLA	15.92	RAL	29.60	RAD	6643.4	VEL	11.882	PTH	6.89	VHP	5.408	DPA	9.16	RAP	47.37	ECC	1.3486	SGT	1364.8	SGR	699.4	SG3	366.6	ST	26.5	SR	28.0	SS	17.2	CRT	.7173	CR8	.9002	C8T	.9304	LSA	39.6	MSA	14.5	SSA	2.3																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3220	RRF	.3689	RTF	-.7403	EL1	35.7	EL2	14.5	ALF	47.20	BDE	.5630	BRA	.8220	BC3	.9614	F8P	531																				
50.00	11	2	37	3468.19	-45.73	125.22	264.14	104.87	12	0	25	2468.2	-34.98	96.57	SG1	1364.8	SG2	651.2	THA	168.21	EL1	35.7	EL2	14.5	ALF	47.20																																							
60.00	11	24	4	3411.08	-39.45	121.86	265.95	99.00	12	20	55	2411.1	-31.66	93.77																																																			
70.00	11	55	31	3318.50	-33.90	115.20	266.76	94.46	12	50	50	2318.5	-28.56	87.79																																																			
80.00	12	44	8	3166.18	-29.83	103.90	267.01	91.39	13	36	54	2166.2	-26.23	77.05																																																			
90.00	13	56	41	2931.98	-28.28	86.71	267.03	90.26	14	45	33	1932.0	-25.32	60.09																																																			
100.00	15	28	59	2640.65	-29.83	65.26	267.01	91.39	16	11	0	1640.7	-26.23	38.42																																																			
110.00	16	54	57	2365.32	-33.90	44.12	266.76	94.46	17	34	23	1365.3	-28.56	16.70																																																			

LAUNCH DATE AUG 10 1973

FLIGHT TIME 136.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC										DISTANCE 341.370										EARTH TO MARS																																													
RL	151.64	LAL	.00	LOL	317.23	VL	33.785	GAL	1.46	AZL	89.47	HCA	107.84	SMA	217.93	ECC	.30517	INC	.5266	V1	29.382	RP	225.78	LAP	.50	LOP	65.07	VP	23.804	GAP	17.65	AZP	90.16	TAL	6.27	TAP	114.11	RCA	151.43	APO	284.44	V2	24.359	RC	115.782	GL	3.91	GP	-8.41	ZAL	75.40	ZAP	160.44	ETS	206.45	ZAE	159.95	ETE	332.73	ZAC	74.17	ETC	282.39	LVI	-7.44
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.707	VHL	4.551	DLA	16.05	RAL	29.00	RAD	6643.2	VEL	11.862	PTH	6.88	VHP	5.259	DPA	8.95	RAP	47.56	ECC	1.3408	SGT	1399.6	SGR	706.5	SG3	388.8	ST	26.8	SR	27.7	SS	17.9	CRT	.7227	CR8	.9067	C8T	.9278	LSA	39.9	MSA	14.4	SSA	2.4																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3412	RRF	.4131	RTF	-.7444	EL1	35.8	EL2	14.3	ALF	46.34	BDE	.5571	BRA	.8104	BC3	1.0062	F8P	567																				
50.00	10	59	43	3465.27	-45.68	124.95	263.14	105.07	11	57	29	2465.3	-34.87	96.38	SG1	1399.6	SG2	651.8	THA	167.60	EL1	35.8	EL2	14.3	ALF	46.34																																							
60.00	11	21	1	3408.58	-39.42	121.67	264.96	99.14	12	17	49	2408.6	-31.58	93.60																																																			
70.00	11	52	16	3316.58	-33.89	115.05	265.79	94.35	12	47	33	2316.6	-28.52	87.65																																																			
80.00	12	40	40	3164.89	-29.83	103.80	266.04	91.44	13	33	25	2164.9	-26.20	76.96																																																			
90.00	13	53	8	2931.00	-28.28	86.64	266.07	90.29	14	41	59	1931.0	-25.31	60.02																																																			
100.00	15	25	32	2639.36	-29.83	65.17	266.04	91.44	16	7	32	1639.4	-26.20	38.33																																																			
110.00	16	51	42	2363.40	-33.89	43.97	265.79	94.35	17	31	6	1363.4	-28.52	16.57																																																			

LAUNCH DATE AUG 10 1973

FLIGHT TIME 138.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC										DISTANCE 344.857										EARTH TO MARS																																													
RL	151.64	LAL	.00	LOL	317.23	VL	33.728	GAL	1.51	AZL	89.44	HCA	108.90	SMA	216.88	ECC	.30082	INC	.5648	V1	29.382	RP	226.17	LAP	.53	LOP	66.13	VP	23.680	GAP	17.33	AZP	90.18	TAL	6.53	TAP	115.43	RCA	151.41	APO	281.70	V2	24.318	RC	118.341	GL	4.23	GP	-8.67	ZAL	74.92	ZAP	159.46	ETS	205.89	ZAE	160.26	ETE	331.25	ZAC	73.89	ETC	282.40	LVI	-7.16
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.269	VHL	4.502	DLA	16.18	RAL	28.41	RAD	6643.0	VEL	11.844	PTH	6.86	VHP	5.114	DPA	8.73	RAP	47.73	ECC	1.3338	SGT	1413.4	SGR	714.3	SG3	411.7	ST	27.1	SR	27.4	SS	18.6	CRT	.7278	CR8	.9128	C8T	.9248	LSA	40.3	MSA	14.2	SSA	2.5																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3611	RRF	.4379	RTF	-.7481	EL1	35.8	EL2	14.2	ALF	45.44	BDE	.5512	BRA	.7992	BC3	1.0502	F8P	604																				
50.00	10	56	50	3462.84	-45.64	124.74	262.19	105.23	11	54	32	2462.8	-34.78	96.22	SG1	1413.4	SG2	652.4	THA	166.94	EL1	35.8	EL2	14.2	ALF	45.44																																							
60.00	11	17	57	3406.61	-39.40	121.51	264.02	99.25	12	14	43	2406.6	-31.52	93.47																																																			
70.00	11	48	59	3315.23	-33.88	114.95	264.86	94.61	12	44	15	2315.2	-28.49	87.58																																																			
80.00	12	37	11	3164.22	-29.83	103.75	265.11	91.46	13	29	55	2164.2	-26.19	76.92																																																			



LAUNCH DATE AUG 10 1973

FLIGHT TIME 140.00

ARRIVAL DATE DEC 28 1973

Heliocentric Conic: RL 191.84 LAL .00 LOL 317.23 VL 33.874 GAL 1.38 AZL 89.40 MCA 109.98 SMA 215.27 ECC .29871 INC .6030 V1 29.382 RP 226.56 LAP .57 LOP 87.19 VP 23.559 GAP 17.00 AZP 90.21 TAL 8.78 TAP 116.74 RCA 151.40 APO 279.14 V2 24.276 RC 120.933 GL 4.56 GP -8.84 ZAL 74.45 ZAP 158.47 ETS 205.37 ZAE 160.59 ETE 329.62 ZAC 73.61 ETC 282.40 LVI -6.87

Planetocentric Conic: C3 19.883 VHL 4.457 DLA 16.31 RAL 27.83 RAD 6642.8 VEL 11.827 PTH 6.85 VHP 4.975 DPA 8.49 RAP 47.89 ECC 1.3269 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3524 TRA -.7606 TC3 .9948 BAU .2902 RDE -.4160 RRA .2036 RC3 -.4519 FAU .12685 FDE .8763 FRA .4626 FC3-5.5287 BSP 2342 BDE .5452 BRA .7874 BC3 1.0927 FSP 647

Mid-Course Execution Accuracy: SGT 1424.7 SGR 723.0 SG3 435.7 RRT -.3813 RRF .4633 RTF -.7510 SGB 1597.6 R23 -.1084 R13 .7674 SG1 1458.0 S62 653.1 THA 166.24

Orbit Determination Accuracy: ST 27.4 SR 27.1 SS 19.4 CRT .7328 CR8 .9185 CST .9219 LSA 40.6 MSA 14.1 SSA 2.6 EL1 35.8 EL2 14.1 ALF 44.97

LAUNCH DATE AUG 10 1973

FLIGHT TIME 142.00

ARRIVAL DATE DEC 30 1973

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.622 GAL 1.59 AZL 89.36 MCA 111.01 SMA 214.07 ECC .29284 INC .6418 V1 29.382 RP 226.95 LAP .60 LOP 68.24 VP 23.443 GAP 16.68 AZP 90.23 TAL 7.03 TAP 116.04 RCA 151.38 APO 276.75 V2 24.234 RC 123.556 GL 4.89 GP -9.23 ZAL 74.00 ZAP 157.45 ETS 204.90 ZAE 160.94 ETE 327.84 ZAC 73.32 ETC 282.41 LVI -6.58

Planetocentric Conic: C3 19.488 VHL 4.415 DLA 16.46 RAL 27.25 RAD 6642.6 VEL 11.811 PTH 6.83 VHP 4.840 DPA 8.24 RAP 48.03 ECC 1.3207 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3544 TRA -.7492 TC3 1.0253 BAU .2957 RDE -.4063 RRA .2017 RC3 -.4864 FAU .13304 FDE .7193 FRA .4505 FC3-5.9102 BSP 2367 BDE .5392 BRA .7759 BC3 1.1348 FSP 688

Mid-Course Execution Accuracy: SGT 1435.0 SGR 732.9 SG3 461.0 RRT -.4022 RRF .4897 RTF -.7537 SGB 1611.3 R23 -.1163 R13 .7721 SG1 1472.7 S62 653.8 THA 165.47

Orbit Determination Accuracy: ST 27.6 SR 26.7 SS 20.2 CRT .7373 CR8 .9235 CST .9192 LSA 41.0 MSA 13.9 SSA 2.6 EL1 35.8 EL2 13.9 ALF 43.69

LAUNCH DATE AUG 10 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 1 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.574 GAL 1.63 AZL 89.32 MCA 112.06 SMA 212.95 ECC .28918 INC .6809 V1 29.382 RP 227.34 LAP .63 LOP 69.29 VP 23.330 GAP 16.37 AZP 90.26 TAL 7.27 TAP 119.33 RCA 151.36 APO 274.53 V2 24.193 RC 126.208 GL 5.23 GP -9.52 ZAL 73.56 ZAP 156.41 ETS 204.47 ZAE 161.30 ETE 325.88 ZAC 73.02 ETC 282.42 LVI -6.29

Planetocentric Conic: C3 19.142 VHL 4.375 DLA 16.62 RAL 26.69 RAD 6642.5 VEL 11.797 PTH 6.82 VHP 4.710 DPA 7.97 RAP 48.15 ECC 1.3150 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3569 TRA -.7374 TC3 1.0536 BAU .3010 RDE -.3984 RRA .1997 RC3 -.5228 FAU .13952 FDE .7663 FRA .4354 FC3-6.3103 BSP 2398 BDE .5335 BRA .7840 BC3 1.1762 FSP 734

Mid-Course Execution Accuracy: SGT 1443.7 SGR 743.8 SG3 487.6 RRT -.4229 RRF .5163 RTF -.7560 SGB 1624.1 R23 -.1247 R13 .7766 SG1 1486.2 S62 654.8 THA 164.66

Orbit Determination Accuracy: ST 27.9 SR 26.3 SS 21.0 CRT .7424 CR8 .9285 CST .9167 LSA 41.4 MSA 13.7 SSA 2.7 EL1 35.8 EL2 13.7 ALF 42.75

LAUNCH DATE AUG 10 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 3 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.528 GAL 1.67 AZL 89.28 MCA 113.11 SMA 211.90 ECC .28574 INC .7206 V1 29.382 RP 227.73 LAP .68 LOP 70.34 VP 23.221 GAP 16.06 AZP 90.28 TAL 7.50 TAP 120.81 RCA 151.35 APO 272.45 V2 24.192 RC 128.887 GL 5.58 GP -9.83 ZAL 73.14 ZAP 155.35 ETS 204.06 ZAE 161.67 ETE 323.72 ZAC 72.72 ETC 282.44 LVI -6.00

Planetocentric Conic: C3 18.822 VHL 4.338 DLA 16.79 RAL 26.15 RAD 6642.3 VEL 11.783 PTH 6.81 VHP 4.585 DPA 7.68 RAP 48.26 ECC 1.3098 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3592 TRA -.7262 TC3 1.0792 BAU .3061 RDE -.3864 RRA .1975 RC3 -.5615 FAU .14632 FDE .8161 FRA .4193 FC3-6.7304 BSP 2430 BDE .5278 BRA .7526 BC3 1.2165 FSP 782

Mid-Course Execution Accuracy: SGT 1450.9 SGR 756.3 SG3 515.5 RRT -.4438 RRF .5435 RTF -.7576 SGB 1636.2 R23 -.1338 R13 .7808 SG1 1499.0 S62 656.0 THA 163.79

Orbit Determination Accuracy: ST 28.1 SR 25.9 SS 21.9 CRT .7468 CR8 .9329 CST .9143 LSA 41.8 MSA 13.6 SSA 2.8 EL1 35.7 EL2 13.5 ALF 41.79

LAUNCH DATE AUG 10 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC DISTANCE 362.647 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 33.484 GAL 1.70 AZL 89.24 HCA 114.18 SMA 210.92 ECC .28250 INC .7607 V1 29.382

PLANETOCENTRIC CONIC
C3 18.526 VHL 4.304 DLA 16.97 RAL 26.61 RAD 6842.2 VEL 11.771 PTH 6.80 VHP 4.464 DPA 7.37 RAP 48.35 ECC 1.3049
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS
TDE -.3616 TRA -.7150 TC3 1.1001 BAU .3108 SGT 1455.6 SGR 770.0 SG3 544.4 ST 26.4 SR 25.4 SS 22.9
RDE -.3761 RRA .1951 RC3 -.6020 FAU .15334 RRT -.4639 RRF .5703 RTF -.7582 CRT .7514 CRS .9370 CST .9119

LAUNCH DATE AUG 10 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC DISTANCE 366.263 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 33.443 GAL 1.73 AZL 89.20 HCA 115.10 SMA 210.00 ECC .27943 INC .8014 V1 29.382

PLANETOCENTRIC CONIC
C3 18.253 VHL 4.272 DLA 17.15 RAL 25.09 RAD 6842.0 VEL 11.759 PTH 6.79 VHP 4.347 DPA 7.05 RAP 48.42 ECC 1.3004
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS
TDE -.3538 TRA -.6940 TC3 1.1420 BAU .3202 SGT 1458.1 SGR 786.2 SG3 575.4 ST 27.9 SR 24.9 SS 23.7
RDE -.3698 RRA .1924 RC3 -.6458 FAU .16094 RRT -.4961 RRF .5985 RTF -.7690 CRT .7513 CRS .9407 CST .9071

LAUNCH DATE AUG 10 1973 FLIGHT TIME 152.00 ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC DISTANCE 369.895 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 33.405 GAL 1.76 AZL 89.16 HCA 116.23 SMA 209.14 ECC .27655 INC .8426 V1 29.382

PLANETOCENTRIC CONIC
C3 18.001 VHL 4.243 DLA 17.35 RAL 24.58 RAD 6841.9 VEL 11.748 PTH 6.78 VHP 4.235 DPA 6.70 RAP 48.47 ECC 1.2962
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS
TDE -.3601 TRA -.6871 TC3 1.1483 BAU .3225 SGT 1459.8 SGR 803.4 SG3 607.0 ST 28.4 SR 24.3 SS 24.8
RDE -.3548 RRA .1898 RC3 -.6910 FAU .16858 RRT -.5110 RRF .6253 RTF -.7445 CRT .7571 CRS .9440 CST .9060

LAUNCH DATE AUG 10 1973 FLIGHT TIME 154.00 ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC DISTANCE 373.541 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 33.368 GAL 1.79 AZL 89.12 HCA 117.26 SMA 208.34 ECC .27383 INC .8844 V1 29.382

PLANETOCENTRIC CONIC
C3 17.768 VHL 4.215 DLA 17.57 RAL 24.08 RAD 6841.8 VEL 11.739 PTH 6.77 VHP 4.127 DPA 6.34 RAP 48.51 ECC 1.2924
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS
TDE -.3648 TRA -.6798 TC3 1.1535 BAU .3254 SGT 1459.7 SGR 822.8 SG3 639.9 ST 28.8 SR 23.7 SS 26.0
RDE -.3435 RRA .1871 RC3 -.7386 FAU .17652 RRT -.5267 RRF .6519 RTF -.7606 CRT .7612 CRS .9466 CST .9047

LAUNCH DATE AUG 10 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 33.333 GAL 1.82 AZL 89.07 HCA 118.29 SMA 207.59 ECC .27127 INC .9288 V1 29.382
RP 229.67 LAP .82 LOP 75.92 VP 22.724 GAP 14.54 AZP 90.44 TAL 8.55 TAP 126.84 RCA 151.28 APO 263.91 V2 23.947
RC 142.641 GL 7.39 GP -11.86 ZAL 71.31 ZAP 149.73 ETS 202.39 ZAE 163.40 ETE 309.53 ZAC 71.07 ETC 282.59 LVI -4.44

PLANETOCENTRIC CONIC

C3 17.554 VHL 4.190 DLA 17.79 RAL 23.60 RAD 6641.7 VEL 11.730 PTH 6.76 VHP 4.023 DPA 5.95 RAP 48.52 ECC 1.2889
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 30 57 3462.39 -45.63 124.70 255.66 105.26 11 28 39 2462.4 -34.76 98.20
60.00 10 49 52 3412.01 -39.46 121.96 257.46 98.95 11 46 44 2412.0 -31.69 93.83
70.00 11 18 12 3328.62 -33.95 115.99 258.24 90.59 12 56 38 2186.6 -26.57 78.47
80.00 12 3 31 3186.56 -29.85 103.41 258.43 89.32 14 3 45 1957.6 -25.70 61.87
90.00 13 14 28 2957.56 -28.27 88.58 258.43 90.59 15 30 44 1661.0 -26.57 39.83
100.00 14 46 23 2661.03 -29.85 66.78 258.43 94.00 16 57 13 1375.4 -28.79 17.40
110.00 16 17 38 2375.44 -33.95 44.90 258.24 94.00 16 57 13

DIFFERENTIAL CORRECTIONS

TDE -.3678 TRA -.6706 TC3 1.1577 BAU .3288
RDE -.3319 RRA .1841 RC3 -.7890 FAU .18482
FDE 1.1258 FRA .3081 FC3-9.1149 BSP 2513
BDE .4954 BRA .6954 BC3 1.4010 FSP 1054

MID-COURSE EXECUTION ACCURACY

SGT 1456.6 SGR 844.4 SG3 674.3
RRT -.5429 RRF .6780 RTF -.7575
SGB 1693.6 R23 -.1843 R13 .8004
SG1 1545.2 SG2 668.4 THA 158.26

ORBIT DETERMINATION ACCURACY

ST 29.0 SR 23.1 SS 27.1
CRT .7646 CRS .9490 CST .9031
LSA 44.0 MSA 12.8 SSA 3.2
EL1 35.0 EL2 12.3 ALF 36.54

LAUNCH DATE AUG 10 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 33.301 GAL 1.85 AZL 89.03 HCA 119.32 SMA 206.89 ECC .26886 INC .9699 V1 29.382
RP 230.05 LAP .85 LOP 76.55 VP 22.634 GAP 14.24 AZP 90.47 TAL 8.73 TAP 128.05 RCA 151.27 APO 262.52 V2 23.907
RC 145.456 GL 7.77 GP -11.94 ZAL 70.99 ZAP 148.54 ETS 202.11 ZAE 163.65 ETE 305.93 ZAC 70.72 ETC 282.64 LVI -4.11

PLANETOCENTRIC CONIC

C3 17.357 VHL 4.166 DLA 18.02 RAL 23.13 RAD 6641.6 VEL 11.721 PTH 6.75 VHP 3.923 DPA 5.55 RAP 48.52 ECC 1.2856
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 28 5 3464.85 -45.67 124.90 255.16 105.11 11 25 50 2464.6 -34.85 96.34
60.00 10 46 41 3415.13 -39.49 122.22 256.93 98.77 11 43 36 2415.1 -31.78 94.04
70.00 11 14 36 3332.96 -33.97 116.32 257.69 93.80 12 10 9 2333.0 -26.89 88.79
80.00 11 59 29 3192.29 -29.86 103.84 257.66 90.37 12 52 41 2192.3 -26.67 78.87
90.00 13 10 12 2964.00 -28.27 89.05 257.86 89.08 13 59 36 1964.0 -25.80 62.32
100.00 14 42 20 2666.76 -29.86 67.20 257.86 90.37 15 26 47 1666.8 -26.67 40.23
110.00 16 14 2 2379.78 -33.97 45.24 257.69 93.80 16 53 42 1379.8 -28.89 17.70

DIFFERENTIAL CORRECTIONS

TDE -.3703 TRA -.6813 TC3 1.1574 BAU .3321
RDE -.3198 RRA .1809 RC3 -.8416 FAU .19334
FDE 1.2019 FRA .2799 FC3-9.6436 BSP 2537
BDE .4893 BRA .6856 BC3 1.4310 FSP 1117

MID-COURSE EXECUTION ACCURACY

SGT 1450.5 SGR 868.1 SG3 709.7
RRT -.5379 RRF .7032 RTF -.7536
SGB 1690.5 R23 -.1978 R13 .8030
SG1 1550.2 SG2 674.1 THA 156.93

ORBIT DETERMINATION ACCURACY

ST 29.3 SR 22.4 SS 28.4
CRT .7674 CRS .9510 CST .9015
LSA 44.6 MSA 12.7 SSA 3.2
EL1 34.8 EL2 12.1 ALF 35.24

LAUNCH DATE AUG 10 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 33.270 GAL 1.87 AZL 88.99 HCA 120.34 SMA 206.23 ECC .26659 INC 1.0138 V1 29.382
RP 230.44 LAP .87 LOP 77.57 VP 22.546 GAP 13.95 AZP 90.51 TAL 8.90 TAP 129.24 RCA 151.25 APO 261.21 V2 23.867
RC 148.289 GL 8.16 GP -12.34 ZAL 70.70 ZAP 147.32 ETS 201.83 ZAE 163.86 ETE 302.06 ZAC 70.35 ETC 282.68 LVI -3.77

PLANETOCENTRIC CONIC

C3 17.175 VHL 4.144 DLA 18.27 RAL 22.87 RAD 6641.6 VEL 11.714 PTH 6.75 VHP 3.827 DPA 5.12 RAP 48.90 ECC 1.2827
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 25 14 3467.35 -45.72 125.14 254.69 104.93 11 23 1 2467.3 -34.95 96.51
60.00 10 43 28 3418.76 -39.53 122.52 256.44 98.57 11 40 27 2418.8 -31.89 94.29
70.00 11 10 57 3337.68 -33.99 116.71 257.18 93.58 12 6 35 2337.9 -29.00 89.13
80.00 11 55 21 3198.70 -29.86 106.31 257.33 90.12 12 48 40 2198.7 -26.77 79.31
90.00 13 5 50 2971.19 -28.26 89.58 257.32 88.82 13 55 21 1971.2 -25.90 62.82
100.00 14 38 13 2673.17 -29.86 67.68 257.33 90.12 15 22 46 1673.2 -26.77 40.68
110.00 16 10 23 2384.70 -33.99 45.62 257.18 93.58 16 50 8 1384.7 -29.00 18.04

DIFFERENTIAL CORRECTIONS

TDE -.3725 TRA -.6922 TC3 1.1547 BAU .3358
RDE -.3071 RRA .1774 RC3 -.8973 FAU .20226
FDE 1.2842 FRA .2503 FC-10.1948 BSP 2561
BDE .4828 BRA .6759 BC3 1.4624 FSP 1184

MID-COURSE EXECUTION ACCURACY

SGT 1443.2 SGR 894.5 SG3 746.7
RRT -.5720 RRF .7276 RTF -.7495
SGB 1697.8 R23 -.2107 R13 .8063
SG1 1555.5 SG2 680.7 THA 155.49

ORBIT DETERMINATION ACCURACY

ST 29.5 SR 21.6 SS 29.7
CRT .7695 CRS .9526 CST .8999
LSA 45.3 MSA 12.8 SSA 3.3
EL1 34.6 EL2 11.8 ALF 33.87

LAUNCH DATE AUG 10 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 33.241 GAL 1.89 AZL 88.94 HCA 121.36 SMA 205.62 ECC .26446 INC 1.0583 V1 29.382
RP 230.82 LAP .90 LOP 78.59 VP 22.481 GAP 13.66 AZP 90.55 TAL 9.07 TAP 130.42 RCA 151.24 APO 260.00 V2 23.827
RC 151.140 GL 8.96 GP -12.76 ZAL 70.43 ZAP 146.08 ETS 201.57 ZAE 163.99 ETE 297.96 ZAC 69.98 ETC 282.74 LVI -3.43

PLANETOCENTRIC CONIC

C3 17.009 VHL 4.124 DLA 18.53 RAL 22.23 RAD 6641.5 VEL 11.707 PTH 6.74 VHP 3.734 DPA 4.67 RAP 48.46 ECC 1.2799
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 22 22 3470.49 -45.77 125.43 254.27 104.71 11 20 12 2470.5 -35.07 96.72
60.00 10 40 14 3422.89 -39.57 122.86 255.99 98.34 11 37 17 2422.9 -32.01 94.57
70.00 11 7 15 3343.39 -34.01 117.13 256.70 93.32 12 2 58 2343.4 -29.12 89.51
80.00 11 51 8 3205.80 -29.86 106.84 256.83 89.84 12 44 34 2205.8 -26.89 79.81
90.00 13 1 21 2979.13 -28.24 90.16 256.81 88.53 13 51 1 1979.1 -26.01 63.37
100.00 14 34 0 2680.27 -29.86 68.21 256.83 89.84 15 18 40 1680.3 -26.89 41.18
110.00 16 6 41 2390.21 -34.01 46.05 256.70 93.32 16 46 31 1390.2 -29.12 18.43

DIFFERENTIAL CORRECTIONS

TDE -.3733 TRA -.6430 TC3 1.1476 BAU .3396
RDE -.2941 RRA .1737 RC3 -.9559 FAU .21146
FDE 1.3688 FRA .2176 FC-10.7630 BSP 2575
BDE .4752 BRA .6661 BC3 1.4935 FSP 1251

MID-COURSE EXECUTION ACCURACY

SGT 1432.7 SGR 923.8 SG3 784.9
RRT -.5850 RRF .7511 RTF -.7445
SGB 1704.7 R23 -.2229 R13 .8100
SG1 1559.5 SG2 688.2 THA 153.88

ORBIT DETERMINATION ACCURACY

ST 29.6 SR 20.8 SS 31.0
CRT .7703 CRS .9537 CST .8979
LSA 45.8 MSA 12.5 SSA 3.3
EL1 34.3 EL2 11.4 ALF 32.53

LAUNCH DATE AUG 10 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC												DISTANCE 391.951			EARTH TO MARS										
RL	151.64	LAL	.00	LOL	317.23	VL	33.214	GAL	1.91	AZL	88.90	HCA	122.37	SMA	205.04	ECC	.26244	INC	1.1038	V1	29.302				
RP	231.20	LAP	.93	LOP	79.61	VP	22.379	GAP	13.37	AZP	90.59	TAL	9.22	TAP	131.39	RCA	151.23	APO	258.86	V2	23.787				
RC	154.008	GL	8.96	GP	-13.19	ZAL	70.17	ZAP	144.81	ETS	201.30	ZAE	164.05	ETE	293.64	ZAC	69.59	ETC	282.80	LVI	-3.08				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	16.856	VHL	4.106	DLA	18.80	RAL	21.80	RAD	6641.4	VEL	11.700	PTH	6.73	VHP	3.648	DPA	4.20	RAP	48.39	ECC	1.2774				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	19	29	3474.09	-45.84	125.75	253.89	104.47	11	17	23	2474.1	-35.21	96.95											
60.00	10	36	59	3427.52	-39.62	123.25	253.58	98.09	11	34	6	2427.5	-32.15	94.88											
70.00	11	3	29	3349.49	-34.03	117.61	256.26	93.04	11	59	18	2349.5	-29.25	89.94											
80.00	11	46	50	3213.61	-29.85	107.42	256.37	89.53	12	40	23	2213.6	-27.01	80.36											
90.00	12	56	46	2987.85	-28.23	90.80	256.33	88.21	13	46	34	1987.8	-26.12	63.98											
100.00	14	29	42	2688.09	-29.85	68.79	256.37	89.53	15	14	30	1688.1	-27.01	41.73											
110.00	16	2	55	2396.31	-34.03	46.53	256.26	93.04	16	42	51	1396.3	-29.25	18.85											
TDE	-.3745	TRA	-.6339	TC3	1.1362	BAU	.3437	SGT	1420.2	SGR	955.7	SG3	824.6	ST	29.7	SR	19.9	SS	32.5						
RDE	-.2802	RRA	.1698	RC3	-1.0174	FAU	.22098	RRT	-.5960	RRF	.7734	RTF	-.7388	CRT	.7709	CRS	.9544	CST	.8964						
FDE	1.4628	FRA	.1831	FC	-11.3493	BSP	2581	SGB	1711.8	R23	-.2343	R13	.8142	LSA	46.6	MSA	12.4	SSA	3.4						
BDE	.4677	BRA	.6563	BC3	1.5252	FSP	1320	SG1	1563.5	SG2	697.1	THA	152.15	EL1	34.0	EL2	11.1	ALF	31.05						

LAUNCH DATE AUG 10 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC												DISTANCE 395.662			EARTH TO MARS										
RL	151.64	LAL	.00	LOL	317.23	VL	33.188	GAL	1.93	AZL	88.85	HCA	123.38	SMA	204.50	ECC	.26055	INC	1.1501	V1	29.382				
RP	231.58	LAP	.96	LOP	80.62	VP	22.299	GAP	13.09	AZP	90.63	TAL	9.36	TAP	132.75	RCA	151.22	APO	257.79	V2	23.748				
RC	156.890	GL	9.37	GP	-13.63	ZAL	69.94	ZAP	143.52	ETS	201.05	ZAE	164.02	ETE	289.16	ZAC	69.20	ETC	282.86	LVI	-2.73				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	16.717	VHL	4.089	DLA	19.08	RAL	21.38	RAD	6641.3	VEL	11.694	PTH	6.73	VHP	3.561	DPA	3.71	RAP	48.31	ECC	1.2751				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	16	38	3478.13	-45.90	126.12	253.55	104.19	11	14	35	2478.1	-35.36	97.21											
60.00	10	33	41	3432.67	-39.67	123.68	255.20	97.80	11	30	54	2432.7	-32.30	95.24											
70.00	10	59	39	3358.19	-34.06	118.13	255.85	92.74	11	55	35	2358.2	-29.40	90.40											
80.00	11	42	25	3222.16	-29.85	108.06	255.93	89.20	12	36	7	2222.2	-27.14	80.96											
90.00	12	52	3	2997.37	-28.21	91.49	255.88	87.86	13	42	0	1997.4	-26.25	64.65											
100.00	14	25	17	2696.63	-29.85	69.42	255.93	89.20	15	10	13	1696.6	-27.14	42.33											
110.00	15	59	6	2403.01	-34.06	47.05	255.85	92.74	16	39	9	1403.0	-29.40	19.32											
TDE	-.3748	TRA	-.6252	TC3	1.1192	BAU	.3479	SGT	1404.6	SGR	990.7	SG3	865.4	ST	29.7	SR	19.0	SS	34.0						
RDE	-.2657	RRA	.1655	RC3	-1.0819	FAU	.23075	RRT	-.6047	RRF	.7945	RTF	-.7315	CRT	.7703	CRS	.9546	CST	.8945						
FDE	1.5604	FRA	.1454	FC	-11.9502	BSP	2591	SGB	1718.8	R23	-.2452	R13	.8188	LSA	47.3	MSA	12.4	SSA	3.4						
BDE	.4595	BRA	.6467	BC3	1.5566	FSP	1393	SG1	1566.5	SG2	707.5	THA	150.25	EL1	33.6	EL2	10.7	ALF	29.52						

LAUNCH DATE AUG 10 1973

FLIGHT TIME 168.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC												DISTANCE 399.382			EARTH TO MARS										
RL	151.64	LAL	.00	LOL	317.23	VL	33.164	GAL	1.95	AZL	88.80	HCA	124.39	SMA	204.00	ECC	.25877	INC	1.1973	V1	29.382				
RP	231.95	LAP	.99	LOP	81.63	VP	22.221	GAP	12.80	AZP	90.68	TAL	9.50	TAP	133.89	RCA	151.21	APO	256.79	V2	23.708				
RC	159.785	GL	9.79	GP	-14.09	ZAL	69.72	ZAP	142.21	ETS	200.79	ZAE	163.88	ETE	284.58	ZAC	68.79	ETC	282.93	LVI	-2.37				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	16.590	VHL	4.073	DLA	19.38	RAL	20.98	RAD	6641.3	VEL	11.689	PTH	6.72	VHP	3.479	DPA	3.19	RAP	48.21	ECC	1.2730				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	13	43	3482.83	-45.98	126.52	253.25	103.89	11	11	45	2482.6	-35.54	97.50											
60.00	10	30	21	3438.33	-39.72	124.15	254.86	97.48	11	27	39	2438.3	-32.47	95.62											
70.00	10	55	45	3363.52	-34.08	118.70	255.47	92.40	11	51	49	2363.5	-29.53	90.92											
80.00	11	37	53	3231.46	-29.84	108.75	255.53	88.84	12	31	45	2231.5	-27.28	81.61											
90.00	12	47	11	3007.74	-28.18	92.25	255.47	87.49	13	37	19	2007.7	-26.38	69.38											
100.00	14	20	45	2705.93	-29.84	70.12	255.53	88.84	15	5	51	1705.9	-27.28	42.98											
110.00	15	55	12	2410.34	-34.08	47.62	255.47	92.40	16	35	22	1410.3	-29.53	19.84											
TDE	-.3750	TRA	-.6171	TC3	1.0959	BAU	.3522	SGT	1386.4	SGR	1028.6	SG3	907.1	ST	29.8	SR	18.0	SS	35.5						
RDE	-.2504	RRA	.1610	RC3	-1.1491	FAU	.24071	RRT	-.6106	RRF	.8141	RTF	-.7226	CRT	.7685	CRS	.9542	CST	.8926						
FDE	1.6661	FRA	.1062	FC	-12.5612	BSP	2605	SGB	1726.3	R23	-.2552	R13	.8238	LSA	48.1	MSA	12.4	SSA	3.4						
BDE	.4509	BRA	.6378	BC3	1.5879	FSP	1469	SG1	1569.1	SG2	719.7	THA	148.20	EL1	33.3	EL2	10.3	ALF	27.88						

LAUNCH DATE AUG 10 1973

FLIGHT TIME 170.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC												DISTANCE 403.108			EARTH TO MARS										
RL	151.64	LAL	.00	LOL	317.23	VL	33.141	GAL	1.96	AZL	88.75	HCA	125.40	SMA	203.53	ECC	.25710	INC	1.2456	V1	29.382				
RP	232.33	LAP	1.02	LOP	82.63	VP	22.145	GAP	12.52	AZP	90.72	TAL	9.62	TAP	135.02	RCA	151.20	APO	255.86	V2	23.670				
RC	162.893	GL	10.22	GP	-14.97	ZAL	69.53	ZAP	140.87	ETS	200.53	ZAE	163.65	ETE	279.60	ZAC	68.38	ETC	283.01	LVI	-1.99				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	16.475	VHL	4.059	DLA	19.69	RAL	20.59	RAD	6641.2	VEL	11.684	PTH	6.72	VHP	3.402	DPA	2.66	RAP	48.09	ECC	1.2711				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	10	48	3487.58	-46.06	126.98	252.99	103.55	11	8	56	2487.6	-35.72	97.83											
60.00	10	26	58	3444.51	-39.77	124.67	254.56	97.13	11	24	23	2444.5	-32.65	96.05											
70.00	10	51	47	3371.47	-34.10	119.32	255.13	92.03	11	47	58	2371.5	-29.72	91.48											
80.00	11	33	14	3241.54	-29.82	109.50	255.15	88.44	12	27	15	2241.5	-27.43	82.33											
90.00	12	42	10	3018.97	-28.14	93.07	255.07	87.08	13	32	29	2019.0	-26.52	66.18											
100.00	14	16	5	2716.01	-29.82	70.86	255.15	88.44	15	1	22	1716.0	-27.43	43.69											
110.00	15	51	13	2418.29	-34.10	48.24	255.13	92.03	16	31	31	1418.3	-29.72	20.40											
TDE	-.3739	TRA	-.6093	TC3	1.0673	BAU	.3570	SGT	1365.2	SGR	1070.0	SG3	950.0	ST	29.8	SR	17.0	SS	37.1						
RDE	-.2346	RRA	.1561	RC3	-1.2197	FAU	.25097	RRT	-.6140	RRF	.8324	RTF	-.7118	CRT	.7651	CRS	.9531	CST	.8901						
FDE	1.7738	FRA	.0636	FC	-13.1880	BSP	2612	SGB	1734.5	R23	-.2634	R13	.8296	LSA	48.8	MSA	12.4	SSA	3.4						
BDE	.4414	BRA	.6290	BC3	1.6207	FSP	1543	SG1	1571.8	SG2	733.5	THA	145.92	EL1	32.8	EL2	9.9	ALF	26.18						

LAUNCH DATE AUG 10 1973

FLIGHT TIME 172.00

ARRIVAL DATE JAN 29 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.120 GAL 1.98 AZL 88.71 HCA 126.40 SMA 203.09 ECC .25553 INC 1.2949 V1 29.382  
 RP 232.70 LAP 1.04 LOP 83.64 VP 22.072 GAP 12.25 AZP 90.77 TAL 9.74 TAP 136.14 RCA 151.19 APO 254.98 V2 23.631  
 RC 165.610 GL 10.65 GP -15.06 ZAL 69.35 ZAP 139.30 ETS 200.28 ZAE 163.30 ETE 275.25 ZAC 67.96 ETC 283.09 LVI -1.62

Planetocentric Conic: C3 16.371 VHL 4.046 DLA 20.01 RAL 20.21 RAD 6641.2 VEL 11.679 PTH 6.71 VHP 3.327 DPA 2.09 RAP 47.95 ECC 1.2694  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 7 52 3492.97 -46.14 127.47 252.77 103.18 11 6 5 2493.0 -35.93 98.18  
 60.00 10 23 33 3451.21 -39.83 125.23 254.29 96.76 11 21 4 2451.2 -32.64 96.51  
 70.00 10 47 43 3380.06 -34.12 119.99 254.82 91.64 11 44 3 2380.1 -29.89 92.08  
 80.00 11 20 26 3252.41 -29.80 110.30 254.80 88.02 12 22 38 2252.4 -27.58 83.10  
 90.00 12 36 59 3031.10 -28.10 93.95 254.71 86.64 13 27 30 2031.1 -26.66 67.04  
 100.00 14 11 18 2726.89 -29.60 71.67 254.80 88.02 14 56 45 1726.9 -27.58 44.47  
 110.00 15 47 9 2426.88 -34.12 48.91 254.82 91.64 16 27 36 1426.9 -29.89 21.00

Differential Corrections: TDE -.3686 TRA -.5978 TC3 1.0431 BAV .3639  
 RDE -.2183 RRA .1505 RC3-1.2946 FAU .26169  
 FDE 1.8851 FRA .0134 FC-13.8389 BSP 2578  
 BDE .4284 BRA .6164 BC3 1.6625 FSP 1617

Mid-Course Execution Accuracy: SGT 1340.4 SGR 1115.5 SG3 994.7  
 RRT -.6201 RRF .8496 RTF -.7041  
 SGB 1743.8 R23 -.2632 R13 .8388  
 SG1 1577.3 SG2 743.7 THA 143.29

Orbit Determination Accuracy: ST 29.4 SR 15.9 SS 38.7  
 CRT .7597 CRS .9514 CST .8867  
 LSA 49.5 MSA 12.4 SSA 3.4  
 EL1 32.1 EL2 9.5 ALF 24.62

LAUNCH DATE AUG 10 1973

FLIGHT TIME 174.00

ARRIVAL DATE JAN 31 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.100 GAL 1.99 AZL 88.65 HCA 127.40 SMA 202.68 ECC .25405 INC 1.3453 V1 29.382  
 RP 233.07 LAP 1.07 LOP 84.63 VP 22.001 GAP 11.97 AZP 90.82 TAL 9.84 TAP 137.24 RCA 151.19 APO 254.17 V2 23.593  
 RC 168.537 GL 11.10 GP -15.57 ZAL 69.20 ZAP 138.11 ETS 200.01 ZAE 162.83 ETE 270.69 ZAC 67.52 ETC 283.18 LVI -1.23

Planetocentric Conic: C3 16.277 VHL 4.035 DLA 20.35 RAL 19.84 RAD 6641.1 VEL 11.676 PTH 6.71 VHP 3.257 DPA 1.51 RAP 47.80 ECC 1.2679  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 4 55 3498.85 -46.23 128.01 252.60 102.77 11 3 14 2498.8 -36.15 98.57  
 60.00 10 20 4 3458.47 -39.88 125.84 254.06 96.35 11 17 43 2458.5 -33.04 97.02  
 70.00 10 43 33 3389.34 -34.13 120.72 254.53 91.21 11 40 2 2389.3 -30.08 92.74  
 80.00 11 23 29 3264.17 -29.77 111.18 254.48 87.56 12 17 53 2264.2 -27.75 83.93  
 90.00 12 31 36 3044.23 -28.04 94.91 254.37 86.16 13 22 20 2044.2 -26.81 67.97  
 100.00 14 6 20 2738.64 -29.77 72.55 254.48 87.56 14 51 58 1738.6 -27.75 45.30  
 110.00 15 42 59 2436.15 -34.13 49.63 254.53 91.21 16 23 36 1436.2 -30.08 21.66

Differential Corrections: TDE -.3708 TRA -.5947 TC3 .9926 BAV .3681  
 RDE -.1998 RRA .1454 RC3-1.3699 FAU .27199  
 FDE 2.0155 FRA -.0278 FC-14.4660 BSP 2627  
 BDE .4212 BRA .6123 BC3 1.6917 FSP 1702

Mid-Course Execution Accuracy: SGT 1315.4 SGR 1162.3 SG3 1038.4  
 RRT -.6111 RRF .8648 RTF -.6843  
 SGB 1755.4 R23 -.2722 R13 .8441  
 SG1 1579.3 SG2 766.3 THA 140.74

Orbit Determination Accuracy: ST 29.6 SR 14.7 SS 40.6  
 CRT .7528 CRS .9478 CST .8853  
 LSA 50.7 MSA 12.5 SSA 3.4  
 EL1 31.8 EL2 9.0 ALF 22.32

LAUNCH DATE AUG 10 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 2 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.081 GAL 2.00 AZL 88.60 HCA 128.39 SMA 202.29 ECC .25267 INC 1.3970 V1 29.382  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.931 GAP 11.70 AZP 90.87 TAL 9.94 TAP 138.33 RCA 151.18 APO 253.41 V2 23.554  
 RC 171.472 GL 11.55 GP -16.09 ZAL 69.06 ZAP 136.70 ETS 199.75 ZAE 162.25 ETE 266.25 ZAC 67.08 ETC 283.27 LVI -.83

Planetocentric Conic: C3 16.194 VHL 4.024 DLA 20.71 RAL 19.48 RAD 6641.1 VEL 11.672 PTH 6.71 VHP 3.189 DPA .90 RAP 47.62 ECC 1.2688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 56 3505.19 -46.33 128.59 252.46 102.33 11 0 21 2505.2 -36.38 98.99  
 60.00 10 16 32 3466.28 -39.94 126.49 253.86 95.90 11 14 18 2466.3 -33.26 97.56  
 70.00 10 39 17 3399.29 -34.15 121.49 254.28 90.75 11 35 58 2399.3 -30.27 93.45  
 80.00 11 18 21 3276.80 -29.73 112.11 254.18 87.07 12 12 58 2276.8 -27.91 84.83  
 90.00 12 26 1 3058.37 -27.97 95.94 254.06 85.65 13 18 59 2058.4 -26.96 68.97  
 100.00 14 1 13 2751.27 -29.73 73.48 254.18 87.07 14 47 4 1751.3 -27.91 46.20  
 110.00 15 38 43 2446.11 -34.15 50.41 254.28 90.75 16 19 29 1446.1 -30.27 22.37

Differential Corrections: TDE -.3687 TRA -.5891 TC3 .9434 BAV .3744  
 RDE -.1810 RRA .1397 RC3-1.4493 FAU .28260  
 FDE 2.1458 FRA -.0750 FC-15.1080 BSP 2653  
 BDE .4107 BRA .6055 BC3 1.7293 FSP 1787

Mid-Course Execution Accuracy: SGT 1287.0 SGR 1213.3 SG3 1083.3  
 RRT -.6027 RRF .8790 RTF -.5453  
 SGB 1768.7 R23 -.2731 R13 .8925  
 SG1 1584.2 SG2 786.5 THA 137.79

Orbit Determination Accuracy: ST 29.5 SR 13.4 SS 42.4  
 CRT .7422 CRS .9427 CST .8825  
 LSA 51.8 MSA 12.5 SSA 3.3  
 EL1 31.3 EL2 8.5 ALF 20.15

LAUNCH DATE AUG 10 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 4 1974

Heliocentric Conic: RL 151.64 LAL .00 LOL 317.23 VL 33.064 GAL 2.01 AZL 88.55 HCA 129.39 SMA 201.93 ECC .25137 INC 1.4499 V1 29.382  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.864 GAP 11.43 AZP 90.92 TAL 10.02 TAP 139.41 RCA 151.17 APO 252.69 V2 23.517  
 RC 174.413 GL 12.02 GP -16.63 ZAL 68.94 ZAP 135.26 ETS 199.47 ZAE 161.55 ETE 262.00 ZAC 66.62 ETC 283.37 LVI -.43

Planetocentric Conic: C3 16.120 VHL 4.015 DLA 21.08 RAL 19.14 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 3.125 DPA .27 RAP 47.43 ECC 1.2653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 58 54 3512.00 -46.42 129.22 252.36 101.85 10 57 26 2512.0 -36.64 99.44  
 60.00 10 12 56 3474.64 -40.00 127.20 253.70 95.43 11 10 50 2474.6 -33.50 98.15  
 70.00 10 34 54 3409.95 -34.15 122.33 254.06 90.26 11 31 44 2410.0 -30.48 94.21  
 80.00 11 13 2 3290.37 -29.68 113.12 253.91 86.55 12 7 52 2290.4 -28.09 85.80  
 90.00 12 20 11 3073.60 -27.89 97.04 253.76 85.10 13 11 24 2073.6 -27.12 70.06  
 100.00 13 55 54 2764.84 -29.68 74.49 253.91 86.55 14 41 59 1764.8 -28.09 47.17  
 110.00 15 34 20 2456.77 -34.15 51.24 254.06 90.26 16 15 17 1456.8 -30.48 23.13

Differential Corrections: TDE -.3655 TRA -.5835 TC3 .8905 BAV .3820  
 RDE -.1609 RRA .1335 RC3-1.5326 FAU .29350  
 FDE 2.2844 FRA -.1261 FC-15.7625 BSP 2671  
 BDE .3994 BRA .5986 BC3 1.7725 FSP 1869

Mid-Course Execution Accuracy: SGT 1256.9 SGR 1268.5 SG3 1129.4  
 RRT -.5911 RRF .8919 RTF -.6439  
 SGB 1785.7 R23 -.2689 R13 .8626  
 SG1 1592.8 SG2 807.3 THA 134.56

Orbit Determination Accuracy: ST 29.3 SR 12.0 SS 44.3  
 CRT .7270 CRS .9349 CST .8792  
 LSA 52.9 MSA 12.6 SSA 3.3  
 EL1 30.7 EL2 7.9 ALF 17.81

LAUNCH DATE AUG 10 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 6 1974

Heliocentric Conic: RL 191.84 LAL .00 LOL 317.23 VL 33.047 GAL 2.02 AZL 88.50 HCA 130.38 SMA 201.80 ECC .29016 INC 1.9041 V1 29.382  
 RP 234.17 LAP 1.15 LOP 87.81 VP 21.799 GAP 11.16 AZP 90.97 TAL 10.10 TAP 140.48 RCA 131.17 APO 252.03 V2 23.479  
 RC 177.360 GL 12.50 GP -17.19 ZAL 68.84 ZAP 133.80 ETS 199.19 ZAE 160.74 ETE 257.96 ZAC 66.16 ETC 283.47 LVI -.01

Planetary Conic: C3 16.056 VHL 4.007 DLA 21.48 RAL 18.80 RAD 6641.0 VEL 11.666 PTH 6.70 VHP 3.064 DPA -1.39 RAP 47.22 ECC 1.2642  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 55 50 3519.30 -46.52 129.89 292.30 101.34 10 94 30 2519.3 -36.90 99.94  
 60.00 10 9 15 3483.59 -40.05 127.95 253.56 94.92 11 7 18 2483.6 -33.74 98.79  
 70.00 10 30 22 3421.36 -34.15 123.22 253.87 89.73 11 27 24 2421.4 -30.69 95.03  
 80.00 11 7 30 3304.93 -29.61 114.19 253.67 85.98 12 2 35 2304.9 -28.27 86.85  
 90.00 12 14 4 3090.01 -27.79 98.23 253.49 84.51 13 5 35 2090.0 -27.27 71.24  
 100.00 13 50 22 2779.41 -29.61 75.56 253.67 85.98 14 36 41 1779.4 -28.27 48.22  
 110.00 15 29 49 2468.18 -34.15 52.13 253.87 89.73 16 10 57 1468.2 -30.69 23.95

Differential Corrections: TDE -.3607 TRA -.5782 TC3 .8311 BAU .3906  
 RDE -.1400 RRA .1269 RC3-1.6190 FAU .30444  
 FDE 2.4257 FRA -.1795 FC-16.4154 BSP 2693  
 BDE .3669 BRA .5920 BC3 1.8198 FSP 1952

Mid-Course Execution Accuracy: SGT 1224.2 SGR 1327.2 SG3 1175.7  
 RRT -.5749 RRF .9036 RTF -.6186  
 SGB 1805.6 R23 -.2597 R13 .8740  
 SG1 1804.2 SG2 828.7 THA 131.00

Orbit Determination Accuracy: ST 29.0 SR 10.6 SS 46.2  
 CRT .7049 CRS .9231 CST .8749  
 LSA 54.0 MSA 12.7 SSA 3.2  
 EL1 30.1 EL2 7.3 ALF 15.36

LAUNCH DATE AUG 10 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 33.032 GAL 2.02 AZL 88.44 HCA 131.36 SMA 201.29 ECC .24902 INC 1.5599 V1 29.382  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.735 GAP 10.89 AZP 91.03 TAL 10.17 TAP 141.53 RCA 151.16 APO 251.41 V2 23.442  
 RC 180.313 GL 12.98 GP -17.76 ZAL 68.76 ZAP 132.32 ETS 198.90 ZAE 159.82 ETE 254.16 ZAC 65.68 ETC 283.58 LVI .41

Planetary Conic: C3 16.001 VHL 4.000 DLA 21.86 RAL 18.48 RAD 6641.0 VEL 11.664 PTH 6.70 VHP 3.007 DPA -1.07 RAP 46.99 ECC 1.2633  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 52 43 3527.09 -46.63 130.62 252.27 100.79 10 51 31 2527.1 -37.19 100.47  
 60.00 10 5 29 3493.12 -40.10 128.76 253.46 94.38 11 3 42 2493.1 -34.00 99.46  
 70.00 10 25 42 3433.53 -34.14 124.17 253.70 89.17 11 22 56 2433.5 -30.92 95.91  
 80.00 11 1 44 3320.55 -29.53 115.35 253.44 85.38 11 57 5 2320.5 -28.45 87.98  
 90.00 12 7 40 3107.67 -27.66 99.51 253.24 83.89 12 59 28 2107.7 -27.43 72.50  
 100.00 13 44 36 2795.02 -29.53 76.72 253.44 85.38 14 31 11 1795.0 -28.45 49.34  
 110.00 15 25 9 2480.34 -34.14 53.08 253.70 89.17 16 6 29 1480.3 -30.92 24.83

Differential Corrections: TDE -.3522 TRA -.5700 TC3 .7728 BAU .4013  
 RDE -.1182 RRA .1191 RC3-1.7096 FAU .31564  
 FDE 2.5703 FRA -.2442 FC-17.0773 BSP 2697  
 BDE .3715 BRA .5823 BC3 1.8762 FSP 2030

Mid-Course Execution Accuracy: SGT 1187.7 SGR 1390.4 SG3 1223.0  
 RRT -.5583 RRF .9143 RTF -.5932  
 SGB 1828.6 R23 -.2422 R13 .8873  
 SG1 1821.8 SG2 844.8 THA 127.09

Orbit Determination Accuracy: ST 28.5 SR 9.1 SS 48.1  
 CRT .6734 CRS .9048 CST .8692  
 LSA 55.1 MSA 12.8 SSA 3.1  
 EL1 29.2 EL2 6.6 ALF 12.86

LAUNCH DATE AUG 10 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 10 1974

Heliocentric Conic: RL 151.84 LAL .00 LOL 317.23 VL 33.017 GAL 2.03 AZL 88.38 HCA 132.35 SMA 201.00 ECC .24795 INC 1.6171 V1 29.382  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.674 GAP 10.63 AZP 91.09 TAL 10.22 TAP 142.57 RCA 151.16 APO 250.83 V2 23.405  
 RC 183.270 GL 13.48 GP -18.35 ZAL 68.70 ZAP 130.82 ETS 198.59 ZAE 158.81 ETE 250.61 ZAC 65.20 ETC 283.69 LVI .84

Planetary Conic: C3 15.955 VHL 3.994 DLA 22.28 RAL 18.16 RAD 6641.0 VEL 11.662 PTH 6.70 VHP 2.953 DPA -1.78 RAP 46.74 ECC 1.2628  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 49 33 3535.40 -46.73 131.40 252.29 100.20 10 48 29 2535.4 -37.49 101.03  
 60.00 10 1 37 3503.29 -40.15 129.62 253.40 93.79 11 0 0 2503.3 -34.27 100.19  
 70.00 10 20 53 3446.53 -34.13 125.18 253.56 88.57 11 18 19 2446.5 -31.15 96.86  
 80.00 10 55 42 3337.35 -29.43 116.59 253.23 84.74 11 51 19 2337.3 -28.63 89.19  
 90.00 12 0 55 3126.77 -27.52 100.89 253.00 83.21 12 53 2 2126.8 -27.58 73.88  
 100.00 13 38 34 2811.82 -29.43 77.96 253.23 84.74 14 25 25 1811.8 -28.63 50.56  
 110.00 15 20 19 2493.35 -34.13 54.10 253.56 88.57 16 1 32 1493.4 -31.15 25.77

Differential Corrections: TDE -.3499 TRA -.5709 TC3 .6886 BAU .4110  
 RDE -.0936 RRA .1129 RC3-1.7995 FAU .32604  
 FDE 2.7371 FRA -.2887 FC-17.6913 BSP 2775  
 BDE .3622 BRA .5820 BC3 1.9268 FSP 2123

Mid-Course Execution Accuracy: SGT 1156.6 SGR 1454.4 SG3 1287.9  
 RRT -.5221 RRF .9236 RTF -.5508  
 SGB 1858.2 R23 -.2272 R13 .8988  
 SG1 1839.2 SG2 875.2 THA 123.06

Orbit Determination Accuracy: ST 28.4 SR 7.5 SS 50.4  
 CRT .6169 CRS .8677 CST .8852  
 LSA 56.8 MSA 13.0 SSA 3.1  
 EL1 28.8 EL2 5.8 ALF 9.68

LAUNCH DATE AUG 10 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 12 1974

Heliocentric Conic: RL 191.84 LAL .00 LOL 317.23 VL 33.004 GAL 2.03 AZL 88.32 HCA 133.33 SMA 200.73 ECC .24696 INC 1.6759 V1 29.382  
 RP 235.24 LAP 1.22 LOP 90.97 VP 21.614 GAP 10.37 AZP 91.15 TAL 10.27 TAP 143.59 RCA 151.16 APO 250.30 V2 23.369  
 RC 186.232 GL 13.99 GP -18.98 ZAL 68.66 ZAP 129.30 ETS 198.27 ZAE 157.70 ETE 247.30 ZAC 64.70 ETC 283.81 LVI 1.29

Planetary Conic: C3 15.918 VHL 3.990 DLA 22.72 RAL 17.86 RAD 6641.0 VEL 11.660 PTH 6.70 VHP 2.902 DPA -2.50 RAP 46.49 ECC 1.2620  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 19 3544.22 -46.83 132.22 252.34 99.57 10 45 24 2544.2 -37.80 101.84  
 60.00 9 57 38 3514.08 -40.20 130.53 253.36 93.17 10 56 12 2514.1 -34.55 100.97  
 70.00 10 15 52 3460.38 -34.10 126.26 253.44 87.93 11 13 32 2460.4 -31.38 97.87  
 80.00 10 49 21 3355.37 -29.31 117.91 253.04 84.05 11 45 17 2355.4 -28.81 90.50  
 90.00 11 53 46 3147.39 -27.34 102.37 252.78 82.49 12 46 13 2147.4 -27.73 75.37  
 100.00 13 32 15 2829.84 -29.31 79.28 253.04 84.05 14 19 23 1829.8 -28.81 51.87  
 110.00 15 15 18 2507.20 -34.10 55.18 253.44 87.93 15 57 6 1507.2 -31.38 26.78

Differential Corrections: TDE -.3425 TRA -.5680 TC3 .6074 BAU .4233  
 RDE -.0683 RRA .1051 RC3-1.8941 FAU .33670  
 FDE 2.9021 FRA -.3472 FC-18.3125 BSP 2823  
 BDE .3493 BRA .5777 BC3 1.9891 FSP 2206

Mid-Course Execution Accuracy: SGT 1122.0 SGR 1523.3 SG3 1313.7  
 RRT -.4850 RRF .9320 RTF -.5073  
 SGB 1892.0 R23 -.2029 R13 .9118  
 SG1 1665.6 SG2 897.5 THA 118.68

Orbit Determination Accuracy: ST 28.0 SR 5.9 SS 52.6  
 CRT .5210 CRS .7974 CST .8587  
 LSA 58.3 MSA 13.2 SSA 3.0  
 EL1 28.1 EL2 5.0 ALF 6.52

LAUNCH DATE AUG 10 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

DISTANCE 436.888

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.991 GAL 2.03 AZL 86.26 HCA 134.30 SMA 200.48 ECC .24603 INC 1.7366 V1 29.382  
 RP 235.58 LAP 1.24 LOP 91.54 VP 21.556 GAP 10.11 AZP 91.21 TAL 10.31 TAP 144.61 RCA 151.15 APO 249.80 V2 23.332  
 RC 189.197 GL 14.52 GP -19.58 ZAL 68.64 ZAP 127.76 ETS 197.94 ZAE 156.51 ETE 244.23 ZAC 64.20 ETC 283.94 LVI 1.74

PLANETOCENTRIC CONIC

C3 15.889 VHL 3.986 DLA 23.17 RAL 17.56 RAD 6640.9 VEL 11.659 PTH 6.70 VHP 2.855 DPA -3.25 RAP 46.21 ECC 1.2615  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 1 3553.59 -46.93 133.10 252.44 98.90 10 42 15 2553.6 -38.13 102.30  
 60.00 9 53 33 3525.59 -40.24 131.51 253.36 92.52 10 52 18 2525.5 -34.84 101.80  
 70.00 10 10 39 3475.14 -34.06 127.41 253.34 87.25 11 8 35 2475.1 -31.62 98.95  
 80.00 10 42 40 3374.79 -29.17 119.33 252.87 83.32 11 38 55 2374.8 -28.99 91.91  
 90.00 11 46 9 3169.75 -27.13 103.97 252.57 81.71 12 38 59 2169.7 -27.88 76.99  
 100.00 13 25 32 2849.22 -29.17 80.70 252.87 83.32 14 13 1 1849.2 -28.99 53.28  
 110.00 15 10 6 2521.96 -34.06 56.33 253.34 87.25 15 52 8 1522.0 -31.62 27.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3335 TRA -.5658 TC3 .3200 BAU .4372 SGT 1088.2 SGR 1595.8 SG3 1358.8 ST 27.4 SR 4.4 S8 54.8  
 RDE -.0416 RRA .0989 RC3-1.9912 FAU .34717 RRT -.4397 RRF .9395 RTF -.4561 CRT .3287 CRS .6359 C8T .8508  
 FDE 3.0721 FRA -.4070 FC-18.8163 B8P 2889 SGB 1931.5 R23 -.1743 R13 .9245 LSA 59.9 MSA 13.4 S8A 2.9  
 BDE .3361 BRA .5740 BC3 2.0580 F8P 2292 SGI 1699.6 SG2 917.7 THA 114.13 EL1 27.4 EL2 4.2 ALF 3.13

LAUNCH DATE AUG 10 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

DISTANCE 440.659

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.980 GAL 2.03 AZL 86.20 HCA 135.28 SMA 200.25 ECC .24516 INC 1.7991 V1 29.382  
 RP 235.94 LAP 1.27 LOP 92.92 VP 21.499 GAP 9.85 AZP 91.28 TAL 10.33 TAP 145.61 RCA 151.15 APO 249.34 V2 23.297  
 RC 192.165 GL 15.06 GP -20.22 ZAL 68.63 ZAP 126.20 ETS 197.59 ZAE 155.24 ETE 241.39 ZAC 63.68 ETC 284.07 LVI 2.21

PLANETOCENTRIC CONIC

C3 15.869 VHL 3.984 DLA 23.64 RAL 17.27 RAD 6640.9 VEL 11.658 PTH 6.70 VHP 2.810 DPA -4.03 RAP 45.93 ECC 1.2612  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 39 38 3563.52 -47.03 134.04 252.57 98.18 10 39 2 2563.5 -38.48 103.00  
 60.00 9 49 19 3537.71 -40.27 132.54 253.38 91.82 10 48 17 2537.7 -35.14 102.69  
 70.00 10 5 13 3490.87 -34.00 128.64 253.27 86.53 11 3 24 2490.9 -31.87 100.11  
 80.00 10 35 35 3395.64 -28.99 120.86 252.71 82.53 11 32 10 2395.6 -29.17 93.44  
 90.00 11 38 0 3194.07 -26.88 105.71 252.36 80.88 12 31 14 2194.1 -28.01 78.76  
 100.00 13 18 27 2870.11 -28.99 82.23 252.71 82.53 14 6 17 1870.1 -29.17 54.81  
 110.00 15 4 40 2537.69 -34.00 57.55 253.27 86.53 15 46 57 1537.7 -31.87 29.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3234 TRA -.5643 TC3 .4259 BAU .4527 SGT 1056.6 SGR 1871.8 SG3 1403.3 ST 26.8 SR 3.4 S8 57.1  
 RDE -.0130 RRA .0883 RC3-2.0910 FAU .35745 RRT -.3846 RRF .9463 RTF -.3960 CRT -.0793 CRS .2300 C8T .8415  
 FDE 3.2515 FRA -.4684 FC-19.5005 B8P 2957 SGB 1977.7 R23 -.1427 R13 .9361 LSA 61.7 MSA 13.5 S8A 2.8  
 BDE .3237 BRA .5711 BC3 2.1339 F8P 2370 SGI 1742.2 SG2 935.9 THA 109.50 EL1 26.8 EL2 3.4 ALF 179.42

LAUNCH DATE AUG 10 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

DISTANCE 444.434

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.969 GAL 2.03 AZL 86.14 HCA 136.25 SMA 200.03 ECC .24435 INC 1.8635 V1 29.382  
 RP 236.29 LAP 1.29 LOP 93.49 VP 21.444 GAP 9.59 AZP 91.35 TAL 10.35 TAP 146.60 RCA 151.15 APO 248.91 V2 23.261  
 RC 195.134 GL 15.61 GP -20.87 ZAL 68.64 ZAP 124.63 ETS 197.23 ZAE 153.89 ETE 238.76 ZAC 63.16 ETC 284.21 LVI 2.69

PLANETOCENTRIC CONIC

C3 15.858 VHL 3.982 DLA 24.13 RAL 16.98 RAD 6640.9 VEL 11.658 PTH 6.70 VHP 2.769 DPA -4.62 RAP 45.63 ECC 1.2610  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 10 3574.02 -47.13 135.04 252.73 97.42 10 35 44 2574.0 -38.84 103.74  
 60.00 9 44 37 3550.60 -40.29 133.64 253.44 91.07 10 44 8 2550.6 -35.43 103.64  
 70.00 9 59 32 3507.64 -33.92 129.94 253.22 85.76 10 57 59 2507.6 -32.12 101.35  
 80.00 10 28 2 3416.21 -28.78 122.51 252.56 81.69 11 25 0 2418.2 -29.33 95.09  
 90.00 11 29 12 3220.68 -26.58 107.60 252.15 79.98 12 22 53 2220.7 -28.12 80.69  
 100.00 13 10 54 2892.68 -28.78 83.87 252.56 81.69 13 59 7 1892.7 -29.33 56.46  
 110.00 14 58 58 2554.45 -33.92 58.86 253.22 85.76 15 41 33 1554.5 -32.12 30.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3113 TRA -.5837 TC3 .3253 BAU .4700 SGT 1028.4 SGR 1751.2 SG3 1446.5 ST 26.1 SR 3.4 S8 59.4  
 RDE .0168 RRA .0793 RC3-2.1930 FAU .36741 RRT -.3190 RRF .9522 RTF -.5257 CRT -.5922 CRS -.3958 C8T .8297  
 FDE 3.4308 FRA -.3296 FC-20.0586 B8P 3043 SGB 2030.9 R23 -.1099 R13 .9462 LSA 63.4 MSA 13.7 S8A 2.7  
 BDE .3117 BRA .5692 BC3 2.2170 F8P 2450 SGI 1794.3 SG2 951.3 THA 104.88 EL1 26.1 EL2 2.8 ALF 175.48

LAUNCH DATE AUG 10 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 448.210

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.959 GAL 2.02 AZL 86.07 HCA 137.22 SMA 199.83 ECC .24360 INC 1.9301 V1 29.382  
 RP 236.63 LAP 1.31 LOP 94.46 VP 21.391 GAP 9.34 AZP 91.42 TAL 10.36 TAP 147.58 RCA 151.15 APO 248.51 V2 23.226  
 RC 198.104 GL 16.18 GP -21.54 ZAL 68.67 ZAP 123.04 ETS 196.84 ZAE 152.48 ETE 236.32 ZAC 62.63 ETC 284.35 LVI 3.18

PLANETOCENTRIC CONIC

C3 15.855 VHL 3.982 DLA 24.64 RAL 16.70 RAD 6640.9 VEL 11.658 PTH 6.69 VHP 2.731 DPA -5.64 RAP 45.32 ECC 1.2609  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 32 35 3585.12 -47.22 136.10 252.94 96.61 10 32 20 2585.1 -39.21 104.54  
 60.00 9 40 25 3564.25 -40.30 134.80 253.52 90.28 10 39 49 2564.3 -35.77 104.66  
 70.00 9 53 33 3525.52 -33.82 131.33 253.18 84.95 10 52 19 2525.5 -32.37 102.68  
 80.00 10 19 57 3442.69 -28.53 124.28 252.41 80.79 11 17 20 2442.7 -29.49 96.90  
 90.00 11 19 37 3250.00 -26.22 109.67 251.94 79.00 12 13 47 2250.0 -28.21 82.83  
 100.00 13 2 49 2917.16 -28.53 85.65 252.41 80.79 13 51 26 1917.2 -29.49 58.25  
 110.00 14 53 0 2572.34 -33.82 60.24 253.18 84.95 15 35 52 1572.3 -32.37 31.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2967 TRA -.5630 TC3 .2209 BAU .4894 SGT 1003.8 SGR 1834.8 SG3 1488.9 ST 25.2 SR 4.7 S8 61.7  
 RDE .0485 RRA .0694 RC3-2.2982 FAU .37720 RRT -.2442 RRF .9576 RTF -.2486 CRT -.8150 CRS -.7678 C8T .8148  
 FDE 3.6154 FRA -.5954 FC-20.5962 B8P 3134 SGB 2091.5 R23 -.0777 R13 .9545 LSA 65.3 MSA 13.9 S8A 2.6  
 BDE .3007 BRA .5673 BC3 2.3088 F8P 2520 SGI 1857.3 SG2 961.7 THA 100.43 EL1 25.5 EL2 2.7 ALF 171.19

LAUNCH DATE AUG 10 1973 FLIGHT TIME 196.00 ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC DISTANCE 451.989 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 32.950 GAL 2.02 AZL 88.00 HCA 138.18 SMA 199.65 ECC .24290 INC 1.9990 V1 29.382
RP 236.98 LAP 1.33 LOP 95.43 VP 21.339 GAP 9.08 AZP 91.49 TAL 10.36 TAP 148.55 RCA 151.15 APO 248.15 V2 23.191
RC 201.073 GL 16.76 GP -22.22 ZAL 68.72 ZAP 121.44 ETS 196.44 ZAE 131.01 ETE 234.06 ZAC 62.08 ETC 284.50 LVI 3.68

PLANETOCENTRIC CONIC
C3 15.861 VHL 3.983 DLA 25.17 RAL 16.43 RAD 6640.9 VEL 11.858 PTH 6.70 VHP 2.696 DPA -6.47 RAP 45.00 ECC 1.2610
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 28 53 3596.85 -47.31 137.22 253.19 95.75 10 28 50 2596.8 -39.60 105.40
60.00 9 35 42 3578.71 -40.30 136.03 253.63 89.45 10 35 20 2578.7 -36.10 105.74
70.00 9 47 16 3544.62 -33.70 132.80 253.16 84.08 10 46 20 2544.6 -32.62 104.12
80.00 10 11 15 3469.36 -28.22 126.20 252.26 79.82 11 9 4 2469.4 -29.63 98.87
90.00 11 9 4 3282.62 -25.77 111.95 251.72 77.94 12 3 46 2282.6 -28.27 85.22
100.00 12 54 6 2943.83 -28.22 87.57 252.26 79.82 13 43 10 1943.8 -29.63 60.24
110.00 14 46 42 2591.44 -33.70 61.72 253.16 84.08 15 29 54 1591.4 -32.62 33.03

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
SGT 982.5 SGR 1922.2 SG3 1530.0 ST 24.1 SR 6.6 SS 64.0
RRT -.1603 RRF .9623 RTF -.1585 CRT -.8476 CRS -.8993 CST .7946
LSA 67.2 MSA 14.0 SSA 2.5
EL1 24.8 EL2 3.4 ALF 166.59

LAUNCH DATE AUG 10 1973 FLIGHT TIME 198.00 ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC DISTANCE 455.770 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 32.941 GAL 2.01 AZL 87.93 HCA 139.15 SMA 199.48 ECC .24226 INC 2.0703 V1 29.382
RP 237.31 LAP 1.35 LOP 96.39 VP 21.288 GAP 8.83 AZP 91.57 TAL 10.36 TAP 149.50 RCA 151.16 APO 247.81 V2 23.157
RC 204.040 GL 17.37 GP -22.92 ZAL 68.79 ZAP 119.83 ETS 196.01 ZAE 149.49 ETE 231.95 ZAC 61.53 ETC 284.65 LVI 4.19

PLANETOCENTRIC CONIC
C3 15.877 VHL 3.985 DLA 25.72 RAL 16.15 RAD 6640.9 VEL 11.659 PTH 6.70 VHP 2.664 DPA -7.33 RAP 44.68 ECC 1.2613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 25 4 3609.23 -47.39 138.40 253.47 94.84 10 25 13 2609.2 -40.00 106.31
60.00 9 30 46 3594.03 -40.28 137.33 253.76 88.56 10 30 40 2594.0 -36.44 106.90
70.00 9 40 36 3565.03 -33.54 134.38 253.15 83.16 10 40 1 2565.0 -32.87 105.66
80.00 10 1 46 3498.61 -27.85 126.30 252.10 78.78 11 0 5 2498.6 -29.74 101.03
90.00 10 57 14 3319.43 -25.23 114.91 251.46 76.77 11 52 34 2319.4 -28.28 87.91
100.00 12 44 38 2973.08 -27.85 89.67 252.10 78.78 13 34 11 1973.1 -29.74 62.40
110.00 14 40 3 2611.85 -33.54 63.29 253.15 83.16 15 23 35 1611.8 -32.87 34.57

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
SGT 960.2 SGR 2017.2 SG3 1572.1 ST 22.6 SR 8.7 SS 65.9
RRT -.0727 RRF .9667 RTF -.0660 CRT -.8231 CRS -.9485 CST .7651
LSA 68.7 MSA 14.1 SSA 2.4
EL1 23.8 EL2 4.7 ALF 161.60

LAUNCH DATE AUG 10 1973 FLIGHT TIME 200.00 ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC DISTANCE 459.550 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 32.933 GAL 2.01 AZL 87.86 HCA 140.11 SMA 199.33 ECC .24186 INC 2.1442 V1 29.382
RP 237.65 LAP 1.38 LOP 97.35 VP 21.239 GAP 8.58 AZP 91.65 TAL 10.34 TAP 150.45 RCA 151.16 APO 247.50 V2 23.123
RC 207.005 GL 17.99 GP -23.63 ZAL 68.88 ZAP 118.22 ETS 195.56 ZAE 147.92 ETE 230.00 ZAC 60.97 ETC 284.81 LVI 4.72

PLANETOCENTRIC CONIC
C3 15.901 VHL 3.988 DLA 26.30 RAL 15.89 RAD 6641.0 VEL 11.660 PTH 6.70 VHP 2.636 DPA -8.21 RAP 44.35 ECC 1.2617
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 21 7 3622.34 -47.46 139.66 253.79 93.87 10 21 29 2622.3 -40.42 107.28
60.00 9 25 37 3610.32 -40.24 138.72 253.92 87.63 10 25 47 2610.3 -36.79 108.15
70.00 9 33 32 3587.01 -33.35 136.06 253.15 82.18 10 33 19 2587.0 -33.11 107.33
80.00 9 51 19 3531.14 -27.40 130.61 251.93 77.65 10 50 10 2531.1 -29.82 103.45
90.00 10 43 38 3362.13 -24.53 117.44 251.16 75.47 11 39 40 2362.1 -28.21 91.03
100.00 12 34 11 3005.61 -27.40 91.98 251.93 77.65 13 24 17 2005.6 -29.82 64.82
110.00 14 32 58 2633.83 -33.35 64.98 253.15 82.18 15 16 52 1633.8 -33.11 38.24

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
SGT 988.1 SGR 2098.6 SG3 1600.5 ST 22.4 SR 11.7 SS 69.2
RRT .0510 RRF .9700 RTF .0684 CRT -.8046 CRS -.9732 CST .7487
LSA 72.2 MSA 14.5 SSA 2.3
EL1 24.4 EL2 6.4 ALF 155.40

LAUNCH DATE AUG 10 1973 FLIGHT TIME 202.00 ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC DISTANCE 463.333 EARTH TO MARS
RL 151.64 LAL .00 LOL 317.23 VL 32.926 GAL 2.00 AZL 87.78 HCA 141.06 SMA 199.19 ECC .24111 INC 2.2209 V1 29.382
RP 237.98 LAP 1.40 LOP 98.31 VP 21.192 GAP 8.34 AZP 91.73 TAL 10.31 TAP 151.38 RCA 151.16 APO 247.22 V2 23.090
RC 209.964 GL 18.63 GP -24.36 ZAL 68.98 ZAP 116.60 ETS 195.09 ZAE 146.31 ETE 228.17 ZAC 60.40 ETC 284.97 LVI 5.26

PLANETOCENTRIC CONIC
C3 15.936 VHL 3.992 DLA 26.89 RAL 15.62 RAD 6641.0 VEL 11.661 PTH 6.70 VHP 2.610 DPA -9.10 RAP 44.02 ECC 1.2623
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 16 59 3636.16 -47.51 141.00 254.15 92.85 10 17 35 2636.2 -40.85 108.33
60.00 9 20 13 3627.57 -40.18 140.18 254.10 86.63 10 20 40 2627.6 -37.14 109.48
70.00 9 25 58 3610.59 -33.12 137.86 253.16 81.14 10 26 9 2610.6 -33.35 109.13
80.00 9 39 40 3567.57 -26.84 133.17 251.72 76.41 10 39 8 2567.6 -29.86 106.15
90.00 10 27 26 3413.23 -23.61 120.90 250.78 73.97 11 24 19 2413.2 -28.03 94.76
100.00 12 22 32 3042.05 -26.84 94.54 251.72 76.41 13 13 14 2042.0 -29.86 67.52
110.00 14 25 24 2657.41 -33.12 66.78 253.16 81.14 15 9 42 1657.4 -33.35 38.04

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
SGT 1005.0 SGR 2192.7 SG3 1633.0 ST 21.3 SR 14.5 SS 71.7
RRT .1580 RRF .9733 RTF .1650 CRT -.7630 CRS -.9839 CST .7098
LSA 74.7 MSA 14.7 SSA 2.2
EL1 24.4 EL2 8.2 ALF 148.58



LAUNCH DATE AUG 10 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

DISTANCE 467.117

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.92D GAL 1.99 AZL 87.70 HCA 142.02 SMA 199.06 ECC .24081 INC 2.3007 V1 29.382  
 RP 236.30 LAP 1.42 LOP 99.27 VP 21.145 GAP 8.09 AZP 91.81 TAL 10.28 TAP 152.30 RCA 151.17 APO 246.98 V2 23.056  
 RC 212.819 GL 19.29 GP -25.09 ZAL 69.10 ZAP 114.97 ETS 194.60 ZAE 144.66 ETE 226.46 ZAC 59.83 ETC 285.13 LVI 5.81

PLANETOCENTRIC CONIC

C3 15.981 VHL 3.998 DLA 27.51 RAL 15.35 RAD 6641.0 VEL 11.663 PTH 6.70 VHP 2.588 DPA -10.01 RAP 43.69 ECC 1.2630  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 12 41 3650.75 -47.55 142.41 254.54 91.76 10 13 32 2650.8 -41.30 109.45  
 60.00 9 14 31 3645.88 -40.10 141.73 254.30 85.59 10 15 17 2645.9 -37.49 110.91  
 70.00 9 17 51 3636.05 -32.84 139.80 253.16 80.03 10 18 27 2636.0 -33.57 111.08  
 80.00 9 26 22 3609.28 -26.14 136.07 251.46 75.04 10 26 31 2609.3 -29.82 109.25  
 90.00 10 6 31 3479.48 -22.30 125.31 250.22 72.14 11 4 31 2479.5 -27.63 99.56  
 100.00 12 9 14 3083.76 -26.14 97.44 251.46 75.04 13 0 38 2083.8 -29.82 70.62  
 110.00 14 17 17 2662.87 -32.84 68.71 253.16 80.03 15 2 0 1682.9 -33.57 40.00

DIFFERENTIAL CORRECTIONS

TDE -.2000 TRA -.5806 TC3 -.4131 BAU .6112  
 RDE .2392 RRA .0149 RC3-2.8309 FAU .41589  
 FDE 4.6075 FRA -.9052 FC-22.5300 BSP 3894  
 BDE .3118 BRA .5808 BC3 2.8609 FSP 2855

MID-COURSE EXECUTION ACCURACY

SGT 1035.1 SGR 2289.3 SG3 1662.4  
 RRT .2644 RRF .9762 RTF .2725  
 SGB 2512.4 R23 .0465 R13 .9752  
 SG1 2309.3 SG2 989.6 THA 81.63

ORBIT DETERMINATION ACCURACY

ST 20.1 SR 17.5 SS 74.2  
 CRT -.7094 CRS -.9898 CST .6612  
 LSA 77.4 MSA 14.8 SSA 2.1  
 EL1 24.7 EL2 10.0 ALF 140.59

LAUNCH DATE AUG 10 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

DISTANCE 470.901

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.914 GAL 1.98 AZL 87.62 HCA 142.97 SMA 198.95 ECC .24014 INC 2.3836 V1 29.382  
 RP 236.63 LAP 1.44 LOP 100.22 VP 21.101 GAP 7.84 AZP 91.90 TAL 10.24 TAP 153.21 RCA 151.17 APO 246.72 V2 23.024  
 RC 215.868 GL 19.98 GP -25.85 ZAL 69.24 ZAP 113.35 ETS 194.08 ZAE 142.98 ETE 224.85 ZAC 59.24 ETC 285.30 LVI 6.38

PLANETOCENTRIC CONIC

C3 16.037 VHL 4.005 DLA 28.15 RAL 15.08 RAD 6641.0 VEL 11.665 PTH 6.70 VHP 2.568 DPA -10.94 RAP 43.36 ECC 1.2639  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 8 11 3666.17 -47.57 143.90 254.97 90.62 10 9 17 2666.2 -41.75 110.65  
 60.00 9 8 30 3665.35 -39.98 143.37 254.51 84.48 10 9 35 2665.4 -37.85 112.44  
 70.00 9 9 4 3663.66 -32.49 141.88 253.15 78.85 10 10 8 2663.7 -33.77 113.21  
 80.00 9 10 41 3658.60 -25.23 139.45 251.11 73.48 10 11 39 2658.6 -29.67 112.91  
 90.00 9 30 57 3592.97 -19.74 132.65 249.12 69.33 10 30 50 2593.0 -26.52 107.67  
 100.00 11 53 33 3133.07 -25.23 100.82 251.11 73.48 12 45 46 2133.1 -29.67 74.28  
 110.00 14 8 30 2710.48 -32.49 70.79 253.15 78.85 14 53 41 1710.5 -33.77 42.13

DIFFERENTIAL CORRECTIONS

TDE -.1732 TRA -.5863 TC3 -.5545 BAU .6409  
 RDE .2841 RRA .0018 RC3-2.9376 FAU .42139  
 FDE 4.6090 FRA -.9711 FC-22.7490 BSP 4088  
 BDE .3327 BRA .5864 BC3 2.9895 FSP 2903

MID-COURSE EXECUTION ACCURACY

SGT 1078.9 SGR 2387.6 SG3 1688.2  
 RRT .3653 RRF .9787 RTF .3741  
 SGB 2620.1 R23 .0616 R13 .9769  
 SG1 2426.6 SG2 988.1 THA 78.73

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 20.6 SS 76.8  
 CRT -.6411 CRS -.9932 CST .5973  
 LSA 80.3 MSA 15.0 SSA 2.0  
 EL1 25.4 EL2 11.8 ALF 131.15

LAUNCH DATE AUG 10 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

DISTANCE 474.687

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.909 GAL 1.97 AZL 87.53 HCA 143.92 SMA 198.84 ECC .23972 INC 2.4701 V1 29.382  
 RP 236.95 LAP 1.45 LOP 101.17 VP 21.057 GAP 7.80 AZP 92.00 TAL 10.19 TAP 154.11 RCA 151.18 APO 246.51 V2 22.991  
 RC 218.810 GL 20.68 GP -26.61 ZAL 69.39 ZAP 111.73 ETS 193.54 ZAE 141.27 ETE 223.32 ZAC 58.64 ETC 285.48 LVI 6.96

PLANETOCENTRIC CONIC

C3 16.104 VHL 4.013 DLA 28.82 RAL 14.81 RAD 6641.1 VEL 11.668 PTH 6.70 VHP 2.552 DPA -11.88 RAP 43.03 ECC 1.2650  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 3 28 3682.45 -47.57 145.47 255.42 89.40 10 4 50 2682.5 -42.22 111.93  
 60.00 9 2 6 3686.08 -39.83 145.12 254.74 83.30 10 3 32 2686.1 -38.20 114.09  
 70.00 8 59 29 3693.80 -32.07 144.13 253.13 77.58 10 1 3 2693.8 -33.94 115.55  
 80.00 8 50 59 3720.58 -23.97 143.62 250.60 71.64 9 52 59 2720.6 -29.33 117.48  
 84.18 8 18 6 3826.41 -18.15 149.08 248.27 67.22 9 21 53 2826.4 -25.97 124.65  
 100.00 11 33 51 3195.05 -23.97 104.99 250.60 71.64 12 27 6 2195.0 -29.33 78.65  
 110.00 13 58 56 2740.82 -32.07 73.04 253.13 77.58 14 44 36 1740.6 -33.94 44.46

DIFFERENTIAL CORRECTIONS

TDE -.1426 TRA -.5923 TC3 -.6964 BAU .6728  
 RDE .3310 RRA -.0127 RC3-3.0466 FAU .42648  
 FDE 5.0093 FRA -1.0412 FC-22.9277 BSP 4281  
 BDE .3604 BRA .5924 BC3 3.1252 FSP 2931

MID-COURSE EXECUTION ACCURACY

SGT 1133.8 SGR 2490.5 SG3 1711.9  
 RRT .4570 RRF .9810 RTF .4660  
 SGB 2736.4 R23 .0729 R13 .9785  
 SG1 2553.5 SG2 983.6 THA 76.15

ORBIT DETERMINATION ACCURACY

ST 17.7 SR 23.9 SS 79.2  
 CRT -.5499 CRS -.9954 CST .5099  
 LSA 83.3 MSA 15.2 SSA 1.9  
 EL1 26.6 EL2 13.3 ALF 120.52

LAUNCH DATE AUG 10 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

DISTANCE 478.473

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 32.904 GAL 1.95 AZL 87.44 HCA 144.87 SMA 198.75 ECC .23933 INC 2.5604 V1 29.382  
 RP 239.26 LAP 1.47 LOP 102.12 VP 21.015 GAP 7.36 AZP 92.09 TAL 10.14 TAP 155.00 RCA 151.18 APO 246.31 V2 22.960  
 RC 221.744 GL 21.42 GP -27.39 ZAL 69.56 ZAP 110.12 ETS 192.97 ZAE 139.54 ETE 221.88 ZAC 58.03 ETC 285.66 LVI 7.56

PLANETOCENTRIC CONIC

C3 16.184 VHL 4.023 DLA 29.52 RAL 14.53 RAD 6641.1 VEL 11.672 PTH 6.71 VHP 2.540 DPA -12.84 RAP 42.70 ECC 1.2663  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 29 3699.66 -47.55 147.14 255.91 88.12 10 0 9 2699.7 -42.69 113.31  
 60.00 8 55 18 3708.17 -39.64 146.96 254.98 82.06 9 57 6 2708.2 -38.55 115.86  
 70.00 8 48 57 3726.94 -31.56 146.57 253.07 76.22 9 51 3 2726.9 -34.07 118.12  
 80.00 8 21 43 3812.78 -21.86 149.65 249.69 69.14 9 25 16 2812.8 -28.50 124.21  
 81.17 7 52 56 3904.91 -18.53 155.04 248.25 66.60 8 58 1 2904.9 -26.56 130.60  
 100.00 11 4 35 3287.23 -21.86 111.02 249.69 69.14 11 59 23 2287.2 -28.50 85.57  
 110.00 13 48 23 2773.76 -31.56 75.49 253.07 76.22 14 34 37 1773.8 -34.07 47.04

DIFFERENTIAL CORRECTIONS

TDE -.1037 TRA -.5942 TC3 -.8288 BAU .7076  
 RDE .3755 RRA -.0318 RC3-3.1638 FAU .43207  
 FDE 5.1603 FRA -1.1414 FC-23.1133 BSP 4454  
 BDE .3896 BRA .5951 BC3 3.2706 FSP 2920

MID-COURSE EXECUTION ACCURACY

SGT 1188.4 SGR 2601.7 SG3 1735.2  
 RRT .5398 RRF .9831 RTF .5502  
 SGB 2860.2 R23 .0774 R13 .9803  
 SG1 2691.8 SG2 966.9 THA 74.04

ORBIT DETERMINATION ACCURACY

ST 16.4 SR 27.0 SS 81.1  
 CRT -.4119 CRS -.9967 CST .3762  
 LSA 85.7 MSA 15.1 SSA 1.8  
 EL1 28.2 EL2 14.3 ALF 109.15

LAUNCH DATE AUG 10 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC  
 RL 151.84 LAL .00 LOL 317.23 VL 32.900 GAL 1.94 AZL 87.35 HCA 145.81 SMA 198.86 ECC .23898 INC 2.6547 V1 29.382  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.974 GAP 7.12 AZP 92.20 TAL 10.07 TAP 155.88 RCA 151.19 APO 246.14 V2 22.828  
 RC 224.672 GL 22.18 GP -28.18 ZAL 69.75 ZAP 108.52 ETS 192.38 ZAE 137.80 ETE 220.91 ZAC 57.42 ETC 285.84 LVI 8.17

PLANETOCENTRIC CONIC  
 C3 16.276 VHL 4.034 DLA 30.24 RAL 14.25 RAD 6641.1 VEL 11.675 PTH 6.71 VHP 2.530 DPA -13.81 RAP 42.38 ECC 1.2679  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 15 3717.92 -47.49 148.90 256.44 86.77 9 55 13 2717.9 -43.17 114.80  
 60.00 8 48 1 3731.87 -39.40 148.93 255.22 80.75 9 50 13 2731.9 -38.89 117.78  
 70.00 8 37 9 3763.97 -30.93 149.27 252.97 74.74 9 39 53 2764.0 -34.14 121.01  
 78.81 7 33 52 3963.57 -18.93 159.59 248.25 65.96 8 39 55 2963.6 -27.18 135.13  
 78.81 7 33 52 3963.57 -18.93 159.59 248.25 65.96 8 39 55 2963.6 -27.18 135.13  
 78.81 7 33 52 3963.57 -18.93 159.59 248.25 65.96 8 39 55 2963.6 -27.18 135.13  
 110.00 13 36 35 2810.79 -30.93 70.19 252.97 74.74 14 23 26 1810.8 -34.14 49.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0756 TRA -.6120 TC3-1.0020 BAU .7399 SGT 1295.1 SGR 2694.2 SG3 1742.2 ST 16.1 SR 31.1 SS 84.3  
 RDE .4348 RRA -.0395 RC3-3.2492 FAU .43223 RRT .6072 RRF .9847 RTF .6153 CRT -.2925 CRS -.9977 CST .2583  
 FDE 5.4050 FRA-1.1452 FC-22.9902 BSP 4758 SGB 2989.3 R23 .0928 R13 .9806 LSA 90.0 MSA 15.9 SSA 1.7  
 BDE .4413 BRA .6132 BC3 3.4002 FSP 3007 SG1 2823.4 SG2 981.9 THA 71.40 EL1 31.6 EL2 15.1 ALF 101.18

LAUNCH DATE AUG 10 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 32.898 GAL 1.92 AZL 87.25 HCA 146.75 SMA 198.59 ECC .23866 INC 2.7535 V1 29.382  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.934 GAP 6.88 AZP 92.30 TAL 10.00 TAP 156.75 RCA 151.19 APO 245.99 V2 22.897  
 RC 227.591 GL 22.97 GP -28.99 ZAL 69.96 ZAP 106.94 ETS 191.76 ZAE 136.04 ETE 219.20 ZAC 56.79 ETC 286.03 LVI 8.80

PLANETOCENTRIC CONIC  
 C3 16.383 VHL 4.048 DLA 31.00 RAL 13.96 RAD 6641.2 VEL 11.680 PTH 6.72 VHP 2.523 DPA -14.80 RAP 42.08 ECC 1.2696  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 41 3737.24 -47.40 150.76 256.98 85.34 9 49 58 2737.2 -43.66 116.40  
 60.00 8 40 11 3757.26 -39.10 151.02 255.45 79.35 9 42 48 2757.3 -39.21 119.86  
 70.00 8 23 44 3805.85 -30.14 152.28 252.79 73.12 9 27 10 2805.8 -34.14 124.28  
 76.75 7 17 41 4012.70 -19.32 163.46 248.27 65.28 8 24 33 3012.7 -27.82 138.99  
 76.75 7 17 41 4012.70 -19.32 163.46 248.27 65.28 8 24 33 3012.7 -27.82 138.99  
 76.75 7 17 41 4012.70 -19.32 163.46 248.27 65.28 8 24 33 3012.7 -27.82 138.99  
 110.00 13 23 10 2852.66 -30.14 81.20 252.79 73.12 14 10 43 1852.7 -34.14 53.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0359 TRA -.6218 TC3-1.1538 BAU .7760 SGT 1389.0 SGR 2800.6 SG3 1752.2 ST 15.7 SR 34.9 SS 86.7  
 RDE .4898 RRA -.0560 RC3-3.3499 FAU .43401 RRT .6665 RRF .9863 RTF .6742 CRT -.1113 CRS -.9983 CST .0808  
 FDE 5.5885 FRA-1.2101 FC-22.9340 BSP 4999 SGB 3126.1 R23 .0987 R13 .9816 LSA 93.5 MSA 15.6 SSA 1.6  
 BDE .4911 BRA .6243 BC3 3.5430 FSP 3020 SG1 2969.7 SG2 976.5 THA 69.38 EL1 35.0 EL2 15.6 ALF 93.56

LAUNCH DATE AUG 10 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 32.893 GAL 1.90 AZL 87.14 HCA 147.69 SMA 198.53 ECC .23838 INC 2.8571 V1 29.382  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.895 GAP 6.64 AZP 92.42 TAL 9.92 TAP 157.81 RCA 151.20 APO 245.85 V2 22.866  
 RC 230.502 GL 23.79 GP -29.81 ZAL 70.19 ZAP 105.37 ETS 191.11 ZAE 134.27 ETE 217.95 ZAC 56.15 ETC 286.22 LVI 9.45

PLANETOCENTRIC CONIC  
 C3 16.506 VHL 4.063 DLA 31.78 RAL 13.66 RAD 6641.2 VEL 11.685 PTH 6.72 VHP 2.520 DPA -15.80 RAP 41.78 ECC 1.2717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 45 3757.75 -47.27 152.72 257.55 83.83 9 44 23 2757.7 -44.15 118.13  
 60.00 8 31 41 3784.61 -38.74 153.26 255.67 77.88 9 34 46 2784.6 -39.52 122.12  
 70.00 8 8 2 3854.59 -29.13 155.71 252.49 71.32 9 12 16 2854.6 -34.01 128.08  
 74.86 7 3 19 4055.81 -19.73 166.92 248.31 64.57 8 10 54 3055.8 -28.48 142.44  
 74.86 7 3 19 4055.81 -19.73 166.92 248.31 64.57 8 10 54 3055.8 -28.48 142.44  
 74.86 7 3 19 4055.81 -19.73 166.92 248.31 64.57 8 10 54 3055.8 -28.48 142.44  
 110.00 13 7 28 2901.41 -29.13 84.63 252.49 71.32 13 55 50 1901.4 -34.01 57.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0067 TRA -.6338 TC3-1.3087 BAU .8134 SGT 1495.5 SGR 2907.5 SG3 1757.1 ST 15.9 SR 39.0 SS 89.1  
 RDE .5490 RRA -.0721 RC3-3.4458 FAU .43448 RRT .7154 RRF .9877 RTF .6224 CRT .0862 CRS -.9987 CST -.1129  
 FDE 5.7748 FRA-1.2640 FC-22.7879 BSP 5258 SGB 3269.5 R23 .1041 R13 .9825 LSA 97.3 MSA 15.8 SSA 1.5  
 BDE .5490 BRA .6379 BC3 3.6860 FSP 3029 SG1 3121.3 SG2 973.4 THA 67.49 EL1 39.0 EL2 15.8 ALF 87.60

LAUNCH DATE AUG 10 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 32.890 GAL 1.89 AZL 87.03 HCA 148.63 SMA 198.47 ECC .23813 INC 2.9659 V1 29.382  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.858 GAP 6.41 AZP 92.53 TAL 9.83 TAP 158.46 RCA 151.21 APO 245.73 V2 22.836  
 RC 233.405 GL 24.64 GP -30.64 ZAL 70.43 ZAP 103.81 ETS 190.44 ZAE 132.49 ETE 216.74 ZAC 55.50 ETC 286.41 LVI 10.11

PLANETOCENTRIC CONIC  
 C3 16.647 VHL 4.080 DLA 32.80 RAL 13.35 RAD 6641.3 VEL 11.691 PTH 6.73 VHP 2.521 DPA -16.81 RAP 41.50 ECC 1.2740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 35 26 3779.54 -47.09 154.80 258.13 82.24 9 38 25 2779.5 -44.64 120.00  
 60.00 8 22 27 3814.22 -38.29 155.64 255.86 76.32 9 26 1 2814.2 -39.79 124.59  
 70.00 7 48 43 3914.08 -27.76 159.80 251.98 69.25 8 53 57 2914.1 -33.68 132.70  
 73.07 6 50 10 4094.83 -20.14 170.11 248.37 63.81 7 58 25 3094.8 -29.16 145.62  
 73.07 6 50 10 4094.83 -20.14 170.11 248.37 63.81 7 58 25 3094.8 -29.16 145.62  
 73.07 6 50 10 4094.83 -20.14 170.11 248.37 63.81 7 58 25 3094.8 -29.16 145.62  
 110.00 12 48 9 2960.90 -27.76 88.72 251.98 69.25 13 37 30 1960.9 -33.68 61.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0527 TRA -.6474 TC3-1.4653 BAU .8519 SGT 1612.3 SGR 3014.2 SG3 1756.5 ST 16.7 SR 43.2 SS 91.5  
 RDE .8108 RRA -.0887 RC3-3.5365 FAU .43366 RRT .7559 RRF .9889 RTF .7623 CRT .2809 CRS -.9990 CST -.3035  
 FDE 5.9494 FRA-1.3142 FC-22.5532 BSP 5531 SGB 3418.4 R23 .1086 R13 .9832 LSA 101.2 MSA 15.9 SSA 1.4  
 BDE .6131 BRA .6534 BC3 3.8281 FSP 3034 SG1 3277.6 SG2 970.7 THA 65.72 EL1 43.5 EL2 15.9 ALF 82.83

LAUNCH DATE AUG 10 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC										DISTANCE 497.402										EARTH TO MARS																																																																																				
RL	151.84	LAL	.00	LOL	317.23	VL	32.887	GAL	1.87	AZL	86.92	HCA	149.56	SMA	198.42	ECC	.23791	INC	3.0805	V1	29.382	RP	240.78	LAP	1.58	LOP	106.83	VP	20.821	GAP	6.17	AZP	92.66	TAL	9.74	TAP	159.31	RCA	151.22	APO	245.63	V2	22.807	RC	236.297	GL	25.52	GP	-31.49	ZAL	70.69	ZAP	102.29	ETS	189.74	ZAE	130.72	ETE	215.58	ZAC	54.83	ETC	286.62	LVI	10.79																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	16.806	VHL	4.099	DLA	33.45	RAL	13.02	RAD	6641.4	VEL	11.698	PTH	6.73	VHP	2.524	DPA	-17.83	RAP	41.24	ECC	1.2766	ST	18.2	SR																																																																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	20.4	SR	52.1	SS	95.9	CRT	.4543	CRS	-.9993	CST	-.4726	LSA	105.5	MSA	16.1	SSA	1.4	EL1	48.4	EL2	16.0	ALF	78.90																																																							
50.00	8	28	39	3802.75	-46.85	156.99	250.72	80.57	9	32	1	2802.8	-45.12	122.03	60.00	8	12	17	3846.46	-37.73	158.21	256.01	74.66	9	16	23	2846.5	-40.02	127.30	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49

LAUNCH DATE AUG 10 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC										DISTANCE 501.188										EARTH TO MARS																																																																					
RL	151.64	LAL	.00	LOL	317.23	VL	32.885	GAL	1.85	AZL	86.80	HCA	150.50	SMA	198.38	ECC	.23771	INC	3.2012	V1	29.382	RP	241.07	LAP	1.58	LOP	107.76	VP	20.786	GAP	5.94	AZP	92.79	TAL	9.64	TAP	160.14	RCA	151.23	APO	245.54	V2	22.777	RC	239.179	GL	26.45	GP	-32.35	ZAL	70.97	ZAP	100.79	ETS	189.02	ZAE	128.94	ETE	214.48	ZAC	54.16	ETC	286.83	LVI	11.50																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																					
C3	16.986	VHL	4.121	DLA	34.33	RAL	12.68	RAD	6641.5	VEL	11.706	PTH	6.74	VHP	2.531	DPA	-18.86	RAP	41.00	ECC	1.2795	ST	20.4	SR	52.1	SS	95.9	CRT	.5938	CRS	-.9994	CST	-.6083	LSA	109.8	MSA	16.2	SSA	1.3	EL1	53.6	EL2	16.0	ALF	75.58																																												
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	20.4	SR	52.1	SS	95.9	CRT	.5938	CRS	-.9994	CST	-.6083	LSA	109.8	MSA	16.2	SSA	1.3	EL1	53.6	EL2	16.0	ALF	75.58																																								
50.00	8	21	20	3827.52	-46.55	159.31	259.30	78.80	9	25	7	2827.5	-45.59	124.23	60.00	8	1	0	3881.86	-37.06	160.97	256.10	72.89	9	5	42	2881.9	-40.20	130.30	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49	69.67	6	26	18	4164.58	-20.98	175.96	248.53	62.18	7	35	42	3164.6	-30.58	151.49

LAUNCH DATE AUG 10 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC										DISTANCE 504.973										EARTH TO MARS																																																						
RL	151.64	LAL	.00	LOL	317.23	VL	32.884	GAL	1.83	AZL	86.67	HCA	151.43	SMA	198.35	ECC	.23755	INC	3.3288	V1	29.382	RP	241.36	LAP	1.59	LOP	108.70	VP	20.752	GAP	5.71	AZP	92.92	TAL	9.54	TAP	160.96	RCA	151.24	APO	245.47	V2	22.749	RC	242.049	GL	27.41	GP	-33.22	ZAL	71.26	ZAP	99.31	ETS	188.27	ZAE	127.17	ETE	213.36	ZAC	53.46	ETC	287.04	LVI	12.22									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																						
C3	17.190	VHL	4.146	DLA	35.25	RAL	12.31	RAD	6641.6	VEL	11.714	PTH	6.75	VHP	2.542	DPA	-19.90	RAP	40.79	ECC	1.2829	ST	23.3	SR	56.8	SS	97.9	CRT	.6976	CRS	-.9996	CST	-.7090	LSA	114.4	MSA	16.3	SSA	1.2	EL1	59.3	EL2	16.0	ALF	72.78																													
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	23.3	SR	56.8	SS	97.9	CRT	.6976	CRS	-.9996	CST	-.7090	LSA	114.4	MSA	16.3	SSA	1.2	EL1	59.3	EL2	16.0	ALF	72.78																									
50.00	8	13	25	3854.03	-46.17	161.75	259.88	76.95	9	17	39	2854.0	-46.05	126.62	60.00	7	48	18	3921.17	-36.23	163.98	256.09	70.99	8	53	39	2921.2	-40.29	133.64	68.01	6	15	13	4196.41	-21.41	178.71	248.64	61.30	7	25	9	3196.4	-31.32	154.25	68.01	6	15	13	4196.41	-21.41	178.71	248.64	61.30	7	25	9	3196.4	-31.32	154.25	68.01	6	15	13	4196.41	-21.41	178.71	248.64	61.30	7	25	9	3196.4	-31.32	154.25

LAUNCH DATE AUG 10 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC										DISTANCE 508.758										EARTH TO MARS																																																						
RL	151.64	LAL	.00	LOL	317.23	VL	32.882	GAL	1.80	AZL	86.54	HCA	152.35	SMA	198.33	ECC	.23740	INC	3.4640	V1	29.382	RP	241.64	LAP	1.61	LOP	109.62	VP	20.719	GAP	5.47	AZP	93.07	TAL	9.43	TAP	161.78	RCA	151.25	APO	245.41	V2	22.720	RC	244.907	GL	28.41	GP	-34.12	ZAL	71.57	ZAP	97.87	ETS	187.49	ZAE	125.42	ETE	212.30	ZAC	52.75	ETC	287.26	LVI	12.97									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																						
C3	17.420	VHL	4.174	DLA	36.22	RAL	11.92	RAD	6641.7	VEL	11.724	PTH	6.75	VHP	2.556	DPA	-20.95	RAP	40.60	ECC	1.2867	ST	26.6	SR	61.8	SS	99.9	CRT	.7736	CRS	-.9997	CST	-.7824	LSA	119.3	MSA	16.4	SSA	1.1	EL1	65.4	EL2	15.9	ALF	70.36																													
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	26.6	SR	61.8	SS	99.9	CRT	.7736	CRS	-.9997	CST	-.7824	LSA	119.3	MSA	16.4	SSA	1.1	EL1	65.4	EL2	15.9	ALF	70.36																									
50.00	8	4	47	3882.50	-45.70	164.34	260.42	75.01	9	9	29	2882.5	-46.47	129.24	60.00	7	33	45	3965.53	-35.20	167.29	255.93	68.95	8	39	51	2965.5	-40.27	137.41	66.37	6	4	31	4226.78	-21.84	181.39	248.76	60.36	7	14	58	3226.8	-32.08	156.95	66.37	6	4	31	4226.78	-21.84	181.39	248.76	60.36	7	14	58	3226.8	-32.08	156.95	66.37	6	4	31	4226.78	-21.84	181.39	248.76	60.36	7	14	58	3226.8	-32.08	156.95

LAUNCH DATE AUG 10 1973

FLIGHT TIME 228.00

ARRIVAL DATE MAR 26 1974

Heliocentric Conic  
 RL 151.64 LAL .00 LOL 317.23 VL 32.882 GAL 1.78 AZL 86.39 HCA 153.28 SMA 198.31 ECC .23729 INC 3.6074 V1 29.382  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.687 GAP 5.24 AZP 93.22 TAL 9.31 TAP 162.59 RCA 151.26 APO 245.37 V2 22.692  
 RC 247.751 GL 29.46 GP -35.03 ZAL 71.91 ZAP 96.47 ETS 186.89 ZAE 123.67 ETE 211.27 ZAC 52.02 ETC 287.49 LVI 13.74

Planetocentric Conic  
 C3 17.680 VML 4.205 DLA 37.22 RAL 11.49 RAD 6641.8 VEL 11.735 PTH 6.76 VHP 2.575 DPA -22.01 RAP 40.44 ECC 1.2910  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 55 20 3913.19 -45.13 167.07 260.91 72.97 9 0 33 2913.2 -46.85 132.11  
 60.00 7 16 37 4016.89 -33.88 171.00 255.57 66.72 8 23 34 3016.9 -40.08 141.77  
 64.73 5 54 8 4255.88 -22.26 184.01 248.89 59.37 7 5 4 3255.9 -32.86 159.61  
 64.73 5 54 8 4255.88 -22.26 184.01 248.89 59.37 7 5 4 3255.9 -32.86 159.61  
 64.73 5 54 8 4255.88 -22.26 184.01 248.89 59.37 7 5 4 3255.9 -32.86 159.61  
 64.73 5 54 8 4255.88 -22.26 184.01 248.89 59.37 7 5 4 3255.9 -32.86 159.61

Differential Corrections  
 TDE .3484 TRA -.7346 TC3-2.2112 BAU 1.0605 SGT 2294.2 SGR 3557.6 SG3 1677.8 ST 30.4 SR 66.9 SS 101.6  
 RDE .9763 RRA -.1920 RC3-3.9040 FAU .41177 RRT .8760 RRF .9934 RTF .8795 CRT .8279 CRS -.9997 CST -.8347  
 FDE 6.6664 FRA-1.5530 FC-20.1632 BSP 7007 SGB 4233.2 R23 .1194 R13 .9864 LSA 124.3 MSA 16.5 SSA 1.1  
 BDE 1.0367 BRA .7593 BC3 4.4867 FSP 2904 SG1 4124.1 SG2 954.6 THA 58.67 EL1 71.7 EL2 15.9 ALF 68.22

LAUNCH DATE AUG 10 1973

FLIGHT TIME 230.00

ARRIVAL DATE MAR 28 1974

Heliocentric Conic  
 RL 151.64 LAL .00 LOL 317.23 VL 32.881 GAL 1.76 AZL 86.24 HCA 154.20 SMA 198.30 ECC .23720 INC 3.7599 V1 29.382  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.856 GAP 5.02 AZP 93.39 TAL 9.18 TAP 163.39 RCA 151.27 APO 245.34 V2 22.665  
 RC 250.580 GL 30.55 GP -35.96 ZAL 72.26 ZAP 95.11 ETS 185.86 ZAE 121.94 ETE 210.25 ZAC 51.27 ETC 287.73 LVI 14.54

Planetocentric Conic  
 C3 17.973 VML 4.240 DLA 38.26 RAL 11.04 RAD 6641.9 VEL 11.747 PTH 6.78 VHP 2.598 DPA -23.09 RAP 40.31 ECC 1.2958  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 44 53 3946.45 -44.42 169.96 261.32 70.84 8 50 39 2946.5 -47.18 135.25  
 60.00 6 55 27 4079.08 -32.12 175.34 254.86 64.22 8 3 27 3079.1 -39.61 146.99  
 63.07 5 44 0 4283.94 -22.69 186.58 249.05 58.32 6 55 24 3283.9 -33.66 162.23  
 63.07 5 44 0 4283.94 -22.69 186.58 249.05 58.32 6 55 24 3283.9 -33.66 162.23  
 63.07 5 44 0 4283.94 -22.69 186.58 249.05 58.32 6 55 24 3283.9 -33.66 162.23  
 63.07 5 44 0 4283.94 -22.69 186.58 249.05 58.32 6 55 24 3283.9 -33.66 162.23

Differential Corrections  
 TDE .4219 TRA -.7573 TC3-2.3466 BAU 1.1049 SGT 2446.0 SGR 3666.4 SG3 1646.2 ST 34.7 SR 72.2 SS 103.2  
 RDE 1.0625 RRA -.2169 RC3-3.9543 FAU .40371 RRT .8894 RRF .9940 RTF .8925 CRT .8669 CRS -.9998 CST -.8722  
 FDE 6.7681 FRA-1.5928 FC-19.4456 BSP 7319 SGB 4407.5 R23 .1204 R13 .9869 LSA 129.6 MSA 16.6 SSA 1.0  
 BDE 1.1432 BRA .7877 BC3 4.5981 FSP 2850 SG1 4303.3 SG2 952.6 THA 57.53 EL1 78.5 EL2 15.9 ALF 66.35

LAUNCH DATE AUG 10 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAR 30 1974

Heliocentric Conic  
 RL 151.64 LAL .00 LOL 317.23 VL 32.881 GAL 1.73 AZL 86.08 HCA 155.12 SMA 198.50 ECC .23713 INC 3.9225 V1 29.382  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.626 GAP 4.79 AZP 93.56 TAL 9.05 TAP 164.18 RCA 151.28 APO 245.32 V2 22.638  
 RC 253.394 GL 31.70 GP -36.91 ZAL 72.63 ZAP 93.79 ETS 185.01 ZAE 120.23 ETE 209.26 ZAC 50.49 ETC 287.98 LVI 15.36

Planetocentric Conic  
 C3 18.305 VML 4.278 DLA 39.35 RAL 10.54 RAD 6642.1 VEL 11.761 PTH 6.79 VHP 2.624 DPA -24.17 RAP 40.22 ECC 1.3013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 14 3982.73 -43.57 173.03 261.62 68.60 8 39 37 2982.7 -47.42 136.73  
 60.00 6 26 23 4162.70 -29.51 180.88 253.46 61.20 7 35 48 3162.7 -38.58 153.88  
 61.41 5 33 59 4311.26 -23.10 189.14 249.21 57.21 6 45 50 3311.3 -34.48 164.86  
 61.41 5 33 59 4311.26 -23.10 189.14 249.21 57.21 6 45 50 3311.3 -34.48 164.86  
 61.41 5 33 59 4311.26 -23.10 189.14 249.21 57.21 6 45 50 3311.3 -34.48 164.86  
 61.41 5 33 59 4311.26 -23.10 189.14 249.21 57.21 6 45 50 3311.3 -34.48 164.86

Differential Corrections  
 TDE .5008 TRA -.7817 TC3-2.4738 BAU 1.1504 SGT 2600.6 SGR 3776.6 SG3 1610.0 ST 39.3 SR 77.6 SS 104.6  
 RDE 1.1533 RRA -.2436 RC3-3.9973 FAU .39489 RRT .9008 RRF .9946 RTF .9335 CRT .8953 CRS -.9998 CST -.8894  
 FDE 6.8495 FRA-1.6292 FC-18.6668 BSP 7635 SGB 4595.4 R23 .1210 R13 .9873 LSA 135.0 MSA 16.7 SSA .9  
 BDE 1.2573 BRA .8187 BC3 4.7008 FSP 2787 SG1 4485.8 SG2 950.7 THA 56.48 EL1 85.8 EL2 15.9 ALF 64.67

LAUNCH DATE AUG 10 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 1 1974

Heliocentric Conic  
 RL 151.64 LAL .00 LOL 317.23 VL 32.881 GAL 1.71 AZL 85.90 HCA 156.04 SMA 198.30 ECC .23709 INC 4.0965 V1 29.382  
 RP 242.73 LAP 1.66 LOP 113.32 VP 20.590 GAP 4.56 AZP 93.74 TAL 8.92 TAP 164.96 RCA 151.28 APO 245.31 V2 22.612  
 RC 256.191 GL 32.90 GP -37.89 ZAL 73.01 ZAP 92.52 ETS 184.14 ZAE 118.54 ETE 208.29 ZAC 49.69 ETC 288.25 LVI 16.22

Planetocentric Conic  
 C3 18.681 VML 4.322 DLA 40.49 RAL 9.99 RAD 6642.2 VEL 11.777 PTH 6.80 VHP 2.656 DPA -25.26 RAP 40.17 ECC 1.3074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 7 4022.64 -42.52 176.30 261.77 66.26 8 27 10 3022.6 -47.56 142.58  
 59.72 5 24 5 4337.86 -23.51 191.68 249.38 56.03 6 36 23 3337.9 -35.31 167.50  
 59.72 5 24 5 4337.86 -23.51 191.68 249.38 56.03 6 36 23 3337.9 -35.31 167.50  
 59.72 5 24 5 4337.86 -23.51 191.68 249.38 56.03 6 36 23 3337.9 -35.31 167.50  
 59.72 5 24 5 4337.86 -23.51 191.68 249.38 56.03 6 36 23 3337.9 -35.31 167.50  
 59.72 5 24 5 4337.86 -23.51 191.68 249.38 56.03 6 36 23 3337.9 -35.31 167.50

Differential Corrections  
 TDE .5854 TRA -.8083 TC3-2.5921 BAU 1.1964 SGT 2758.3 SGR 3885.5 SG3 1568.2 ST 44.3 SR 83.3 SS 105.8  
 RDE 1.2497 RRA -.2733 RC3-4.0283 FAU .38433 RRT .9106 RRF .9951 RTF .9129 CRT .9164 CRS -.9999 CST -.9195  
 FDE 6.9125 FRA-1.6668 FC-17.8108 BSP 7951 SGB 4765.0 R23 .1214 R13 .9878 LSA 140.7 MSA 16.8 SSA .9  
 BDE 1.3800 BRA .8532 BC3 4.7903 FSP 2713 SG1 4669.6 SG2 948.4 THA 55.50 EL1 93.0 EL2 15.9 ALF 63.17

LAUNCH DATE AUG 10 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.081 GAL 1.68 AZL 85.72 HCA 156.96 SMA 198.31 ECC .23706 INC 4.2830 V1 29.382
RP 242.99 LAP 1.66 LOP 114.24 VP 20.570 GAP 4.34 AZP 93.94 TAL 8.78 TAP 163.74 RCA 151.30 APO 245.32 V2 22.586
RC 258.972 GL 34.16 GP -38.89 ZAL 73.42 ZAP 91.29 ETS 183.25 ZAE 116.88 ETE 207.34 ZAC 48.87 ETC 288.52 LVI 17.10

DISTANCE 827.670

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.108 VHL 4.371 DLA 41.68 RAL 9.39 RAD 6842.4 VEL 11.795 PTH 6.82 VHP 2.693 DPA -26.37 RAP 40.17 ECC 1.3145
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 5 6 4067.07 -41.25 179.80 261.69 63.80 8 12 53 3067.1 -47.55 146.87
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17
58.01 5 14 11 4364.03 -23.90 194.23 249.55 54.78 6 26 55 3364.0 -36.16 170.17

DIFFERENTIAL CORRECTIONS

TDE .6760 TRA -.8372 TC3-2.6995 BAU 1.2425
RDE 1.3925 RRA -.3052 RC3-4.0460 FAU .37261
FDE 6.9563 FRA-1.7000 FC-16.8819 BSP 8285
BDE 1.5120 BRA .8911 BC3 4.8638 FSP 2637

MID-COURSE EXECUTION ACCURACY

SGT 2917.7 SGR 3992.6 SG3 1520.9
RRT .9190 RRF .9955 RTF .9208
SGB 4945.1 R23 .1218 R13 .9881
SG1 4853.7 SG2 946.4 THA 54.57

ORBIT DETERMINATION ACCURACY

ST 49.6 SR 89.2 SS 106.7
CRT .9321 CRS -.9999 CST -.9346
LSA 146.7 MSA 16.9 SSA .6
EL1 100.8 EL2 15.9 ALF 61.82

LAUNCH DATE AUG 10 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.082 GAL 1.65 AZL 85.52 HCA 157.87 SMA 198.32 ECC .23705 INC 4.4837 V1 29.382
RP 243.24 LAP 1.69 LOP 115.18 VP 20.543 GAP 4.11 AZP 94.15 TAL 8.63 TAP 166.90 RCA 151.31 APO 245.33 V2 22.560
RC 261.736 GL 35.49 GP -39.91 ZAL 73.85 ZAP 90.12 ETS 182.33 ZAE 115.24 ETE 208.40 ZAC 48.01 ETC 288.82 LVI 18.02

DISTANCE 531.449

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.593 VHL 4.426 DLA 42.91 RAL 8.73 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.735 DPA -27.49 RAP 40.21 ECC 1.3225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 47 35 4117.41 -39.66 183.58 261.29 61.20 7 56 12 3117.4 -47.32 151.72
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88
56.27 5 4 15 4389.76 -24.27 196.79 249.73 53.46 6 17 25 3389.8 -37.01 172.88

DIFFERENTIAL CORRECTIONS

TDE .7723 TRA -.8690 TC3-2.7957 BAU 1.2904
RDE 1.4608 RRA -.3409 RC3-4.0562 FAU .36024
FDE 6.9724 FRA-1.7333 FC-15.9170 BSP 8606
BDE 1.6522 BRA .9335 BC3 4.9263 FSP 2547

MID-COURSE EXECUTION ACCURACY

SGT 3079.6 SGR 4102.7 SG3 1469.8
RRT .9262 RRF .9959 RTF .9277
SGB 5129.9 R23 .1219 R13 .9885
SG1 5042.2 SG2 944.5 THA 53.71

ORBIT DETERMINATION ACCURACY

ST 55.2 SR 95.1 SS 107.3
CRT .9440 CRS -.9999 CST -.9459
LSA 152.7 MSA 16.9 SSA .7
EL1 108.8 EL2 15.9 ALF 60.61

LAUNCH DATE AUG 10 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.083 GAL 1.62 AZL 85.30 HCA 158.78 SMA 198.34 ECC .23706 INC 4.7003 V1 29.382
RP 243.50 LAP 1.70 LOP 116.08 VP 20.517 GAP 3.89 AZP 94.38 TAL 8.48 TAP 167.27 RCA 151.32 APO 245.36 V2 22.535
RC 264.483 GL 36.87 GP -40.96 ZAL 74.30 ZAP 89.01 ETS 181.40 ZAE 113.64 ETE 205.47 ZAC 47.12 ETC 289.13 LVI 18.97

DISTANCE 535.227

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.148 VHL 4.489 DLA 44.21 RAL 7.99 RAD 6842.9 VEL 11.839 PTH 6.86 VHP 2.783 DPA -28.62 RAP 40.30 ECC 1.3316
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 26 25 4176.16 -37.65 187.76 260.41 58.44 7 36 2 3176.2 -46.78 157.29
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63
54.49 4 54 12 4415.33 -24.62 199.37 249.90 52.05 6 7 48 3415.3 -37.87 175.63

DIFFERENTIAL CORRECTIONS

TDE .8753 TRA -.9032 TC3-2.8778 BAU 1.3381
RDE 1.5757 RRA -.3784 RC3-4.0486 FAU .34644
FDE 6.9634 FRA-1.7569 FC-14.8860 BSP 8932
BDE 1.8025 BRA .9793 BC3 4.9879 FSP 2449

MID-COURSE EXECUTION ACCURACY

SGT 3241.6 SGR 4209.1 SG3 1412.8
RRT .9324 RRF .9963 RTF .5335
SGB 5312.7 R23 .1220 R13 .9889
SG1 5228.3 SG2 943.1 THA 52.81

ORBIT DETERMINATION ACCURACY

ST 61.0 SR 101.2 SS 107.8
CRT .9532 CRS -.9999 CST -.9546
LSA 158.9 MSA 17.0 SSA .7
EL1 117.1 EL2 15.9 ALF 89.51

LAUNCH DATE AUG 10 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.084 GAL 1.59 AZL 85.07 HCA 159.69 SMA 198.36 ECC .23709 INC 4.9349 V1 29.382
RP 243.74 LAP 1.71 LOP 116.99 VP 20.492 GAP 3.67 AZP 94.63 TAL 8.33 TAP 168.02 RCA 151.33 APO 245.39 V2 22.511
RC 267.212 GL 38.34 GP -42.05 ZAL 74.76 ZAP 87.96 ETS 180.44 ZAE 112.07 ETE 204.56 ZAC 46.20 ETC 289.47 LVI 19.96

DISTANCE 539.004

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.783 VHL 4.559 DLA 45.55 RAL 7.16 RAD 6843.2 VEL 11.865 PTH 6.88 VHP 2.838 DPA -29.77 RAP 40.45 ECC 1.3420
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 39 18 4248.76 -34.95 192.60 258.75 55.39 7 10 7 3248.8 -45.72 163.97
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51
52.67 4 44 0 4440.76 -24.93 201.98 250.05 50.55 5 58 1 3440.8 -38.72 178.51

DIFFERENTIAL CORRECTIONS

TDE .9852 TRA -.9403 TC3-2.9435 BAU 1.3864
RDE 1.7001 RRA -.4200 RC3-4.0288 FAU .33159
FDE 6.9333 FRA-1.7774 FC-13.8124 BSP 9267
BDE 1.9649 BRA 1.0299 BC3 4.9895 FSP 2346

MID-COURSE EXECUTION ACCURACY

SGT 3403.6 SGR 4315.9 SG3 1351.6
RRT .9378 RRF .9966 RTF .9386
SGB 5496.5 R23 .1221 R13 .9892
SG1 5415.3 SG2 941.5 THA 52.17

ORBIT DETERMINATION ACCURACY

ST 67.0 SR 107.6 SS 107.6
CRT .9604 CRS-1.0000 CST -.9614
LSA 165.4 MSA 17.1 SSA .6
EL1 125.7 EL2 16.0 ALF 58.54

LAUNCH DATE AUG 10 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.886 GAL 1.56 AZL 84.81 HCA 160.60 SMA 198.39 ECC .23714 INC 5.1900 V1 29.382
RP 243.98 LAP 1.72 LOP 117.90 VP 20.468 GAP 3.44 AZP 94.90 TAL 8.17 TAP 168.77 RCA 151.34 APO 245.44 V2 22.487
RC 269.924 GL 39.87 GP -43.17 ZAL 75.25 ZAP 86.97 ETS 179.47 ZAE 110.54 ETE 203.66 ZAC 45.24 ETC 289.83 LVI 20.99

PLANETOCENTRIC CONIC

C3 21.515 VHL 4.838 DLA 46.96 RAL 6.22 RAD 6643.5 VEL 11.896 PTH 6.91 VHP 2.901 DPA -30.93 RAP 40.66 ECC 1.3541
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 18 0 4354.84 -30.85 199.06 255.31 51.64 6 30 35 3354.8 -43.44 173.16
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46
50.81 4 33 32 4466.21 -25.19 204.62 250.18 48.96 5 47 58 3466.2 -39.56 181.46

DIFFERENTIAL CORRECTIONS

TDE 1.1006 TRA -0.9821 TC3-2.9942 BAU 1.4362
RDE 1.8308 RRA -0.4682 RC3-3.0958 FAU .31600
FDE 6.8663 FRA-1.8010 FC-12.7153 BSP 9375
BDE 2.1361 BRA 1.0879 BC3 4.9930 FSP 2228

MID-COURSE EXECUTION ACCURACY

SGT 3566.9 SGR 4423.9 SG3 1286.5
RRF .9427 RRF .9969 RTF .9431
SGB 9682.8 R23 .1219 R13 .9894
SG1 5604.7 S62 939.0 THA 51.48

ORBIT DETERMINATION ACCURACY

ST 73.1 SR 113.9 SS 107.1
CRT .9660 CRS-1.0000 CST -0.9666
LSA 171.7 MSA 17.1 SSA .6
EL1 134.4 EL2 16.0 ALF 57.68

LAUNCH DATE AUG 10 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.887 GAL 1.53 AZL 84.53 HCA 161.51 SMA 198.42 ECC .23721 INC 5.4685 V1 29.382
RP 244.22 LAP 1.73 LOP 118.81 VP 20.445 GAP 3.22 AZP 95.19 TAL 8.00 TAP 169.51 RCA 151.35 APO 245.49 V2 22.464
RC 272.618 GL 41.49 GP -44.32 ZAL 75.76 ZAP 86.05 ETS 178.49 ZAE 109.05 ETE 202.78 ZAC 44.25 ETC 290.22 LVI 22.06

PLANETOCENTRIC CONIC

C3 22.361 VHL 4.729 DLA 46.42 RAL 5.16 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.971 DPA -32.11 RAP 40.94 ECC 1.3680
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
43.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52
48.90 4 22 42 4491.89 -25.39 207.31 250.27 47.28 5 37 34 3491.9 -40.37 184.52

DIFFERENTIAL CORRECTIONS

TDE 1.2226 TRA-1.0275 TC3-3.0260 BAU 1.4867
RDE 1.9712 RRA -.5207 RC3-3.9467 FAU .29948
FDE 6.7700 FRA-1.8158 FC-11.5949 BSP 9909
BDE 2.3196 BRA 1.1519 BC3 4.9732 FSP 2111

MID-COURSE EXECUTION ACCURACY

SGT 3728.8 SGR 4532.1 SG3 1217.4
RRF .9470 RRF .9971 RTF .9470
SGB 9688.9 R23 .1218 R13 .9897
SG1 5793.6 S62 937.1 THA 50.86

ORBIT DETERMINATION ACCURACY

ST 79.4 SR 120.4 SS 106.1
CRT .9704 CRS-1.0000 CST -.9707
LSA 178.2 MSA 17.2 SSA .5
EL1 143.3 EL2 16.1 ALF 56.93

LAUNCH DATE AUG 10 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.889 GAL 1.50 AZL 84.25 HCA 162.41 SMA 198.48 ECC .23729 INC 5.7741 V1 29.382
RP 244.45 LAP 1.74 LOP 119.72 VP 20.423 GAP 3.00 AZP 95.51 TAL 7.83 TAP 170.24 RCA 151.37 APO 245.55 V2 22.441
RC 275.293 GL 43.20 GP -45.51 ZAL 76.30 ZAP 85.21 ETS 177.50 ZAE 107.60 ETE 201.91 ZAC 43.21 ETC 290.65 LVI 23.18

PLANETOCENTRIC CONIC

C3 23.345 VHL 4.832 DLA 49.94 RAL 3.95 RAD 6644.3 VEL 11.972 PTH 6.97 VHP 3.052 DPA -33.30 RAP 41.29 ECC 1.3842
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72
46.95 4 11 25 4517.89 -25.53 210.05 250.29 45.49 5 26 43 3517.9 -41.14 187.72

DIFFERENTIAL CORRECTIONS

TDE 1.3502 TRA-1.0775 TC3-3.0380 BAU 1.5381
RDE 2.1202 RRA -.5795 RC3-3.8803 FAU .26205
FDE 6.6353 FRA-1.8248 FC-10.4594 BSP 10233
BDE 2.5136 BRA 1.2254 BC3 4.9281 FSP 1984

MID-COURSE EXECUTION ACCURACY

SGT 3888.9 SGR 4639.1 SG3 1144.2
RRF .9508 RRF .9973 RTF .5004
SGB 6093.5 R23 .1216 R13 .9899
SG1 5981.0 S62 934.6 THA 50.28

ORBIT DETERMINATION ACCURACY

ST 85.5 SR 126.9 SS 104.7
CRT .9738 CRS-1.0000 CST -.9739
LSA 184.6 MSA 17.3 SSA .5
EL1 152.1 EL2 16.2 ALF 56.28

LAUNCH DATE AUG 10 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

RL 151.64 LAL .00 LOL 317.23 VL 32.891 GAL 1.47 AZL 83.88 HCA 163.31 SMA 198.50 ECC .23739 INC 6.1110 V1 29.382
RP 244.68 LAP 1.75 LOP 120.63 VP 20.402 GAP 2.79 AZP 95.86 TAL 7.66 TAP 170.97 RCA 151.38 APO 245.62 V2 22.418
RC 277.948 GL 45.01 GP -46.74 ZAL 76.85 ZAP 84.44 ETS 176.50 ZAE 106.20 ETE 201.05 ZAC 42.12 ETC 291.12 LVI 24.34

PLANETOCENTRIC CONIC

C3 24.498 VHL 4.950 DLA 51.52 RAL 2.55 RAD 6644.8 VEL 12.020 PTH 7.01 VHP 3.143 DPA -34.50 RAP 41.71 ECC 1.4032
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06
44.95 3 59 33 4544.40 -25.57 212.84 250.21 43.61 5 15 18 3544.4 -41.85 191.06

DIFFERENTIAL CORRECTIONS

TDE 1.4830 TRA-1.1330 TC3-3.0285 BAU 1.5908
RDE 2.2802 RRA -.6469 RC3-3.7965 FAU .26382
FDE 6.4648 FRA-1.8300 FC3-9.3233 BSP 10571
BDE 2.7201 BRA 1.3047 BC3 4.8564 FSP 1856

MID-COURSE EXECUTION ACCURACY

SGT 4046.9 SGR 4747.6 SG3 1067.9
RRF .9543 RRF .9975 RTF .9534
SGB 6238.4 R23 .1213 R13 .9901
SG1 6168.5 S62 930.9 THA 49.77

ORBIT DETERMINATION ACCURACY

ST 91.6 SR 133.3 SS 102.6
CRT .9766 CRS-1.0000 CST -.9765
LSA 190.8 MSA 17.4 SSA .5
EL1 160.9 EL2 16.3 ALF 55.74

LAUNCH DATE AUG 10 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 19 1974

Heliocentric Conic

RL 151.64 LAL .00 LOL 317.23 VL 32.893 GAL 1.43 AZL 83.52 HCA 164.21 SMA 198.54 ECC .23750 INC 6.4044 V1 29.382  
 RP 244.90 LAP 1.76 LOP 121.33 VP 20.381 GAP 2.97 AZP 96.24 TAL 7.48 TAP 171.69 RCA 151.39 APO 245.70 V2 22.387  
 RC 280.584 GL 46.91 GP -48.01 ZAL 77.42 ZAP 83.75 ETS 175.51 ZAE 104.86 ETE 200.21 ZAC 40.99 ETC 291.64 LVI 25.59

Planetocentric Conic

C3 25.857 VHL 5.085 DLA 53.16 RAL .94 RAD 6645.3 VEL 12.078 PTH 7.06 VHP 3.247 DPA -35.73 RAP 42.22 ECC 1.4259  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56  
 42.91 3 46 59 4571.55 -25.51 215.68 250.01 41.63 5 3 11 3571.6 -42.48 194.56

Differential Corrections

TDE 1.6181 TRA-1.1949 TC3-2.9969 BAU 1.6445 SGT 4201.8 SGR 4856.2 SG3 988.5 ORBIT DETERMINATION ACCURACY  
 RDE 2.4502 RRA -.7229 RC3-3.6943 FAU .24487 RRT .9573 RRF .9977 RTF .9560 CRT .9786 CRS-1.0000 CST -.9782  
 FDE 6.2908 FRA-1.8260 FC3-8.1987 BSP 10904 SGB 8421.7 R23 .1213 R13 .9903 LSA 196.6 MSA 17.5 S8A .4  
 BDE 2.9362 BRA 1.3965 BC3 4.7570 FSP 1721 SG1 6354.3 SG2 927.8 THA 49.31 EL1 169.4 EL2 16.5 ALF 55.34

LAUNCH DATE AUG 10 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 21 1974

Heliocentric Conic

RL 151.64 LAL .00 LOL 317.23 VL 32.898 GAL 1.40 AZL 83.10 HCA 165.11 SMA 198.59 ECC .23763 INC 6.9010 V1 29.382  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.362 GAP 2.35 AZP 96.67 TAL 7.30 TAP 172.41 RCA 151.40 APO 245.78 V2 22.375  
 RC 283.198 GL 48.93 GP -49.33 ZAL 78.02 ZAP 83.15 ETS 174.52 ZAE 103.57 ETE 199.39 ZAC 39.81 ETC 292.20 LVI 26.61

Planetocentric Conic

C3 27.474 VHL 5.242 DLA 54.85 RAL 359.07 RAD 6646.0 VEL 12.142 PTH 7.11 VHP 3.367 DPA -36.96 RAP 42.82 ECC 1.4522  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22  
 40.83 3 33 29 4599.62 -25.31 218.56 249.63 39.56 4 50 9 3599.6 -43.00 198.22

Differential Corrections

TDE 1.7551 TRA-1.2627 TC3-2.9394 BAU 1.6989 SGT 4350.0 SGR 4965.7 SG3 906.6 ORBIT DETERMINATION ACCURACY  
 RDE 2.6318 RRA -.8103 RC3-3.5712 FAU .22515 RRT .9803 RRF .9978 RTF .9584 CRT .9802 CRS-1.0000 CST -.9796  
 FDE 5.9936 FRA-1.8144 FC3-7.0948 BSP 11245 SGB 8601.6 R23 .1210 R13 .9904 LSA 201.9 MSA 17.7 S8A .4  
 BDE 3.1633 BRA 1.3003 BC3 4.6253 FSP 1582 SG1 6536.9 SG2 922.0 THA 48.94 EL1 177.5 EL2 16.7 ALF 55.08

LAUNCH DATE AUG 10 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 23 1974

Heliocentric Conic

RL 151.64 LAL .00 LOL 317.23 VL 32.899 GAL 1.37 AZL 82.63 HCA 166.00 SMA 198.64 ECC .23777 INC 7.3687 V1 29.382  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.343 GAP 2.13 AZP 97.15 TAL 7.12 TAP 173.12 RCA 151.41 APO 245.88 V2 22.354  
 RC 285.791 GL 51.06 GP -50.68 ZAL 78.64 ZAP 82.63 ETS 173.54 ZAE 102.33 ETE 198.59 ZAC 38.59 ETC 292.84 LVI 28.12

Planetocentric Conic

C3 29.414 VHL 5.424 DLA 56.58 RAL 356.86 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 3.504 DPA -38.21 RAP 43.52 ECC 1.4841  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05  
 38.71 3 18 50 4628.83 -24.96 221.48 248.99 37.41 4 35 59 3628.8 -43.38 202.05

Differential Corrections

TDE 1.8815 TRA-1.3423 TC3-2.8620 BAU 1.7649 SGT 4496.3 SGR 5099.8 SG3 828.4 ORBIT DETERMINATION ACCURACY  
 RDE 2.8039 RRA -.9284 RC3-3.4570 FAU .20681 RRT .9644 RRF .9979 RTF .522 CRT .9816 CRS-1.0000 CST -.9806  
 FDE 5.6482 FRA-1.8271 FC3-6.0870 BSP 11377 SGB 8798.8 R23 .1168 R13 .9911 LSA 205.4 MSA 17.6 S8A .4  
 BDE 3.3766 BRA 1.6321 BC3 4.4880 FSP 1399 SG1 6739.0 SG2 899.7 THA 48.73 EL1 183.8 EL2 16.7 ALF 54.84

LAUNCH DATE AUG 10 1973

FLIGHT TIME 258.00

ARRIVAL DATE APR 25 1974

Heliocentric Conic

RL 151.64 LAL .00 LOL 317.23 VL 32.901 GAL 1.33 AZL 82.10 HCA 166.89 SMA 198.70 ECC .23792 INC 7.8978 V1 29.382  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.326 GAP 1.92 AZP 97.69 TAL 6.94 TAP 173.83 RCA 151.42 APO 245.97 V2 22.334  
 RC 288.361 GL 53.31 GP -52.08 ZAL 79.28 ZAP 82.21 ETS 172.60 ZAE 101.18 ETE 197.83 ZAC 37.31 ETC 293.54 LVI 29.47

Planetocentric Conic

C3 31.768 VHL 5.636 DLA 58.35 RAL 354.26 RAD 6647.7 VEL 12.316 PTH 7.25 VHP 3.663 DPA -39.47 RAP 44.32 ECC 1.5228  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03  
 36.57 3 2 44 4659.43 -24.42 224.41 248.02 35.19 4 20 24 3659.4 -43.56 206.03

Differential Corrections

TDE 1.9980 TRA-1.4298 TC3-2.7576 BAU 1.8237 SGT 4632.5 SGR 5211.1 SG3 740.2 ORBIT DETERMINATION ACCURACY  
 RDE 3.0011 RRA-1.0429 RC3-3.2914 FAU .18575 RRT .9663 RRF .9979 RTF .9632 CRT .9816 CRS-1.0000 CST -.9804  
 FDE 5.2883 FRA-1.7830 FC3-5.0620 BSP 11377 SGB 6972.5 R23 .1185 R13 .9909 LSA 208.5 MSA 18.1 S8A .3  
 BDE 3.6054 BRA 1.7698 BC3 4.2939 FSP 1263 SG1 6914.3 SG2 899.3 THA 48.48 EL1 189.7 EL2 17.2 ALF 54.96

LAUNCH DATE AUG 10 1973

FLIGHT TIME 260.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC  
 RL 151.84 LAL .00 LOL 317.23 VL 32.904 GAL 1.30 AZL 81.50 HCA 167.78 SMA 198.76 ECC .23809 INC 8.5013 V1 29.382  
 RP 245.73 LAP 1.79 LOP 125.14 VP 20.309 GAP 1.70 AZP 98.31 TAL 6.75 TAP 174.53 RCA 151.44 APO 246.08 V2 22.314  
 RC 290.907 GL 35.70 GP -53.52 ZAL 79.94 ZAP 81.90 ETS 171.70 ZAE 100.09 ETE 197.11 ZAC 35.99 ETC 294.33 LVI 30.88

PLANETOCENTRIC CONIC  
 C3 34.657 VHL 5.887 DLA 60.13 RAL 351.15 RAD 6648.8 VEL 12.432 PTH 7.34 VHP 3.848 DPA -40.72 RAP 49.24 ECC 1.5704  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12  
 34.43 2 44 51 4691.73 -23.65 227.34 246.59 32.93 4 3 3 3691.7 -43.51 210.12

DIFFERENTIAL CORRECTIONS  
 TDE 2.0885 TRA-1.5286 TC3-2.6279 BAU 1.8861 SGT 4757.2 SGR 5327.6 SG3 653.5 ST 111.2 SR 159.4 SS 80.5  
 RDE 3.1968 RRA-1.1785 RC3-3.1087 FAU .16450 RRT .9679 RRF .9979 RTF .9637 CRT .9807 CR8-1.0000 CST -.9791  
 FDE 4.8640 FRA-1.7264 FC3-4.1091 BSP 12093 SGB 7142.4 R23 .1206 R13 .9906 LSA 209.6 MSA 18.7 SSA .3  
 BDE 3.8186 BRA 1.9302 BC3 4.0707 FSP 1122 SGI 7085.6 SG2 898.8 THA 48.34 EL1 193.6 EL2 17.9 ALF 55.30

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 10 1973

FLIGHT TIME 262.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 32.908 GAL 1.26 AZL 80.80 HCA 168.67 SMA 198.82 ECC .23827 INC 9.1973 V1 29.382  
 RP 245.93 LAP 1.80 LOP 126.04 VP 20.293 GAP 1.49 AZP 99.02 TAL 6.56 TAP 175.22 RCA 151.45 APO 246.19 V2 22.295  
 RC 293.430 GL 98.23 GP -55.00 ZAL 80.62 ZAP 81.68 ETS 170.86 ZAE 99.09 ETE 196.45 ZAC 34.62 ETC 295.21 LVI 32.33

PLANETOCENTRIC CONIC  
 C3 38.254 VHL 6.185 DLA 61.91 RAL 347.42 RAD 6650.1 VEL 12.575 PTH 7.44 VHP 4.065 DPA -41.97 RAP 46.29 ECC 1.6296  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27  
 32.32 2 24 45 4725.97 -22.63 230.21 244.57 30.67 3 43 31 3726.0 -43.18 214.27

DIFFERENTIAL CORRECTIONS  
 TDE 2.1341 TRA-1.6399 TC3-2.4732 BAU 1.9547 SGT 4865.9 SGR 5457.3 SG3 567.6 ST 110.2 SR 161.6 SS 73.2  
 RDE 3.3794 RRA-1.3436 RC3-2.9141 FAU .14343 RRT .9695 RRF .9978 RTF .9639 CRT .9786 CR8 -.9999 CST -.9763  
 FDE 4.3712 FRA-1.6583 FC3-3.2459 BSP 12441 SGB 7311.5 R23 .1229 R13 .9903 LSA 207.9 MSA 19.5 SSA .3  
 BDE 3.9969 BRA 2.1200 BC3 3.8221 FSP 976 SGI 7256.4 SG2 896.4 THA 48.38 EL1 194.6 EL2 18.6 ALF 55.93

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 10 1973

FLIGHT TIME 314.00

ARRIVAL DATE JUN 20 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 33.025 GAL -.10 AZL 98.87 HCA 191.91 SMA 201.15 ECC .24613 INC 8.8671 V1 29.382  
 RP 249.05 LAP 1.82 LOP 149.00 VP 20.149 GAP -3.87 AZP 81.32 TAL 359.50 TAP 191.41 RCA 151.64 APO 250.65 V2 21.990  
 RC 349.515 GL -57.38 GP 50.04 ZAL 87.85 ZAP 67.77 ETS 211.72 ZAE 80.80 ETE 192.87 ZAC 135.85 ETC 290.46 LVI -69.63

PLANETOCENTRIC CONIC  
 C3 36.524 VHL 6.044 DLA -38.75 RAL 59.77 RAD 6649.4 VEL 12.507 PTH 7.39 VHP 4.099 DPA 51.95 RAP 351.94 ECC 1.6011  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 17 11 26 2431.26 -3.96 63.92 290.57 137.45 17 51 57 1431.3 14.36 47.61  
 60.00 19 26 35 2070.26 7.76 42.24 301.86 129.67 20 1 5 1070.3 22.93 22.81  
 62.33 20 52 39 1825.01 16.30 28.41 308.39 125.65 21 23 4 825.0 29.39 6.46  
 62.33 20 52 39 1825.01 16.30 28.41 308.39 125.65 21 23 4 825.0 29.39 6.46  
 62.33 20 52 39 1825.01 16.30 28.41 308.39 125.65 21 23 4 825.0 29.39 6.46  
 62.33 20 52 39 1825.01 16.30 28.41 308.39 125.65 21 23 4 825.0 29.39 6.46

DIFFERENTIAL CORRECTIONS  
 TDE -6.2237 TRA 2.7000 TC3-4.8780 BAU 2.6249 SGT 8962.2 SGR 4448.1 SG3 532.4 ST 299.2 SR 132.7 SS 97.2  
 RDE 2.8936 RRA-1.9781 RC3 2.2632 FAU .14080 RRT -.9803 RRF -.9956 RTF .5057 CRT -.9940 CR8 .9983 CST -.9859  
 FDE -3.2188 FRA 2.8958 FC3-3.3373 BSP 17762 SGB10005.4 R23 .2105 R13 -.9746 LSA 331.9 MSA 15.8 SSA .3  
 BDE 6.7816 BRA 3.3470 BC3 5.3756 FSP 915 SGI 9974.2 SG2 788.6 THA 153.88 EL1 327.1 EL2 13.3 ALF 156.16

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 10 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 22 1974

HELIOCENTRIC CONIC  
 RL 151.64 LAL .00 LOL 317.23 VL 33.030 GAL -.15 AZL 98.25 HCA 192.78 SMA 201.25 ECC .24654 INC 8.2487 V1 29.382  
 RP 249.09 LAP 1.82 LOP 149.88 VP 20.153 GAP -3.86 AZP 81.95 TAL 359.22 TAP 192.00 RCA 151.64 APO 250.87 V2 21.988  
 RC 351.261 GL -55.04 GP 48.18 ZAL 88.07 ZAP 66.27 ETS 211.87 ZAE 79.54 ETE 193.93 ZAC 134.11 ETC 289.85 LVI -68.04

PLANETOCENTRIC CONIC  
 C3 33.440 VHL 5.783 DLA -36.44 RAL 59.09 RAD 6648.3 VEL 12.384 PTH 7.30 VHP 3.935 DPA 50.43 RAP 353.67 ECC 1.5503  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 49 51 2473.68 -6.08 65.30 287.12 137.28 17 31 4 1473.7 12.28 49.49  
 60.00 18 41 36 2175.85 3.14 47.33 295.92 130.20 19 17 52 1175.9 18.78 28.65  
 65.99 21 8 37 1748.20 16.28 22.13 305.78 123.06 21 37 45 748.3 28.38 359.64  
 65.99 21 8 37 1748.20 16.28 22.13 305.78 123.06 21 37 45 748.3 28.38 359.64  
 65.99 21 8 37 1748.20 16.28 22.13 305.78 123.06 21 37 45 748.3 28.38 359.64  
 65.99 21 8 37 1748.20 16.28 22.13 305.78 123.06 21 37 45 748.3 28.38 359.64

DIFFERENTIAL CORRECTIONS  
 TDE -5.9125 TRA 2.6425 TC3-5.3671 BAU 2.6182 SGT 9134.6 SGR 4270.2 SG3 596.0 ST 297.1 SR 124.0 SS 99.4  
 RDE 2.4038 RRA-1.8541 RC3 2.3437 FAU .15560 RRT -.9796 RRF -.9956 RTF .9655 CRT -.9934 CR8 .9982 CST -.9849  
 FDE -3.3259 FRA 3.1469 FC3-4.0283 BSP 17918 SGB10083.4 R23 .2132 R13 -.9737 LSA 327.0 MSA 16.0 SSA .3  
 BDE 6.3024 BRA 3.2281 BC3 5.8565 FSP 1024 SGI10053.2 SG2 780.0 THA 155.24 EL1 321.7 EL2 13.1 ALF 157.44

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 10 1973

FLIGHT TIME 310.00

ARRIVAL DATE JUN 24 1974

HELIOCENTRIC CONIC

DISTANCE 682.442

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 33.035 GAL -.21 AZL 97.71 HCA 193.64 SMA 201.36 ECC .24696 INC 7.7094 V1 29.382  
 RP 249.12 LAP 1.81 LOP 150.75 VP 20.158 GAP -4.06 AZP 82.51 TAL 358.94 TAP 192.99 RCA 131.63 APO 251.09 V2 21.982  
 RC 352.974 GL -32.83 GP 46.38 ZAL 88.32 ZAP 64.81 ETS 211.93 ZAE 78.30 ETE 194.10 ZAC 132.41 ETC 289.26 LVI -66.44

PLANETOCENTRIC CONIC

C3 30.930 VHL 5.561 DLA -34.25 RAL 58.55 RAD 6647.4 VEL 12.282 PTH 7.22 VHP 3.798 DPA 48.97 RAP 355.29 ECC 1.5090  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 31 52 2511.39 -7.97 86.90 284.37 137.06 17 13 43 1511.4 10.42 51.14  
 60.00 18 10 57 2247.56 -.02 50.76 291.96 130.30 18 48 25 1247.6 15.85 32.44  
 69.83 21 28 6 1663.53 16.08 15.29 303.47 120.65 21 55 50 663.5 27.26 352.40  
 69.83 21 28 6 1663.53 16.08 15.29 303.47 120.65 21 55 50 663.5 27.26 352.40  
 69.83 21 28 6 1663.53 16.08 15.29 303.47 120.65 21 55 50 663.5 27.26 352.40  
 69.83 21 28 6 1663.53 16.08 15.29 303.47 120.65 21 55 50 663.5 27.26 352.40  
 69.83 21 28 6 1663.53 16.08 15.29 303.47 120.65 21 55 50 663.5 27.26 352.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.6317 TRA 2.5972 TC3-5.8480 BAW 2.6120 SGT 9297.9 SGR 4093.0 SG3 654.4 ST 294.3 SR 115.7 SS 60.9  
 RDE 2.1528 RRA-1.7481 RC3 2.3934 FAU .16631 RRT -.9785 RRF -.9955 RTF .9647 CRT -.9927 CRS .9981 CST -.9834  
 FDE-3.3805 FRA 3.3834 FC3-4.7109 BSP 17895 SGB10158.9 R23 .2174 R13 -.9725 LSA 321.6 MSA 16.3 SSA .4  
 BDE 6.0291 BRA 3.1307 BC3 6.3188 FSP 1105 SGI10129.3 SG2 775.6 THA 156.55 EL1 315.9 EL2 13.0 ALF 150.65

LAUNCH DATE AUG 10 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 26 1974

HELIOCENTRIC CONIC

DISTANCE 686.179

EARTH TO MARS

RL 151.64 LAL .00 LOL 317.23 VL 33.041 GAL -.27 AZL 97.23 HCA 194.51 SMA 201.47 ECC .24738 INC 7.2327 V1 29.382  
 RP 249.15 LAP 1.81 LOP 151.63 VP 20.164 GAP -4.25 AZP 83.00 TAL 358.66 TAP 193.17 RCA 131.63 APO 251.31 V2 21.979  
 RC 354.652 GL -30.74 GP 44.64 ZAL 88.61 ZAP 63.41 ETS 211.92 ZAE 77.06 ETE 194.58 ZAC 130.75 ETC 288.75 LVI -64.86

PLANETOCENTRIC CONIC

C3 28.860 VHL 5.372 DLA -32.16 RAL 58.11 RAD 6646.6 VEL 12.198 PTH 7.16 VHP 3.684 DPA 47.56 RAP 356.81 ECC 1.4750  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 16 33 2545.89 -9.68 88.38 282.15 136.81 16 58 59 1545.9 8.70 52.62  
 60.00 17 47 6 2304.92 -2.54 53.50 288.86 130.23 18 23 31 1304.9 13.44 35.38  
 70.00 19 59 29 1915.09 6.78 28.93 295.95 123.55 20 31 24 915.1 19.82 8.20  
 74.01 21 52 47 1564.73 15.75 7.47 301.43 118.40 22 18 52 564.7 26.08 344.28  
 74.01 21 52 47 1564.73 15.75 7.47 301.43 118.40 22 18 52 564.7 26.08 344.28  
 74.01 21 52 47 1564.73 15.75 7.47 301.43 118.40 22 18 52 564.7 26.08 344.28  
 110.00 1 2 51 6249.95 6.78 295.75 295.95 123.55 2 47 1 5249.9 19.82 275.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.3762 TRA 2.5566 TC3-6.3193 BAW 2.6121 SGT 9452.6 SGR 3921.6 SG3 707.9 ST 290.9 SR 108.0 SS 61.7  
 RDE 1.9389 RRA-1.6448 RC3 2.4286 FAU .18002 RRT -.9778 RRF -.9953 RTF .9647 CRT -.9922 CRS .9979 CST -.9820  
 FDE-3.4023 FRA 3.5769 FC3-5.4001 BSP 18091 SGB10233.8 R23 .2190 R13 -.9718 LSA 316.0 MSA 16.4 SSA .4  
 BDE 5.7152 BRA 3.0400 BC3 6.7699 FSP 1203 SGI10205.5 SG2 760.3 THA 157.79 EL1 310.1 EL2 12.6 ALF 159.74

LAUNCH DATE AUG 11 1973      FLIGHT TIME 100.00      ARRIVAL DATE NOV 19 1973

DISTANCE 286.455      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 35.568 GAL .71 AZL 90.11 HCA 87.71 SMA 273.27 ECC .44533 INC .1108 V1 29.387  
 RP 219.08 LAP -.11 LOP 45.89 VP 26.943 GAP 24.00 AZP 90.00 TAL 2.29 TAP 90.00 RCA 151.58 APO 394.97 V2 25.087  
 RC 78.631 GL -.84 GP -5.14 ZAL 83.27 ZAP 174.26 ETS 245.24 ZAE 161.47 ETE 344.85 ZAC 78.12 EYC 282.72 LVI -11.76

PLANETOCENTRIC CONIC  
 C3 38.726 VHL 6.223 DLA 14.66 RAL 39.23 RAD 8650.2 VEL 12.594 PTH 7.45 VHP 8.875 DPA 10.80 RAP 42.66 ECC 1.6373  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 42 11 3592.37 -47.28 136.79 287.14 96.08 12 42 3 2592.4 -39.45 105.07  
 60.00 12 5 16 3530.92 -40.25 131.96 287.84 92.21 13 4 7 2530.9 -34.97 102.19  
 70.00 12 38 41 3432.55 -34.15 124.09 287.94 89.21 13 35 54 2432.5 -30.90 95.84  
 80.00 13 29 18 3273.97 -29.74 111.90 287.77 87.18 14 23 52 2274.0 -27.88 84.63  
 90.00 14 42 49 3036.68 -28.07 94.36 287.67 86.43 15 33 26 2036.7 -26.72 67.43  
 100.00 16 12 10 2748.44 -29.74 73.27 287.77 87.18 16 57 58 1748.4 -27.88 46.00  
 110.00 17 38 8 2479.37 -34.15 53.01 287.94 89.21 18 19 27 1479.4 -30.90 24.76

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.2793 TRA -.9585 TC3 .2436 BAU .1322      SGT 993.4 SGR 622.1 SG3 130.4      ST 18.8 SR 28.9 SS 9.0  
 RDE -.6237 RRA .2307 RC3 -.0764 FAU .05167      RRT -.1310 RRF .1228 RTF -.5760      CRT .5979 CRS .7635 CST .9568  
 FDE .2125 FRA .4354 FC3-1.1531 B8P 1362      SGB 1172.1 R23 -.0008 R13 .5780      LSA 32.6 MSA 14.3 SSA 1.4  
 BDE .6834 BRA .9840 BC3 .2553 FSP 156      SG1 998.8 SG2 613.4 THA 172.44      EL1 31.6 EL2 13.8 ALF 63.35

LAUNCH DATE AUG 11 1973      FLIGHT TIME 102.00      ARRIVAL DATE NOV 21 1973

DISTANCE 288.613      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 35.413 GAL .77 AZL 90.08 HCA 88.83 SMA 267.22 ECC .43260 INC .0730 V1 29.387  
 RP 219.45 LAP -.08 LOP 47.02 VP 26.700 GAP 23.62 AZP 90.00 TAL 2.54 TAP 91.36 RCA 151.57 APO 382.87 V2 25.046  
 RC 80.245 GL -.44 GP -5.27 ZAL 82.76 ZAP 173.75 ETS 239.21 ZAE 160.93 ETE 344.64 ZAC 77.93 ETC 282.68 LVI -11.54

PLANETOCENTRIC CONIC  
 C3 36.881 VHL 6.073 DLA 14.70 RAL 38.66 RAD 6649.6 VEL 12.521 PTH 7.40 VHP 8.602 DPA 10.79 RAP 43.02 ECC 1.6070  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 39 48 3580.70 -47.19 135.67 285.38 96.94 12 39 29 2580.7 -39.06 104.22  
 60.00 12 2 51 3519.36 -40.22 130.98 286.21 92.87 13 1 30 2519.4 -34.68 101.35  
 70.00 12 36 13 3421.14 -34.15 123.00 286.38 89.74 13 33 14 2421.1 -30.69 95.02  
 80.00 13 26 47 3262.71 -29.77 111.07 286.26 87.62 14 21 10 2262.7 -27.73 83.83  
 90.00 14 40 17 3025.50 -28.12 93.54 286.17 86.84 15 30 42 2025.5 -26.59 66.64  
 100.00 16 9 39 2737.18 -29.77 72.44 286.26 87.62 16 55 16 1737.2 -27.73 45.20  
 110.00 17 35 40 2467.96 -34.15 52.12 286.38 89.74 18 16 48 1468.0 -30.69 23.94

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3187 TRA -.9499 TC3 .3013 BAU .1544      SGT 1040.5 SGR 627.1 SG3 139.4      ST 20.5 SR 29.0 SS 9.4  
 RDE -.6113 RRA .2291 RC3 -.0854 FAU .05400      RRT -.1097 RRF .1321 RTF -.6117      CRT .6507 CRS .7739 CST .9683  
 FDE .2250 FRA .4420 FC3-1.2677 B8P 1473      SGB 1214.9 R23 -.0279 R13 .6146      LSA 33.8 MSA 14.3 SSA 1.4  
 BDE .6894 BRA .9771 BC3 .3132 FSP 168      SG1 1044.1 SG2 621.3 THA 174.13      EL1 32.7 EL2 13.8 ALF 59.34

LAUNCH DATE AUG 11 1973      FLIGHT TIME 104.00      ARRIVAL DATE NOV 23 1973

DISTANCE 290.937      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 35.267 GAL .83 AZL 90.04 HCA 89.96 SMA 261.77 ECC .42102 INC .0397 V1 29.387  
 RP 219.82 LAP -.04 LOP 48.14 VP 26.467 GAP 23.23 AZP 90.00 TAL 2.80 TAP 92.76 RCA 151.56 APO 371.98 V2 25.005  
 RC 81.936 GL -.23 GP -5.40 ZAL 82.24 ZAP 173.18 ETS 234.11 ZAE 160.45 ETE 344.38 ZAC 77.74 ETC 282.65 LVI -11.31

PLANETOCENTRIC CONIC  
 C3 35.188 VHL 5.932 DLA 14.73 RAL 38.08 RAD 6649.0 VEL 12.453 PTH 7.35 VHP 8.359 DPA 10.76 RAP 43.38 ECC 1.5791  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 37 22 3569.54 -47.09 134.61 283.66 97.75 12 36 31 2569.5 -38.68 103.42  
 60.00 12 0 22 3508.31 -40.17 130.04 284.60 93.51 12 58 50 2508.3 -34.40 100.55  
 70.00 12 33 41 3410.24 -34.15 122.35 284.85 90.24 13 30 31 2410.2 -30.49 94.23  
 80.00 13 24 11 3251.98 -29.80 110.27 284.77 88.04 14 18 23 2252.0 -27.58 83.07  
 90.00 14 37 39 3014.85 -28.15 92.77 284.69 87.23 15 27 54 2014.9 -26.47 65.89  
 100.00 16 7 3 2726.45 -29.80 71.64 284.77 88.04 16 52 30 1726.5 -27.58 44.43  
 110.00 17 33 7 2457.06 -34.15 51.27 284.85 90.24 18 14 4 1457.1 -30.49 23.13

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3192 TRA -.9405 TC3 .3319 BAU .1624      SGT 1064.1 SGR 632.0 SG3 148.7      ST 20.9 SR 29.1 SS 9.7  
 RDE -.5992 RRA .2276 RC3 -.0950 FAU .05638      RRT -.1182 RRF .1419 RTF -.6118      CRT .6537 CRS .7841 CST .9660  
 FDE .2377 FRA .4474 FC3-1.3872 B8P 1504      SGB 1237.6 R23 -.0298 R13 .6249      LSA 34.2 MSA 14.4 SSA 1.5  
 BDE .6789 BRA .9876 BC3 .3433 FSP 182      SG1 1068.1 SG2 625.2 THA 173.88      EL1 33.0 EL2 13.9 ALF 58.70

LAUNCH DATE AUG 11 1973      FLIGHT TIME 106.00      ARRIVAL DATE NOV 25 1973

DISTANCE 293.407      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 35.128 GAL .89 AZL 90.00 HCA 91.08 SMA 256.84 ECC .40995 INC .0000 V1 29.387  
 RP 220.19 LAP -.00 LOP 49.26 VP 26.244 GAP 22.85 AZP 90.00 TAL 3.06 TAP 94.14 RCA 151.55 APO 362.14 V2 24.984  
 RC 83.701 GL -.02 GP -5.54 ZAL 81.71 ZAP 172.56 ETS 229.82 ZAE 160.03 ETE 344.08 ZAC 77.55 ETC 282.62 LVI -11.09

PLANETOCENTRIC CONIC  
 C3 33.634 VHL 5.799 DLA 14.77 RAL 37.49 RAD 6648.4 VEL 12.391 PTH 7.31 VHP 8.088 DPA 10.73 RAP 43.72 ECC 1.5535  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 34 51 3558.88 -46.99 133.80 281.98 98.52 12 34 10 2558.9 -38.32 102.67  
 60.00 11 57 48 3497.78 -40.13 129.15 283.02 94.11 12 56 6 2497.8 -34.12 99.80  
 70.00 12 31 4 3399.87 -34.15 121.54 283.34 90.72 13 27 44 2399.9 -30.29 93.49  
 80.00 13 21 31 3241.78 -29.82 109.51 283.30 88.43 14 15 33 2241.8 -27.43 82.34  
 90.00 14 34 58 3004.74 -28.19 92.03 283.24 87.59 15 25 3 2004.7 -26.34 65.17  
 100.00 16 4 23 2716.26 -29.82 70.88 283.30 88.43 16 49 39 1716.3 -27.43 43.71  
 110.00 17 30 31 2446.89 -34.15 50.46 283.34 90.72 18 11 17 1446.7 -30.29 22.41

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3191 TRA -.9303 TC3 .3652 BAU .1709      SGT 1087.3 SGR 636.7 SG3 158.4      ST 21.3 SR 29.2 SS 10.1  
 RDE -.5876 RRA .2282 RC3 -.1054 FAU .05883      RRT -.1277 RRF .1529 RTF -.6328      CRT .6564 CRS .7925 CST .9638  
 FDE .2497 FRA .4526 FC3-1.5142 B8P 1558      SGB 1260.0 R23 -.0317 R13 .6362      LSA 34.6 MSA 14.5 SSA 1.5  
 BDE .6687 BRA .9574 BC3 .3801 FSP 196      SG1 1091.8 SG2 628.8 THA 173.59      EL1 33.3 EL2 14.1 ALF 58.12

LAUNCH DATE AUG 11 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 27 1973

**HELIOCENTRIC CONIC** DISTANCE 299.008 EARTH TO MARS

RL 181.81 LAL -.00 LOL 318.18 VL 34.988 GAL .98 AZL 89.97 HCA 92.18 SMA 282.37 ECC .38984 INC .0305 V1 29.387  
 RP 220.87 LAP .03 LOP 30.38 VP 26.029 GAP 22.47 AZP 90.00 TAL 3.33 TAP 98.92 RCA 131.94 APO 353.20 V2 24.923  
 RC 89.836 GL .21 GP -8.68 ZAL 81.17 ZAP 175.90 ZTP 226.21 ZAE 159.87 ETE 343.73 ZAC 77.38 ETC 282.59 LVI -10.86

**PLANETOCENTRIC CONIC**

C3 32.206 VHL 8.675 DLA 14.81 RAL 36.89 RAD 8647.9 VEL 12.334 PTH 7.26 VHP 7.842 DPA 10.69 RAP 44.06 ECC 1.6300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 32 17 3548.74 -46.88 132.65 280.33 99.25 12 31 26 2548.7 -37.96 101.98  
 60.00 11 55 11 3487.77 -40.07 129.31 281.48 94.68 12 53 19 2487.8 -33.85 99.08  
 70.00 12 28 24 3390.04 -34.14 120.77 281.86 91.18 13 24 54 2390.0 -30.00 92.79  
 80.00 13 18 47 3232.14 -29.84 108.80 281.86 88.81 14 12 39 2232.1 -27.29 81.66  
 90.00 14 32 12 2995.19 -26.21 91.33 281.81 87.94 15 22 7 1995.2 -26.22 64.50  
 100.00 16 1 39 2706.61 -29.84 70.17 281.86 88.81 16 48 46 1706.6 -27.29 43.03  
 110.00 17 27 50 2436.86 -34.14 49.89 281.86 91.18 18 8 27 1436.9 -30.00 21.71

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3207 TRA -.8198 TC3 .4001 BAW .1794 8GT 1110.7 8GR 841.2 8G3 188.8 8T 21.7 8R 29.3 8S 10.4  
 RDE -.8762 RRA .2247 RC3 -.1168 FAW .08149 RRT -.1385 RRP .1644 RTP -.6429 CRT .6811 CR8 .8021 C8T .9616  
 PDE .2689 PRA .4599 FC3-1.6829 B8P 1614 8GB 1282.5 R23 -.0348 R13 .6466 L8A 34.8 N8A 14.6 88A 1.8  
 BDE .6998 BRA .9469 BC3 .4168 F8P 212 8G1 1118.8 8G2 632.3 T8A 173.38 EL1 33.8 EL2 14.2 ALP 57.41

LAUNCH DATE AUG 11 1973

FLIGHT TIME 110.00

ARRIVAL DATE NOV 29 1973

**HELIOCENTRIC CONIC** DISTANCE 299.720 EARTH TO MARS

RL 181.81 LAL -.00 LOL 318.18 VL 34.874 GAL 1.01 AZL 89.93 HCA 93.30 SMA 248.30 ECC .38973 INC .0674 V1 29.387  
 RP 220.98 LAP .07 LOP 31.48 VP 25.823 GAP 22.09 AZP 90.00 TAL 3.61 TAP 96.91 RCA 151.53 APO 348.07 V2 24.882  
 RC 87.440 GL .43 GP -8.84 ZAL 80.62 ZAP 171.20 ETE 223.15 ZAE 159.37 YAP 343.33 ZAC 77.18 ETC 282.57 LVI -10.83

**PLANETOCENTRIC CONIC**

C3 30.893 VHL 8.888 DLA 14.88 RAL 36.27 RAD 8647.4 VEL 12.281 PTH 7.22 VHP 7.607 DPA 10.64 RAP 44.39 ECC 1.8084  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 29 40 3639.13 -46.77 131.74 278.73 99.94 12 28 39 2539.1 -37.82 101.29  
 60.00 11 52 31 3478.30 -40.02 127.51 279.97 95.22 12 50 29 2478.3 -33.60 98.41  
 70.00 12 25 39 3380.76 -34.12 120.09 280.41 91.61 13 22 0 2380.8 -29.91 92.13  
 80.00 13 15 59 3223.06 -29.89 108.12 280.44 89.17 14 9 42 2223.1 -27.15 81.02  
 90.00 14 29 22 2985.21 -26.23 90.88 280.40 88.27 15 19 8 1985.2 -26.10 63.87  
 100.00 16 8 51 2697.53 -29.88 69.49 280.44 89.17 16 43 48 1697.5 -27.15 42.39  
 110.00 17 25 8 2427.59 -34.12 48.96 280.41 91.61 18 8 33 1427.6 -29.91 21.02

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3219 TRA -.8095 TC3 .4387 BAW .1877 8GT 1133.8 8GR 848.8 8G3 179.8 8T 22.1 8R 29.3 8S 10.8  
 RDE -.8661 RRA .2234 RC3 -.1290 FAW .08428 RRT -.1488 RRP .1761 RTP -.6329 CRT .6894 CR8 .8126 C8T .9680  
 PDE .2786 PRA .4594 FC3-1.8012 B8P 1682 8GB 1304.7 R23 -.0370 R13 .6866 L8A 35.3 N8A 14.7 88A 1.8  
 BDE .6903 BRA .9368 BC3 .4844 F8P 229 8G1 1139.6 8G2 638.3 T8A 173.07 EL1 33.8 EL2 14.3 ALP 58.71

LAUNCH DATE AUG 11 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 1 1973

**HELIOCENTRIC CONIC** DISTANCE 301.834 EARTH TO MARS

RL 181.81 LAL -.00 LOL 318.18 VL 34.788 GAL 1.07 AZL 89.89 HCA 94.41 SMA 244.98 ECC .38931 INC .1040 V1 29.387  
 RP 221.33 LAP .10 LOP 32.80 VP 25.828 GAP 21.72 AZP 90.01 TAL 3.89 TAP 98.30 RCA 151.92 APO 337.69 V2 24.840  
 RC 89.407 GL .67 GP -8.99 ZAL 80.06 ZAP 170.47 ETE 220.84 ZAE 159.13 ETE 342.89 ZAC 76.94 ETC 282.54 LVI -10.39

**PLANETOCENTRIC CONIC**

C3 29.888 VHL 8.448 DLA 14.89 RAL 35.88 RAD 8646.9 VEL 12.232 PTH 7.18 VHP 7.381 DPA 10.98 RAP 44.71 ECC 1.4888  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 27 0 3830.03 -46.86 130.90 277.18 100.88 12 28 30 2830.0 -37.30 100.87  
 60.00 11 49 47 3489.38 -39.96 126.75 278.50 98.73 12 47 37 2489.4 -33.35 97.78  
 70.00 12 22 52 3372.03 -34.10 119.37 278.99 92.01 13 19 4 2372.0 -29.73 91.82  
 80.00 13 13 7 3214.99 -29.89 107.49 279.06 89.90 14 6 42 2214.6 -27.02 80.42  
 90.00 14 26 28 2977.81 -26.25 90.06 279.03 88.98 15 16 6 1977.8 -25.99 63.28  
 100.00 16 5 39 2689.02 -29.85 68.88 279.06 89.90 16 40 48 1689.0 -27.02 41.79  
 110.00 17 22 16 2418.85 -34.10 48.28 278.99 92.01 18 2 37 1418.9 -29.73 20.44

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3233 TRA -.8091 TC3 .4725 BAW .1938 8GT 1156.7 8GR 849.7 8G3 191.3 8T 22.5 8R 29.4 8S 11.1  
 RDE -.5543 RRA .2220 RC3 -.1421 FAW .06715 RRT -.1589 RRP .1888 RTP -.6220 CRT .6698 CR8 .8222 C8T .9562  
 PDE .2937 PRA .4618 FC3-1.9583 B8P 1714 8GB 1326.7 R23 -.0400 R13 .6863 L8A 35.7 N8A 14.7 88A 1.7  
 BDE .6417 BRA .9261 BC3 .4934 F8P 248 8G1 1163.1 8G2 636.1 T8A 172.78 EL1 34.1 EL2 14.4 ALP 58.01

LAUNCH DATE AUG 11 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 3 1973

**HELIOCENTRIC CONIC** DISTANCE 304.440 EARTH TO MARS

RL 181.81 LAL -.00 LOL 318.18 VL 34.647 GAL 1.13 AZL 89.86 HCA 95.52 SMA 241.18 ECC .37182 INC .1404 V1 29.387  
 RP 221.71 LAP .14 LOP 33.70 VP 25.438 GAP 21.38 AZP 90.01 TAL 4.17 TAP 99.69 RCA 151.80 APO 330.86 V2 24.799  
 RC 81.436 GL .91 GP -8.16 ZAL 79.80 ZAP 168.71 ETE 218.30 ZAE 158.84 ETE 342.40 ZAC 76.73 ETC 282.51 LVI -10.16

**PLANETOCENTRIC CONIC**

C3 28.874 VHL 8.346 DLA 14.94 RAL 35.02 RAD 8646.4 VEL 12.187 PTH 7.18 VHP 7.182 DPA 10.81 RAP 45.03 ECC 1.4703  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 24 17 3821.80 -46.85 130.10 275.67 101.19 12 22 59 2921.5 -36.99 100.09  
 60.00 11 47 1 3461.00 -39.90 126.05 277.06 98.20 12 44 42 2461.0 -33.12 97.20  
 70.00 12 20 1 3363.87 -34.08 118.73 277.61 92.38 13 16 9 2363.9 -29.86 90.94  
 80.00 13 10 12 3206.63 -29.86 106.90 277.70 89.81 14 3 39 2206.6 -26.90 79.87  
 90.00 14 23 31 2970.00 -26.26 89.49 277.69 88.86 15 13 1 1970.0 -25.88 62.73  
 100.00 16 5 4 2681.10 -29.86 68.27 277.70 89.81 16 37 48 1681.1 -26.00 41.24  
 110.00 17 19 27 2410.69 -34.08 47.65 277.61 92.38 17 59 38 1410.7 -29.86 19.86

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3243 TRA -.8088 TC3 .5103 BAW .2039 8GT 1179.3 8GR 853.9 8G3 203.6 8T 22.8 8R 29.4 8S 11.5  
 RDE -.5438 RRA .2207 RC3 -.1563 FAW .07028 RRT -.1686 RRP .2030 RTP -.6709 CRT .6738 CR8 .8308 C8T .9539  
 PDE .4039 PRA .4639 FC3-2.1285 B8P 1762 8GB 1348.5 R23 -.0431 R13 .6756 L8A 36.0 N8A 14.8 88A 1.7  
 BDE .6332 BRA .9158 BC3 .5337 F8P 287 8G1 1188.6 8G2 640.6 T8A 172.45 EL1 34.3 EL2 14.5 ALP 55.34

LAUNCH DATE AUG 11 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 8 1973

HELIOCENTRIC CONIC

RL 191.61 LAL -.00 LOL 310.19 VL 34.843 GAL 1.19 AZL 89.92 HCA 96.82 SMA 230.08 ECC .38364 INC .1765 V1 29.387
RP 222.09 LAP .10 LOP 84.80 VP 25.252 GAP 20.99 AZP 90.02 TAL 4.46 TAP 101.07 RCA 131.49 APO 324.63 V2 24.787
RC 93.523 GL 1.17 GP -0.33 ZAL 78.94 ZAP 100.93 ETB 216.37 ZAE 180.81 ETE 341.83 ZAC 76.51 ETC 202.40 LVI -9.92

DISTANCE 307.426

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.551 VHL 5.249 DLA 14.99 RAL 34.38 RAD 6648.0 VEL 12.145 PTH 7.11 VHP 6.952 DPA 10.43 RAP 45.33 ECC 1.4834
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
80.00 11 21 33 3913.49 -46.45 129.38 274.20 101.75 12 20 6 2513.5 -36.69 99.88
80.00 11 44 12 3493.16 -39.84 123.39 275.67 96.65 12 41 45 2453.2 -32.89 96.65
70.00 12 17 7 3386.28 -34.06 118.14 276.26 92.73 13 13 4 2356.3 -29.40 90.41
80.00 13 7 13 3199.29 -29.86 106.38 276.38 90.09 14 0 33 2199.3 -26.78 79.36
90.00 14 20 30 2962.79 -29.27 88.98 276.37 89.13 15 9 53 1962.8 -25.78 62.23
100.00 15 30 5 2673.77 -29.86 67.73 276.38 90.09 16 34 39 1673.8 -26.78 40.72
110.00 17 16 34 2403.10 -34.06 47.06 276.26 92.73 17 56 37 1403.1 -29.40 19.33

DIFFERENTIAL CORRECTIONS

TDE -.3288 TRA -.8775 TCS .9800 BAU .2122
RDE -.8338 RRA .2194 RC3 -.1718 FAU .07352
PDE .3278 FRA .4648 FC3-2.3103 B8P 1804
BDE .6249 BRA .9048 BC3 .9761 F8P 288

MID-COURSE EXECUTION ACCURACY

8GT 1201.2 8GR 658.0 8G3 216.6
RRT -.1809 RRF .2174 RTF -.6801
8GB 1369.7 R23 -.0487 R13 .6853
8G1 1209.5 8G2 642.8 THA 172.10

ORBIT DETERMINATION ACCURACY

8T 23.2 8R 29.4 88 11.9
CRT .6783 CR8 .8404 C8T .9804
L8A 36.3 M8A 14.8 88A 1.8
EL1 34.9 EL2 14.8 ALP 84.67

LAUNCH DATE AUG 11 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC

RL 191.61 LAL -.00 LOL 318.19 VL 34.444 GAL 1.25 AZL 89.79 HCA 97.71 SMA 235.19 ECC .38593 INC .2124 V1 29.387
RP 222.48 LAP .21 LOP 85.90 VP 25.078 GAP 20.63 AZP 90.03 TAL 4.78 TAP 102.46 RCA 131.49 APO 318.90 V2 24.718
RC 98.668 GL 1.42 GP -6.50 ZAL 78.38 ZAP 100.13 ETB 214.69 ZAE 188.74 ETE 341.24 ZAC 76.29 ETC 202.47 LVI -9.67

DISTANCE 310.485

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.607 VHL 8.198 DLA 18.08 RAL 33.74 RAD 6645.7 VEL 12.108 PTH 7.08 VHP 6.748 DPA 10.34 RAP 45.62 ECC 1.4379
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
80.00 11 18 46 3808.99 -46.34 128.66 278.78 102.27 12 17 12 2506.0 -36.41 99.04
80.00 11 41 21 3445.86 -39.78 124.78 274.31 97.06 12 38 47 2445.9 -32.88 96.14
70.00 12 14 11 3349.24 -34.03 117.59 274.95 93.06 13 10 0 2349.2 -29.29 89.92
80.00 13 4 11 3192.52 -29.86 105.65 275.09 90.36 13 57 24 2192.5 -26.77 79.88
90.00 14 17 25 2956.15 -29.27 88.48 275.09 89.37 15 6 42 1956.2 -25.68 61.77
100.00 15 47 3 2667.00 -29.86 67.22 275.09 90.36 16 31 30 1667.0 -26.67 40.25
110.00 17 13 37 2396.05 -34.03 46.51 274.95 93.06 17 53 33 1396.1 -29.29 18.84

DIFFERENTIAL CORRECTIONS

TDE -.3188 TRA -.8878 TCS .8021 BAU .2243
RDE -.8233 RRA .2182 RC3 -.1876 FAU .07688
PDE .3480 FRA .4660 FC3-2.9006 B8P 1742
BDE .6126 BRA .8881 BC3 .6307 F8P 311

MID-COURSE EXECUTION ACCURACY

8GT 1218.4 8GR 682.0 8G3 230.1
RRT -.2012 RRF .2320 RTF -.6990
8GB 1386.6 R23 -.0378 R13 .7042
8G1 1228.4 8G2 645.2 THA 171.38

ORBIT DETERMINATION ACCURACY

8T 23.1 8R 29.3 88 12.4
CRT .6771 CR8 .8300 C8T .9455
L8A 36.4 M8A 14.7 88A 1.8
EL1 34.4 EL2 14.8 ALP 84.80

LAUNCH DATE AUG 11 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC

RL 191.61 LAL -.00 LOL 318.19 VL 34.381 GAL 1.30 AZL 89.79 HCA 98.81 SMA 238.84 ECC .34867 INC .2488 V1 29.387
RP 222.66 LAP .28 LOP 86.99 VP 24.906 GAP 20.27 AZP 90.04 TAL 5.04 TAP 103.84 RCA 131.49 APO 313.82 V2 24.673
RC 97.880 GL 1.89 GP -6.69 ZAL 77.82 ZAP 107.30 ETB 213.23 ZAE 188.71 ETE 340.88 ZAC 76.07 ETC 202.48 LVI -9.43

DISTANCE 313.610

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.738 VHL 9.073 DLA 18.11 RAL 33.11 RAD 6648.3 VEL 12.071 PTH 7.08 VHP 6.888 DPA 10.23 RAP 46.90 ECC 1.4236
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
80.00 11 19 59 3499.06 -46.24 128.03 271.41 102.76 12 14 17 2499.1 -36.18 98.80
80.00 11 38 26 3439.14 -39.72 124.22 273.00 97.44 12 38 47 2439.1 -32.49 95.60
70.00 12 11 12 3342.80 -34.01 117.09 273.67 93.38 13 6 58 2342.8 -29.11 89.47
80.00 13 1 7 3186.40 -29.85 105.40 273.84 90.60 13 54 13 2186.4 -26.97 79.46
90.00 14 14 18 2950.18 -29.28 88.04 273.84 89.59 15 3 28 1950.2 -25.60 61.38
100.00 15 43 59 2660.67 -29.85 66.77 273.84 90.60 16 28 20 1660.6 -26.37 39.82
110.00 17 10 38 2389.62 -34.01 46.01 273.67 93.38 17 50 28 1389.6 -29.11 18.39

DIFFERENTIAL CORRECTIONS

TDE -.3239 TRA -.8500 TCS .6372 BAU .2304
RDE -.8134 RRA .2166 RC3 -.2052 FAU .08034
PDE .3680 FRA .4637 FC3-2.7092 B8P 1835
BDE .6070 BRA .8772 BC3 .6695 F8P 333

MID-COURSE EXECUTION ACCURACY

8GT 1241.2 8GR 686.2 8G3 244.7
RRT -.2113 RRF .2488 RTF -.7122
8GB 1408.7 R23 -.0460 R13 .7082
8G1 1252.1 8G2 645.5 THA 171.18

ORBIT DETERMINATION ACCURACY

8T 23.6 8R 29.2 88 12.8
CRT .6851 CR8 .8592 C8T .9428
L8A 36.8 M8A 14.7 88A 1.9
EL1 34.7 EL2 14.5 ALP 83.71

LAUNCH DATE AUG 11 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC

RL 191.61 LAL -.00 LOL 318.19 VL 34.263 GAL 1.36 AZL 89.71 HCA 99.90 SMA 230.10 ECC .34184 INC .2847 V1 29.387
RP 223.28 LAP .28 LOP 86.08 VP 24.742 GAP 19.92 AZP 90.05 TAL 5.32 TAP 105.22 RCA 131.49 APO 308.76 V2 24.631
RC 100.104 GL 1.98 GP -8.88 ZAL 77.26 ZAP 106.46 ETB 211.84 ZAE 188.73 ETE 339.85 ZAC 75.84 ETC 202.43 LVI -9.18

DISTANCE 316.794

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.937 VHL 4.894 DLA 15.18 RAL 32.47 RAD 6645.0 VEL 12.038 PTH 7.03 VHP 6.362 DPA 10.12 RAP 46.18 ECC 1.4104
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
80.00 11 13 8 3492.85 -46.14 127.44 270.09 103.20 12 11 21 2492.7 -35.82 98.16
80.00 11 35 34 3432.87 -39.67 123.70 271.73 97.78 12 32 47 2433.0 -32.31 95.26
70.00 12 8 11 3336.94 -33.98 116.63 272.43 93.62 13 3 48 2336.9 -28.98 89.06
80.00 12 58 0 3180.87 -29.85 104.99 272.62 90.81 13 51 0 2180.9 -26.48 78.07
90.00 14 11 8 2944.82 -29.28 87.65 272.63 89.79 15 0 12 1944.6 -25.52 60.88
100.00 15 40 51 2655.34 -29.85 66.36 272.62 90.81 16 25 7 1655.3 -26.48 39.44
110.00 17 7 38 2383.76 -33.98 45.55 272.43 93.62 17 47 21 1383.8 -26.98 17.98

DIFFERENTIAL CORRECTIONS

TDE -.3276 TRA -.8408 TCS .6743 BAU .2369
RDE -.8038 RRA .2188 RC3 -.2239 FAU .08440
PDE .3883 FRA .4809 FC3-2.9301 B8P 1904
BDE .6009 BRA .8679 BC3 .7105 F8P 357

MID-COURSE EXECUTION ACCURACY

8GT 1262.5 8GR 670.6 8G3 260.1
RRT -.2237 RRF .2662 RTF -.7067
8GB 1429.6 R23 -.0529 R13 .7134
8G1 1274.6 8G2 647.4 THA 170.84

ORBIT DETERMINATION ACCURACY

8T 24.1 8R 29.2 88 13.3
CRT .6916 CR8 .8675 C8T .9403
L8A 37.2 M8A 14.7 88A 2.0
EL1 34.9 EL2 14.5 ALP 82.80



LAUNCH DATE AUG 11 1973      FLIGHT TIME 132.00      ARRIVAL DATE DEC 21 1973

**HELIOCENTRIC CONIC**      DISTANCE 333.425      EARTH TO MARS  
 RL 151.61 LAL    -0.00 LOL 318.19 VL 33.809 GAL    1.61 AZL 89.53 HCA 103.28 SMA 220.35 ECC .51310 INC .4678 V1 29.387  
 RP 225.20 LAP    .45 LOP 63.47 VP 24.008 GAP 18.20 AZP 90.12 TAL    6.74 TAP 112.03 RCA 151.36 APO 289.35 V2 24.422  
 RC 112.011 GL    3.40 GP    -7.96 ZAL 74.58 ZAP 161.98 ETS 207.34 ZAE 159.50 ETE 334.99 ZAC 74.62 ETC 282.30 LVI -7.88

**PLANETOCENTRIC CONIC**  
 C3 21.765 VHL 4.665 DLA 15.62 RAL 29.33 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 5.509 DPA 9.35 RAP 47.34 ECC 1.3582  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 58 51 3468.43 -45.74 125.24 264.21 104.85 11 56 39 2468.4 -34.99 96.58  
 60.00 11 20 42 3410.25 -39.44 121.81 266.02 99.04 12 17 33 2410.2 -31.63 93.71  
 70.00 11 52 39 3316.23 -33.88 115.02 266.84 94.57 12 47 55 2316.2 -28.51 87.63  
 80.00 12 41 45 3162.34 -29.82 103.61 267.10 91.54 13 34 28 2162.3 -26.16 76.79  
 90.00 13 54 33 2927.36 -28.28 86.37 267.13 90.42 14 43 21 1927.4 -25.25 59.77  
 100.00 15 24 37 2636.81 -29.82 64.98 267.10 91.54 16 8 34 1636.8 -26.16 38.15  
 110.00 16 52 5 2363.05 -33.88 43.94 266.84 94.57 17 31 28 1363.0 -28.51 16.55

**DIFFERENTIAL CORRECTIONS**      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3401 TRA -.7869 TC3 .8642 BAU .2700    SGT 1553.4 SGR 696.3 SG3 350.3    ST 25.8 SR 28.4 S8 15.8  
 RDE -.4571 RRA .2078 RC3 -.3378 FAU .10690    RRT -.3031 RRF .3677 RTF -.7513    CRT .7196 CRS .9060 CST .9239  
 FDE .5181 FRA .4284 FC3 -4.2518 BSP 2157    SGB 1922.0 R23 -.0823 R13 .7426    LSA 38.9 MSA 14.3 S8A 2.3  
 BDE .5698 BRA .8139 BC3 .9279 FSP 503    SG1 1374.7 SG2 653.2 THA 168.51    EL1 35.6 EL2 14.3 ALF 48.79

LAUNCH DATE AUG 11 1973      FLIGHT TIME 134.00      ARRIVAL DATE DEC 23 1973

**HELIOCENTRIC CONIC**      DISTANCE 336.865      EARTH TO MARS  
 RL 151.61 LAL    -0.00 LOL 318.19 VL 33.825 GAL    1.65 AZL 89.49 HCA 106.35 SMA 218.80 ECC .50830 INC .5050 V1 29.387  
 RP 225.59 LAP    .48 LCP 64.54 VP 23.876 GAP 17.97 AZP 90.14 TAL    7.01 TAP 113.37 RCA 151.35 APO 286.26 V2 24.380  
 RC 114.516 GL    3.71 GP    -0.21 ZAL 74.08 ZAP 161.03 ETS 206.68 ZAE 159.77 ETE 333.71 ZAC 74.36 ETC 282.38 LVI -7.62

**PLANETOCENTRIC CONIC**  
 C3 21.269 VHL 4.612 DLA 13.73 RAL 28.72 RAD 6643.4 VEL 11.886 PTH 6.90 VHP 5.355 DPA 9.15 RAP 47.53 ECC 1.3500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 55 59 3465.11 -45.68 124.94 263.18 105.08 11 53 44 2465.1 -34.86 96.37  
 60.00 11 17 41 3407.31 -39.41 121.57 265.01 99.21 12 14 29 2407.3 -31.54 93.51  
 70.00 11 49 28 3313.80 -33.87 114.84 265.85 94.68 12 44 41 2313.8 -28.46 87.48  
 80.00 12 38 23 3160.46 -29.82 103.47 266.11 91.61 13 31 4 2160.5 -26.13 76.66  
 90.00 13 51 6 2925.76 -28.28 86.26 266.14 90.48 14 39 52 1925.8 -25.23 59.66  
 100.00 15 21 15 2634.94 -29.82 64.84 266.11 91.61 16 5 10 1634.9 -26.13 38.03  
 110.00 16 48 54 2360.62 -33.87 43.75 265.85 94.68 17 28 15 1360.6 -28.46 16.38

**DIFFERENTIAL CORRECTIONS**      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3428 TRA -.7758 TC3 .9011 BAU .2765    SGT 1369.2 SGR 702.9 SG3 371.6    ST 26.1 SR 29.1 S8 16.5  
 RDE -.4480 RRA .2062 RC3 -.3653 FAU .11218    RRT -.3215 RRF .3911 RTF -.7359    CRT .7252 CRS .9123 CST .9210  
 FDE .5503 FRA .4193 FC3 -4.5662 BSP 2197    SGB 1559.1 R23 -.0888 R13 .7435    LSA 39.2 MSA 14.2 S8A 2.4  
 BDE .5641 BRA .8027 BC3 .9273 FSP 538    SG1 1393.1 SG2 654.1 THA 167.93    EL1 35.6 EL2 14.2 ALF 47.95

LAUNCH DATE AUG 11 1973      FLIGHT TIME 136.00      ARRIVAL DATE DEC 25 1973

**HELIOCENTRIC CONIC**      DISTANCE 340.336      EARTH TO MARS  
 RL 151.61 LAL    -0.00 LOL 318.19 VL 33.766 GAL    1.69 AZL 89.46 HCA 107.41 SMA 217.35 ECC .50377 INC .5425 V1 29.387  
 RP 225.98 LAP    .52 LOP 65.60 VP 23.749 GAP 17.54 AZP 90.16 TAL    7.28 TAP 114.70 RCA 151.33 APO 283.38 V2 24.338  
 RC 117.057 GL    4.02 GP    -8.46 ZAL 73.58 ZAP 160.06 ETS 206.08 ZAE 160.07 ETE 332.32 ZAC 74.09 ETC 282.38 LVI -7.34

**PLANETOCENTRIC CONIC**  
 C3 20.810 VHL 4.562 DLA 15.84 RAL 28.12 RAD 6643.2 VEL 11.866 PTH 6.08 VHP 5.207 DPA 8.94 RAP 47.71 ECC 1.3425  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 53 7 3462.29 -45.63 124.69 262.19 105.27 11 50 49 2462.3 -34.73 96.19  
 60.00 11 14 40 3404.89 -39.38 121.37 264.04 99.34 12 11 25 2404.9 -31.47 93.35  
 70.00 11 46 15 3311.94 -33.86 114.69 264.89 94.76 12 41 27 2311.9 -28.41 87.34  
 80.00 12 34 59 3158.20 -29.82 103.38 265.16 91.66 13 27 39 2159.2 -26.10 76.57  
 90.00 13 47 37 2924.79 -28.28 86.19 265.19 90.52 14 36 22 1924.8 -25.21 59.59  
 100.00 15 17 51 2633.87 -29.82 64.75 265.16 91.66 16 1 45 1633.7 -26.10 37.94  
 110.00 16 45 41 2358.73 -33.86 43.61 264.89 94.76 17 25 0 1358.8 -28.41 16.25

**DIFFERENTIAL CORRECTIONS**      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3451 TRA -.7647 TC3 .9352 BAU .2823    SGT 1383.0 SGR 709.9 SG3 393.6    ST 26.4 SR 27.8 S8 17.2  
 RDE -.4387 RRA .2043 RC3 -.3940 FAU .11761    RRT -.3405 RRF .4147 RTF -.7399    CRT .7304 CRS .9186 CST .9176  
 FDE .5859 FRA .4075 FC3 -4.8928 BSP 2235    SGB 1554.6 R23 -.0954 R13 .7535    LSA 39.3 MSA 14.1 S8A 2.5  
 BDE .5581 BRA .7915 BC3 1.0148 FSP 575    SG1 1409.9 SG2 654.8 THA 167.30    EL1 35.7 EL2 14.1 ALF 47.13

LAUNCH DATE AUG 11 1973      FLIGHT TIME 138.00      ARRIVAL DATE DEC 27 1973

**HELIOCENTRIC CONIC**      DISTANCE 343.834      EARTH TO MARS  
 RL 151.61 LAL    -0.00 LOL 318.19 VL 33.709 GAL    1.74 AZL 89.42 HCA 108.47 SMA 216.00 ECC .29951 INC .5804 V1 29.387  
 RP 226.37 LAP    .55 LOP 68.66 VP 23.625 GAP 17.22 AZP 90.18 TAL    7.54 TAP 116.02 RCA 151.31 APO 280.70 V2 24.297  
 RC 119.633 GL    4.34 GP    -8.72 ZAL 73.10 ZAP 159.08 ETS 205.53 ZAE 160.39 ETE 330.78 ZAC 73.82 ETC 282.38 LVI -7.07

**PLANETOCENTRIC CONIC**  
 C3 20.386 VHL 4.515 DLA 15.97 RAL 27.53 RAD 6643.0 VEL 11.849 PTH 6.87 VHP 5.064 DPA 8.72 RAP 47.87 ECC 1.3358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 50 15 3459.95 -45.59 124.48 261.25 105.42 11 47 35 2460.0 -34.66 96.04  
 60.00 11 11 38 3403.00 -39.36 121.21 263.11 99.44 12 8 21 2403.0 -31.41 93.22  
 70.00 11 43 1 3310.63 -33.85 114.59 263.97 94.82 12 38 12 2310.6 -28.38 87.25  
 80.00 12 31 33 3158.55 -29.81 103.33 264.24 91.69 13 24 12 2158.5 -26.09 76.52  
 90.00 13 44 5 2924.46 -28.28 86.16 264.28 90.53 14 32 49 1924.5 -25.21 59.57  
 100.00 15 14 25 2633.02 -29.81 64.70 264.24 91.69 15 58 18 1633.0 -26.09 37.89  
 110.00 16 42 27 2357.45 -33.85 43.51 263.97 94.82 17 21 45 1357.5 -28.38 16.18

**DIFFERENTIAL CORRECTIONS**      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.3472 TRA -.7551 TC3 .9679 BAU .2881    SGT 1395.1 SGR 717.9 SG3 416.7    ST 26.6 SR 27.6 S8 17.9  
 RDE -.4295 RRA .2024 RC3 -.4246 FAU .12334    RRT -.3599 RRF .4395 RTF -.7429    CRT .7358 CRS .9243 CST .9145  
 FDE .6223 FRA .3938 FC3 -5.2378 BSP 2271    SGB 1569.0 R25 -.1027 R13 .7585    LSA 39.8 MSA 13.9 S8A 2.6  
 BDE .5523 BRA .7768 BC3 1.0569 FSP 616    SG1 1425.5 SG2 655.5 THA 166.63    EL1 35.7 EL2 13.9 ALF 46.31

LAUNCH DATE AUG 11 1973

FLIGHT TIME 140.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC										DISTANCE 347.358										EARTH TO MARS							
RL	151.61	LAL	-.00	LOL	318.19	VL	33.656	GAL	1.78	AZL	89.38	HCA	109.93	SMA	214.75	ECC	.29548	INC	.6185	V1	29.387						
RP	226.76	LAP	.58	LOP	67.72	VP	23.508	GAP	16.89	AZP	90.21	TAL	7.80	TAP	117.33	RCA	151.29	APO	278.20	V2	24.255						
RC	122.241	GL	4.66	GP	-9.00	ZAL	72.64	ZAP	158.07	ETS	205.02	ZAE	160.74	ETE	329.10	ZAC	73.54	ETC	282.39	LVI	-6.70						
PLANETOCENTRIC CONIC																											
C3	19.995	VHL	4.472	DLA	16.10	RAL	26.95	RAD	6642.8	VEL	11.832	PTH	6.85	VHP	4.926	DPA	8.48	RAP	48.01	ECC	1.3291						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG		
50.00	10	47	23	3458.10	-45.55	124.31	260.36	105.55	11	45	1	2458.1	-34.39	95.92													
60.00	11	8	36	3401.82	-39.35	121.10	262.23	99.52	12	5	18	2401.6	-31.37	93.13													
70.00	11	39	48	3309.89	-33.85	114.53	263.10	94.85	12	34	56	2309.9	-28.37	87.19													
80.00	12	28	5	3158.31	-29.81	103.33	263.37	91.69	13	20	43	2158.5	-26.09	76.52													
90.00	13	40	29	2924.77	-28.28	86.18	263.40	90.52	14	29	14	1924.8	-25.21	59.59													
100.00	15	10	56	2632.98	-29.81	64.69	263.37	91.69	15	54	49	1633.0	-26.09	37.89													
110.00	16	39	12	2356.71	-33.85	43.45	263.10	94.05	17	18	29	1356.7	-28.37	16.11													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY							
TDE	-.3492	TRA	-.7415	TC3	.9997	BAU	.2939	SGT	1406.2	SGR	727.0	SG3	441.3	ST	26.9	SR	27.2	SS	18.6								
RDE	-.4202	RRA	.2903	RC3	-.4572	FAU	.12944	RRT	-.3803	RRF	.4652	RTF	-.7460	CRT	.7408	CRS	.9297	CST	.9113								
FDE	.6614	FRA	.3778	FC3	-5.6044	BSP	2296	SCB	1593.0	R23	-.1101	R13	.7635	LSA	40.2	MSA	13.8	SSA	2.7								
BDE	.5464	BRA	.7680	BC3	1.0993	FSP	655	SG1	1440.5	SG2	656.3	THA	165.89	EL1	35.7	EL2	13.8	ALF	45.50								

LAUNCH DATE AUG 11 1973

FLIGHT TIME 142.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC										DISTANCE 350.906										EARTH TO MARS							
RL	151.61	LAL	-.00	LOL	318.19	VL	33.605	GAL	1.82	AZL	89.34	HCA	110.58	SMA	213.57	ECC	.29169	INC	.6369	V1	29.367						
RP	227.15	LAP	.62	LOP	68.77	VP	23.391	GAP	16.57	AZP	90.23	TAL	8.05	TAP	118.63	RCA	151.28	APO	275.87	V2	24.214						
RC	124.878	GL	4.99	GP	-9.28	ZAL	72.19	ZAP	157.04	ETS	204.56	ZAE	161.10	ETE	327.24	ZAC	73.25	ETC	282.40	LVI	-6.50						
PLANETOCENTRIC CONIC																											
C3	19.632	VHL	4.431	DLA	16.25	RAL	26.39	RAD	6642.7	VEL	11.817	PTH	6.84	VHP	4.793	DPA	8.22	RAP	48.14	ECC	1.3231						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG		
50.00	10	44	32	3456.72	-45.53	124.19	259.52	105.64	11	42	9	2456.7	-34.54	95.84													
60.00	11	5	34	3400.75	-39.34	121.03	261.40	99.57	12	2	15	2400.8	-31.34	93.07													
70.00	11	36	29	3309.71	-33.85	114.52	262.26	94.86	12	31	39	2309.7	-28.36	87.18													
80.00	12	24	34	3159.08	-29.82	103.37	262.53	91.66	13	17	13	2159.1	-26.10	76.56													
90.00	13	36	51	2925.72	-28.28	86.25	262.57	90.48	14	25	37	1925.7	-25.23	59.86													
100.00	15	7	25	2633.55	-29.82	64.74	262.53	91.66	15	51	19	1633.6	-26.10	37.93													
110.00	16	35	56	2356.53	-33.85	43.44	262.26	94.86	17	15	12	1356.5	-28.36	16.10													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY							
TDE	-.3515	TRA	-.7303	TC3	1.0277	BAU	.2990	SGT	1415.5	SGR	736.9	SG3	466.9	ST	27.1	SR	26.9	SS	19.4								
RDE	-.4108	RRA	.1981	RC3	-.4915	FAU	.13574	RRT	-.4004	RRF	.4912	RTF	-.7482	CRT	.7459	CRS	.9346	CST	.9084								
FDE	.7044	FRA	.3609	FC3	-5.9857	BSP	2330	SCB	1595.8	R23	-.1165	R13	.7678	LSA	40.5	MSA	13.6	SSA	2.7								
BDE	.5407	BRA	.7587	BC3	1.1392	FSP	698	SG1	1454.2	SG2	657.3	THA	165.12	EL1	35.7	EL2	13.6	ALF	44.63								

LAUNCH DATE AUG 11 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC										DISTANCE 354.474										EARTH TO MARS							
RL	151.61	LAL	-.00	LOL	318.19	VL	33.558	GAL	1.85	AZL	89.30	HCA	111.63	SMA	212.48	ECC	.28812	INC	.6959	V1	29.387						
RP	227.54	LAP	.65	LOP	69.82	VP	23.279	GAP	16.26	AZP	90.26	TAL	8.29	TAP	119.92	RCA	151.26	APO	273.70	V2	24.172						
RC	127.544	GL	5.32	GP	-9.58	ZAL	71.76	ZAP	155.99	ETS	204.13	ZAE	161.48	ETE	325.21	ZAC	72.95	ETC	282.42	LVI	-6.21						
PLANETOCENTRIC CONIC																											
C3	19.298	VHL	4.393	DLA	16.40	RAL	25.83	RAD	6642.5	VEL	11.803	PTH	6.83	VHP	4.684	DPA	7.94	RAP	48.25	ECC	1.3176						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG		
50.00	10	41	42	3455.82	-45.51	124.11	258.72	105.70	11	39	18	2455.8	-34.50	95.78													
60.00	11	2	31	3400.39	-39.33	121.00	260.60	99.59	11	39	11	2400.4	-31.33	93.05													
70.00	11	33	12	3310.09	-33.85	114.55	261.47	94.85	12	28	22	2310.1	-28.37	87.21													
80.00	12	21	0	3160.27	-29.82	103.46	261.73	91.62	13	13	40	2160.3	-26.12	76.64													
90.00	13	33	10	2927.31	-28.28	86.37	261.76	90.43	14	21	58	1927.3	-25.25	59.77													
100.00	15	3	52	2634.74	-29.82	64.83	261.73	91.62	15	47	47	1634.7	-26.12	38.01													
110.00	16	32	36	2356.91	-33.85	43.47	261.47	94.85	17	11	55	1356.9	-28.37	16.13													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY							
TDE	-.3339	TRA	-.7192	TC3	1.0540	BAU	.3041	SGT	1423.8	SGR	748.1	SG3	493.8	ST	27.4	SR	26.5	SS	20.2								
RDE	-.4012	RRA	.1957	RC3	-.5278	FAU	.14236	RRT	-.4207	RRF	.5178	RTF	-.7500	CRT	.7509	CRS	.9391	CST	.9056								
FDE	.7501	FRA	.3415	FC3	-6.3863	BSP	2361	SCB	1608.2	R23	-.1273	R13	.7720	LSA	40.9	MSA	13.9	SSA	2.8								
BDE	.5350	BRA	.7453	BC3	1.1787	FSP	745	SG1	1467.2	SG2	658.5	THA	164.29	EL1	35.6	EL2	13.4	ALF	43.72								

LAUNCH DATE AUG 11 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC										DISTANCE 358.063										EARTH TO MARS							
RL	151.61	LAL	-.00	LOL	318.19	VL	33.512	GAL	1.89	AZL	89.26	HCA	112.87	SMA	211.45	ECC	.28475	INC	.7352	V1	29.387						
RP	227.93	LAP	.68	LOP	70.86	VP	23.171	GAP	15.95	AZP	90.28	TAL	8.53	TAP	121.20	RCA	151.24	APO	271.66	V2	24.131						
RC	130.237	GL	5.68	GP	-9.88	ZAL	71.34	ZAP	154.92	ETS	203.74	ZAE	161.87	ETE	322.97	ZAC	72.65	ETC	282.44	LVI	-5.92						
PLANETOCENTRIC CONIC																											
C3	18.989	VHL	4.358	DLA	16.58	RAL	25.29	RAD	6642.4	VEL	11.790	PTH	6.81	VHP	4.540	DPA	7.65	RAP	48.35	ECC	1.3125						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG		
50.00	10	38	52	3455.38	-45.50	124.07	257.97	105.73	11	36	27	2455.4	-34.48	95.75													
60.00	10	59	28	3400.53	-39.34	121.01	259.85	99.58	11	56	8	2400.5	-31.34	93.06													
70.00	11	29	52	3311.02	-33.85	114.62	260.71	94.80	12	25	3	2311.0	-28.39	87.27													
80.00	12	17	24	3162.07	-29.82	103.59	260.97	91.55	13	10	6	2162.1	-26.15	76.77													
90.00	13	29	26	2929.56	-28.28	86.53	261.00	90.34	14	18	16	1929.6	-25.29	59.92													
100.00	15	0	16	2636.54	-29.82	64.96	260.97	91.55	15	44	12	1636.5	-26.15	38.14													
110.00	16	29	19	2357.84	-33.85	43.54	260.71	94.80	17	8	36	1357.8	-28.39	16.19													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY							
TDE	-.3563	TRA	-.7083	TC3	1.0768	BAU	.3088	SGT	1429.8	SGR	760.6	SG3	521.8	ST	27.6	SR	26.0	SS	21.1								
RDE	-.3914	RRA	.1931	RC3	-.5662	FAU	.14927	RRT	-.4408	RRF	.5446	RTF	-.7510	CRT	.7558	CRS	.9433	CST	.9029								
FDE	.8000	FRA	.3203	FC3	-6.8056	BSP	2391	SCB	1619.5	R23	-.1368	R13	.7759	LSA	41.2	MSA	13.3	SSA	2.9								
BDE	.5293	BRA	.7342	BC3	1.2165	FSP</																					

LAUNCH DATE AUG 11 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC DISTANCE 361.669 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.470 GAL 1.92 AZL 89.22 HCA 113.72 SMA 210.49 ECC .28158 INC .7751 V1 29.387
RP 228.32 LAP .71 LOP 71.90 VP 23.066 GAP 15.64 AZP 90.31 TAL 8.75 TAP 122.47 RCA 151.22 APO 269.77 V2 24.090
RC 132.954 GL 6.01 GP -10.20 ZAL 70.95 ZAP 153.83 ETS 203.36 ZAE 162.25 ETE 320.52 ZAC 72.34 ETC 282.46 LVI -9.83

PLANETOCENTRIC CONIC
C3 18.703 VHL 4.325 DLA 16.74 RAL 24.76 RAD 6642.3 VEL 11.778 PTH 6.80 VHP 4.421 DPA 7.34 RAP 48.42 ECC 1.3078
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 36 2 3459.40 -45.50 124.07 257.27 105.73 11 33 37 2455.4 -34.49 95.75
60.00 10 56 24 3401.17 -39.34 121.06 259.14 99.55 11 53 5 2401.2 -31.36 93.10
70.00 11 26 31 3312.50 -33.86 114.74 259.99 94.74 12 21 44 2312.5 -28.43 87.57
80.00 12 13 45 3164.49 -29.83 103.77 260.25 91.45 13 6 30 2164.5 -26.20 76.94
90.00 13 25 38 2932.45 -29.28 86.75 260.27 90.24 14 14 31 1932.5 -25.33 60.12
100.00 14 56 37 2638.97 -29.83 65.14 260.25 91.45 15 40 36 1639.0 -26.20 38.30
110.00 16 25 58 2359.32 -33.86 43.65 259.99 94.74 17 5 17 1359.3 -28.43 16.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3584 TRA -.6969 TC3 1.0967 BAU .3134 SGT 1433.4 SGR 774.6 SG3 551.2 ST 27.8 SR 25.6 SS 22.0
RDE -.3814 RRA .1903 RC3 -.6067 FAU .15650 RRT -.4608 RRF .5716 RTF -.7518 CRT .7605 CR8 .9471 C8T .9003
FDE .8531 FRA .2962 FC3-7.2442 B8P 2417 SGB 1629.4 R23 -.1465 R13 .7798 L8A 41.6 M8A 13.2 S8A 3.0
BDE .5234 BRA .7224 BC3 1.2533 F8P 845 SG1 1488.9 SG2 661.9 THA 162.44 EL1 35.5 EL2 13.0 ALF 41.83

LAUNCH DATE AUG 11 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC DISTANCE 365.292 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.429 GAL 1.95 AZL 89.18 HCA 114.75 SMA 209.60 ECC .27850 INC .8154 V1 29.387
RP 228.70 LAP .74 LOP 72.94 VP 22.965 GAP 15.33 AZP 90.34 TAL 8.97 TAP 123.72 RCA 151.21 APO 267.99 V2 24.049
RC 135.694 GL 6.36 GP -10.53 ZAL 70.57 ZAP 152.72 ETS 203.02 ZAE 162.62 ETE 317.83 ZAC 72.02 ETC 282.49 LVI -5.32

PLANETOCENTRIC CONIC
C3 18.440 VHL 4.294 DLA 16.92 RAL 24.24 RAD 6642.1 VEL 11.767 PTH 6.79 VHP 4.305 DPA 7.01 RAP 48.46 ECC 1.3035
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 33 13 3455.85 -45.51 124.11 256.60 105.70 11 30 48 2455.9 -34.50 95.78
60.00 10 53 20 3402.28 -39.36 121.15 258.46 99.48 11 50 2 2402.3 -31.39 93.16
70.00 11 23 9 3314.52 -33.87 114.89 259.31 94.64 12 18 23 2314.5 -28.47 87.51
80.00 12 10 3 3167.51 -29.83 104.00 259.56 91.34 13 2 51 2167.5 -26.25 77.14
90.00 13 21 47 2935.98 -29.28 87.00 259.58 90.11 14 10 43 1936.0 -25.38 60.37
100.00 14 52 55 2641.98 -29.83 65.36 259.56 91.34 15 36 57 1642.0 -26.25 38.51
110.00 16 22 35 2361.33 -33.87 43.81 259.31 94.64 17 1 56 1361.3 -28.47 16.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3510 TRA -.6775 TC3 1.1337 BAU .3222 SGT 1435.3 SGR 791.0 SG3 582.6 ST 27.4 SR 25.1 SS 22.8
RDE -.3719 RRA .1872 RC3 -.6502 FAU .16427 RRT -.4917 RRF .5995 RTF -.7612 CRT .7609 CR8 .9504 C8T .8952
FDE .9045 FRA .2880 FC3-7.7122 B8P 2326 SGB 1638.9 R23 -.1424 R13 .7913 L8A 41.5 M8A 13.0 S8A 3.1
BDE .5111 BRA .7029 BC3 1.3069 F8P 893 SG1 1500.6 SG2 658.9 THA 161.05 EL1 34.9 EL2 12.8 ALF 41.71

LAUNCH DATE AUG 11 1973 FLIGHT TIME 152.00 ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC DISTANCE 368.931 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.391 GAL 1.98 AZL 89.14 HCA 115.79 SMA 208.76 ECC .27376 INC .8562 V1 29.387
RP 229.09 LAP .77 LOP 73.98 VP 22.867 GAP 15.02 AZP 90.37 TAL 9.18 TAP 124.97 RCA 151.19 APO 266.33 V2 24.008
RC 138.457 GL 6.71 GP -10.88 ZAL 70.21 ZAP 151.58 ETS 202.89 ZAE 162.98 ETE 314.89 ZAC 71.70 ETC 282.52 LVI -5.02

PLANETOCENTRIC CONIC
C3 18.198 VHL 4.266 DLA 17.11 RAL 23.74 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 4.194 DPA 6.66 RAP 48.52 ECC 1.2993
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 30 24 3436.78 -45.53 124.19 259.98 105.63 11 28 1 2456.8 -34.54 95.84
60.00 10 50 15 3403.92 -39.37 121.29 257.83 99.39 11 48 59 2403.9 -31.44 93.29
70.00 11 19 44 3317.12 -33.89 115.09 258.67 94.53 12 15 2 2317.1 -28.53 87.69
80.00 12 6 18 3171.20 -29.84 104.27 258.91 91.19 12 59 9 2171.2 -26.31 77.40
90.00 13 17 32 2940.21 -29.28 87.31 258.92 89.95 14 8 52 1940.2 -25.45 60.66
100.00 14 49 10 2645.67 -29.84 65.64 258.91 91.19 15 33 16 1645.7 -26.31 38.77
110.00 16 19 11 2363.94 -33.89 44.01 258.67 94.53 16 58 35 1363.9 -28.53 16.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3570 TRA -.6711 TC3 1.1373 BAU .3248 SGT 1435.8 SGR 808.3 SG3 614.3 ST 27.9 SR 24.6 SS 23.9
RDE -.3808 RRA .1843 RC3 -.6948 FAU .17200 RRT -.5058 RRF .6260 RTF -.7662 CRT .7605 CR8 .9532 C8T .8942
FDE .9070 FRA .2428 FC3-8.1833 B8P 2391 SGB 1647.5 R23 -.1596 R13 .7913 L8A 42.1 M8A 12.9 S8A 3.2
BDE .5078 BRA .6959 BC3 1.3328 F8P 949 SG1 1507.9 SG2 683.9 THA 160.09 EL1 35.0 EL2 12.6 ALF 40.29

LAUNCH DATE AUG 11 1973 FLIGHT TIME 154.00 ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC DISTANCE 372.583 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.358 GAL 2.01 AZL 89.10 HCA 116.82 SMA 207.98 ECC .27311 INC .8977 V1 29.387
RP 229.48 LAP .80 LOP 75.01 VP 22.772 GAP 14.72 AZP 90.41 TAL 9.38 TAP 126.20 RCA 151.18 APO 264.78 V2 23.967
RC 141.841 GL 7.08 GP -11.24 ZAL 69.88 ZAP 150.43 ETS 202.38 ZAE 163.31 ETE 311.70 ZAC 71.38 ETC 282.89 LVI -4.70

PLANETOCENTRIC CONIC
C3 17.972 VHL 4.239 DLA 17.32 RAL 23.28 RAD 6641.9 VEL 11.747 PTH 6.78 VHP 4.088 DPA 6.29 RAP 48.54 ECC 1.2988
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 27 36 3458.15 -45.56 124.32 258.41 105.84 11 25 14 2458.2 -34.59 95.93
60.00 10 47 10 3406.04 -39.40 121.46 257.24 99.28 11 43 56 2406.0 -31.51 93.43
70.00 11 16 18 3320.28 -33.91 115.34 258.06 94.38 12 11 39 2320.3 -28.60 87.91
80.00 12 2 30 3175.51 -29.84 104.59 258.29 91.02 12 59 25 2175.5 -26.39 77.70
90.00 13 13 32 2945.12 -29.28 87.67 258.30 89.77 14 2 57 1945.1 -25.52 61.00
100.00 14 45 22 2649.98 -29.84 65.96 258.29 91.02 15 29 32 1650.0 -26.39 39.07
110.00 16 15 45 2367.09 -33.91 44.26 258.06 94.38 16 55 12 1367.1 -28.60 16.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3812 TRA -.6833 TC3 1.1419 BAU .3272 SGT 1434.4 SGR 827.9 SG3 647.6 ST 26.2 SR 24.0 SS 25.0
RDE -.3498 RRA .1810 RC3 -.7423 FAU .18017 RRT -.5214 RRF .6524 RTF -.7524 CRT .7710 CR8 .9557 C8T .8928
FDE 1.0331 FRA .2141 FC3-8.6788 B8P 2436 SGB 1656.1 R23 -.1746 R13 .7928 L8A 42.7 M8A 12.8 S8A 3.2
BDE .5028 BRA .6876 BC3 1.3619 F8P 1008 SG1 1515.1 SG2 688.8 THA 158.97 EL1 34.9 EL2 12.3 ALF 39.00



LAUNCH DATE AUG 11 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC

DISTANCE 376.248

EARTH TO MARS

RL 151.31 LAL -.00 LOL 318.19 VL 33.322 GAL 2.03 AZL 89.06 HCA 117.85 SMA 207.25 ECC .27061 INC .9397 V1 29.387  
 RP 229.86 LAP .83 LOP 76.04 VP 22.680 GAP 14.43 AZP 90.44 TAL 8.57 TAP 127.41 RCA 151.16 APO 263.33 V2 23.927  
 RC 144.046 GL 7.45 GP -11.61 ZAL 69.54 ZAP 149.24 ETS 202.08 ZAE 163.61 ETE 308.23 ZAC 71.02 ETC 282.59 LVI -4.39

PLANETOCENTRIC CONIC

C3 17.765 VHL 4.215 DLA 17.34 RAL 22.78 RAD 6641.8 VEL 11.739 PTH 6.77 VHP 3.985 DPA 5.91 RAP 48.34 ECC 1.2824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 24 48 3489.97 -45.59 124.48 254.88 105.42 11 22 28 2460.0 -34.66 96.04  
 60.00 10 44 4 3408.65 -39.43 121.68 256.70 99.13 11 40 53 2408.7 -31.58 93.60  
 70.00 11 12 30 3323.99 -33.92 115.63 257.50 94.21 12 8 14 2324.0 -28.69 88.16  
 80.00 11 58 37 3180.47 -29.85 104.96 257.71 90.83 12 51 38 2180.5 -26.47 78.04  
 90.00 13 9 48 2950.71 -28.28 88.08 257.71 89.57 13 58 59 1950.7 -25.60 61.39  
 100.00 14 41 29 2654.94 -29.85 66.33 257.71 90.83 15 25 44 1654.9 -26.47 39.41  
 110.00 16 12 16 2370.80 -33.92 44.54 257.50 94.21 16 51 47 1370.8 -28.69 17.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3641 TRA -.6550 TC3 1.1427 BAU .3302 SGT 1430.0 SGR 849.3 SG3 681.9 ST 28.5 SR 23.3 SS 26.2  
 RDE -.3385 RRA .1776 RC3 -.7918 FAU .18853 RRT -.5365 RRF .6781 RTF -.7484 CRT .7746 CR8 .9579 CST .8910  
 FDE 1.1030 FRA .1836 FC3-9.1873 BSP 2470 SGB 1663.2 R23 -.1887 R13 .7949 LSA 43.2 MSA 12.7 S8A 3.3  
 BDE .4972 BRA .6786 BC3 1.3903 FSP 1070 SG1 1520.4 SG2 674.1 THA 157.72 EL1 34.8 EL2 12.1 ALF 37.76

LAUNCH DATE AUG 11 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC

DISTANCE 379.925

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.290 GAL 2.06 AZL 89.02 HCA 118.87 SMA 206.56 ECC .26826 INC .9824 V1 29.387  
 RP 230.25 LAP .86 LOP 77.06 VP 22.590 GAP 14.13 AZP 90.47 TAL 9.75 TAP 128.62 RCA 151.15 APO 261.97 V2 23.887  
 RC 146.870 GL 7.82 GP -11.99 ZAL 69.24 ZAP 148.04 ETS 201.79 ZAE 163.85 ETE 304.50 ZAC 70.67 ETC 282.64 LVI -4.06

PLANETOCENTRIC CONIC

C3 17.575 VHL 4.192 DLA 17.77 RAL 22.32 RAD 6641.7 VEL 11.730 PTH 6.76 VHP 3.886 DPA 5.50 RAP 48.53 ECC 1.2892  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 22 0 3462.22 -45.63 124.68 254.39 105.27 11 19 42 2462.2 -34.75 96.19  
 60.00 10 40 57 3411.75 -39.46 121.94 256.18 98.96 11 37 49 2411.7 -31.68 93.81  
 70.00 11 9 19 3328.25 -33.95 115.96 256.97 94.02 12 4 47 2328.3 -28.78 88.46  
 80.00 11 54 41 3186.07 -29.85 105.37 257.18 90.61 12 47 47 2186.1 -26.57 78.43  
 90.00 13 5 39 2937.00 -28.27 88.54 257.16 89.34 13 54 56 1937.0 -25.70 61.83  
 100.00 14 37 33 2660.54 -29.85 66.74 257.16 90.61 15 21 54 1660.5 -26.57 39.80  
 110.00 16 8 45 2375.07 -33.95 44.88 256.97 94.02 16 48 21 1375.1 -28.78 17.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3683 TRA -.6461 TC3 1.1419 BAU .3337 SGT 1423.8 SGR 873.4 SG3 718.0 ST 28.7 SR 22.7 SS 27.4  
 RDE -.3267 RRA .1738 RC3 -.8444 FAU .19732 RRT -.5513 RRF .7033 RTF -.7443 CRT .7777 CR8 .9597 CST .8891  
 FDE 1.1776 FRA .1491 FC3-9.7199 BSP 2490 SGB 1670.3 R23 -.2020 R13 .7979 LSA 43.8 MSA 12.6 S8A 3.4  
 BDE .4908 BRA .6691 BC3 1.4202 FSP 1132 SG1 1525.8 SG2 680.1 THA 156.34 EL1 34.6 EL2 11.6 ALF 36.31

LAUNCH DATE AUG 11 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC

DISTANCE 383.612

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.260 GAL 2.08 AZL 88.97 HCA 119.89 SMA 205.92 ECC .26604 INC 1.0257 V1 29.387  
 RP 230.63 LAP .89 LOP 78.08 VP 22.503 GAP 13.84 AZP 90.51 TAL 9.92 TAP 129.81 RCA 151.14 APO 260.70 V2 23.847  
 RC 149.713 GL 8.20 GP -12.39 ZAL 68.95 ZAP 146.81 ETS 201.52 ZAE 164.04 ETE 300.51 ZAC 70.31 ETC 282.69 LVI -3.73

PLANETOCENTRIC CONIC

C3 17.400 VHL 4.171 DLA 18.01 RAL 21.87 RAD 6641.7 VEL 11.723 PTH 6.75 VHP 3.791 DPA 5.07 RAP 48.49 ECC 1.2864  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 19 13 3464.90 -45.68 124.92 253.94 103.09 11 16 57 2464.9 -34.86 96.36  
 60.00 10 37 50 3415.33 -39.50 122.23 255.71 98.76 11 34 45 2415.3 -31.79 94.06  
 70.00 11 5 46 3333.09 -33.97 116.33 256.47 93.80 12 1 19 2333.1 -28.89 88.79  
 80.00 11 50 40 3192.32 -29.86 105.84 256.65 90.37 12 43 53 2192.3 -26.67 78.87  
 90.00 13 1 24 2963.99 -28.27 89.05 256.64 89.08 13 50 48 1964.0 -25.80 62.31  
 100.00 14 33 32 2666.80 -29.86 67.21 256.65 90.37 15 17 59 1666.8 -26.67 40.24  
 110.00 16 3 12 2379.90 -33.97 45.25 256.47 93.80 16 44 52 1379.9 -28.89 17.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3879 TRA -.8374 TC3 1.1379 BAU .3373 SGT 1415.6 SGR 900.2 SG3 755.5 ST 28.6 SR 21.9 SS 28.6  
 RDE -.3145 RRA .1698 RC3 -.8999 FAU .20649 RRT -.5651 RRF .7278 RTF -.7599 CRT .7800 CR8 .9611 CST .8873  
 FDE 1.2568 FRA .1133 FC-10.2738 BSP 2505 SGB 1677.6 R23 -.2145 R13 .8015 LSA 44.3 MSA 12.5 S8A 3.4  
 BDE .4840 BRA .6596 BC3 1.4507 FSP 1198 SG1 1530.3 SG2 687.0 THA 154.83 EL1 34.3 EL2 11.5 ALF 35.24

LAUNCH DATE AUG 11 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC

DISTANCE 387.310

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.231 GAL 2.10 AZL 88.93 HCA 120.91 SMA 203.32 ECC .26395 INC 1.0699 V1 29.387  
 RP 231.01 LAP .92 LOP 79.10 VP 22.419 GAP 13.55 AZP 90.55 TAL 10.08 TAP 130.99 RCA 151.12 APO 259.51 V2 23.807  
 RC 152.572 GL 8.59 GP -12.80 ZAL 68.69 ZAP 149.56 ETS 201.25 ZAE 164.16 ETE 298.27 ZAC 69.94 ETC 282.75 LVI -3.40

PLANETOCENTRIC CONIC

C3 17.239 VHL 4.152 DLA 18.26 RAL 21.44 RAD 6641.6 VEL 11.716 PTH 6.75 VHP 3.700 DPA 4.62 RAP 48.44 ECC 1.2837  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 16 25 3468.03 -45.73 125.20 253.53 104.88 11 14 13 2468.0 -34.98 96.56  
 60.00 10 34 40 3419.41 -39.54 122.57 255.28 98.54 11 31 40 2419.4 -31.91 94.33  
 70.00 11 2 9 3338.49 -33.99 116.75 256.01 93.55 11 57 48 2338.5 -29.01 89.17  
 80.00 11 46 35 3199.25 -29.86 106.35 256.16 90.10 12 39 54 2199.3 -26.78 79.35  
 90.00 12 57 4 2971.72 -28.26 89.62 256.15 88.80 13 46 36 1971.7 -25.90 62.85  
 100.00 14 29 27 2673.73 -29.86 67.72 256.16 90.10 15 14 0 1673.7 -26.78 40.72  
 110.00 16 1 36 2385.31 -33.99 45.67 256.01 93.55 16 41 21 1385.3 -29.01 18.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3692 TRA -.6290 TC3 1.1277 BAU .3410 SGT 1404.3 SGR 929.3 SG3 794.0 ST 29.0 SR 21.2 SS 29.9  
 RDE -.3016 RRA .1656 RC3 -.9577 FAU .21583 RRT -.5767 RRF .7510 RTF -.7341 CRT .7817 CR8 .9621 CST .8856  
 FDE 1.3424 FRA .0759 FC-10.8389 BSP 2522 SGB 1683.9 R23 -.2270 R13 .8051 LSA 44.9 MSA 12.4 S8A 3.5  
 BDE .4768 BRA .6505 BC3 1.4795 FSP 1268 SG1 1533.8 SG2 695.1 THA 153.18 EL1 34.1 EL2 11.2 ALF 33.89

LAUNCH DATE AUG 11 1973 FLIGHT TIME 164.00 ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 391.017 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.205 GAL 2.12 AZL 88.89 HCA 121.92 SMA 204.76 ECC .26199 INC 1.1148 V1 29.387
RP 231.39 LAP .95 LOP 80.11 VP 22.337 GAP 13.28 AZP 90.59 TAL 10.24 TAP 132.16 RCA 151.11 APO 250.40 V2 23.767
RC 155.447 GL 8.99 GP -13.23 ZAL 68.44 ZAP 144.28 ETS 200.98 ZAE 164.19 ETE 291.84 ZAC 69.56 ETC 282.81 LVI -3.06

PLANETOCENTRIC CONIC
C3 17.092 VHL 4.134 DLA 18.52 RAL 21.02 RAD 6641.5 VEL 11.710 PTH 6.74 VHP 3.612 DPA 4.14 RAP 48.36 ECC 1.2813
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 13 37 3471.59 -45.79 125.52 253.17 104.64 11 11 28 2471.6 -35.11 96.79
60.00 10 31 30 3423.97 -39.58 122.95 254.88 98.28 11 28 34 2424.0 -32.04 94.64
70.00 10 58 30 3344.47 -34.02 117.22 255.58 93.28 11 54 14 2344.5 -29.14 89.58
80.00 11 42 24 3206.87 -29.86 106.92 255.71 89.80 12 35 51 2206.9 -26.90 79.89
90.00 12 52 37 2980.20 -28.24 90.24 255.69 86.49 13 42 17 1980.2 -26.02 63.45
100.00 14 25 16 2681.34 -29.86 68.29 255.71 89.60 15 9 57 1681.3 -26.90 41.25
110.00 15 57 56 2391.28 -34.02 46.14 255.58 93.28 16 37 48 1391.3 -29.14 18.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3698 TRA -.6208 TC3 1.1129 BAU .3447 SGT 1390.1 SGR 961.1 SG3 833.5 ST 29.0 SR 20.3 SS 31.3
RDE -.2883 RRA .1610 RC3-1.0182 FAU .22542 RRT -.5864 RRF .7730 RTF -.7270 CRT .7826 CRS .9629 CST .8834
FDE 1.4316 FRA .0344 FC-11.4178 BSP 2526 SGB 1690.0 R23 -.2387 R13 .8091 LSA 45.5 MSA 12.4 SSA 3.5
BDE .4687 BRA .6413 BC3 1.5083 FSP 1336 SG1 1536.2 SG2 704.5 THA 151.39 EL1 33.7 EL2 10.9 ALF 32.52

LAUNCH DATE AUG 11 1973 FLIGHT TIME 166.00 ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 394.732 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.180 GAL 2.14 AZL 88.84 HCA 122.93 SMA 204.23 ECC .26015 INC 1.1607 V1 29.387
RP 231.77 LAP .97 LOP 81.12 VP 22.258 GAP 12.98 AZP 90.63 TAL 10.38 TAP 133.31 RCA 151.10 APO 257.36 V2 23.728
RC 158.336 GL 9.39 GP -13.67 ZAL 68.22 ZAP 142.98 ETS 200.72 ZAE 164.13 ETE 287.25 ZAC 69.17 ETC 282.87 LVI -2.71

PLANETOCENTRIC CONIC
C3 16.957 VHL 4.118 DLA 18.80 RAL 20.61 RAD 6641.5 VEL 11.704 PTH 6.74 VHP 3.529 DPA 3.65 RAP 48.27 ECC 1.2791
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 48 3475.58 -45.86 125.88 252.84 104.37 11 8 44 2475.6 -35.27 97.04
60.00 10 28 17 3429.03 -39.63 123.37 254.52 98.00 11 25 26 2429.0 -32.19 94.99
70.00 10 54 47 3351.03 -34.04 117.73 255.19 92.97 11 50 38 2351.0 -29.28 90.04
80.00 11 38 7 3215.19 -29.85 107.54 255.29 89.47 12 31 42 2215.2 -27.03 80.47
90.00 12 48 3 2989.45 -28.22 90.91 255.25 88.15 13 37 52 1989.4 -26.14 64.10
100.00 14 20 59 2689.66 -29.85 68.91 255.29 89.47 15 5 48 1689.7 -27.03 41.84
110.00 15 54 13 2397.85 -34.04 46.65 255.19 92.97 16 34 11 1397.8 -29.28 18.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3701 TRA -.6125 TC3 1.0923 BAU .3485 SGT 1372.9 SGR 995.7 SG3 874.3 ST 29.1 SR 19.4 SS 32.7
RDE -.2741 RRA .1560 RC3-1.0815 FAU .23528 RRT -.5935 RRF .7937 RTF -.7184 CRT .7832 CRS .9633 CST .8815
FDE 1.5287 FRA -.0105 FC-12.0120 BSP 2540 SGB 1696.0 R23 -.2496 R13 .8137 LSA 46.2 MSA 12.4 SSA 3.5
BDE .4605 BRA .6321 BC3 1.5371 FSP 1412 SG1 1537.6 SG2 719.6 THA 149.42 EL1 33.4 EL2 10.5 ALF 31.03

LAUNCH DATE AUG 11 1973 FLIGHT TIME 168.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 398.455 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.156 GAL 2.15 AZL 88.79 HCA 123.94 SMA 203.74 ECC .25841 INC 1.2073 V1 29.387
RP 232.14 LAP 1.00 LOP 82.13 VP 22.181 GAP 12.69 AZP 90.67 TAL 10.51 TAP 134.45 RCA 151.09 APO 256.39 V2 23.689
RC 161.238 GL 9.80 GP -14.13 ZAL 68.01 ZAP 141.66 ETS 200.46 ZAE 163.96 ETE 282.57 ZAC 68.77 ETC 282.95 LVI -2.35

PLANETOCENTRIC CONIC
C3 16.834 VHL 4.103 DLA 19.09 RAL 20.22 RAD 6641.4 VEL 11.699 PTH 6.73 VHP 3.449 DPA 3.13 RAP 48.15 ECC 1.2771
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 7 59 3480.01 -45.94 126.29 252.55 104.07 11 5 59 2480.0 -35.44 97.33
60.00 10 25 3 3434.59 -39.68 123.84 254.19 97.69 11 22 17 2434.6 -32.36 95.37
70.00 10 51 0 3358.19 -34.06 118.29 254.83 92.64 11 46 58 2358.2 -29.44 90.54
80.00 11 33 44 3224.24 -29.85 108.21 254.90 89.12 12 27 28 2224.2 -27.17 81.11
90.00 12 43 21 2999.50 -28.20 91.65 254.85 87.79 13 33 20 1999.5 -26.27 64.80
100.00 14 16 35 2698.71 -29.85 69.58 254.90 89.12 15 1 34 1698.7 -27.17 42.47
110.00 15 50 26 2405.01 -34.06 47.20 254.83 92.64 16 30 31 1405.0 -29.44 19.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3702 TRA -.6034 TC3 1.0680 BAU .3530 SGT 1354.8 SGR 1033.8 SG3 916.7 ST 29.2 SR 18.5 SS 34.3
RDE -.2593 RRA .1508 RC3-1.1485 FAU .24555 RRT -.5984 RRF .8134 RTF -.7185 CRT .7823 CRS .9630 CST .8796
FDE 1.6313 FRA -.0559 FC-12.6277 BSP 2548 SGB 1704.3 R23 -.2592 R13 .8192 LSA 46.9 MSA 12.4 SSA 3.5
BDE .4519 BRA .6239 BC3 1.5683 FSP 1486 SG1 1540.7 SG2 728.4 THA 147.29 EL1 33.0 EL2 10.2 ALF 29.43

LAUNCH DATE AUG 11 1973 FLIGHT TIME 170.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 402.188 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.134 GAL 2.17 AZL 88.74 HCA 124.94 SMA 203.28 ECC .25678 INC 1.2551 V1 29.387
RP 232.51 LAP 1.03 LOP 83.13 VP 22.106 GAP 12.41 AZP 90.72 TAL 10.63 TAP 135.58 RCA 151.08 APO 255.48 V2 23.650
RC 164.130 GL 10.22 GP -14.80 ZAL 67.82 ZAP 140.30 ETS 200.20 ZAE 163.69 ETE 277.84 ZAC 68.36 ETC 283.02 LVI -1.99

PLANETOCENTRIC CONIC
C3 16.723 VHL 4.089 DLA 19.40 RAL 19.84 RAD 6641.3 VEL 11.694 PTH 6.73 VHP 3.372 DPA 2.59 RAP 48.01 ECC 1.2752
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 5 9 3484.85 -48.01 126.73 252.30 103.74 11 3 14 2484.9 -35.62 97.65
60.00 10 21 46 3440.83 -39.74 124.34 253.90 97.35 11 19 6 2440.6 -32.53 95.78
70.00 10 47 8 3365.92 -34.09 118.89 254.49 92.29 11 43 14 2365.9 -29.60 91.09
80.00 11 29 13 3233.99 -29.83 108.94 254.54 88.74 12 23 7 2234.0 -27.32 81.79
90.00 12 38 30 3010.33 -28.17 92.44 254.47 87.39 13 28 40 2010.3 -26.41 65.57
100.00 14 12 5 2708.46 -29.83 70.30 254.54 88.74 14 57 13 1708.5 -27.32 43.16
110.00 15 46 34 2412.74 -34.09 47.81 254.49 92.29 16 26 47 1412.7 -29.60 20.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3563 TRA -.5852 TC3 1.0882 BAU .3628 SGT 1329.7 SGR 1078.0 SG3 962.3 ST 28.2 SR 17.5 SS 35.4
RDE -.2453 RRA .1437 RC3-1.2216 FAU .25678 RRT -.6187 RRF .8325 RTF -.7118 CRT .7789 CRS .9631 CST .8729
FDE 1.7199 FRA -.1241 FC-13.2932 BSP 2414 SGB 1711.8 R23 -.2471 R13 .8335 LSA 46.8 MSA 12.3 SSA 3.5
BDE .4326 BRA .6026 BC3 1.6228 FSP 1542 SG1 1549.9 SG2 726.6 THA 144.43 EL1 31.7 EL2 9.8 ALF 28.86

LAUNCH DATE AUG 11 1973

FLIGHT TIME 172.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC

DISTANCE 405.921

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.113 GAL 2.18 AZL 88.70 HCA 125.94 SMA 202.85 ECC .25925 INC 1.3037 V1 29.387  
 RP 232.89 LAP 1.06 LOP 84.14 VP 22.034 GAP 12.14 AZP 90.77 TAL 10.75 TAP 136.69 RCA 131.07 APO 254.83 V2 23.612  
 RC 167.073 GL 10.84 GP -15.09 ZAL 67.66 ZAP 138.93 ETS 199.94 ZAE 183.30 ETE 273.17 ZAC 67.95 ETC 283.11 LVI -1.62

PLANETOCENTRIC CONIC

C3 16.622 VHL 4.077 DLA 19.72 RAL 19.47 RAD 6641.3 VEL 11.690 PTH 6.72 VHP 3.299 DPA 2.03 RAP 47.86 ECC 1.2736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 2 19 3490.18 -48.10 127.21 251.20 103.37 11 0 29 2490.2 -35.82 98.00  
 60.00 10 18 26 3447.23 -39.79 124.89 253.65 96.98 11 15 54 2447.2 -32.72 96.24  
 70.00 10 43 12 3374.34 -34.11 119.55 254.20 91.90 11 39 26 2374.3 -29.78 91.68  
 80.00 11 24 35 3244.60 -29.82 109.72 254.21 88.33 12 18 39 2244.6 -27.47 82.54  
 90.00 12 33 30 3022.13 -28.13 93.30 254.13 86.96 13 23 52 2022.1 -26.55 66.40  
 100.00 14 7 27 2719.07 -29.82 71.09 254.21 88.33 14 52 46 1719.1 -27.47 43.91  
 110.00 15 42 38 2421.16 -34.11 48.46 254.20 91.90 16 22 59 1421.2 -29.78 20.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3647 TRA -.5889 TC3 1.0076 BAU .3640 SGT 1307.9 SGR 1120.0 SG3 1004.2 ST 28.8 SR 16.4 SS 37.4  
 RDE -.2277 RRA .1391 RC3-1.2914 FAU .26670 RRT -.6033 RRF .8486 RTF -.6860 CRT .7768 CRS .9610 CST .8737  
 FDE 1.8486 FRA -.1589 FC-13.8907 BSP 2528 SGB 1721.9 R23 -.2674 R13 .8344 LSA 48.2 MSA 12.5 SSA 3.5  
 BDE .4299 BRA .6051 BC3 1.6380 FSP 1636 SG1 1547.6 S62 754.8 THA 142.24 EL1 31.8 EL2 9.3 ALF 26.23

LAUNCH DATE AUG 11 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC

DISTANCE 409.663

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.093 GAL 2.19 AZL 88.65 HCA 126.94 SMA 202.45 ECC .25382 INC 1.3535 V1 29.387  
 RP 233.23 LAP 1.08 LOP 85.13 VP 21.963 GAP 11.86 AZP 90.81 TAL 10.85 TAP 137.78 RCA 131.06 APO 253.83 V2 23.573  
 RC 170.003 GL 11.08 GP -15.59 ZAL 67.52 ZAP 137.53 ETS 199.67 ZAE 162.79 ETE 268.60 ZAC 67.52 ETC 283.19 LVI -1.24

PLANETOCENTRIC CONIC

C3 16.532 VHL 4.066 DLA 20.09 RAL 19.12 RAD 6641.3 VEL 11.686 PTH 6.72 VHP 3.229 DPA 1.45 RAP 47.69 ECC 1.2721  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 26 3495.95 -46.19 127.74 251.93 102.97 10 97 42 2496.0 -36.04 98.38  
 60.00 10 15 4 3454.33 -39.85 125.49 253.43 96.58 11 12 38 2454.3 -32.93 96.73  
 70.00 10 39 10 3383.38 -34.13 120.25 253.93 91.48 11 35 33 2383.4 -29.96 92.32  
 80.00 11 19 48 3255.99 -29.79 110.57 253.90 87.88 12 14 4 2256.0 -27.63 83.35  
 90.00 12 28 19 3034.82 -28.08 94.22 253.81 86.50 13 18 53 2034.8 -26.70 67.30  
 100.00 14 2 40 2730.46 -29.79 71.94 253.90 87.88 14 48 10 1730.5 -27.63 44.72  
 110.00 15 38 36 2430.20 -34.13 49.17 253.93 91.48 16 19 6 1430.2 -29.96 21.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3656 TRA -.5860 TC3 .9581 BAU .3688 SGT 1282.6 SGR 1167.0 SG3 1048.5 ST 29.0 SR 15.2 SS 39.1  
 RDE -.2100 RRA .1332 RC3-1.3663 FAU .27729 RRT -.5939 RRF .8638 RTF -.6655 CRT .7721 CRS .9585 CST .8717  
 FDE 1.9744 FRA -.2079 FC-14.5213 BSP 2578 SGB 1734.0 R23 -.2739 R13 .8409 LSA 49.3 MSA 12.8 SSA 3.5  
 BDE .4216 BRA .6009 BC3 1.6687 FSP 1725 SG1 1550.3 S62 776.8 THA 139.53 EL1 31.5 EL2 8.9 ALF 24.08

LAUNCH DATE AUG 11 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC

DISTANCE 413.411

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.075 GAL 2.20 AZL 88.60 HCA 127.93 SMA 202.08 ECC .25247 INC 1.4044 V1 29.387  
 RP 233.62 LAP 1.11 LOP 86.13 VP 21.895 GAP 11.59 AZP 90.86 TAL 10.94 TAP 138.87 RCA 131.06 APO 253.09 V2 23.536  
 RC 172.941 GL 11.52 GP -16.11 ZAL 67.39 ZAP 136.11 ETS 199.40 ZAE 162.16 ETE 264.18 ZAC 67.08 ETC 283.29 LVI -1.85

PLANETOCENTRIC CONIC

C3 16.431 VHL 4.056 DLA 20.40 RAL 18.77 RAD 6641.2 VEL 11.683 PTH 6.72 VHP 3.163 DPA .84 RAP 47.50 ECC 1.2707  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 33 3502.17 -46.28 128.31 251.80 102.54 10 54 55 2502.2 -36.27 98.79  
 60.00 10 11 38 3461.96 -39.91 126.13 253.24 96.15 11 9 20 2462.0 -33.14 97.26  
 70.00 10 35 2 3393.08 -34.14 121.01 253.69 91.04 11 31 35 2393.1 -30.15 93.01  
 80.00 11 14 51 3268.23 -29.76 111.48 253.62 87.41 12 9 19 2268.2 -27.80 84.22  
 90.00 12 22 56 3048.47 -28.02 95.22 253.51 86.01 13 13 44 2048.5 -26.86 68.27  
 100.00 13 57 43 2742.70 -29.76 72.84 253.62 87.41 14 43 26 1742.7 -27.80 45.59  
 110.00 15 34 28 2439.90 -34.14 49.93 253.69 91.04 16 15 8 1439.9 -30.15 21.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3638 TRA -.5816 TC3 .9080 BAU .3750 SGT 1254.0 SGR 1217.5 SG3 1093.5 ST 26.9 SR 13.9 SS 41.0  
 RDE -.1914 RRA .1269 RC3-1.4442 FAU .28803 RRT -.5827 RRF .8779 RTF -.6439 CRT .7647 CRS .9549 CST .8689  
 FDE 2.1042 FRA -.2608 FC-15.1577 BSP 2601 SGB 1747.8 R23 -.2737 R13 .8499 LSA 50.3 MSA 12.7 SSA 3.4  
 BDE .4111 BRA .5953 BC3 1.7049 FSP 1808 SG1 1555.1 S62 797.9 THA 136.45 EL1 31.0 EL2 8.4 ALF 21.94

LAUNCH DATE AUG 11 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

DISTANCE 417.163

EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 33.058 GAL 2.21 AZL 88.54 HCA 128.92 SMA 201.73 ECC .25121 INC 1.4566 V1 29.387  
 RP 233.99 LAP 1.13 LOP 87.12 VP 21.829 GAP 11.32 AZP 90.92 TAL 11.02 TAP 139.94 RCA 131.05 APO 252.40 V2 23.498  
 RC 175.888 GL 11.98 GP -16.65 ZAL 67.28 ZAP 134.67 ETS 199.12 ZAE 161.43 ETE 259.97 ZAC 66.64 ETC 283.39 LVI -1.46

PLANETOCENTRIC CONIC

C3 16.379 VHL 4.047 DLA 20.76 RAL 18.44 RAD 6641.2 VEL 11.680 PTH 6.72 VHP 3.100 DPA .21 RAP 47.29 ECC 1.2698  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 53 37 3508.84 -46.38 128.93 251.71 102.08 10 52 6 2508.8 -36.52 99.23  
 60.00 10 8 9 3470.14 -39.97 126.82 253.08 95.69 11 5 59 2470.1 -33.37 97.84  
 70.00 10 30 47 3403.46 -34.15 121.82 253.48 90.56 11 27 31 2403.5 -30.36 93.75  
 80.00 11 9 44 3281.35 -29.71 112.45 253.37 86.90 12 4 25 2281.3 -27.97 85.16  
 90.00 12 17 19 3063.14 -27.95 96.28 253.23 85.48 13 8 23 2063.1 -27.01 69.31  
 100.00 13 52 36 2755.82 -29.71 73.82 253.37 86.90 14 38 32 1755.8 -27.97 46.53  
 110.00 15 30 14 2450.27 -34.15 50.74 253.48 90.56 16 11 4 1450.3 -30.36 22.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3602 TRA -.5770 TC3 .8509 BAU .3826 SGT 1223.7 SGR 1272.1 SG3 1139.6 ST 28.7 SR 12.6 SS 42.8  
 RDE -.1721 RRA .1198 RC3-1.5262 FAU .29906 RRT -.5685 RRF .8908 RTF -.6199 CRT .7543 CRS .9495 CST .8651  
 FDE 2.2371 FRA -.3189 FC-15.8067 BSP 2614 SGB 1765.2 R23 -.2676 R13 .8608 LSA 51.3 MSA 12.8 SSA 3.4  
 BDE .3992 BRA .5893 BC3 1.7474 FSP 1888 SG1 1563.6 S62 819.0 THA 133.05 EL1 30.3 EL2 7.8 ALF 19.73

LAUNCH DATE AUG 11 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC DISTANCE 420.920 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.042 GAL 2.21 AZL 88.49 HCA 129.01 SMA 201.40 ECC .25002 INC 1.5101 V1 29.387

PLANETOCENTRIC CONIC
C3 16.317 VHL 4.039 DLA 21.14 RAL 18.12 RAD 8641.2 VEL 11.677 PTH 6.71 VHP 3.040 DPA -.45 RAP 47.07 ECC 1.2685
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3356 TRA -.5729 TC3 .7884 BAV .3911 SGT 1191.3 SGR 1329.6 SG3 1185.4 ST 28.4 SR 11.2 SS 44.7

LAUNCH DATE AUG 11 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC DISTANCE 424.681 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.027 GAL 2.22 AZL 88.43 HCA 130.90 SMA 201.10 ECC .24692 INC 1.5649 V1 29.387

PLANETOCENTRIC CONIC
C3 16.263 VHL 4.033 DLA 21.53 RAL 17.80 RAD 8641.1 VEL 11.675 PTH 6.71 VHP 2.984 DPA -1.13 RAP 46.83 ECC 1.2676
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3466 TRA -.9661 TC3 .7303 BAV .4023 SGT 1156.2 SGR 1392.9 SG3 1233.4 ST 27.8 SR 9.8 SS 46.9

LAUNCH DATE AUG 11 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC DISTANCE 428.445 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.013 GAL 2.22 AZL 88.38 HCA 131.88 SMA 200.82 ECC .24788 INC 1.6213 V1 29.387

PLANETOCENTRIC CONIC
C3 16.218 VHL 4.027 DLA 21.94 RAL 17.50 RAD 8641.1 VEL 11.673 PTH 6.71 VHP 2.931 DPA -1.83 RAP 46.37 ECC 1.2689
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3445 TRA -.5682 TC3 .6418 BAV .4118 SGT 1125.6 SGR 1455.2 SG3 1277.9 ST 27.8 SR 6.2 SS 48.7

LAUNCH DATE AUG 11 1973 FLIGHT TIME 186.00 ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC DISTANCE 432.213 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 33.000 GAL 2.22 AZL 88.32 HCA 132.88 SMA 200.56 ECC .24692 INC 1.6792 V1 29.387

PLANETOCENTRIC CONIC
C3 16.181 VHL 4.023 DLA 22.36 RAL 17.21 RAD 8641.1 VEL 11.671 PTH 6.71 VHP 2.881 DPA -2.55 RAP 46.30 ECC 1.2683
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3389 TRA -.5670 TC3 .5599 BAV .4245 SGT 1093.6 SGR 1925.6 SG3 1323.4 ST 27.3 SR 6.6 SS 50.8

LAUNCH DATE AUG 11 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 15 1974

MELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.988 GAL 2.22 AZL 88.26 HCA 133.83 SMA 200.31 ECC .24601 INC 1.7388 V1 29.387  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.824 GAP 10.00 AZP 91.20 TAL 11.28 TAP 148.12 RCA 151.03 APO 249.59 V2 23.315  
 RC 190.680 GL 14.41 GP -19.55 ZAL 67.02 ZAP 127.13 ETS 197.55 ZAE 156.21 ETE 242.53 ZAC 64.27 ETC 283.96 LVI 1.68

DISTANCE 435.984 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.152 VHL 4.019 DLA 22.81 RAL 16.92 RAD 6641.1 VEL 11.670 PTH 6.71 VHP 2.834 DPA -3.29 RAP 46.01 ECC 1.2658  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 15 3549.46 -46.89 132.72 251.82 99.20 10 37 25 2549.5 -37.99 102.01  
 60.00 9 49 25 3519.73 -40.22 131.01 252.79 92.85 10 48 5 2519.7 -34.69 101.38  
 70.00 10 7 26 3466.66 -34.08 126.75 252.82 87.64 11 5 12 2466.7 -31.49 98.32  
 80.00 10 40 38 3362.53 -29.26 118.44 252.40 83.78 11 36 40 2362.5 -28.88 91.02  
 90.00 11 44 52 3155.11 -27.27 102.92 252.12 82.22 12 37 27 2155.1 -27.79 75.93  
 100.00 13 23 30 2837.00 -29.26 79.81 252.40 83.78 14 10 47 1837.0 -29.88 52.39  
 110.00 15 6 52 2513.48 -34.08 55.67 252.82 87.64 15 48 45 1513.5 -31.49 27.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3280 TRA -.5864 TC3 .4698 BAU .4385 SGT 1062.3 SGR 1994.5 SG3 1368.0 ST 26.8 SR 5.0 SS 52.8  
 RDE -.0561 RRA .0792 RC3-1.9754 FAU .35306 RRT -.3953 RRF .9383 RTF -.4103 CRT -.5066 CRS .7674 CST .8340  
 FDE 3.0092 FRA -.6263 FC-16.9234 BSP 2840 SGB 1916.0 R23 -.1602 R13 .9255 LSA 57.9 MSA 13.7 SSA 2.9  
 BDE .3328 BRA .5719 BC3 2.0305 FSP 2310 SG1 1676.1 SG2 928.3 THA 111.72 EL1 26.9 EL2 4.3 ALF 5.54

LAUNCH DATE AUG 11 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 17 1974

MELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.976 GAL 2.22 AZL 88.20 HCA 134.81 SMA 200.09 ECC .24517 INC 1.8003 V1 29.387  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.468 GAP 9.74 AZP 91.27 TAL 11.31 TAP 146.11 RCA 151.03 APO 249.15 V2 23.279  
 RC 193.649 GL 14.94 GP -20.18 ZAL 67.03 ZAP 125.56 ETS 197.19 ZAE 154.91 ETE 239.76 ZAC 63.77 ETC 284.09 LVI 2.11

DISTANCE 439.757 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.132 VHL 4.016 DLA 23.27 RAL 16.84 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 2.790 DPA -4.06 RAP 45.71 ECC 1.2655  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 34 59 3559.13 -46.99 133.63 251.95 98.50 10 34 18 2559.1 -38.33 102.69  
 60.00 9 45 20 3531.54 -40.25 132.02 252.82 92.17 10 44 12 2531.5 -34.99 102.24  
 70.00 10 2 12 3481.86 -34.03 127.94 252.76 86.94 11 0 14 2481.9 -31.73 99.44  
 80.00 10 33 53 3382.49 -29.10 119.90 252.25 83.02 11 30 16 2382.5 -29.06 92.48  
 90.00 11 37 10 3178.16 -27.05 104.57 251.94 81.42 12 30 8 2178.2 -27.92 77.60  
 100.00 13 16 45 2856.96 -29.10 81.27 252.25 83.02 14 4 22 1857.0 -29.06 53.84  
 110.00 15 1 39 2528.67 -34.03 56.85 252.76 86.94 15 43 47 1528.7 -31.73 28.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3178 TRA -.5864 TC3 .3751 BAU .4545 SGT 1034.3 SGR 1669.8 SG3 1412.7 ST 26.2 SR 3.6 SS 55.2  
 RDE -.0285 RRA .0699 RC3-2.0737 FAU .36351 RRT -.3352 RRF .9451 RTF -.3451 CRT .2483 CRS .5198 CST .8238  
 FDE 3.1827 FRA -.6912 FC-19.5080 BSP 2916 SGB 1964.2 R23 -.1266 R13 .9371 LSA 59.5 MSA 13.8 SSA 2.8  
 BDE .3191 BRA .5707 BC3 2.1073 FSP 2391 SG1 1721.9 SG2 945.0 THA 106.98 EL1 26.2 EL2 3.5 ALF 1.99

LAUNCH DATE AUG 11 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 19 1974

MELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.966 GAL 2.22 AZL 88.14 HCA 135.78 SMA 199.88 ECC .24439 INC 1.8636 V1 29.387  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.413 GAP 9.48 AZP 91.34 TAL 11.32 TAP 147.10 RCA 151.03 APO 248.73 V2 23.244  
 RC 196.619 GL 15.48 GP -20.62 ZAL 67.05 ZAP 123.99 ETS 196.81 ZAE 153.54 ETE 237.19 ZAC 63.26 ETC 284.23 LVI 2.58

DISTANCE 443.533 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.120 VHL 4.015 DLA 23.75 RAL 16.37 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 2.750 DPA -4.85 RAP 45.40 ECC 1.2653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 38 3569.36 -47.09 134.60 252.12 97.76 10 31 7 2569.4 -38.68 103.41  
 60.00 9 41 8 3544.05 -40.28 133.08 252.88 91.45 10 40 12 2544.1 -35.29 103.16  
 70.00 9 56 45 3498.03 -33.97 129.19 252.72 86.20 10 55 3 2498.0 -31.98 100.84  
 80.00 10 26 44 3404.00 -28.92 121.47 252.12 82.22 11 23 28 2404.0 -29.23 94.05  
 90.00 11 28 54 3203.25 -26.78 106.36 251.75 80.56 12 22 17 2203.3 -26.05 78.42  
 100.00 13 9 35 2878.47 -28.92 82.84 252.12 82.22 13 57 34 1878.5 -29.23 55.42  
 110.00 14 56 11 2544.85 -33.97 58.11 252.72 86.20 15 38 36 1544.8 -31.98 29.55

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3057 TRA -.5670 TC3 .2733 BAU .4721 SGT 1009.9 SGR 1747.8 SG3 1455.8 ST 25.5 SR 3.0 SS 57.4  
 RDE .0006 RRA .0597 RC3-2.1733 FAU .37353 RRT -.2638 RRF .9511 RTF -.2091 CRT -.2677 CRS -.0675 CST .8109  
 FDE 3.3602 FRA -.7800 FC-20.0607 BSP 3000 SGB 2018.8 R23 -.0923 R13 .9468 LSA 61.2 MSA 14.0 SSA 2.7  
 BDE .3057 BRA .5701 BC3 2.1906 FSP 2466 SG1 1776.6 SG2 958.3 THA 102.30 EL1 25.5 EL2 2.9 ALF 178.19

LAUNCH DATE AUG 11 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 21 1974

MELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.956 GAL 2.21 AZL 88.07 HCA 136.74 SMA 199.69 ECC .24366 INC 1.9289 V1 29.387  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.361 GAP 9.23 AZP 91.41 TAL 11.33 TAP 148.07 RCA 151.03 APO 248.35 V2 23.209  
 RC 199.589 GL 16.03 GP -21.47 ZAL 67.09 ZAP 122.40 ETS 196.42 ZAE 152.11 ETE 234.82 ZAC 62.74 ETC 284.37 LVI 3.05

DISTANCE 447.311 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.118 VHL 4.015 DLA 24.25 RAL 16.10 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 2.713 DPA -5.65 RAP 45.08 ECC 1.2652  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 28 11 3580.16 -47.18 135.62 252.33 96.97 10 27 51 2580.2 -39.05 104.18  
 60.00 9 36 46 3557.29 -40.30 134.21 252.97 90.69 10 36 3 2557.3 -35.61 104.14  
 70.00 9 51 2 3815.25 -33.88 130.53 252.70 85.42 10 49 37 2515.3 -32.23 101.92  
 80.00 10 19 5 3427.23 -28.69 123.16 251.99 81.36 11 16 13 2427.2 -29.39 95.76  
 90.00 11 19 57 3230.72 -26.46 108.31 251.57 79.64 12 13 47 2230.7 -28.16 81.43  
 100.00 13 1 57 2901.70 -28.69 84.53 251.99 81.36 13 50 19 1901.7 -29.39 57.13  
 110.00 14 50 28 2562.07 -33.88 59.45 252.70 85.42 15 33 11 1562.1 -32.23 30.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2914 TRA -.5681 TC3 .1665 BAU .4917 SGT 990.7 SGR 1829.5 SG3 1497.7 ST 24.7 SR 3.7 SS 59.6  
 RDE .0309 RRA .0488 RC3-2.2759 FAU .38329 RRT -.1824 RRF .9565 RTF -.1835 CRT -.8752 CRS -.6402 CST .7945  
 FDE 3.5379 FRA -.8315 FC-20.5891 BSP 3099 SGB 2080.5 R23 -.0595 R13 .9547 LSA 63.0 MSA 14.2 SSA 2.6  
 BDE .2930 BRA .5702 BC3 2.2820 FSP 2539 SG1 1841.8 SG2 967.5 THA 97.81 EL1 24.8 EL2 2.7 ALF 174.15

LAUNCH DATE AUG 11 1973 FLIGHT TIME 196.00 ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC DISTANCE 451.091 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.947 GAL 2.21 AZL 88.00 HCA 137.71 SMA 199.51 ECC .24299 INC 1.9965 V1 29.387
RP 237.14 LAP 1.34 LOP 95.91 VP 21.309 GAP 8.98 AZP 91.48 TAL 11.32 TAP 149.03 RCA 151.04 APO 247.99 V2 23.174
RC 202.557 GL 16.60 GP -22.14 ZAL 67.13 ZAP 120.79 ETS 196.01 ZAE 150.62 ETE 232.61 ZAC 62.21 ETC 204.51 LVI 3.54
PLANETOCENTRIC CONIC
C3 16.121 VHL 4.015 DLA 24.76 RAL 15.84 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 2.678 DPA -6.48 RAP 44.75 ECC 1.2653
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 24 38 3591.56 -47.27 136.71 252.58 96.14 10 24 29 2591.6 -39.43 105.01
60.00 9 32 14 3571.30 -40.30 135.40 253.08 89.88 10 31 45 2571.3 -35.94 105.19
70.00 9 45 1 3533.61 -33.77 131.95 252.69 84.58 10 43 55 2533.6 -32.48 103.29
80.00 10 10 54 3452.43 -28.42 124.98 251.87 80.44 11 8 26 2452.4 -29.54 97.62
90.00 11 10 10 3261.01 -26.07 110.44 251.38 78.64 12 4 31 2261.0 -28.24 83.64
100.00 12 53 45 2926.90 -28.42 86.35 251.87 80.44 13 42 32 1926.9 -29.54 58.98
110.00 14 44 28 2580.43 -33.77 60.87 252.69 84.58 15 27 28 1580.4 -32.48 32.21
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2731 TRA -.5679 TC3 .0589 BAW .5135 SGT 975.0 SGR 1915.4 SG3 1538.7 ST 23.6 SR 5.4 SS 61.8
RDE .0623 RRA .0366 RC3-2.3816 FAU .39288 RRT -.0944 RRF .9613 RTF -.0914 CRT -.7761 CR5 -.8607 CST .7725
FDE 3.7121 FRA -.9116 FC-21.0983 BSP 3196 SGB 2149.3 R23 -.0307 R13 .9608 LSA 64.7 MSA 14.4 SSA 2.6
BDE .2801 BRA .5691 BC3 2.3824 FSP 2597 SG1 1918.4 SG2 969.1 THA 93.70 EL1 24.0 EL2 3.3 ALF 169.83

LAUNCH DATE AUG 11 1973 FLIGHT TIME 198.00 ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC DISTANCE 454.871 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.939 GAL 2.20 AZL 87.93 HCA 138.67 SMA 199.35 ECC .24236 INC 2.0664 V1 29.387
RP 237.48 LAP 1.36 LOP 96.87 VP 21.260 GAP 8.72 AZP 91.55 TAL 11.31 TAP 149.98 RCA 151.04 APO 247.67 V2 23.140
RC 205.523 GL 17.19 GP -22.82 ZAL 67.22 ZAP 119.19 ETS 195.98 ZAE 149.09 ETE 230.57 ZAC 61.68 ETC 204.66 LVI 4.04
PLANETOCENTRIC CONIC
C3 16.135 VHL 4.017 DLA 25.30 RAL 15.59 RAD 6641.1 VEL 11.669 PTH 6.71 VHP 2.647 DPA -7.33 RAP 44.42 ECC 1.2655
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 20 58 3603.61 -47.35 137.86 252.86 95.26 10 21 1 2603.6 -39.82 105.89
60.00 9 27 30 3586.16 -40.29 136.66 253.22 89.02 10 27 17 2586.2 -36.27 106.31
70.00 9 38 41 3553.24 -33.64 133.47 252.89 83.69 10 37 54 2553.2 -32.73 104.77
80.00 10 2 1 3479.98 -28.09 126.97 251.74 79.44 11 0 1 2480.0 -29.67 99.65
90.00 10 59 19 3294.89 -25.60 112.80 251.17 77.55 11 54 14 2294.9 -28.28 86.11
100.00 12 44 53 2954.45 -28.09 88.33 251.74 79.44 13 34 7 1954.5 -29.67 61.02
110.00 14 38 7 2600.06 -33.64 62.39 252.69 83.69 15 21 27 1600.1 -32.73 33.68
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2605 TRA -.5769 TC3 -.0740 BAW .5396 SGT 984.9 SGR 1999.2 SG3 1574.0 ST 23.1 SR 7.7 SS 64.4
RDE .0987 RRA .0276 RC3-2.4818 FAU .40070 RRT .0135 RRF .9654 RTF .0179 CRT -.7877 CR5 -.9392 CST .7518
FDE 3.9203 FRA -.9356 FC-21.5006 BSP 3370 SGB 2228.6 R23 -.0007 R13 .9654 LSA 67.2 MSA 14.7 SSA 2.4
BDE .2785 BRA .3773 BC3 2.4829 FSP 2689 SG1 1999.2 SG2 984.8 THA 89.50 EL1 23.9 EL2 4.6 ALF 164.73

LAUNCH DATE AUG 11 1973 FLIGHT TIME 200.00 ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC DISTANCE 458.653 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.932 GAL 2.19 AZL 87.86 HCA 139.63 SMA 199.21 ECC .24179 INC 2.1388 V1 29.387
RP 237.81 LAP 1.39 LOP 97.83 VP 21.211 GAP 8.47 AZP 91.63 TAL 11.29 TAP 150.92 RCA 151.04 APO 247.37 V2 23.106
RC 208.485 GL 17.79 GP -23.52 ZAL 67.32 ZAP 117.57 ETS 195.12 ZAE 147.51 ETE 228.66 ZAC 61.14 ETC 204.01 LVI 4.53
PLANETOCENTRIC CONIC
C3 16.157 VHL 4.020 DLA 25.86 RAL 15.33 RAD 6641.1 VEL 11.670 PTH 6.71 VHP 2.619 DPA -8.19 RAP 44.08 ECC 1.2659
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 17 9 3618.31 -47.43 139.08 253.18 94.32 10 17 25 2618.3 -40.23 106.83
60.00 9 22 34 3601.87 -40.26 136.00 253.39 88.11 10 22 36 2601.9 -36.41 107.50
70.00 9 31 57 3574.22 -33.47 135.08 252.71 82.75 10 31 31 2574.2 -32.97 106.35
80.00 9 52 20 3510.23 -27.70 129.13 251.60 78.37 10 50 50 2510.2 -29.78 101.90
90.00 10 47 7 3333.28 -25.01 115.46 250.92 76.34 11 42 40 2333.3 -28.26 88.92
100.00 12 35 12 2984.70 -27.70 90.49 251.60 78.37 13 24 57 1984.7 -29.78 63.26
110.00 14 31 23 2621.04 -33.47 64.00 252.71 82.75 15 15 4 1621.0 -32.97 35.27
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2415 TRA -.5818 TC3 -.2018 BAW .9602 SGT 997.1 SGR 2087.8 SG3 1608.6 ST 22.1 SR 10.1 SS 66.9
RDE .1394 RRA .0197 RC3-2.5858 FAU .40847 RRT .1191 RRF .9691 RTF .1254 CRT -.7809 CR5 -.9683 CST .7214
FDE 4.1147 FRA -1.0220 FC-21.8868 BSP 3522 SGB 2313.7 R23 .0235 R13 .9688 LSA 69.5 MSA 14.9 SSA 2.3
BDE .2768 BRA .5820 BC3 2.5936 FSP 2754 SG1 2092.2 SG2 988.0 THA 85.81 EL1 23.5 EL2 6.2 ALF 158.22

LAUNCH DATE AUG 11 1973 FLIGHT TIME 202.00 ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC DISTANCE 462.437 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.925 GAL 2.18 AZL 87.79 HCA 140.58 SMA 199.07 ECC .24125 INC 2.2139 V1 29.387
RP 238.14 LAP 1.41 LOP 98.79 VP 21.184 GAP 8.23 AZP 91.71 TAL 11.26 TAP 151.85 RCA 151.05 APO 247.10 V2 23.073
RC 211.443 GL 18.42 GP -24.23 ZAL 67.43 ZAP 115.95 ETS 194.64 ZAE 145.88 ETE 226.87 ZAC 60.58 ETC 204.97 LVI 5.07
PLANETOCENTRIC CONIC
C3 16.189 VHL 4.024 DLA 26.44 RAL 15.08 RAD 6641.1 VEL 11.672 PTH 6.71 VHP 2.595 DPA -9.07 RAP 43.74 ECC 1.2664
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 13 12 3629.70 -47.49 140.37 253.53 93.33 10 13 41 2629.7 -40.65 107.84
60.00 9 17 24 3618.52 -40.22 139.41 253.57 87.15 10 17 42 2618.5 -36.98 108.78
70.00 9 24 47 3596.73 -33.26 136.81 252.73 81.75 10 24 44 2596.7 -33.21 108.07
80.00 9 41 38 3543.83 -27.21 131.51 251.43 77.21 10 40 42 2543.8 -29.84 104.39
90.00 10 32 58 3377.96 -24.25 118.52 250.62 74.99 11 29 16 2378.0 -28.17 92.19
100.00 12 24 30 3018.30 -27.21 92.87 251.43 77.21 13 14 48 2018.3 -29.84 65.76
110.00 14 24 13 2643.55 -33.26 65.72 252.73 81.75 15 8 17 1643.5 -33.21 36.98
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2200 TRA -.5878 TC3 -.3349 BAW .5867 SGT 1022.1 SGR 2179.0 SG3 1640.3 ST 21.0 SR 12.8 SS 69.3
RDE .1739 RRA .0034 RC3-2.6902 FAU .41594 RRT .2248 RRF .9723 RTF .2325 CRT -.7199 CR5 -.9817 CST .6619
FDE 4.3092 FRA -1.0868 FC-22.2221 BSP 3689 SGB 2408.8 R23 .0439 R13 .9715 LSA 71.9 MSA 15.0 SSA 2.2
BDE .2805 BRA .5878 BC3 2.7110 FSP 2814 SG1 2194.2 SG2 989.0 THA 82.43 EL1 23.3 EL2 8.0 ALF 152.83

LAUNCH DATE AUG 11 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.919 GAL 2.17 AZL 87.71 HCA 141.54 SMA 198.95 ECC .24077 INC 2.2920 V1 29.387  
 RP 238.47 LAP 1.43 LOP 99.75 VP 21.119 GAP 7.98 AZP 91.80 TAL 11.23 TAP 152.76 RCA 151.05 APO 246.85 V2 23.040  
 RC 214.384 GL 19.06 GP -24.95 ZAL 67.56 ZAP 114.33 ETS 194.14 ZAE 144.23 ETE 225.20 ZAC 60.02 ETC 285.13 LVI 9.61

DISTANCE 466.221

EARTH TO MARS  
 C3 16.230 VHL 4.029 DLA 27.05 RAL 14.82 RAD 8641.1 VEL 11.674 PTH 6.71 VHP 2.573 DPA -9.97 RAP 43.39 ECC 1.2671  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 4 3643.84 -47.53 141.74 253.92 92.28 10 9 48 2643.8 -41.09 108.92  
 60.00 9 11 57 3636.17 -40.15 140.91 253.78 86.14 10 12 33 2636.2 -37.31 110.15  
 70.00 9 17 7 3620.94 -33.01 138.65 252.75 80.69 10 17 28 2620.9 -33.44 109.92  
 80.00 9 29 37 3581.70 -26.61 134.16 251.23 75.94 10 29 18 2581.7 -29.85 107.20  
 90.00 10 15 50 3432.32 -23.25 122.18 250.21 73.43 11 13 2 2432.3 -27.93 96.14  
 100.00 12 12 26 3056.17 -26.61 95.53 250.23 75.94 13 3 25 2056.2 -29.85 68.57  
 110.00 14 16 33 2667.76 -33.01 67.57 252.75 80.69 15 1 1 1667.8 -33.44 38.84

PLANETOCENTRIC CONIC  
 TDE -.1962 TRA -.5948 TC3 -.4721 BAU .6152 SGT 1060.5 SGR 2273.1 SCS 1669.6 ORBIT DETERMINATION ACCURACY  
 RDE .2150 RRA -.0095 RC3-2.7955 FAU .42199 RRT .3260 RRF .9753 RTF .3345 CRT -.6663 CRS -.9887 CBT .6309  
 FDE 4.5077 FRA-1.1508 FC-22.5090 BSP 3869 SGB 2508.4 R23 .0607 R13 .9753 LSA 74.5 MSA 15.2 SSA 2.1  
 BDE .2911 BRA .5949 BC3 2.8350 FSP 2866 SC1 2305.3 SC2 988.6 THA 79.38 EL1 23.3 EL2 10.0 ALF 145.07

LAUNCH DATE AUG 11 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.913 GAL 2.18 AZL 87.63 HCA 142.49 SMA 198.84 ECC .24032 INC 2.3731 V1 29.387  
 RP 238.79 LAP 1.44 LOP 100.70 VP 21.074 GAP 7.74 AZP 91.89 TAL 11.18 TAP 153.67 RCA 151.06 APO 246.62 V2 23.008  
 RC 217.340 GL 19.73 GP -25.68 ZAL 67.70 ZAP 112.71 ETS 193.62 ZAE 142.54 ETE 223.62 ZAC 59.46 ETC 285.30 LVI 6.16

DISTANCE 470.007

EARTH TO MARS  
 C3 16.282 VHL 4.035 DLA 27.68 RAL 14.57 RAD 8641.1 VEL 11.676 PTH 6.71 VHP 2.554 DPA -10.88 RAP 43.05 ECC 1.2680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 46 3658.75 -47.57 143.18 254.34 91.17 10 5 45 2658.8 -41.54 110.07  
 60.00 9 6 13 3654.90 -40.05 142.49 254.00 85.07 10 7 7 2654.9 -37.66 111.61  
 70.00 9 8 52 3647.09 -32.70 140.63 252.77 79.58 10 9 39 2647.1 -33.65 111.93  
 80.00 9 15 47 3625.33 -25.86 137.18 250.97 74.52 10 16 12 2625.3 -29.78 110.45  
 90.00 9 22 53 3505.38 -21.74 127.01 249.59 71.46 10 51 18 2505.4 -27.42 101.43  
 100.00 11 58 39 3099.81 -25.86 98.55 250.97 74.52 12 50 19 2099.8 -29.78 71.81  
 110.00 14 8 18 2693.91 -32.70 69.55 252.77 79.58 14 53 12 1693.9 -33.65 40.85

PLANETOCENTRIC CONIC  
 TDE -.1693 TRA -.6026 TC3 -.6129 BAU .6453 SGT 1111.7 SGR 2389.3 SCS 1695.3 ORBIT DETERMINATION ACCURACY  
 RDE .2577 RRA -.0230 RC3-2.9002 FAU .42760 RRT .4197 RRF .9779 RTF .4287 CRT -.5959 CRS -.9928 CBT .5632  
 FDE 4.6999 FRA-1.2135 FC-22.7359 BSP 4063 SGB 2617.1 R23 .0742 R13 .9753 LSA 77.2 MSA 15.4 SSA 2.0  
 BDE .3083 BRA .8030 BC3 2.9643 FSP 2911 SC1 2424.2 SC2 986.2 THA 76.60 EL1 23.7 EL2 11.9 ALF 135.52

LAUNCH DATE AUG 11 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.908 GAL 2.15 AZL 87.54 HCA 143.44 SMA 198.74 ECC .23991 INC 2.4576 V1 29.387  
 RP 239.10 LAP 1.46 LOP 101.65 VP 21.031 GAP 7.49 AZP 91.97 TAL 11.13 TAP 154.56 RCA 151.06 APO 246.42 V2 22.975  
 RC 220.278 GL 20.41 GP -26.43 ZAL 67.87 ZAP 111.10 ETS 193.07 ZAE 140.83 ETE 222.13 ZAC 58.88 ETC 285.47 LVI 6.72

DISTANCE 473.793

EARTH TO MARS  
 C3 16.345 VHL 4.043 DLA 28.33 RAL 14.31 RAD 8641.2 VEL 11.678 PTH 6.71 VHP 2.538 DPA -11.80 RAP 42.71 ECC 1.2690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 0 15 3674.90 -47.58 144.70 254.80 90.00 10 1 29 2674.5 -41.99 111.30  
 60.00 9 0 8 3674.82 -39.92 144.17 254.24 83.94 10 1 22 2674.8 -38.01 113.19  
 70.00 8 59 54 3675.48 -32.33 142.76 252.78 78.35 10 1 10 2675.5 -33.84 114.13  
 80.00 8 59 15 3677.55 -24.86 140.74 250.60 72.91 10 0 32 2677.5 -29.58 114.31  
 88.28 8 45 59 3720.46 -17.77 141.15 247.86 67.57 9 48 0 2720.5 -25.48 116.76  
 100.00 11 42 7 3152.02 -24.86 102.11 250.60 72.91 12 34 39 2152.0 -29.58 75.68  
 110.00 13 59 20 2722.30 -32.33 71.68 252.78 78.35 14 44 43 1722.3 -33.84 43.04

PLANETOCENTRIC CONIC  
 TDE -.1390 TRA -.6102 TC3 -.7553 BAU .6773 SGT 1173.4 SGR 2488.8 SCS 1718.4 ORBIT DETERMINATION ACCURACY  
 RDE .3023 RRA -.0368 RC3-3.0059 FAU .43281 RRT .5043 RRF .9802 RTF .537 CRT -.5024 CRS -.9950 CBT .4728  
 FDE 4.8881 FRA-1.2878 FC-22.9135 BSP 4267 SGB 2733.4 R23 .0843 R13 .9768 LSA 80.0 MSA 15.5 SSA 1.9  
 BDE .3327 BRA .6114 BC3 3.0993 FSP 2945 SC1 2551.8 SC2 980.4 THA 74.11 EL1 24.6 EL2 13.6 ALF 123.92

LAUNCH DATE AUG 11 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC  
 RL 151.61 LAL -.00 LOL 318.19 VL 32.903 GAL 2.13 AZL 87.45 HCA 144.38 SMA 198.65 ECC .23953 INC 2.5457 V1 29.387  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.990 GAP 7.25 AZP 92.07 TAL 11.07 TAP 155.45 RCA 151.07 APO 246.23 V2 22.944  
 RC 223.209 GL 21.13 GP -27.19 ZAL 68.05 ZAP 109.49 ETS 192.49 ZAE 139.10 ETE 220.72 ZAC 58.30 ETC 285.64 LVI 7.30

DISTANCE 477.580

EARTH TO MARS  
 C3 16.420 VHL 4.052 DLA 29.01 RAL 14.05 RAD 8641.2 VEL 11.682 PTH 6.72 VHP 2.526 DPA -12.75 RAP 42.37 ECC 1.2702  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 55 30 3691.11 -47.56 146.31 255.29 88.76 9 57 1 2891.1 -42.46 112.62  
 60.00 8 53 40 3696.00 -39.75 145.95 254.48 82.74 9 55 16 2696.0 -38.36 114.88  
 70.00 8 50 6 3706.49 -31.88 145.07 252.76 77.05 9 51 53 2706.5 -33.99 116.53  
 80.00 8 37 55 3744.89 -23.44 145.23 250.03 70.95 9 40 19 2744.9 -29.14 119.27  
 83.26 8 3 42 3854.82 -18.14 151.17 247.85 66.97 9 7 57 2854.8 -26.06 126.77  
 100.00 11 20 46 3219.36 -23.44 106.60 250.03 70.95 12 14 26 2219.4 -29.14 80.64  
 110.00 13 49 33 2753.31 -31.88 73.98 252.76 77.05 14 35 26 1753.3 -33.99 45.45

PLANETOCENTRIC CONIC  
 TDE -.1000 TRA -.6132 TC3 -.8865 BAU .7124 SGT 1232.4 SGR 2578.0 SCS 1742.3 ORBIT DETERMINATION ACCURACY  
 RDE .3436 RRA -.0595 RC3-3.1218 FAU .43844 RRT .5805 RRF .9824 RTF .5912 CRT -.3596 CRS -.9965 CBT .3347  
 FDE 5.0289 FRA-1.3973 FC-23.1166 BSP 4433 SGB 2857.5 R23 .0868 R13 .9789 LSA 82.1 MSA 15.3 SSA 1.9  
 BDE .3579 BRA .6161 BC3 3.2452 FSP 2922 SC1 2690.9 SC2 961.5 THA 72.13 EL1 25.7 EL2 14.7 ALF 110.57

LAUNCH DATE AUG 11 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 11 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.899 GAL 2.12 AZL 87.36 HCA 145.33 SMA 198.57 ECC .23920 INC 2.6377 V1 29.387  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.949 GAP 7.01 AZP 92.17 TAL 11.00 TAP 156.32 RCA 151.08 APO 246.07 V2 22.912  
 RC 226.132 GL 21.86 GP -27.95 ZAL 68.25 ZAP 107.90 ETS 191.90 ZAE 137.35 ETE 219.38 ZAC 57.70 ETC 265.82 LVI 7.69

Distance 481.365

Planetocentric Conic: C3 16.507 VHL 4.063 DLA 29.71 RAL 13.79 RAD 6641.2 VEL 11.685 PTH 6.72 VHP 2.816 DPA -13.70 RAP 42.05 ECC 1.2717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 29 3708.73 -47.52 148.01 255.81 87.45 9 52 18 2708.7 -42.93 114.05  
 60.00 8 46 46 3718.68 -39.54 147.84 254.74 81.48 9 48 44 2718.7 -38.70 116.71  
 70.00 8 39 15 3740.84 -31.33 147.59 252.71 75.65 9 41 36 2740.8 -34.11 119.21  
 80.00 8 1 37 3859.68 -20.69 152.65 248.82 67.98 9 5 56 2859.7 -27.93 127.58  
 80.48 7 40 44 3926.40 -18.53 156.64 247.86 66.34 8 46 11 2926.4 -26.66 132.22  
 100.00 10 44 29 3334.15 -20.69 114.02 248.82 67.98 11 40 3 2334.2 -27.93 88.95  
 110.00 13 38 42 2787.66 -31.33 76.51 252.70 75.65 14 25 9 1787.7 -34.11 48.13

Differential Corrections: TDE -.0738 TRA -.6337 TC3-1.0610 BAU .7450 SGT 1346.4 SGR 2667.5 SG3 1749.3 ST 16.3 SR 28.7 SS 81.5  
 RDE .4020 RRA -.0669 RC3-3.2051 FAU .43859 RRT .6398 RRF .9840 RTF .6480 CRT -.2504 CRS -.9975 CST .2249  
 FDE 5.2802 FRA-1.3915 FC-23.0029 BSP 4742 SGB 2988.1 R23 .1024 R13 .9790 LSA 86.5 MSA 15.9 SSA 1.8  
 BDE .4087 BRA .6572 BC3 3.3761 FSP 3018 SG1 2823.7 SG2 977.5 THA 69.54 EL1 29.1 EL2 15.6 ALF 101.47

Mid-Course Execution Accuracy: SGT 1346.4 SGR 2667.5 SG3 1749.3  
 RRT .6398 RRF .9840 RTF .6480  
 SGB 2988.1 R23 .1024 R13 .9790  
 SG1 2823.7 SG2 977.5 THA 69.54

Orbit Determination Accuracy: ST 16.3 SR 28.7 SS 81.5  
 CRT -.2504 CRS -.9975 CST .2249  
 LSA 86.5 MSA 15.9 SSA 1.8  
 EL1 29.1 EL2 15.6 ALF 101.47

LAUNCH DATE AUG 11 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 13 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.896 GAL 2.10 AZL 87.27 HCA 146.27 SMA 198.50 ECC .23889 INC 2.7339 V1 29.387  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.910 GAP 6.77 AZP 92.27 TAL 10.92 TAP 157.19 RCA 151.08 APO 245.93 V2 22.882  
 RC 229.048 GL 22.63 GP -28.74 ZAL 68.46 ZAP 106.32 ETS 191.28 ZAE 135.80 ETE 218.09 ZAC 57.09 ETC 266.00 LVI 8.50

Distance 485.152

Planetocentric Conic: C3 16.607 VHL 4.075 DLA 30.45 RAL 13.52 RAD 6641.3 VEL 11.690 PTH 6.72 VHP 2.510 DPA -14.66 RAP 41.74 ECC 1.2733  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 11 3727.35 -47.45 149.81 256.35 86.07 9 47 19 2727.3 -43.42 115.58  
 60.00 8 39 22 3742.90 -39.28 149.84 254.99 80.14 9 41 45 2742.9 -39.03 118.88  
 70.00 8 27 5 3779.17 -30.65 150.37 252.59 74.14 9 30 4 2779.2 -34.15 122.20  
 78.22 7 22 38 3982.04 -18.92 160.96 247.88 65.69 8 29 0 2982.0 -27.29 136.54  
 78.22 7 22 38 3982.04 -18.92 160.96 247.88 65.69 8 29 0 2982.0 -27.29 136.54  
 78.22 7 22 38 3982.04 -18.92 160.96 247.88 65.69 8 29 0 2982.0 -27.29 136.54  
 110.00 13 26 31 2825.99 -30.65 79.29 252.59 74.14 14 13 37 1826.0 -34.15 51.12

Differential Corrections: TDE -.0348 TRA -.6456 TC3-1.2132 BAU .7812 SGT 1445.3 SGR 2769.8 SG3 1758.8 ST 16.1 SR 32.3 SS 83.8  
 RDE .4544 RRA -.0836 RC3-3.3025 FAU .44025 RRT .6929 RRF .9856 RTF .7006 CRT -.0771 CRS -.9982 CST .0544  
 FDE 5.4590 FRA-1.4515 FC-22.9501 BSP 4985 SGB 3124.2 R23 .1076 R13 .9801 LSA 89.8 MSA 16.0 SSA 1.7  
 BDE .4557 BRA .6510 BC3 3.3183 FSP 3030 SG1 2969.1 SG2 972.1 THA 67.59 EL1 32.3 EL2 16.0 ALF 92.91

Mid-Course Execution Accuracy: SGT 1445.3 SGR 2769.8 SG3 1758.8  
 RRT .6929 RRF .9856 RTF .7006  
 SGB 3124.2 R23 .1076 R13 .9801  
 SG1 2969.1 SG2 972.1 THA 67.59

Orbit Determination Accuracy: ST 16.1 SR 32.3 SS 83.8  
 CRT -.0771 CRS -.9982 CST .0544  
 LSA 89.8 MSA 16.0 SSA 1.7  
 EL1 32.3 EL2 16.0 ALF 92.91

LAUNCH DATE AUG 11 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 15 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.893 GAL 2.08 AZL 87.17 HCA 147.20 SMA 198.45 ECC .23862 INC 2.8348 V1 29.387  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.872 GAP 6.54 AZP 92.38 TAL 10.84 TAP 158.04 RCA 151.09 APO 245.80 V2 22.851  
 RC 231.955 GL 23.42 GP -29.53 ZAL 68.70 ZAP 104.76 ETS 190.63 ZAE 133.83 ETE 216.86 ZAC 56.48 ETC 266.18 LVI 9.12

Distance 488.938

Planetocentric Conic: C3 16.723 VHL 4.089 DLA 31.21 RAL 13.23 RAD 6641.3 VEL 11.694 PTH 6.73 VHP 2.507 DPA -15.64 RAP 41.43 ECC 1.2752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 34 3747.08 -47.34 151.70 256.92 84.61 9 42 1 2747.1 -43.90 117.23  
 60.00 8 31 23 3768.92 -38.95 151.98 255.23 78.72 9 34 11 2768.9 -39.35 120.82  
 70.00 8 13 7 3822.87 -29.80 153.49 252.39 72.48 9 16 30 2822.9 -34.11 125.61  
 76.21 7 7 2 4029.42 -19.31 164.71 247.91 64.99 8 14 11 3029.4 -27.93 140.28  
 76.21 7 7 2 4029.42 -19.31 164.71 247.91 64.99 8 14 11 3029.4 -27.93 140.28  
 76.21 7 7 2 4029.42 -19.31 164.71 247.91 64.99 8 14 11 3029.4 -27.93 140.28  
 110.00 13 12 34 2869.69 -29.80 82.40 252.39 72.48 14 0 23 1869.7 -34.11 54.53

Differential Corrections: TDE .0065 TRA -.6598 TC3-1.3896 BAU .8182 SGT 1556.6 SGR 2871.2 SG3 1782.7 ST 16.3 SR 36.1 SS 86.2  
 RDE .5111 RRA -.0995 RC3-3.3937 FAU .44039 RRT .7365 RRF .9871 RTF .1.35 CRT .1070 CRS -.9987 CST -.1271  
 FDE 5.6425 FRA-1.4980 FC-22.7985 BSP 5250 SGB 3266.0 R23 .1128 R13 .9809 LSA 93.5 MSA 16.2 SSA 1.8  
 BDE .5111 BRA .6673 BC3 3.6598 FSP 3045 SG1 3118.8 SG2 989.3 THA 65.74 EL1 36.2 EL2 16.2 ALF 86.54

Mid-Course Execution Accuracy: SGT 1556.6 SGR 2871.2 SG3 1782.7  
 RRT .7365 RRF .9871 RTF .1.35  
 SGB 3266.0 R23 .1128 R13 .9809  
 SG1 3118.8 SG2 989.3 THA 65.74

Orbit Determination Accuracy: ST 16.3 SR 36.1 SS 86.2  
 CRT .1070 CRS -.9987 CST -.1271  
 LSA 93.5 MSA 16.2 SSA 1.8  
 EL1 36.2 EL2 16.2 ALF 86.54

LAUNCH DATE AUG 11 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 17 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.890 GAL 2.06 AZL 87.06 HCA 148.14 SMA 198.39 ECC .23858 INC 2.9406 V1 29.387  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.835 GAP 6.30 AZP 92.50 TAL 10.75 TAP 158.69 RCA 151.10 APO 245.69 V2 22.821  
 RC 234.852 GL 24.25 GP -30.34 ZAL 68.95 ZAP 103.22 ETS 189.95 ZAE 132.06 ETE 215.88 ZAC 55.85 ETC 266.37 LVI 9.78

Distance 492.725

Planetocentric Conic: C3 16.855 VHL 4.105 DLA 32.01 RAL 12.94 RAD 6641.4 VEL 11.700 PTH 6.73 VHP 2.507 DPA -16.62 RAP 41.15 ECC 1.2774  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 34 3768.02 -47.19 153.70 257.50 83.08 9 38 22 2768.0 -44.39 119.01  
 60.00 8 22 43 3796.97 -38.55 154.26 255.46 77.22 9 26 0 2797.0 -39.64 123.15  
 70.00 7 56 35 3874.25 -28.69 157.07 252.05 70.62 9 1 10 2874.2 -33.92 129.81  
 74.35 6 53 3 4071.42 -19.72 168.10 247.97 64.26 8 0 54 3071.4 -28.59 143.66  
 74.35 6 53 3 4071.42 -19.72 168.10 247.97 64.26 8 0 54 3071.4 -28.59 143.66  
 74.35 6 53 3 4071.42 -19.72 168.10 247.97 64.26 8 0 54 3071.4 -28.59 143.66  
 110.00 12 56 2 2921.07 -28.69 85.99 252.05 70.62 13 44 43 1921.1 -33.92 58.53

Differential Corrections: TDE .0516 TRA -.6751 TC3-1.5253 BAU .8570 SGT 1675.8 SGR 2975.5 SG3 1783.0 ST 17.2 SR 40.1 SS 88.5  
 RDE .5701 RRA -.1169 RC3-3.4840 FAU .43981 RRT .7729 RRF .9883 RTF .7792 CRT .2896 CRS -.9990 CST -.3066  
 FDE 5.8142 FRA-1.5472 FC-22.5905 BSP 5515 SGB 3415.0 R23 .1165 R13 .9817 LSA 97.3 MSA 16.3 SSA 1.5  
 BDE .5725 BRA .6852 BC3 3.8033 FSP 3044 SG1 3275.5 SG2 966.0 THA 64.05 EL1 40.5 EL2 16.3 ALF 81.57

Mid-Course Execution Accuracy: SGT 1675.8 SGR 2975.5 SG3 1783.0  
 RRT .7729 RRF .9883 RTF .7792  
 SGB 3415.0 R23 .1165 R13 .9817  
 SG1 3275.5 SG2 966.0 THA 64.05

Orbit Determination Accuracy: ST 17.2 SR 40.1 SS 88.5  
 CRT .2896 CRS -.9990 CST -.3066  
 LSA 97.3 MSA 16.3 SSA 1.5  
 EL1 40.5 EL2 16.3 ALF 81.57



LAUNCH DATE AUG 11 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.888 GAL 2.04 AZL 86.95 HCA 149.07 SMA 198.35 ECC .23817 INC 3.0518 V1 29.387
RP 240.93 LAP 1.57 LOP 107.30 VP 20.799 GAP 6.07 AZP 92.62 TAL 10.65 TAP 199.73 RCA 151.11 APO 245.59 V2 22.792
RC 237.739 GL 23.11 6P -31.16 ZAL 69.22 ZAP 101.70 ETS 189.26 ZAE 130.30 ETE 214.54 ZAC 55.21 ETC 286.57 LVI 10.42

PLANETOCENTRIC CONIC

C3 17.005 VHL 4.124 DLA 32.83 RAL 12.63 RAD 6641.5 VEL 11.706 PTH 6.74 VHP 2.510 DPA -17.62 RAP 40.88 ECC 1.2799
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 27 8 3790.27 -46.99 155.82 258.10 81.46 9 30 18 2790.3 -44.87 120.93
60.00 8 13 15 3827.37 -38.07 156.69 255.65 75.63 9 17 2 2927.4 -39.89 125.70
70.00 7 35 48 3938.32 -27.16 161.43 251.46 68.45 8 41 26 2938.3 -33.49 134.56
72.58 6 40 11 4109.66 -20.13 171.24 248.04 63.50 7 48 40 3109.7 -29.27 146.80
72.58 6 40 11 4109.66 -20.13 171.24 248.04 63.50 7 48 40 3109.7 -29.27 146.80
72.58 6 40 11 4109.66 -20.13 171.24 248.04 63.50 7 48 40 3109.7 -29.27 146.80
110.00 12 35 14 2985.14 -27.16 90.35 251.46 66.45 13 24 59 1985.1 -33.49 63.48

DIFFERENTIAL CORRECTIONS

TDE .1007 TRA -.6812 TC3-1.6800 BAU .8967
RDE .6319 RRA -.1362 RC3-3.5687 FAU .43792
FDE 5.9749 FRA-1.6006 FC-22.2954 B8P 5793
BDE .6399 BRA .7045 BC3 3.9444 F8P 3036

MID-COURSE EXECUTION ACCURACY

SGT 1801.7 SGR 3079.6 SG3 1750.1
RRT .8035 RRF .9895 RTF .8092
SGB 3567.9 R23 .1192 R13 .9826
SG1 3436.0 SG2 961.3 THA 62.49

ORBIT DETERMINATION ACCURACY

ST 18.6 SR 44.3 SS 90.6
CRT .4537 CRS -.9993 CST -.4676
LSA 101.2 MSA 16.4 SSA 1.4
EL1 45.2 EL2 16.3 ALF 77.54

LAUNCH DATE AUG 11 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.888 GAL 2.02 AZL 86.83 HCA 150.00 SMA 198.32 ECC .23799 INC 3.1690 V1 29.387
RP 241.22 LAP 1.58 LOP 108.23 VP 20.765 GAP 5.83 AZP 92.75 TAL 10.55 TAP 180.55 RCA 151.12 APO 245.51 V2 22.763
RC 240.615 GL 26.00 GP -31.99 ZAL 69.50 ZAP 100.20 ETS 188.53 ZAE 128.53 ETE 213.43 ZAC 54.56 ETC 286.76 LVI 11.10

PLANETOCENTRIC CONIC

C3 17.174 VHL 4.144 DLA 33.70 RAL 12.31 RAD 6641.6 VEL 11.714 PTH 6.75 VHP 2.517 DPA -18.62 RAP 40.63 ECC 1.2826
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 20 14 3813.99 -46.72 158.05 258.70 79.76 9 23 48 2814.0 -45.34 123.02
60.00 8 2 48 3860.55 -37.48 159.31 255.79 73.94 9 7 9 2860.5 -40.10 128.49
70.00 7 5 7 4031.93 -24.67 167.56 250.30 65.60 8 12 19 3031.9 -32.48 141.67
70.87 6 28 8 4145.06 -20.55 174.20 248.13 62.69 7 37 13 3145.1 -29.98 149.76
70.87 6 28 8 4145.06 -20.55 174.20 248.13 62.69 7 37 13 3145.1 -29.98 149.76
70.87 6 28 8 4145.06 -20.55 174.20 248.13 62.69 7 37 13 3145.1 -29.98 149.76
110.00 12 4 34 3078.75 -24.67 96.48 250.30 65.60 12 55 53 2078.7 -32.48 70.59

DIFFERENTIAL CORRECTIONS

TDE .1534 TRA -.7093 TC3-1.8339 BAU .9372
RDE .6987 RRA -.1544 RC3-3.6489 FAU .43489
FDE 6.1367 FRA-1.6376 FC-21.9125 B8P 6079
BDE .7153 BRA .7259 BC3 4.0820 F8P 3020

MID-COURSE EXECUTION ACCURACY

SGT 1935.1 SGR 3183.6 SG3 1747.8
RRT .8281 RRF .9905 RTF .8331
SGB 3725.6 R23 .1219 R13 .9832
SG1 3600.0 SG2 959.3 THA 61.03

ORBIT DETERMINATION ACCURACY

ST 20.7 SR 48.7 SS 92.9
CRT .5830 CRS -.9994 CST -.5963
LSA 105.6 MSA 16.8 SSA 1.3
EL1 50.3 EL2 16.3 ALF 74.32

LAUNCH DATE AUG 11 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.888 GAL 2.00 AZL 86.71 HCA 150.93 SMA 198.29 ECC .23783 INC 3.2926 V1 29.387
RP 241.50 LAP 1.60 LOP 109.18 VP 20.731 GAP 5.60 AZP 92.88 TAL 10.44 TAP 161.37 RCA 151.13 APO 245.45 V2 22.734
RC 243.479 GL 26.93 GP -32.84 ZAL 69.81 ZAP 98.74 ETS 187.78 ZAE 126.77 ETE 212.35 ZAC 53.89 ETC 286.97 LVI 11.80

PLANETOCENTRIC CONIC

C3 17.368 VHL 4.167 DLA 34.59 RAL 11.97 RAD 6641.6 VEL 11.722 PTH 6.75 VHP 2.527 DPA -19.64 RAP 40.41 ECC 1.2858
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 12 47 3839.31 -46.39 160.40 259.29 77.98 9 16 46 2839.3 -45.80 125.29
60.00 7 51 10 3897.08 -36.75 162.14 255.85 72.14 8 56 7 2897.1 -40.25 131.59
69.19 6 16 43 4178.26 -20.97 177.03 248.23 61.83 7 26 21 3178.3 -30.70 152.60
69.19 6 16 43 4178.26 -20.97 177.03 248.23 61.83 7 26 21 3178.3 -30.70 152.60
69.19 6 16 43 4178.26 -20.97 177.03 248.23 61.83 7 26 21 3178.3 -30.70 152.60
69.19 6 16 43 4178.26 -20.97 177.03 248.23 61.83 7 26 21 3178.3 -30.70 152.60
69.19 6 16 43 4178.26 -20.97 177.03 248.23 61.83 7 26 21 3178.3 -30.70 152.60

DIFFERENTIAL CORRECTIONS

TDE .2106 TRA -.7284 TC3-1.9844 BAU .9794
RDE .7670 RRA -.1756 RC3-3.7226 FAU .43070
FDE 6.2748 FRA-1.6638 FC-21.4714 B8P 6372
BDE .7954 BRA .7493 BC3 4.2185 F8P 2995

MID-COURSE EXECUTION ACCURACY

SGT 2073.5 SGR 3290.0 SG3 1733.6
RRT .8493 RRF .9914 RTF .5337
SGB 3888.9 R23 .1233 R13 .9840
SG1 3769.7 SG2 955.5 THA 59.69

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 53.1 SS 94.8
CRT .6872 CRS -.9998 CST -.6960
LSA 109.9 MSA 16.7 SSA 1.2
EL1 55.7 EL2 16.2 ALF 71.52

LAUNCH DATE AUG 11 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.884 GAL 1.99 AZL 86.58 HCA 151.88 SMA 198.27 ECC .23770 INC 3.4234 V1 29.387
RP 241.78 LAP 1.61 LOP 110.09 VP 20.699 GAP 5.37 AZP 93.02 TAL 10.32 TAP 162.18 RCA 151.14 APO 245.40 V2 22.706
RC 246.330 GL 27.91 GP -33.71 ZAL 70.13 ZAP 97.31 ETS 187.01 ZAE 125.03 ETE 211.31 ZAC 53.20 ETC 287.18 LVI 12.52

PLANETOCENTRIC CONIC

C3 17.582 VHL 4.193 DLA 35.53 RAL 11.60 RAD 6641.7 VEL 11.731 PTH 6.76 VHP 2.541 DPA -20.66 RAP 40.21 ECC 1.2894
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 4 41 3866.44 -45.98 162.89 259.86 76.10 9 9 7 2866.4 -46.24 127.76
60.00 7 38 0 3937.80 -35.86 165.23 255.81 70.22 8 43 38 2937.8 -40.30 135.05
67.54 6 5 47 4209.71 -21.39 179.76 248.35 60.93 7 15 56 3209.7 -31.45 155.35
67.54 6 5 47 4209.71 -21.39 179.76 248.35 60.93 7 15 56 3209.7 -31.45 155.35
67.54 6 5 47 4209.71 -21.39 179.76 248.35 60.93 7 15 56 3209.7 -31.45 155.35
67.54 6 5 47 4209.71 -21.39 179.76 248.35 60.93 7 15 56 3209.7 -31.45 155.35
67.54 6 5 47 4209.71 -21.39 179.76 248.35 60.93 7 15 56 3209.7 -31.45 155.35

DIFFERENTIAL CORRECTIONS

TDE .2724 TRA -.7491 TC3-2.1315 BAU 1.0217
RDE .8400 RRA -.1966 RC3-3.7880 FAU .42504
FDE 6.4058 FRA-1.7188 FC-20.9289 B8P 6682
BDE .8830 BRA .7744 BC3 4.3465 F8P 2967

MID-COURSE EXECUTION ACCURACY

SGT 2217.1 SGR 3393.8 SG3 1712.8
RRT .8666 RRF .9922 RTF .8705
SGB 4053.8 R23 .1248 R13 .9846
SG1 3940.3 SG2 952.8 THA 58.42

ORBIT DETERMINATION ACCURACY

ST 26.6 SR 57.8 SS 96.7
CRT .7827 CRS -.9997 CST -.7697
LSA 114.6 MSA 16.8 SSA 1.2
EL1 61.6 EL2 16.2 ALF 69.13

LAUNCH DATE AUG 11 1973

FLIGHT TIME 228.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.883 GAL 1.95 AZL 86.44 HCA 182.78 SMA 198.26 ECC .23759 INC 3.5620 V1 29.387  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.667 GAP 5.14 AZP 93.17 TAL 10.20 TAP 162.99 RCA 151.15 APO 245.36 V2 22.679  
 RC 249.167 GL 28.92 GP -34.59 ZAL 70.47 ZAP 95.92 ETS 186.21 ZAE 123.29 ETE 210.29 ZAC 52.50 ETC 287.40 LVI 13.27

DISTANCE 511.651

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 17.826 VHL 4.222 DLA 36.50 RAL 11.21 RAD 6641.9 VEL 11.741 PTH 6.77 VHP 2.559 DPA -21.69 RAP 40.04 ECC 1.2934  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 55 51 3895.59 -45.47 168.51 260.39 74.13 9 0 46 2895.6 -46.64 130.46  
 60.00 7 22 46 3984.04 -34.74 168.64 255.60 66.13 8 29 12 2984.0 -40.22 158.99  
 65.89 5 55 12 4239.72 -21.81 182.42 248.49 59.98 7 5 52 3239.7 -32.21 158.04  
 65.89 5 55 12 4239.72 -21.81 182.42 248.49 59.98 7 5 52 3239.7 -32.21 158.04  
 65.89 5 55 12 4239.72 -21.81 182.42 248.49 59.98 7 5 52 3239.7 -32.21 158.04  
 65.89 5 55 12 4239.72 -21.81 182.42 248.49 59.98 7 5 52 3239.7 -32.21 158.04  
 65.89 5 55 12 4239.72 -21.81 182.42 248.49 59.98 7 5 52 3239.7 -32.21 158.04

DIFFERENTIAL CORRECTIONS

TDE .3387 TRA -.7713 TC3-2.2733 BAU 1.0654  
 RDE .9167 RRA -.2204 RC3-3.8495 FAU .41861  
 FDE 6.5216 FRA-1.7588 FC-20.3297 BSP 6985  
 BDE .9772 BRA .8022 BC3 4.4706 FSP 2922

MID-COURSE EXECUTION ACCURACY

SGT 2364.7 SGR 3500.3 SG3 1688.3  
 RRT .8815 RRF .9929 RTF .8849  
 SGB 4224.2 R23 .1255 R13 .9852  
 SG1 4116.1 SG2 949.7 THA 57.27

ORBIT DETERMINATION ACCURACY

ST 30.3 SR 62.6 SS 98.5  
 CRT .8180 CRS -.9997 CST -.8233  
 LSA 119.4 MSA 16.9 SSA 1.1  
 EL1 67.7 EL2 16.1 ALF 67.04

LAUNCH DATE AUG 11 1973

FLIGHT TIME 230.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.883 GAL 1.93 AZL 86.29 HCA 153.71 SMA 198.25 ECC .23751 INC 3.7093 V1 29.387  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.637 GAP 4.91 AZP 93.33 TAL 10.07 TAP 163.78 RCA 151.16 APO 245.33 V2 22.652  
 RC 251.989 GL 29.98 GP -35.49 ZAL 70.83 ZAP 94.57 ETS 185.39 ZAE 121.58 ETE 209.29 ZAC 51.77 ETC 287.62 LVI 14.04

DISTANCE 515.435

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.102 VHL 4.255 DLA 37.52 RAL 10.78 RAD 6642.0 VEL 11.753 PTH 6.78 VHP 2.580 DPA -22.74 RAP 39.91 ECC 1.2979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 46 8 3927.06 -44.84 168.29 260.86 72.07 8 51 35 2927.1 -47.00 133.41  
 60.00 7 4 41 4038.13 -33.30 172.50 255.15 65.84 8 11 59 3038.1 -39.95 143.56  
 64.24 5 44 55 4268.58 -22.23 185.02 248.64 58.97 6 56 3 3268.6 -33.00 160.70  
 64.24 5 44 55 4268.58 -22.23 185.02 248.64 58.97 6 56 3 3268.6 -33.00 160.70  
 64.24 5 44 55 4268.58 -22.23 185.02 248.64 58.97 6 56 3 3268.6 -33.00 160.70  
 64.24 5 44 55 4268.58 -22.23 185.02 248.64 58.97 6 56 3 3268.6 -33.00 160.70  
 64.24 5 44 55 4268.58 -22.23 185.02 248.64 58.97 6 56 3 3268.6 -33.00 160.70

DIFFERENTIAL CORRECTIONS

TDE .4099 TRA -.7953 TC3-2.4095 BAU 1.1095  
 RDE .9981 RRA -.2440 RC3-3.9003 FAU .41067  
 FDE 6.6245 FRA-1.7869 FC-19.6406 BSP 7292  
 BDE 1.0790 BRA .8319 BC3 4.5846 FSP 2869

MID-COURSE EXECUTION ACCURACY

SGT 2516.3 SGR 3604.6 SG3 1657.7  
 RRT .8937 RRF .9936 RTF .8966  
 SGB 4396.0 R23 .1264 R13 .9857  
 SG1 4292.6 SG2 948.0 THA 56.17

ORBIT DETERMINATION ACCURACY

ST 34.4 SR 67.7 SS 100.1  
 CRT .6581 CRS -.9998 CST -.8623  
 LSA 124.5 MSA 17.0 SSA 1.0  
 EL1 74.2 EL2 16.1 ALF 65.21

LAUNCH DATE AUG 11 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.883 GAL 1.90 AZL 86.13 HCA 154.63 SMA 198.25 ECC .23744 INC 3.8660 V1 29.387  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.608 GAP 4.68 AZP 93.49 TAL 9.94 TAP 164.57 RCA 151.10 APO 245.32 V2 22.625  
 RC 254.795 GL 31.09 GP -36.41 ZAL 71.21 ZAP 93.26 ETS 184.55 ZAE 119.88 ETE 208.31 ZAC 51.03 ETC 287.86 LVI 14.84

DISTANCE 519.218

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.413 VHL 4.291 DLA 38.58 RAL 10.32 RAD 6642.1 VEL 11.766 PTH 6.79 VHP 2.606 DPA -23.79 RAP 39.81 ECC 1.3030  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 22 3961.23 -44.09 171.23 261.24 69.91 8 41 23 2961.2 -47.29 136.66  
 60.00 6 41 49 4105.01 -31.34 177.09 254.29 63.24 7 50 14 3105.0 -39.34 149.14  
 62.59 5 34 48 4296.52 -22.65 187.60 248.79 57.90 6 46 25 3296.5 -33.80 163.33  
 62.59 5 34 48 4296.52 -22.65 187.60 248.79 57.90 6 46 25 3296.5 -33.80 163.33  
 62.59 5 34 48 4296.52 -22.65 187.60 248.79 57.90 6 46 25 3296.5 -33.80 163.33  
 62.59 5 34 48 4296.52 -22.65 187.60 248.79 57.90 6 46 25 3296.5 -33.80 163.33  
 62.59 5 34 48 4296.52 -22.65 187.60 248.79 57.90 6 46 25 3296.5 -33.80 163.33

DIFFERENTIAL CORRECTIONS

TDE .4861 TRA -.8212 TC3-2.5383 BAU 1.1544  
 RDE 1.0838 RRA -.2709 RC3-3.9432 FAU .40166  
 FDE 6.7086 FRA-1.8197 FC-18.8852 BSP 7804  
 BDE 1.1878 BRA .8647 BC3 4.6896 FSP 2807

MID-COURSE EXECUTION ACCURACY

SGT 2671.0 SGR 3709.5 SG3 1622.3  
 RRT .9043 RRF .9942 RTF .5568  
 SGB 4571.1 R23 .1269 R13 .9862  
 SG1 4472.2 SG2 945.5 THA 55.15

ORBIT DETERMINATION ACCURACY

ST 38.8 SR 72.9 SS 101.5  
 CRT .8878 CRS -.9999 CST -.8910  
 LSA 129.7 MSA 17.1 SSA 1.0  
 EL1 81.0 EL2 16.1 ALF 63.97

LAUNCH DATE AUG 11 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

RL 151.61 LAL -.00 LOL 318.19 VL 32.883 GAL 1.88 AZL 85.97 HCA 155.94 SMA 198.25 ECC .23740 INC 4.0334 V1 29.387  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.580 GAP 4.46 AZP 93.67 TAL 9.80 TAP 165.34 RCA 151.19 APO 245.32 V2 22.599  
 RC 257.584 GL 32.25 GP -37.35 ZAL 71.60 ZAP 91.99 ETS 183.68 ZAE 118.21 ETE 207.36 ZAC 50.25 ETC 288.11 LVI 15.66

DISTANCE 522.999

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.785 VHL 4.332 DLA 39.68 RAL 9.81 RAD 6642.3 VEL 11.781 PTH 6.81 VHP 2.636 DPA -24.86 RAP 39.75 ECC 1.3088  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 23 20 3990.57 -43.17 174.34 261.50 67.65 8 29 50 2990.6 -47.49 140.25  
 60.00 6 8 14 4201.04 -28.22 183.31 252.49 59.95 7 18 15 3201.0 -37.96 156.93  
 60.91 5 24 51 4323.62 -23.06 190.15 248.96 56.76 6 36 55 3323.6 -34.62 165.96  
 60.91 5 24 51 4323.62 -23.06 190.15 248.96 56.76 6 36 55 3323.6 -34.62 165.96  
 60.91 5 24 51 4323.62 -23.06 190.15 248.96 56.76 6 36 55 3323.6 -34.62 165.96  
 60.91 5 24 51 4323.62 -23.06 190.15 248.96 56.76 6 36 55 3323.6 -34.62 165.96  
 60.91 5 24 51 4323.62 -23.06 190.15 248.96 56.76 6 36 55 3323.6 -34.62 165.96

DIFFERENTIAL CORRECTIONS

TDE .5674 TRA -.8494 TC3-2.6592 BAU 1.2002  
 RDE 1.1748 RRA -.2994 RC3-3.9772 FAU .39158  
 FDE 6.7782 FRA-1.8472 FC-18.0657 BSP 7916  
 BDE 1.3046 BRA .9006 BC3 4.7843 FSP 2736

MID-COURSE EXECUTION ACCURACY

SGT 2828.7 SGR 3814.7 SG3 1582.3  
 RRT .9133 RRF .9947 RTF .9154  
 SGB 4749.1 R23 .1274 R13 .9867  
 SG1 4654.3 SG2 944.2 THA 54.19

ORBIT DETERMINATION ACCURACY

ST 43.6 SR 78.2 SS 102.8  
 CRT .9097 CRS -.9999 CST -.9121  
 LSA 135.2 MSA 17.1 SSA .9  
 EL1 88.1 EL2 16.1 ALF 62.12

LAUNCH DATE AUG 11 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC DISTANCE 526.780 EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 32.884 GAL 1.85 AZL 85.79 HCA 156.46 SMA 198.28 ECC .23738 INC 4.2126 V1 29.387

RP 243.12 LAP 1.68 LOP 114.70 VP 20.552 GAP 4.23 AZP 93.86 TAL 9.68 TAP 166.12 RCA 151.20 APO 245.33 V2 22.573

RC 260.356 GL 33.47 GP -38.32 ZAL 72.02 ZAP 90.78 ETS 182.80 ZAE 116.56 ETE 206.41 ZAC 49.46 ETC 288.37 LVI 16.52

PLANETOCENTRIC CONIC

C3 19.164 VML 4.378 DLA 40.84 RAL 9.26 RAD 6642.5 VEL 11.797 PTH 6.82 VHP 2.671 DPA -25.93 RAP 39.73 ECC 1.3154

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 7 9 42 4039.78 -42.04 177.67 261.58 65.29 8 17 2 3039.8 -47.58 144.23

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

59.22 5 14 57 4350.18 -23.46 192.70 249.14 55.56 6 27 27 3350.2 -35.45 168.62

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .6550 TRA -.8791 TC3-2.7687 BAU 1.2463 SGT 2987.2 SGR 3918.8 SG3 1536.9 ST 48.7 SR 83.8 SS 103.8

RDE 1.2714 RRA -.3288 RC3-3.9999 FAU .38028 RRT .9209 RRF .9952 RTF .9226 CRT .9264 CRS -.9999 CST -.9282

FDE 6.8249 FRA-1.8655 FC-17.1792 BSP 8242 SGB 4927.5 R23 .1277 R13 .9871 LSA 141.0 HSA 17.2 S8A .8

BDE 1.4302 BRA .9386 BC3 4.8647 FSP 2661 SG1 4836.4 SG2 943.3 THA 53.31 EL1 95.6 EL2 16.1 ALF 60.80

LAUNCH DATE AUG 11 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC DISTANCE 530.560 EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 32.884 GAL 1.82 AZL 85.59 HCA 157.37 SMA 198.28 ECC .23738 INC 4.4050 V1 29.387

RP 243.37 LAP 1.69 LOP 115.62 VP 20.526 GAP 4.01 AZP 94.07 TAL 9.51 TAP 166.38 RCA 151.21 APO 245.35 V2 22.548

RC 263.112 GL 34.75 GP -39.31 ZAL 72.46 ZAP 89.62 ETS 181.89 ZAE 114.94 ETE 205.49 ZAC 48.63 ETC 288.65 LVI 17.40

PLANETOCENTRIC CONIC

C3 19.617 VML 4.429 DLA 42.04 RAL 8.64 RAD 6642.7 VEL 11.817 PTH 6.84 VHP 2.711 DPA -27.02 RAP 39.76 ECC 1.3228

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 6 54 1 4085.86 -40.67 181.23 261.41 62.80 8 2 7 3085.9 -47.49 148.69

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

57.49 5 5 3 4376.25 -23.84 195.24 249.32 54.28 6 17 59 3376.2 -36.29 171.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .7478 TRA -.9116 TC3-2.8669 BAU 1.2930 SGT 3147.5 SGR 4022.2 SG3 1486.7 ST 54.1 SR 89.4 SS 104.5

RDE 1.3726 RRA -.3642 RC3-4.0108 FAU .36783 RRT .9280 RRF .9956 RTF .9292 CRT .9393 CRS -.9999 CST -.9406

FDE 6.8480 FRA-1.8931 FC-16.2330 BSP 8565 SGB 5107.3 R23 .1275 R13 .9875 LSA 146.8 HSA 17.3 S8A .8

BDE 1.5631 BRA .9817 BC3 4.9301 FSP 2575 SG1 5020.1 SG2 939.8 THA 52.47 EL1 103.3 EL2 16.1 ALF 59.61

LAUNCH DATE AUG 11 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC DISTANCE 534.338 EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 32.886 GAL 1.79 AZL 85.39 HCA 158.28 SMA 198.30 ECC .23740 INC 4.6122 V1 29.387

RP 243.82 LAP 1.71 LOP 116.53 VP 20.501 GAP 3.79 AZP 94.29 TAL 9.35 TAP 167.64 RCA 151.23 APO 245.38 V2 22.523

RC 265.850 GL 36.09 GP -40.33 ZAL 72.92 ZAP 88.51 ETS 180.96 ZAE 113.35 ETE 204.58 ZAC 47.77 ETC 288.94 LVI 18.33

PLANETOCENTRIC CONIC

C3 20.133 VML 4.467 DLA 43.29 RAL 7.98 RAD 6642.9 VEL 11.838 PTH 6.86 VHP 2.757 DPA -28.12 RAP 39.84 ECC 1.3313

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 6 35 33 4138.46 -38.96 185.11 260.87 60.18 7 44 31 3138.5 -47.16 153.73

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

55.74 4 55 6 4401.95 -24.19 197.81 249.49 52.93 6 8 28 3402.0 -37.14 174.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .8486 TRA -.9470 TC3-2.9536 BAU 1.3413 SGT 3309.7 SGR 4128.1 SG3 1432.9 ST 59.7 SR 93.3 SS 105.0

RDE 1.4814 RRA -.3996 RC3-4.0133 FAU .35489 RRT .9336 RRF .9960 RTF .9345 CRT .9490 CRS -.9999 CST -.9499

FDE 6.8498 FRA-1.8080 FC-15.2518 BSP 8875 SGB 5291.1 R23 .1277 R13 .9878 LSA 152.8 HSA 17.4 S8A .7

BDE 1.7043 BRA 1.0278 BC3 4.9830 FSP 2478 SG1 5206.9 SG2 940.1 THA 51.71 EL1 111.3 EL2 16.1 ALF 58.58

LAUNCH DATE AUG 11 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC DISTANCE 538.115 EARTH TO MARS

RL 151.61 LAL -.00 LOL 318.19 VL 32.887 GAL 1.76 AZL 85.16 HCA 159.19 SMA 198.33 ECC .23743 INC 4.8364 V1 29.387

RP 243.88 LAP 1.72 LOP 117.45 VP 20.476 GAP 3.56 AZP 94.52 TAL 9.19 TAP 168.38 RCA 151.24 APO 245.42 V2 22.499

RC 268.970 GL 37.50 GP -41.38 ZAL 73.40 ZAP 87.46 ETS 180.02 ZAE 111.80 ETE 203.68 ZAC 46.88 ETC 289.26 LVI 19.28

PLANETOCENTRIC CONIC

C3 20.724 VML 4.522 DLA 44.60 RAL 7.19 RAD 6643.2 VEL 11.863 PTH 6.88 VHP 2.809 DPA -29.23 RAP 39.98 ECC 1.3411

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 6 12 58 4200.62 -36.77 189.43 259.79 57.36 7 22 57 3200.6 -46.47 159.57

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

53.95 4 45 0 4427.54 -24.52 200.40 249.66 51.49 5 58 48 3427.5 -37.99 176.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .9525 TRA -.9844 TC3-3.0234 BAU 1.3890 SGT 3470.3 SGR 4231.5 SG3 1373.9 ST 65.5 SR 101.4 SS 105.1

RDE 1.5978 RRA -.4396 RC3-3.9992 FAU .34020 RRT .9388 RRF .9963 RTF .9393 CRT .9568 CRS -1.0000 CST -.9574

FDE 6.8295 FRA-1.9217 FC-14.2117 BSP 9225 SGB 5472.6 R23 .1276 R13 .9882 LSA 159.1 HSA 17.4 S8A .7

BDE 1.8601 BRA 1.0781 BC3 5.0135 FSP 2384 SG1 5391.6 SG2 938.1 THA 51.00 EL1 119.6 EL2 16.1 ALF 57.61

LAUNCH DATE AUG 11 1973 FLIGHT TIME 244.00 ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC DISTANCE 541.891 EARTH TO MARS
RL 151.81 LAL -.00 LOL 318.19 VL 32.888 GAL 1.73 AZL 84.92 HCA 160.10 SMA 198.36 ECC .23748 INC 5.0794 V1 29.387
RP 244.10 LAP 1.73 LOP 118.36 VP 20.453 GAP 3.34 AZP 94.78 TAL 9.03 TAP 169.13 RCA 151.25 APO 245.47 V2 22.475
RC 271.273 GL 38.99 GP -42.47 ZAL 73.90 ZAP 86.48 E78 179.06 ZAE 110.28 ETE 202.79 ZAC 45.95 ETC 289.60 LVI 20.28

PLANETOCENTRIC CONIC
C3 21.401 VHL 4.626 DLA 45.97 RAL 6.33 RAD 6643.5 VEL 11.891 PTH 6.90 VHP 2.867 DPA -30.36 RAP 40.17 ECC 1.3522
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 43 3 4279.73 -33.74 194.56 257.75 54.21 6 54 23 3279.7 -45.14 166.73
52.12 4 34 42 4453.04 -24.81 203.01 249.80 49.97 5 48 55 3453.0 -38.83 179.72
52.12 4 34 42 4453.04 -24.81 203.01 249.80 49.97 5 48 55 3453.0 -38.83 179.72
52.12 4 34 42 4453.04 -24.81 203.01 249.80 49.97 5 48 55 3453.0 -38.83 179.72
52.12 4 34 42 4453.04 -24.81 203.01 249.80 49.97 5 48 55 3453.0 -38.83 179.72
52.12 4 34 42 4453.04 -24.81 203.01 249.80 49.97 5 48 55 3453.0 -38.83 179.72

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.0640 TRA-1.0258 TC3-3.0780 BAU 1.4376 SGT 3631.5 SGR 4334.5 SG3 1310.5 ST 71.5 SR 107.5 SS 104.9
RDE 1.7207 RRA -.4840 RC3-3.9715 FAU .32476 RRT .9434 RRF .9966 RTF .9435 CRT .9629 CRS-1.0000 CST -.9632
FDE 6.7781 FRA-1.9324 FC-15.1370 BSP 9547 SGB 5854.7 R23 .1275 R13 .9885 LSA 165.4 MSA 17.5 S8A .6
BDE 2.0231 BRA 1.1342 BC3 5.0247 FSP 2275 SG1 5576.7 SG2 936.3 THA 30.34 EL1 128.1 EL2 16.2 ALF 56.76

LAUNCH DATE AUG 11 1973 FLIGHT TIME 246.00 ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC DISTANCE 545.666 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.890 GAL 1.70 AZL 84.66 HCA 161.00 SMA 198.39 ECC .23755 INC 5.3441 V1 29.387
RP 244.34 LAP 1.74 LOP 119.27 VP 20.430 GAP 3.12 AZP 95.05 TAL 8.86 TAP 169.86 RCA 151.27 APO 245.92 V2 22.452
RC 273.957 GL 40.55 GP -43.59 ZAL 74.42 ZAP 85.56 E78 178.09 ZAE 108.81 ETE 201.92 ZAC 44.98 ETC 289.97 LVI 21.32

PLANETOCENTRIC CONIC
C3 22.183 VHL 4.710 DLA 47.39 RAL 5.35 RAD 6643.8 VEL 11.924 PTH 6.93 VHP 2.934 DPA -31.51 RAP 40.43 ECC 1.3651
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 49 15 4416.06 -28.01 202.51 252.78 49.83 6 2 51 3416.1 -41.78 178.10
50.24 4 24 8 4478.61 -25.04 205.67 249.91 48.35 5 38 46 3478.6 -39.65 182.71
50.24 4 24 8 4478.61 -25.04 205.67 249.91 48.35 5 38 46 3478.6 -39.65 182.71
50.24 4 24 8 4478.61 -25.04 205.67 249.91 48.35 5 38 46 3478.6 -39.65 182.71
50.24 4 24 8 4478.61 -25.04 205.67 249.91 48.35 5 38 46 3478.6 -39.65 182.71
50.24 4 24 8 4478.61 -25.04 205.67 249.91 48.35 5 38 46 3478.6 -39.65 182.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.1808 TRA-1.0718 TC3-3.1172 BAU 1.4885 SGT 3794.0 SGR 4441.1 SG3 1244.2 ST 77.5 SR 113.7 SS 104.2
RDE 1.8518 RRA -.5336 RC3-3.9335 FAU .30879 RRT .9473 RRF .9969 RTF .9471 CRT .9676 CRS-1.0000 CST -.9677
FDE 6.6968 FRA-1.9390 FC-12.0510 BSP 9844 SGB 5841.0 R23 .1274 R13 .9887 LSA 171.7 MSA 17.6 S8A .6
BDE 2.1962 BRA 1.1973 BC3 5.0189 FSP 2152 SG1 5765.6 SG2 935.9 THA 49.74 EL1 136.6 EL2 16.3 ALF 56.03

LAUNCH DATE AUG 11 1973 FLIGHT TIME 248.00 ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC DISTANCE 549.438 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.892 GAL 1.66 AZL 84.37 HCA 161.91 SMA 198.43 ECC .23764 INC 5.6337 V1 29.387
RP 244.56 LAP 1.75 LOP 120.17 VP 20.409 GAP 2.90 AZP 95.36 TAL 8.69 TAP 170.59 RCA 151.28 APO 245.59 V2 22.430
RC 276.623 GL 42.20 GP -44.74 ZAL 74.97 ZAP 84.72 E78 177.11 ZAE 107.37 ETE 201.05 ZAC 43.97 ETC 290.36 LVI 22.41

PLANETOCENTRIC CONIC
C3 23.089 VHL 4.805 DLA 48.87 RAL 4.24 RAD 6644.2 VEL 11.961 PTH 6.96 VHP 3.009 DPA -32.67 RAP 40.75 ECC 1.3800
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81
48.32 4 13 10 4504.41 -25.22 208.37 249.97 46.64 5 28 14 3504.4 -40.44 185.81

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.3038 TRA-1.1216 TC3-3.1391 BAU 1.5388 SGT 3953.3 SGR 4944.7 SG3 1173.3 ST 83.6 SR 120.0 SS 103.1
RDE 1.9926 RRA -.5899 RC3-3.8747 FAU .29151 RRT .9511 RRF .9971 RTF .9504 CRT .9715 CRS-1.0000 CST -.9713
FDE 6.5831 FRA-1.9439 FC-10.9303 BSP 10184 SGB 6023.5 R23 .1272 R13 .9890 LSA 178.1 MSA 17.6 S8A .5
BDE 2.3812 BRA 1.2673 BC3 4.9842 FSP 2036 SG1 5950.8 SG2 933.0 THA 49.18 EL1 145.3 EL2 16.4 ALF 53.40

LAUNCH DATE AUG 11 1973 FLIGHT TIME 250.00 ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC DISTANCE 553.209 EARTH TO MARS
RL 151.61 LAL -.00 LOL 318.19 VL 32.895 GAL 1.63 AZL 84.05 HCA 162.81 SMA 198.48 ECC .23774 INC 5.9521 V1 29.387
RP 244.70 LAP 1.76 LOP 121.08 VP 20.388 GAP 2.69 AZP 95.89 TAL 8.51 TAP 171.32 RCA 151.29 APO 245.86 V2 22.407
RC 279.288 GL 43.94 GP -45.94 ZAL 75.54 ZAP 83.95 E78 176.12 ZAE 105.99 ETE 200.21 ZAC 42.91 ETC 290.80 LVI 23.33

PLANETOCENTRIC CONIC
C3 24.146 VHL 4.914 DLA 50.41 RAL 2.97 RAD 6644.6 VEL 12.003 PTH 7.00 VHP 3.094 DPA -33.84 RAP 41.15 ECC 1.3974
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06
46.36 4 1 40 4530.64 -25.32 211.12 249.95 44.83 5 17 11 3530.6 -41.19 189.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.4326 TRA-1.1752 TC3-3.1311 BAU 1.5894 SGT 4108.8 SGR 4648.4 SG3 1098.9 ST 89.7 SR 126.3 SS 101.4
RDE 2.1426 RRA -.6517 RC3-3.7997 FAU .27349 RRT .9544 RRF .9973 RTF .9532 CRT .9745 CRS-1.0000 CST -.9742
FDE 6.4367 FRA-1.9383 FC3-9.8056 BSP 10520 SGB 6204.0 R23 .1270 R13 .9892 LSA 184.3 MSA 17.7 S8A .5
BDE 2.5774 BRA 1.3438 BC3 4.9235 FSP 1910 SG1 6133.9 SG2 929.9 THA 48.69 EL1 154.0 EL2 16.5 ALF 54.87

LAUNCH DATE AUG 11 1973 FLIGHT TIME 252.00 ARRIVAL DATE APR 20 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.897 GAL 1.60 AZL 83.70 HCA 183.70 SMA 198.52 ECC .23783 INC 6.3038 V1 29.387  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.368 GAP 2.47 AZP 96.05 TAL 8.33 TAP 172.03 RCA 151.31 APO 245.74 V2 22.388  
 RC 281.893 GL 45.78 GP -47.17 ZAL 76.13 ZAP 83.26 ETS 175.13 ZAE 304.65 ETE 199.37 ZAC 41.81 ETC 291.28 LVI 24.71

Planetary Centric Conic: C3 25.387 VHL 5.039 DLA 52.01 RAL 1.50 RAD 8645.2 VEL 12.056 PTH 7.04 VHP 3.191 DPA -35.04 RAP 41.63 ECC 1.4178  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44  
 44.35 3 49 35 4557.39 -25.32 213.92 249.83 42.92 5 5 32 3557.4 -41.86 192.44

Differential Corrections: TDE 1.5636 TRA-1.2357 TC3-3.1077 BAU 1.6426 SGT 4263.7 SGR 4754.8 SG3 1021.9 ST 95.4 SR 132.5 SS 99.1  
 RDE 2.3020 RRA -0.7217 RC3-3.7102 FAU .25494 RRT .9572 RRF .9975 RTF .9556 CRT .9768 CRS-1.0000 CST -.9762  
 FDE 6.2483 FRA-1.9261 FC3-6.6938 BSP 10636 SGB 6386.3 R23 .1270 R13 .9894 LSA 190.2 MSA 17.9 SSA .4  
 BDE 2.7828 BRA 1.4310 BC3 4.8398 FSP 1777 SG1 6318.7 SG2 928.3 THA 48.25 EL1 162.4 EL2 16.7 ALF 54.46

LAUNCH DATE AUG 11 1973 FLIGHT TIME 254.00 ARRIVAL DATE APR 22 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.900 GAL 1.56 AZL 83.31 HCA 164.60 SMA 198.58 ECC .23798 INC 6.6946 V1 29.387  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.349 GAP 2.25 AZP 96.46 TAL 8.15 TAP 172.75 RCA 151.32 APO 245.83 V2 22.365  
 RC 284.497 GL 47.72 GP -48.45 ZAL 76.74 ZAP 82.65 ETS 174.14 ZAE 103.37 ETE 198.56 ZAC 40.66 ETC 291.81 LVI 25.94

Planetary Centric Conic: C3 26.856 VHL 5.182 DLA 53.66 RAL 359.80 RAD 8645.8 VEL 12.117 PTH 7.09 VHP 3.302 DPA -36.24 RAP 42.20 ECC 1.4420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99  
 42.29 3 36 40 4584.94 -25.20 216.77 249.56 40.92 4 53 5 3584.9 -42.45 195.99

Differential Corrections: TDE 1.6983 TRA-1.3022 TC3-3.0601 BAU 1.6971 SGT 4413.5 SGR 4883.1 SG3 942.4 ST 100.7 SR 138.5 SS 96.2  
 RDE 2.4709 RRA -1.8030 RC3-3.6027 FAU .23573 RRT .9601 RRF .9976 RTF .9579 CRT .9785 CRS-1.0000 CST -.9777  
 FDE 6.0159 FRA-1.9100 FC3-7.5992 BSP 11158 SGB 6587.3 R23 .1267 R13 .9895 LSA 195.6 MSA 18.0 SSA .4  
 BDE 2.9971 BRA 1.5299 BC3 4.7269 FSP 1639 SG1 6502.0 SG2 923.7 THA 47.89 EL1 170.4 EL2 16.9 ALF 54.17

LAUNCH DATE AUG 11 1973 FLIGHT TIME 256.00 ARRIVAL DATE APR 24 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.902 GAL 1.53 AZL 82.87 HCA 165.49 SMA 198.63 ECC .23812 INC 7.1318 V1 29.387  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.331 GAP 2.04 AZP 96.91 TAL 7.96 TAP 173.46 RCA 151.33 APO 245.93 V2 22.344  
 RC 287.079 GL 49.77 GP -49.78 ZAL 77.38 ZAP 82.12 ETS 173.16 ZAE 102.15 ETE 197.76 ZAC 39.46 ETC 292.40 LVI 27.21

Planetary Centric Conic: C3 28.608 VHL 5.349 DLA 55.38 RAL 357.81 RAD 8646.5 VEL 12.188 PTH 7.15 VHP 3.429 DPA -37.47 RAP 42.86 ECC 1.4708  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70  
 40.20 3 22 47 4613.41 -24.95 219.65 249.08 38.83 4 39 40 3613.4 -42.91 199.70

Differential Corrections: TDE 1.8220 TRA-1.3785 TC3-2.9901 BAU 1.7604 SGT 4559.5 SGR 4991.4 SG3 883.8 ST 103.2 SR 143.4 SS 91.9  
 RDE 2.6318 RRA -0.9122 RC3-3.4991 FAU .21754 RRT .9641 RRF .9978 RTF .9517 CRT .9803 CRS-1.0000 CST -.9792  
 FDE 5.7002 FRA-1.9188 FC3-6.5833 BSP 11318 SGB 6760.4 R23 .1224 R13 .9902 LSA 199.4 MSA 17.9 SSA .4  
 BDE 3.2010 BRA 1.6330 BC3 4.6026 FSP 1462 SG1 6700.0 SG2 902.1 THA 47.68 EL1 177.1 EL2 16.8 ALF 53.91

LAUNCH DATE AUG 11 1973 FLIGHT TIME 258.00 ARRIVAL DATE APR 26 1974

Heliocentric Conic: RL 151.61 LAL -0.00 LOL 318.19 VL 32.905 GAL 1.49 AZL 82.38 HCA 166.39 SMA 198.68 ECC .23828 INC 7.6240 V1 29.387  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.314 GAP 1.82 AZP 97.41 TAL 7.77 TAP 174.16 RCA 151.34 APO 246.03 V2 22.324  
 RC 289.637 GL 51.94 GP -51.15 ZAL 78.05 ZAP 81.70 ETS 172.22 ZAE 100.99 ETE 197.00 ZAC 38.21 ETC 293.05 LVI 28.54

Planetary Centric Conic: C3 30.720 VHL 5.543 DLA 57.10 RAL 355.47 RAD 8647.3 VEL 12.274 PTH 7.21 VHP 3.575 DPA -38.70 RAP 43.62 ECC 1.5056  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57  
 38.08 3 7 38 4643.16 -24.52 222.57 248.32 36.66 4 25 1 3643.2 -43.21 203.57

Differential Corrections: TDE 1.9424 TRA-1.4620 TC3-2.8948 BAU 1.8179 SGT 4698.0 SGR 5101.1 SG3 779.5 ST 108.8 SR 148.8 SS 87.5  
 RDE 2.8211 RRA -1.0159 RC3-3.3486 FAU .19678 RRT .9659 RRF .9978 RTF .9625 CRT .9805 CRS-1.0000 CST -.9791  
 FDE 5.3807 FRA-1.8694 FC3-5.5456 BSP 11675 SGB 6934.8 R23 .1241 R13 .9901 LSA 203.2 MSA 18.3 SSA .3  
 BDE 3.4251 BRA 1.7803 BC3 4.4264 FSP 1330 SG1 6875.8 SG2 903.0 THA 47.44 EL1 183.5 EL2 17.3 ALF 53.98

LAUNCH DATE AUG 11 1973 FLIGHT TIME 260.00 ARRIVAL DATE APR 28 1974

Heliocentric Conic: RL 151.81 LAL -0.00 LOL 318.19 VL 32.908 GAL 1.46 AZL 81.82 HCA 167.27 SMA 198.75 ECC .23845 INC 8.1029 V1 29.387  
 RP 245.83 LAP 1.80 LOP 125.89 VP 20.297 GAP 1.61 AZP 97.98 TAL 7.58 TAP 174.85 RCA 151.36 APO 246.14 V2 22.305  
 RC 292.172 GL 84.24 GP -32.56 ZAL 78.73 ZAP 81.37 ETS 171.30 ZAE 99.91 ETE 196.27 ZAC 36.91 ETC 293.78 LVI 29.92

Planetocentric Conic: CS 33.293 VHL 5.770 DLA 58.87 RAL 352.69 RAD 6648.3 VEL 12.378 PTH 7.29 VHP 3.744 DPA -39.94 RAP 44.50 ECC 1.5479  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57  
 35.95 2 50 56 4674.35 -23.90 225.49 247.18 34.43 4 8 51 3674.4 -43.31 207.57

Differential Corrections: TDE 2.0446 TRA-1.5543 TC3-2.7720 BAU 1.8779 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 3.0113 RRA-1.1387 RC3-3.1806 FAU .17576 SGT 4823.6 SGR 5215.1 SG3 694.2 ST 111.1 SR 153.2 SS 82.1  
 FDE 4.9987 FRA-1.8109 FC3-4.5703 B8P 12034 RRT .9676 RRF .9978 RTF .9633 CRT .9802 CR8-1.0000 CST -.9784  
 BDE 3.6398 BRA 1.9267 BC3 4.2191 F8P 1191 SGB 7103.8 R23 .1256 R13 .9899 LSA 205.4 MSA 18.8 SSA .3  
 SG1 7046.5 SG2 900.8 THA 47.31 EL1 188.3 EL2 17.9 ALF 54.23

LAUNCH DATE AUG 11 1973 FLIGHT TIME 262.00 ARRIVAL DATE APR 30 1974

Heliocentric Conic: RL 151.81 LAL -0.00 LOL 318.19 VL 32.912 GAL 1.42 AZL 81.18 HCA 168.16 SMA 198.81 ECC .23863 INC 8.8230 V1 29.387  
 RP 246.02 LAP 1.80 LOP 126.48 VP 20.282 GAP 1.39 AZP 98.64 TAL 7.38 TAP 175.34 RCA 151.37 APO 246.25 V2 22.286  
 RC 294.682 GL 56.68 GP -54.01 ZAL 79.44 ZAP 81.14 ETS 170.44 ZAE 98.91 ETE 195.59 ZAC 35.56 ETC 294.61 LVI 31.35

Planetocentric Conic: CS 36.470 VHL 6.039 DLA 60.65 RAL 349.37 RAD 6649.4 VEL 12.504 PTH 7.39 VHP 3.942 DPA -41.18 RAP 45.50 ECC 1.6002  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66  
 33.82 2 32 17 4707.38 -23.04 228.38 245.54 32.19 3 50 44 3707.4 -43.15 211.66

Differential Corrections: TDE 2.1075 TRA-1.6627 TC3-2.6290 BAU 1.9450 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 3.1934 RRA-1.2883 RC3-3.0002 FAU .15481 SGT 4943.3 SGR 5341.1 SG3 609.3 ST 111.1 SR 156.1 SS 75.6  
 FDE 4.5508 FRA-1.7437 FC3-3.6748 B8P 12333 RRT .9691 RRF .9977 RTF .9635 CRT .9785 CR8 -.9999 CST -.9760  
 BDE 3.8261 BRA 2.1033 BC3 3.9891 F8P 1045 SGB 7277.6 R23 .1282 R13 .9896 LSA 205.1 MSA 19.6 SSA .3  
 SG1 7221.6 SG2 901.2 THA 47.29 EL1 190.7 EL2 18.8 ALF 54.75

LAUNCH DATE AUG 11 1973 FLIGHT TIME 314.00 ARRIVAL DATE JUN 21 1974

Heliocentric Conic: RL 151.81 LAL -0.00 LOL 318.19 VL 33.031 GAL .05 AZL 99.25 HCA 191.40 SMA 201.18 ECC .24638 INC 9.2532 V1 29.387  
 RP 249.07 LAP 1.82 LOP 149.44 VP 20.150 GAP -3.75 AZP 80.93 TAL .26 TAP 191.66 RCA 151.81 APO 250.75 V2 21.988  
 RC 350.392 GL -58.68 GP 51.01 ZAL 87.05 ZAP 88.30 ETS 212.05 ZAE 80.91 ETE 193.15 ZAC 136.67 ETC 290.77 LVI -70.31

Planetocentric Conic: CS 38.654 VHL 6.217 DLA -40.10 RAL 59.94 RAD 6650.2 VEL 12.591 PTH 7.45 VHP 4.224 DPA 52.91 RAP 351.33 ECC 1.8381  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 17 20 40 2404.89 -2.64 62.41 292.65 137.52 18 0 45 1404.9 15.63 46.43  
 60.00 20 11 7 1947.30 13.04 36.15 307.21 128.48 20 43 35 947.5 27.43 15.51  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21  
 60.30 20 39 54 1866.32 16.20 31.80 309.74 127.19 21 11 0 866.3 29.88 10.21

Differential Corrections: TDE-6.8029 TRA 2.6028 TC3-4.6827 BAU 2.6805 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 2.9693 RRA-1.9904 RC3 2.2312 FAU .13215 SGT 8986.8 SGR 4950.4 SG3 489.8 ST 308.0 SR 141.3 SS 86.8  
 FDE-3.2218 FRA 2.5911 FC3-2.9598 B8P 17285 RRT -.9824 RRF -.9956 RTF .5779 CRT -.9931 CR8 .9986 CST -.9884  
 BDE 7.2399 BRA 3.2523 BC3 5.1870 F8P 778 SGB10073.2 R23 .2028 R13 -.9763 LSA 343.3 MSA 14.7 SSA .3  
 SG110044.4 SG2 780.9 THA 153.39 EL1 338.6 EL2 12.7 ALF 155.42

LAUNCH DATE AUG 11 1973 FLIGHT TIME 316.00 ARRIVAL DATE JUN 23 1974

Heliocentric Conic: RL 151.81 LAL -0.00 LOL 318.19 VL 33.036 GAL -0.00 AZL 98.58 HCA 192.26 SMA 201.20 ECC .24679 INC 8.5814 V1 29.387  
 RP 249.11 LAP 1.82 LOP 150.32 VP 20.154 GAP -3.95 AZP 81.61 TAL 359.98 TAP 192.24 RCA 151.81 APO 250.96 V2 21.984  
 RC 352.122 GL -56.25 GP 49.12 ZAL 87.21 ZAP 86.75 ETS 212.24 ZAE 79.63 ETE 193.88 ZAC 134.91 ETC 290.10 LVI -68.72

Planetocentric Conic: CS 35.149 VHL 5.929 DLA -37.71 RAL 59.19 RAD 6648.9 VEL 12.452 PTH 7.35 VHP 4.041 DPA 51.37 RAP 353.13 ECC 1.8785  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.00 16 56 20 2431.34 -4.96 84.36 288.70 137.38 17 37 12 1451.3 13.38 48.51  
 80.00 18 58 48 2124.70 5.38 44.87 298.54 130.00 19 34 12 1124.7 20.92 25.86  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51  
 83.94 20 54 22 1792.28 16.29 25.71 306.96 124.49 21 24 14 792.3 28.94 3.51

Differential Corrections: TDE-6.1830 TRA 2.5829 TC3-4.9373 BAU 2.5002 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 2.5300 RRA-1.8772 RC3 1.9831 FAU .12360 SGT 8940.6 SGR 4094.6 SG3 513.2 ST 302.6 SR 127.0 SS 56.7  
 FDE-3.1883 FRA 2.9369 FC3-3.0444 B8P 20420 RRT -.9728 RRF -.9951 RTF .9557 CRT -.9931 CR8 .9980 CST -.9837  
 BDE 6.6806 BRA 3.1930 BC3 5.3206 F8P 1253 SGB 8833.8 R23 .2443 R13 -.9662 LSA 332.7 MSA 16.4 SSA .3  
 SG1 9795.4 SG2 866.2 THA 155.78 EL1 327.9 EL2 13.7 ALF 157.32

LAUNCH DATE AUG 11 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC

RL 151.61 LAL	-.00 LOL 318.19 VL	33.042 GAL	-.06 AZL	98.00 HCA	193.13 SMA	201.40 ECC	.24720 INC	7.9969 V1	29.387	
RP 249.14 LAP	1.81 LOP 151.19 VP	20.160 GAP	-4.14 AZP	82.21 TAL	359.70 TAP	192.83 RCA	151.61 APO	251.18 V2	21.981	
RC 353.817 GL	-33.96 GP	47.28 ZAL	87.42 ZAP	65.26 ETS	212.34 ZAE	78.36 ETE	194.45 ZAC	133.18 ETC	289.50 LVI	-67.12

PLANETOCENTRIC CONIC

C3 32.317 VHL	5.685 DLA	-35.44 RAL	58.58 RAD	6647.9 VEL	12.338 PTH	7.26 VHP	3.889 DPA	49.87 RAP	354.82 ECC	1.5319
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	16 36 26	2491.64	-6.98	66.06	285.58	137.18	17 17 58	1491.6	11.39	50.28
60.00	18 21 46	2211.07	1.59	49.02	293.76	130.27	18 58 37	1211.1	17.35	30.53
67.69	21 11 55	1711.99	16.19	19.17	304.49	121.97	21 40 27	712.0	27.88	356.50
67.69	21 11 55	1711.99	16.19	19.17	304.49	121.97	21 40 27	712.0	27.88	356.50
67.69	21 11 55	1711.99	16.19	19.17	304.49	121.97	21 40 27	712.0	27.88	356.50
67.69	21 11 55	1711.99	16.19	19.17	304.49	121.97	21 40 27	712.0	27.88	356.50
67.69	21 11 55	1711.99	16.19	19.17	304.49	121.97	21 40 27	712.0	27.88	356.50

DIFFERENTIAL CORRECTIONS

TDE-5.9074 TRA 2.5192 TC3-5.6279 BAU 2.6311  
 RDE 2.3025 RRA-1.7491 RC3 2.3282 FAU .15689  
 FDE-3.3373 FRA 3.1453 FC3-4.2029 BSP 17930  
 BDE 6.3403 BRA 3.0869 BC3 6.0897 FSP 1020

MID-COURSE EXECUTION ACCURACY

SGT 9279.3 SGR 4130.6 SG3 606.6  
 RRT -.9779 RRF -.9953 RTF .9629  
 SGB10157.2 R23 .2237 R13 -.9711  
 SG110126.3 SG2 790.9 THA 156.32

ORBIT DETERMINATION ACCURACY

ST 301.5 SR 120.5 SS 59.9  
 CRT -.9932 CRS .9981 CST -.9841  
 LSA 329.8 MSA 16.2 SSA .3  
 EL1 324.4 EL2 13.1 ALF 150.30

LAUNCH DATE AUG 11 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 27 1974

HELIOCENTRIC CONIC

RL 151.61 LAL	-.00 LOL 318.19 VL	33.047 GAL	-.12 AZL	97.48 HCA	193.99 SMA	201.51 ECC	.24761 INC	7.4834 V1	29.387	
RP 249.17 LAP	1.80 LOP 152.06 VP	20.166 GAP	-4.32 AZP	82.74 TAL	359.41 TAP	193.41 RCA	151.61 APO	251.40 V2	21.978	
RC 355.478 GL	-51.80 GP	45.50 ZAL	87.66 ZAP	63.82 ETS	212.35 ZAE	77.10 ETE	194.96 ZAC	131.49 ETC	288.96 LVI	-65.53

PLANETOCENTRIC CONIC

C3 30.000 VHL	5.477 DLA	-33.28 RAL	58.09 RAD	6647.0 VEL	12.245 PTH	7.19 VHP	3.763 DPA	48.43 RAP	356.41 ECC	1.4937
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
30.00	16 19 41	2527.96	-8.79	67.61	283.08	136.95	17 1 49	1528.0	9.60	51.85
60.00	17 54 32	2275.49	-1.25	52.09	290.28	130.28	18 32 28	1275.5	14.68	33.88
70.00	20 25 10	1831.33	9.91	24.46	298.56	122.85	20 55 41	831.3	22.45	3.12
71.67	21 33 38	1621.32	15.93	11.92	302.30	119.62	22 0 39	621.3	26.72	348.88
71.67	21 33 38	1621.32	15.93	11.92	302.30	119.62	22 0 39	621.3	26.72	348.88
71.67	21 33 38	1621.32	15.93	11.92	302.30	119.62	22 0 39	621.3	26.72	348.88
110.00	1 28 32	6166.19	9.91	291.28	298.56	122.85	3 11 19	5166.2	22.45	269.95

DIFFERENTIAL CORRECTIONS

TDE-5.6355 TRA 2.4600 TC3-6.1394 BAU 2.6435  
 RDE 2.0678 RRA-1.6370 RC3 2.3978 FAU .17115  
 FDE-3.3809 FRA 3.3335 FC3-4.9390 BSP 18164  
 BDE 6.0029 BRA 2.9549 BC3 6.5911 FSP 1139

MID-COURSE EXECUTION ACCURACY

SGT 9458.3 SGR 3971.7 SG3 664.7  
 RRT -.9776 RRF -.9952 RTF .9631  
 SGB10258.4 R23 .2246 R13 -.9706  
 SG110229.2 SG2 773.6 THA 157.55

ORBIT DETERMINATION ACCURACY

ST 298.5 SR 112.5 SS 61.0  
 CRT -.9926 CRS .9980 CST -.9830  
 LSA 324.4 MSA 16.3 SSA .4  
 EL1 318.8 EL2 12.8 ALF 159.46

LAUNCH DATE AUG 12 1973 FLIGHT TIME 100.00 ARRIVAL DATE NOV 20 1973

HELIOCENTRIC CONIC DISTANCE 284.895 EARTH TO MARS  
 RL 151.59 LAL -.00 LOL 319.15 VL 35.521 GAL .98 AZL 90.09 HCA 87.31 SMA 271.26 ECC .44145 INC .0923 V1 29.392  
 RP 219.26 LAP -.09 LOP 46.46 VP 26.897 GAP 23.90 AZP 90.00 TAL 3.20 TAP 90.51 RCA 151.51 APO 391.01 V2 25.067  
 RC 79.428 GL -.54 GP -5.18 ZAL 81.60 ZAP 174.09 ETS 243.05 ZAE 161.08 EYE 344.94 ZAC 78.03 ETC 282.69 LVI -11.83

PLANETOCENTRIC CONIC  
 C3 36.348 VHL 6.193 DLA 14.84 RAL 36.90 RAD 8650.1 VEL 12.579 PTH 7.44 VHP 8.790 DPA 10.86 RAP 42.96 ECC 1.6311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 35 50 3587.37 -47.24 136.31 286.03 96.45 12 35 37 2587.4 -39.29 104.71  
 60.00 11 59 4 3525.51 -40.24 131.50 286.79 92.52 12 57 50 2525.5 -34.84 101.80  
 70.00 12 32 41 3426.59 -34.15 123.62 286.93 89.49 13 29 48 2426.6 -30.79 95.41  
 80.00 13 23 29 3267.42 -29.76 111.42 286.79 87.44 14 17 56 2267.4 -27.79 84.16  
 90.00 14 37 5 3029.85 -28.10 93.86 286.69 86.68 15 27 35 2029.8 -26.65 66.95  
 100.00 16 6 21 2741.89 -29.76 72.78 286.79 87.44 16 52 3 1741.9 -27.79 45.53  
 110.00 17 32 7 2473.41 -34.15 52.54 286.93 89.49 18 13 21 1473.4 -30.79 24.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3132 TRA -.9433 TC3 .2843 BAV .1513 SGT 1010.4 SGR 623.4 SG3 132.3 ST 19.8 SR 28.9 SS 8.8  
 RDE -.6214 RRA -.2303 RC3 -.0791 FAU .05248 RRT -.1055 RRF .1240 RTF -.9979 CRT .6480 CRS .7757 CST .9653  
 FDE .2094 FRA .4083 FC3-1.1848 BSP 1403 SGB 1187.3 R23 -.0234 R13 .6006 LSA 33.3 MSA 13.9 SSA 1.4  
 BDE .6959 BRA .9710 BC3 .2951 FSP 158 SG1 1013.6 SGT 617.8 THA 174.07 EL1 32.4 EL2 13.5 ALF 60.43

LAUNCH DATE AUG 12 1973 FLIGHT TIME 102.00 ARRIVAL DATE NOV 22 1973

HELIOCENTRIC CONIC DISTANCE 287.114 EARTH TO MARS  
 RL 151.59 LAL -.00 LOL 319.15 VL 35.369 GAL 1.04 AZL 90.06 HCA 88.44 SMA 265.38 ECC .42912 INC .0551 V1 29.392  
 RP 219.63 LAP -.06 LOP 47.58 VP 26.617 GAP 23.51 AZP 90.00 TAL 3.46 TAP 91.88 RCA 151.50 APO 379.27 V2 25.026  
 RC 81.081 GL -.33 GP -5.31 ZAL 81.07 ZAP 173.57 ETS 237.31 ZAE 160.58 EYE 344.70 ZAC 77.84 ETC 282.65 LVI -11.41

PLANETOCENTRIC CONIC  
 C3 36.551 VHL 6.046 DLA 14.57 RAL 37.91 RAD 8649.5 VEL 12.508 PTH 7.39 VHP 8.520 DPA 10.84 RAP 43.31 ECC 1.6015  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 33 24 3575.81 -47.15 135.21 284.27 97.29 12 33 0 2575.8 -38.90 103.87  
 60.00 11 56 36 3514.04 -40.20 130.53 285.15 93.18 12 55 10 2514.0 -34.55 100.97  
 70.00 12 30 10 3415.24 -34.15 122.74 285.37 90.01 13 27 6 2415.2 -30.59 94.59  
 80.00 13 20 56 3256.20 -29.79 110.58 285.27 87.87 14 15 12 2256.2 -27.64 83.37  
 90.00 14 34 31 3018.70 -28.14 93.05 285.19 87.09 15 24 50 2018.7 -26.51 66.16  
 100.00 16 3 48 2730.67 -29.79 71.95 285.27 87.87 16 49 18 1730.7 -27.64 44.73  
 110.00 17 29 37 2462.06 -34.15 51.66 285.37 90.01 18 10 39 1462.1 -30.59 23.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3158 TRA -.9532 TC3 .3136 BAV .1592 SGT 1033.6 SGR 628.6 SG3 141.1 ST 20.3 SR 29.1 SS 9.0  
 RDE -.6093 RRA .2287 RC3 -.0881 FAU .05476 RRT -.1111 RRF .1338 RTF -.6079 CRT .6540 CRS .7845 CST .9639  
 FDE .2195 FRA .4122 FC3-1.2969 BSP 1449 SGB 1209.7 R23 -.0280 R13 .6109 LSA 33.7 MSA 14.1 SSA 1.3  
 BDE .6864 BRA .9608 BC3 .3258 FSP 171 SG1 1037.3 SGT 622.5 THA 173.95 EL1 32.7 EL2 13.6 ALF 59.65

LAUNCH DATE AUG 12 1973 FLIGHT TIME 104.00 ARRIVAL DATE NOV 24 1973

HELIOCENTRIC CONIC DISTANCE 289.492 EARTH TO MARS  
 RL 151.59 LAL -.00 LOL 319.15 VL 35.224 GAL 1.10 AZL 90.02 HCA 89.56 SMA 260.09 ECC .41753 INC .0156 V1 29.392  
 RP 220.00 LAP -.02 LOP 48.70 VP 26.386 GAP 23.13 AZP 90.00 TAL 3.72 TAP 93.28 RCA 151.49 APO 368.68 V2 24.985  
 RC 82.809 GL -.12 GP -5.44 ZAL 80.53 ZAP 172.97 ETS 232.48 ZAE 160.13 EYE 344.42 ZAC 77.65 ETC 282.62 LVI -11.19

PLANETOCENTRIC CONIC  
 C3 34.904 VHL 5.908 DLA 14.60 RAL 37.32 RAD 8648.9 VEL 12.442 PTH 7.34 VHP 8.259 DPA 10.81 RAP 43.66 ECC 1.5744  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 30 54 3564.76 -47.05 134.16 282.55 98.09 12 30 19 2564.8 -38.52 103.08  
 60.00 11 54 4 3503.08 -40.15 129.60 283.54 93.81 12 52 27 2503.1 -34.26 100.18  
 70.00 12 27 36 3404.42 -34.15 121.89 283.83 90.51 13 24 20 2404.4 -30.37 93.82  
 80.00 13 18 18 3245.51 -29.81 109.79 283.77 88.29 14 12 24 2245.5 -27.49 82.61  
 90.00 14 31 52 3008.07 -28.18 92.27 283.71 87.47 15 22 0 2008.1 -26.38 65.41  
 100.00 16 1 10 2719.99 -29.81 71.16 283.77 88.29 16 46 30 1720.0 -27.49 43.98  
 110.00 17 27 2 2451.23 -34.15 50.81 283.83 90.51 18 7 53 1451.2 -30.37 22.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3169 TRA -.9225 TC3 .3460 BAV .1678 SGT 1036.5 SGR 633.5 SG3 130.5 ST 20.7 SR 29.2 SS 9.4  
 RDE -.5978 RRA .2272 RC3 -.0979 FAU .05717 RRT -.1190 RRF .1433 RTF -.6.98 CRT .6584 CRS .7950 CST .9616  
 FDE .2324 FRA .4167 FC3-1.4180 BSP 1496 SGB 1231.9 R23 -.0289 R13 .6231 LSA 34.1 MSA 14.2 SSA 1.3  
 BDE .6786 BRA .9500 BC3 .3596 FSP 185 SG1 1080.7 SGT 628.5 THA 173.72 EL1 33.0 EL2 13.8 ALF 59.00

LAUNCH DATE AUG 12 1973 FLIGHT TIME 106.00 ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC DISTANCE 292.010 EARTH TO MARS  
 RL 151.59 LAL -.00 LOL 319.15 VL 35.088 GAL 1.16 AZL 89.98 HCA 90.68 SMA 255.29 ECC .40664 INC .0000 V1 29.392  
 RP 220.38 LAP .02 LOP 49.82 VP 26.184 GAP 22.74 AZP 90.00 TAL 4.00 TAP 94.67 RCA 151.48 APO 359.11 V2 24.944  
 RC 84.610 GL -.09 GP -5.58 ZAL 79.98 ZAP 172.33 ETS 228.42 ZAE 159.75 EYE 344.09 ZAC 77.46 ETC 282.59 LVI -10.97

PLANETOCENTRIC CONIC  
 C3 33.392 VHL 5.779 DLA 14.63 RAL 36.71 RAD 8648.3 VEL 12.382 PTH 7.30 VHP 8.008 DPA 10.78 RAP 43.99 ECC 1.5499  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 28 21 3554.22 -46.94 133.16 280.87 98.85 12 27 35 2554.2 -38.15 102.34  
 60.00 11 51 28 3492.65 -40.10 128.72 281.97 94.40 12 49 41 2492.7 -33.98 99.43  
 70.00 12 24 57 3394.12 -34.14 121.09 282.32 90.99 13 21 31 2394.1 -30.17 93.08  
 80.00 13 15 37 3235.37 -29.83 109.04 282.30 88.69 14 9 32 2235.4 -27.34 81.89  
 90.00 14 29 10 2998.00 -28.20 91.54 282.25 87.84 15 19 8 1998.0 -26.26 64.70  
 100.00 15 58 29 2709.84 -29.83 70.41 282.30 88.69 16 43 39 1709.8 -27.34 43.26  
 110.00 17 24 23 2440.94 -34.14 50.01 282.32 90.99 18 5 4 1440.9 -30.17 22.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3171 TRA -.9122 TC3 .3600 BAV .1764 SGT 1079.6 SGR 638.2 SG3 160.4 ST 21.1 SR 29.3 SS 9.7  
 RDE -.5865 RRA .2256 RC3 -.1086 FAU .05973 RRT -.1284 RRF .1541 RTF -.6300 CRT .6616 CRS .8055 CST .9585  
 FDE .2446 FRA .4178 FC3-1.5485 BSP 1547 SGB 1254.2 R23 -.0317 R13 .6336 LSA 34.5 MSA 14.3 SSA 1.6  
 BDE .6667 BRA .9397 BC3 .3952 FSP 201 SG1 1084.3 SGT 630.2 THA 173.43 EL1 33.3 EL2 13.9 ALF 58.42



LAUNCH DATE AUG 12 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC										DISTANCE 294.653										EARTH TO MARS					
RL	151.59	LAL	-.00	LOL	319.15	VL	34.959	GAL	1.21	AZL	89.93	HCA	91.79	SMA	250.94	ECC	.38640	INC	.0495	V1	29.392				
RP	220.76	LAP	.05	LOP	50.94	VP	25.952	GAP	22.36	AZP	90.00	TAL	4.28	TAP	96.07	RCA	151.47	APO	350.41	V2	24.902				
RC	86.480	GL	.32	GP	-5.73	ZAL	79.43	ZAP	171.65	ETS	224.99	ZAE	159.42	ETE	343.72	ZAC	77.26	ETC	282.37	LVI	-10.74				
PLANETOCENTRIC CONIC																									
C3	32.004	VHL	9.657	DLA	14.66	RAL	36.09	RAD	6647.8	VEL	12.326	PTH	7.26	VHP	7.767	DPA	10.73	RAP	44.33	ECC	1.5267				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG
50.00		11	25	44		3544.21		-46.83	132.22	279.23		99.57	12	24	48	2544.2		-37.80			101.64				
60.00		11	48	49		3482.75		-40.05	127.88	280.42		94.97	12	46	52	2482.8		-33.72			98.73				
70.00		12	22	15		3384.37		-34.13	120.33	280.84		91.44	13	18	39	2384.4		-29.98			92.39				
80.00		13	12	52		3225.78		-29.84	108.33	280.86		89.06	14	6	30	2225.8		-27.20			81.21				
90.00		14	26	23		2988.49		-28.23	90.84	280.82		88.19	15	16	11	1988.5		-26.13			64.03				
100.00		15	35	44		2700.25		-29.84	69.69	280.86		89.06	16	40	44	1700.3		-27.20			42.58				
110.00		17	21	41		2431.19		-34.13	49.25	260.84		91.44	18	2	12	1431.2		-29.98			21.31				
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY					
TDE	-.3185	TRA	-.9018	TC3	.4143	BAU	.1846			SGT	1102.3	SGR	642.8	SG3	170.8	ST	21.5	SR	29.4	SS	10.0				
RDE	-.5755	RRA	.2242	RC3	-.1200	FAU	.06240			RRT	-.1372	RRF	.1657	RTF	-.6399	CR1	.6663	CR5	.8148	CST	.9561				
FDE	.2974	FRA	.4201	FC3	-1.6879	BSP	1590			SGB	1276.1	R23	-.0348	R13	.8438	LSA	34.8	MSA	14.4	SSA	1.6				
BDE	.6577	BRA	.9292	BC3	.4314	FSP	215			SG1	1107.6	SG2	633.7	THA	173.18	EL1	33.6	EL2	14.0	ALF	57.75				

LAUNCH DATE AUG 12 1973

FLIGHT TIME 110.00

ARRIVAL DATE NOV 30 1973

HELIOCENTRIC CONIC										DISTANCE 297.405										EARTH TO MARS					
RL	151.59	LAL	-.00	LOL	319.15	VL	34.837	GAL	1.27	AZL	89.91	HCA	92.90	SMA	246.97	ECC	.38677	INC	.0854	V1	29.392				
RP	221.14	LAP	.09	LOP	52.05	VP	25.748	GAP	21.99	AZP	90.00	TAL	3.56	TAP	97.46	RCA	151.45	APO	342.49	V2	24.861				
RC	88.416	GL	.55	GP	-5.88	ZAL	78.86	ZAP	170.94	ETS	222.08	ZAE	159.13	ETE	343.31	ZAC	77.06	ETC	282.94	LVI	-10.51				
PLANETOCENTRIC CONIC																									
C3	30.728	VHL	5.543	DLA	14.70	RAL	35.46	RAD	6647.3	VEL	12.274	PTH	7.22	VHP	7.534	DPA	10.68	RAP	44.65	ECC	1.5057				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG
50.00		11	23	5		3534.75		-46.72	131.33	277.64		100.25	12	22	0	2534.7		-37.46			100.99				
60.00		11	46	7		3473.40		-39.99	127.09	278.92		95.80	12	44	1	2473.4		-33.46			98.07				
70.00		12	19	29		3375.18		-34.11	119.61	279.39		91.66	13	15	45	2375.2		-29.79			91.74				
80.00		13	10	3		3216.76		-29.85	107.66	279.45		89.41	14	3	40	2216.8		-27.06			80.58				
90.00		14	23	32		2979.56		-28.24	90.19	279.41		88.51	15	13	12	1979.6		-26.01			63.40				
100.00		15	32	55		2691.24		-29.85	69.02	279.45		89.41	16	37	46	1691.2		-27.06			41.95				
110.00		17	18	56		2422.00		-34.11	48.53	279.39		91.86	17	59	18	1422.0		-29.79			20.66				
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY					
TDE	-.3197	TRA	-.8916	TC3	.4504	BAU	.1929			SGT	1125.3	SGR	647.3	SG3	192.0	ST	21.9	SR	29.4	SS	10.3				
RDE	-.5648	RRA	.2228	RC3	-.1325	FAU	.06527			RRT	-.1473	RRF	.1783	RTF	-.6497	CR1	.6706	CR5	.8239	CST	.9534				
FDE	.2712	FRA	.4220	FC3	-1.8391	BSP	1646			SGB	1298.2	R23	-.0379	R13	.6540	LSA	35.2	MSA	14.4	SSA	1.7				
BDE	.6490	BRA	.9190	BC3	.4695	FSP	233			SG1	1131.2	SG2	636.9	THA	172.89	EL1	33.8	EL2	14.1	ALF	57.09				

LAUNCH DATE AUG 12 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 2 1973

HELIOCENTRIC CONIC										DISTANCE 300.255										EARTH TO MARS					
RL	151.59	LAL	-.00	LOL	319.15	VL	34.723	GAL	1.33	AZL	89.88	HCA	94.01	SMA	243.35	ECC	.37770	INC	.1221	V1	29.392				
RP	221.52	LAP	.12	LOP	53.15	VP	25.551	GAP	21.62	AZP	90.01	TAL	4.85	TAP	98.86	RCA	151.44	APO	335.27	V2	24.819				
RC	90.414	GL	.79	GP	-6.04	ZAL	78.29	ZAP	170.20	ETS	219.59	ZAE	158.94	ETE	342.84	ZAC	76.85	ETC	282.51	LVI	-10.28				
PLANETOCENTRIC CONIC																									
C3	29.554	VHL	5.438	DLA	14.74	RAL	34.82	RAD	6646.8	VEL	12.227	PTH	7.18	VHP	7.309	DPA	10.61	RAP	44.96	ECC	1.4864				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG
50.00		11	20	23		3323.78		-46.61	130.50	276.09		100.88	12	19	9	2525.8		-37.14			100.38				
60.00		11	43	22		3464.58		-39.93	126.35	277.45		96.00	12	41	7	2464.6		-33.22			97.45				
70.00		12	16	41		3368.55		-34.09	118.94	277.98		92.26	13	12	47	2366.5		-29.61			91.13				
80.00		13	7	11		3208.32		-29.86	107.03	278.07		89.74	14	0	39	2208.3		-26.93			79.99				
90.00		14	20	38		2971.21		-28.28	89.58	278.04		88.82	15	10	10	1971.2		-25.90			62.82				
100.00		15	30	2		2692.79		-29.86	68.40	278.07		89.74	16	34	45	1682.8		-26.93			41.36				
110.00		17	16	7		2413.37		-34.09	47.86	277.98		92.25	17	56	21	1413.4		-29.61			20.05				
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY					
TDE	-.3208	TRA	-.8608	TC3	.4876	BAU	.2011			SGT	1147.5	SGR	651.6	SG3	193.7	ST	22.2	SR	29.4	SS	10.7				
RDE	-.5543	RRA	.2214	RC3	-.1458	FAU	.06826			RRT	-.1579	RRF	.1906	RTF	-.6580	CR1	.6751	CR5	.8349	CST	.9498				
FDE	.2873	FRA	.4214	FC3	-1.9994	BSP	1691			SGB	1319.6	R23	-.0400	R13	.6636	LSA	35.5	MSA	14.5	SSA	1.7				
BDE	.6404	BRA	.9082	BC3	.5089	FSP	251			SG1	1134.2	SG2	639.7	THA	172.59	EL1	34.0	EL2	14.2	ALF	56.44				

LAUNCH DATE AUG 12 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 4 1973

HELIOCENTRIC CONIC										DISTANCE 303.192										EARTH TO MARS					
RL	151.59	LAL	-.00	LOL	319.15	VL	34.614	GAL	1.39	AZL	89.84	HCA	95.11	SMA	240.03	ECC	.36917	INC	.1581	V1	29.392				
RP	221.90	LAP	.16	LOP	54.25	VP	25.383	GAP	21.25	AZP	90.01	TAL	5.14	TAP	100.25	RCA	151.42	APO	328.65	V2	24.778				
RC	92.473	GL	1.03	GP	-6.20	ZAL	77.72	ZAP	169.43	ETS	217.46	ZAE	158.79	ETE	342.33	ZAC	76.42	ETC	282.49	LVI	-10.04				
PLANETOCENTRIC CONIC																									
C3	28.475	VHL	5.336	DLA	14.78	RAL	34.18	RAD	6646.4	VEL	12.183	PTH	7.14	VHP	7.093	DPA	10.54	RAP	45.27	ECC	1.4688				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG
50.00		11	17	39		3517.37		-46.30	129.72	274.59		101.43	12	16	16	2517.4		-36.83			99.81				
60.00		11	40	35		3456.32		-39.87	125.66	276.02		96.47	12	38	11	2456.3		-32.98			96.87				
70.00		12	13	49		3358.48		-34.06	118.31	276.60		92.63	13	9	48	2356.5		-29.44			90.56				
80.00		13	4	15		3200.47		-29.86	106.44	276.72		90.05	13	57	36	2200.5		-26.90			78.44				
90.00		14	17	41		2963.46		-28.27	89.01	276.70		89.10	15	7	4	1963.5		-25.79			62.28				
100.00		15	47	7		2674.94		-29.86																	

LAUNCH DATE AUG 12 1973 FLIGHT TIME 116.00 ARRIVAL DATE DEC 6 1973

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 34.811 GAL 1.44 AZL 89.81 HCA 96.21 SMA 236.89 ECC .36112 INC .1940 V1 29.392  
 RP 222.28 LAP .19 LOP 55.35 VP 25.181 GAP 20.88 AZP 90.02 TAL 5.44 TAP 101.85 RCA 151.41 APO 322.57 V2 24.736  
 RC 94.587 GL 1.28 GP -6.37 ZAL 77.15 ZAP 166.64 ETS 215.61 ZAE 158.69 ETE 341.75 ZAC 76.43 ETC 282.47 LVI -9.81

Distance 306.206

Planetocentric Conic: CS 27.480 VHL 5.242 DLA 14.83 RAL 33.53 RAD 6646.D VEL 12.142 PTH 7.11 VHP 6.883 DPA 10.46 RAP 45.56 ECC 1.4523  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 14 52 3509.47 -46.39 128.98 273.13 102.03 12 13 22 2509.5 -36.54 99.27  
 60.00 11 37 45 3448.58 -39.80 125.01 274.63 96.90 12 35 13 2448.6 -32.76 96.33  
 70.00 12 10 55 3350.95 -34.04 117.72 275.25 92.98 13 6 46 2350.9 -29.28 90.04  
 80.00 13 1 17 3193.16 -29.86 105.90 275.40 90.33 13 54 30 2193.2 -26.68 78.93  
 90.00 14 14 40 2956.26 -28.27 88.49 275.39 89.37 15 3 57 1956.3 -25.68 61.78  
 100.00 15 44 8 2667.63 -29.86 67.27 275.40 90.33 16 28 36 1667.6 -26.68 40.29  
 110.00 17 10 21 2397.77 -34.04 46.64 275.25 92.98 17 50 19 1397.8 -29.28 18.95

Differential Corrections: TDE -.3114 TRA -.8465 TC3 .5822 BAU .2234  
 RDE -.5339 RRA .2188 RC3 -.1752 FAU .07462  
 FDE .3243 FRA .4224 FC3-2.3509 BSP 1629  
 BDE .6181 BRA .8743 BC3 .6080 FSP 295

Mid-Course Execution Accuracy: SGT 1185.1 SGR 659.9 SG3 219.1  
 RRT -.1921 RRF .2176 RTF -.6929  
 SGB 1356.4 R23 -.0295 R13 .6976  
 SG1 1194.7 SG2 642.4 THA 171.39

Orbit Determination Accuracy: ST 22.3 SR 29.4 SS 11.6  
 CRT .6759 CRS .8547 CST .9400  
 LSA 35.8 HSA 14.4 SSA 1.8  
 EL1 34.1 EL2 14.2 ALF 56.29

LAUNCH DATE AUG 12 1973 FLIGHT TIME 118.00 ARRIVAL DATE DEC 6 1973

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 34.414 GAL 1.50 AZL 89.77 HCA 97.30 SMA 234.19 ECC .35356 INC .2301 V1 29.392  
 RP 222.67 LAP .23 LOP 56.45 VP 25.007 GAP 20.92 AZP 90.03 TAL 5.73 TAP 103.03 RCA 151.39 APO 316.99 V2 24.694  
 RC 96.756 GL 1.54 GP -6.55 ZAL 76.58 ZAP 167.82 ETS 214.01 ZAE 158.64 ETE 341.13 ZAC 76.21 ETC 282.45 LVI -9.56

Distance 309.292

Planetocentric Conic: CS 26.566 VHL 5.154 DLA 14.88 RAL 32.89 RAD 6645.6 VEL 12.105 PTH 7.08 VHP 6.882 DPA 10.36 RAP 45.84 ECC 1.4372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 12 5 3502.14 -46.28 128.31 271.72 102.54 12 10 27 2502.1 -36.27 98.79  
 60.00 11 34 54 3441.43 -39.74 124.41 273.29 97.31 12 32 15 2441.4 -32.56 95.84  
 70.00 12 7 59 3344.04 -34.01 117.19 273.95 93.29 13 3 43 2344.0 -29.13 89.56  
 80.00 12 58 15 3186.51 -29.85 105.41 274.12 90.59 13 51 22 2186.5 -26.57 78.46  
 90.00 14 11 37 2949.73 -28.28 88.01 274.12 89.60 15 0 47 1949.7 -25.59 61.32  
 100.00 15 41 7 2660.98 -29.85 66.77 274.12 90.59 16 25 28 1661.0 -26.57 39.83  
 110.00 17 7 25 2390.86 -34.01 46.10 273.95 93.29 17 47 16 1390.9 -29.13 18.47

Differential Corrections: TDE -.3173 TRA -.8401 TC3 .6150 BAU .2288  
 RDE -.5243 RRA .2173 RC3 -.1918 FAU .07820  
 FDE .3402 FRA .4182 FC3-2.5486 BSP 1734  
 BDE .6129 BRA .8677 BC3 .6442 FSP 316

Mid-Course Execution Accuracy: SGT 1208.3 SGR 664.3 SG3 233.1  
 RRT -.2009 RRF .2339 RTF -.6945  
 SGB 1378.9 R23 -.0394 R13 .7001  
 SG1 1218.6 SG2 645.2 THA 171.22

Orbit Determination Accuracy: ST 22.8 SR 29.4 SS 11.9  
 CRT .6843 CRS .8630 CST .9379  
 LSA 36.3 HSA 14.4 SSA 1.9  
 EL1 34.4 EL2 14.2 ALF 55.19

LAUNCH DATE AUG 12 1973 FLIGHT TIME 120.00 ARRIVAL DATE DEC 10 1973

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 34.322 GAL 1.55 AZL 89.73 HCA 98.39 SMA 231.61 ECC .34643 INC .2660 V1 29.392  
 RP 223.06 LAP .26 LOP 57.54 VP 24.839 GAP 20.16 AZP 90.04 TAL 6.03 TAP 104.42 RCA 151.37 APO 311.84 V2 24.652  
 RC 98.976 GL 1.80 GP -6.73 ZAL 76.01 ZAP 166.99 ETS 212.60 ZAE 158.65 ETE 340.43 ZAC 75.99 ETC 282.43 LVI -9.32

Distance 312.441

Planetocentric Conic: CS 25.723 VHL 5.072 DLA 14.94 RAL 32.24 RAD 6645.3 VEL 12.070 PTH 7.05 VHP 6.487 DPA 10.25 RAP 46.12 ECC 1.4233  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 9 17 3495.34 -46.18 127.68 270.37 103.01 12 7 32 2495.3 -36.02 98.34  
 60.00 11 32 1 3434.83 -39.69 123.86 271.99 97.88 12 29 15 2434.8 -32.36 95.38  
 70.00 12 5 1 3337.70 -33.99 116.69 272.69 93.59 13 0 38 2337.7 -28.99 89.11  
 80.00 12 55 12 3180.45 -29.85 104.96 272.87 90.83 13 48 12 2180.4 -26.47 78.04  
 90.00 14 8 31 2943.81 -28.28 87.58 272.88 89.82 14 57 34 1943.8 -25.50 60.91  
 100.00 15 38 4 2654.92 -29.85 66.32 272.87 90.83 16 22 19 1654.9 -26.47 39.41  
 110.00 17 4 27 2384.52 -33.99 45.61 272.69 93.59 17 44 12 1384.5 -26.99 18.03

Differential Corrections: TDE -.3217 TRA -.8320 TC3 .6498 BAU .2348  
 RDE -.5149 RRA .2138 RC3 -.2095 FAU .08196  
 FDE .3585 FRA .4132 FC3-2.7585 BSP 1818  
 BDE .6071 BRA .8593 BC3 .6827 FSP 339

Mid-Course Execution Accuracy: SGT 1229.9 SGR 688.6 SG3 247.9  
 RRT -.2116 RRF .2507 RTF -.6777  
 SGB 1400.0 R23 -.0473 R13 .7040  
 SG1 1241.2 SG2 647.6 THA 170.98

Orbit Determination Accuracy: ST 23.3 SR 29.3 SS 12.3  
 CRT .6913 CRS .8716 CST .9349  
 LSA 36.6 HSA 14.4 SSA 1.9  
 EL1 34.7 EL2 14.3 ALF 54.24

LAUNCH DATE AUG 12 1973 FLIGHT TIME 122.00 ARRIVAL DATE DEC 12 1973

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 34.235 GAL 1.60 AZL 89.70 HCA 99.48 SMA 229.23 ECC .33972 INC .3019 V1 29.392  
 RP 223.44 LAP .30 LOP 58.83 VP 24.677 GAP 19.81 AZP 90.05 TAL 6.32 TAP 105.80 RCA 151.35 APO 307.10 V2 24.611  
 RC 101.244 GL 2.07 GP -6.93 ZAL 75.45 ZAP 166.14 ETS 211.36 ZAE 158.70 ETE 339.68 ZAC 75.76 ETC 282.41 LVI -9.07

Distance 315.647

Planetocentric Conic: CS 24.945 VHL 4.995 DLA 15.00 RAL 31.60 RAD 6645.0 VEL 12.038 PTH 7.03 VHP 6.300 DPA 10.13 RAP 46.38 ECC 1.4105  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 6 27 3489.07 -46.08 127.11 269.06 103.45 12 4 36 2489.1 -35.78 97.92  
 60.00 11 29 6 3428.78 -39.63 123.35 270.73 98.02 12 26 15 2428.8 -32.19 94.97  
 70.00 12 2 0 3331.94 -33.96 116.24 271.46 93.85 12 57 32 2331.9 -28.87 86.71  
 80.00 12 52 6 3174.99 -29.84 104.55 271.67 91.04 13 45 1 2175.0 -26.38 77.66  
 90.00 14 5 22 2938.51 -28.28 87.19 271.69 90.02 14 54 20 1938.5 -25.42 60.54  
 100.00 15 34 57 2649.46 -29.84 65.92 271.67 91.04 16 19 7 1649.5 -26.38 39.03  
 110.00 17 1 27 2378.75 -33.96 45.16 271.46 93.85 17 41 5 1378.8 -28.87 17.63

Differential Corrections: TDE -.3253 TRA -.8226 TC3 .6867 BAU .2413  
 RDE -.5055 RRA .2142 RC3 -.2283 FAU .08592  
 FDE .3789 FRA .4066 FC3-2.9819 BSP 1887  
 BDE .6011 BRA .8500 BC3 .7237 FSP 363

Mid-Course Execution Accuracy: SGT 1250.7 SGR 673.1 SG3 263.4  
 RRT -.2240 RRF .2681 RTF -.7022  
 SGB 1420.3 R23 -.0539 R13 .7093  
 SG1 1263.1 SG2 649.5 THA 170.62

Orbit Determination Accuracy: ST 23.7 SR 29.2 SS 12.7  
 CRT .6979 CRS .8804 CST .9314  
 LSA 37.0 HSA 14.4 SSA 2.0  
 EL1 34.9 EL2 14.3 ALF 53.37

LAUNCH DATE AUG 12 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC										DISTANCE 318.904										EARTH TO MARS																																																																																																		
RL	151.59	LAL	-.00	LOL	319.15	VL	34.153	GAL	1.69	AZL	89.66	HCA	100.86	SMA	227.02	ECC	.33340	INC	.3381	V1	29.392	RP	223.83	LAP	.33	LOP	59.71	VP	24.521	GAP	19.46	AZP	90.08	TAL	6.62	TAP	107.18	RCA	151.33	APO	302.71	V2	24.569	RC	103.560	GL	2.35	GP	-7.13	ZAL	74.89	ZAP	163.27	ETS	210.27	ZAE	158.79	ETE	338.83	ZAC	75.53	ETC	282.40	LVI	-8.82																																																					
PLANETOCENTRIC CONIC																																																																																																																						
C3	24.229	VHL	4.922	DLA	15.07	RAL	30.96	RAD	6644.7	VEL	12.009	PTH	7.00	VHP	6.118	DPA	10.00	RAP	46.63	ECC	1.3987	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																							
	50.00		11	3	37	3483.33	-45.99	126.59	267.80	103.84	12	1	40	2483.5	-35.56	97.55		60.00		11	26	11	3423.27	-39.58	122.89	269.51	98.32	12	23	14	2423.3	-32.02	94.59		70.00		11	58	58	3326.74	-33.94	115.84	270.28	94.09	12	54	25	2326.7	-28.75	68.35		80.00		12	48	57	3170.13	-29.83	104.19	270.50	91.25	13	41	47	2170.1	-26.30	77.33		90.00		14	2	10	2933.81	-28.28	86.85	270.52	90.19	14	51	4	1933.8	-25.35	60.22		100.00		13	31	49	2644.61	-29.83	65.56	270.50	91.23	16	15	54	1644.6	-26.30	38.69		110.00		16	58	25	2373.56	-33.94	44.76	270.28	94.09	17	37	58	1373.6	-28.75	17.27
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																		
TDE	-.3284	TRA	-.8127	TC3	.7240	BAU	.2480	SGT	1270.4	SGR	677.8	SG3	279.9	ST	24.1	SR	29.1	SS	13.2	RDE	-.4963	RRA	.2127	RC3	-.2485	FAU	.09009	RRT	-.2377	RRF	.2867	RTF	-.7072	CRT	.7041	CRS	.8883	CST	.9282	FDE	.4009	FRA	.4009	FC3	-3.2192	BSP	1943	SG6	1439.9	R23	-.0601	R13	.7152	LSA	37.3	NSA	14.4	SSA	2.1	BDE	.5951	BRA	.8401	BC3	.7655	FSP	.388	SG1	1284.2	SG2	651.3	THA	170.24	EL1	35.1	EL2	14.2	ALF	52.4																																							

LAUNCH DATE AUG 12 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC										DISTANCE 322.209										EARTH TO MARS																																																																																																		
RL	151.59	LAL	-.00	LOL	319.15	VL	34.075	GAL	1.70	AZL	89.63	HCA	101.64	SMA	224.98	ECC	.32744	INC	.3744	V1	29.392	RP	224.22	LAP	.37	LOP	60.79	VP	24.370	GAP	19.11	AZP	90.08	TAL	6.91	TAP	108.55	RCA	151.32	APO	298.65	V2	24.527	RC	105.921	GL	2.63	GP	-7.34	ZAL	74.35	ZAP	164.38	ETS	209.29	ZAE	158.94	ETE	337.94	ZAC	75.29	ETC	282.38	LVI	-8.57																																																					
PLANETOCENTRIC CONIC																																																																																																																						
C3	23.568	VHL	4.855	DLA	15.15	RAL	30.32	RAD	6644.4	VEL	11.981	PTH	6.98	VHP	5.943	DPA	9.86	RAP	46.86	ECC	1.3679	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																							
	50.00		11	0	46	3478.10	-45.90	126.11	266.59	104.20	11	58	44	2478.1	-35.36	97.21		60.00		11	23	14	3418.30	-39.53	122.48	268.34	98.60	12	20	12	2418.3	-31.80	94.26		70.00		11	55	55	3322.11	-33.91	115.48	269.13	94.30	12	51	17	2322.1	-28.65	68.04		80.00		12	43	46	3165.88	-29.83	103.87	269.37	91.40	13	38	32	2165.9	-26.22	77.03		90.00		13	58	56	2929.74	-28.28	86.55	269.40	90.34	14	47	45	1929.7	-25.29	59.94		100.00		15	28	38	2640.35	-29.83	65.24	269.37	91.40	16	12	39	1640.4	-26.22	38.40		110.00		16	55	21	2368.93	-33.91	44.40	269.13	94.30	17	34	50	1368.9	-28.65	16.95
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																		
TDE	-.3310	TRA	-.8015	TC3	.7621	BAU	.2547	SGT	1288.6	SGR	682.6	SG3	297.2	ST	24.5	SR	29.0	SS	13.6	RDE	-.4873	RRA	.2110	RC3	-.2699	FAU	.09448	RRT	-.2825	RRF	.3060	RTF	-.7124	CRT	.7102	CRS	.8965	CST	.9244	FDE	.4243	FRA	.3913	FC3	-3.4705	BSP	1995	SG6	1458.2	R23	-.0660	R13	.7212	LSA	37.7	NSA	14.3	SSA	2.2	BDE	.5891	BRA	.8288	BC3	.8085	FSP	.416	SG1	1304.0	SG2	632.7	THA	169.80	EL1	35.2	EL2	14.2	ALF	51.78																																							

LAUNCH DATE AUG 12 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC										DISTANCE 325.556										EARTH TO MARS																																																																																																		
RL	151.59	LAL	-.00	LOL	319.15	VL	34.002	GAL	1.75	AZL	89.59	HCA	102.72	SMA	223.09	ECC	.32182	INC	.4108	V1	29.392	RP	224.81	LAP	.40	LOP	61.87	VP	24.225	GAP	18.77	AZP	90.09	TAL	7.20	TAP	109.92	RCA	151.30	APO	294.89	V2	24.485	RC	108.326	GL	2.92	GP	-7.55	ZAL	73.81	ZAP	163.48	ETS	208.42	ZAE	159.12	ETE	336.94	ZAC	75.05	ETC	282.37	LVI	-8.31																																																					
PLANETOCENTRIC CONIC																																																																																																																						
C3	22.957	VHL	4.791	DLA	15.23	RAL	29.69	RAD	6644.1	VEL	11.986	PTH	6.96	VHP	5.775	DPA	9.70	RAP	47.09	ECC	1.3778	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																							
	50.00		10	57	55	3473.39	-45.82	125.69	265.43	104.52	11	55	49	2473.4	-35.18	96.90		60.00		11	20	17	3413.87	-39.48	122.11	267.21	98.84	12	17	11	2413.9	-31.74	93.96		70.00		11	52	50	3318.06	-33.89	115.17	268.03	94.48	12	48	8	2318.1	-28.53	67.76		80.00		12	42	34	3162.23	-29.82	103.60	268.28	91.54	13	35	16	2162.2	-26.16	76.78		90.00		13	55	39	2926.29	-28.28	86.30	268.31	90.46	14	44	26	1926.3	-25.23	59.70		100.00		15	25	25	2636.70	-29.82	64.97	268.28	91.54	16	9	22	1636.7	-26.16	38.15		110.00		16	52	16	2364.88	-33.89	44.08	268.03	94.48	17	31	41	1354.9	-28.53	16.67
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																		
TDE	-.3335	TRA	-.7913	TC3	.7991	BAU	.2812	SGT	1306.8	SGR	687.7	SG3	315.4	ST	24.8	SR	28.9	SS	14.2	RDE	-.4782	RRA	.2094	RC3	-.2826	FAU	.09903	RRT	-.2683	RRF	.3230	RTF	-.7172	CRT	.7157	CRS	.9040	CST	.9206	FDE	.4507	FRA	.3830	FC3	-3.7346	BSP	2044	SG6	1476.7	R23	-.0716	R13	.7270	LSA	38.0	NSA	14.2	SSA	2.2	BDE	.5830	BRA	.8187	BC3	.8309	FSP	.447	SG1	1324.0	SG2	653.9	THA	169.33	EL1	35.3	EL2	14.2	ALF	50.99																																							

LAUNCH DATE AUG 12 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC										DISTANCE 328.941										EARTH TO MARS																																																																																																		
RL	151.59	LAL	-.00	LOL	319.15	VL	35.932	GAL	1.80	AZL	89.35	HCA	103.79	SMA	221.33	ECC	.31653	INC	.4474	V1	29.392	RP	225.00	LAP	.43	LOP	62.94	VP	24.085	GAP	18.43	AZP	90.11	TAL	7.48	TAP	111.27	RCA	151.28	APO	291.39	V2	24.443	RC	110.773	GL	3.21	GP	-7.78	ZAL	73.28	ZAP	162.55	ETS	207.63	ZAE	159.34	ETE	335.84	ZAC	74.80	ETC	282.37	LVI	-8.06																																																					
PLANETOCENTRIC CONIC																																																																																																																						
C3	22.394	VHL	4.732	DLA	15.32	RAL	29.06	RAD	6643.9	VEL	11.933	PTH	6.94	VHP	5.612	DPA	9.53	RAP	47.30	ECC	1.3685	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																							
	50.00		10	55	4	3469.18	-45.75	125.31	264.32	104.80	11	52	53	2469.2	-35.02	96.63		60.00		11	17	19	3409.97	-39.44	121.79	266.13	99.06	12	14	9	2410.0	-31.62	93.69		70.00		11	49	43	3314.57	-33.87	114.90	265.96	94.64	12	44	58	2314.6	-28.47	87.52		80.00		12	39	19	3159.18	-29.82	103.38	267.22	91.66	13	31	58	2159.2	-26.10	76.57		90.00		13	52	21	2923.46	-28.27	86.09	267.26	90.57	14	41	4	1923.5	-25.19	59.50		100.00		15	22	11	2633.66	-29.82	64.75	267.22	91.66	16	6	4	1633.7	-26.10	37.94		110.00		16	49	10	2361.39	-33.87	43.81	266.96	94.64	17	28	31	1361.4	-28.47	16.43
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																		
TDE	-.3355	TRA	-.7795	TC3	.8359	BAU	.2676	SGT	1322.4	SGR	693.3	SG3	334.8	ST	25.1	SR	28.7	SS	14.7	RDE	-.4694	RRA	.2075	RC3	-.3168	FAU	.10387	RRT	-.2849	RRF	.3472	RTF	-.7220	CRT	.7215	CRS	.9113	CST	.9167	FDE	.4774	FRA	.3708	FC3	-4.0155	BSP	2085	SG6	1493.1	R23	-.0775	R13	.7329	LSA	38.3	NSA	14.1	SSA	2.3	BDE	.5770	BRA	.8067	BC3	.8939	FSP	.477	SG1	1341.8	SG2	655.0	THA	168.80	EL1	35.4	EL2	14.1	ALF	50.27																																							

LAUNCH DATE AUG 12 1973 FLIGHT TIME 132.00 ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC DISTANCE 332.362 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.18 VL 33.867 GAL 1.84 AZL 89.52 HCA 104.86 SMA 219.70 ECC .31154 INC .4842 V1 29.392

PLANETOCENTRIC CONIC
C3 21.874 VHL 4.677 DLA 15.42 RAL 28.45 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 5.454 DPA 9.34 RAP 47.49 ECC 1.3800
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3379 TRA -.7685 TC3 .8719 BAU .2739 SGT 1338.0 SGR 699.5 S63 354.9 ST 25.4 SR 28.5 S8 15.2

LAUNCH DATE AUG 12 1973 FLIGHT TIME 134.00 ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC DISTANCE 335.816 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.804 GAL 1.89 AZL 89.48 HCA 105.92 SMA 218.18 ECC .30684 INC .5211 V1 29.392

PLANETOCENTRIC CONIC
C3 21.393 VHL 4.625 DLA 15.52 RAL 27.84 RAD 6643.5 VEL 11.891 PTH 6.90 VHP 5.302 DPA 9.15 RAP 47.67 ECC 1.3521
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3399 TRA -.7570 TC3 .9073 BAU .2802 SGT 1352.3 SGR 706.2 S63 376.3 ST 25.6 SR 28.3 S8 15.8

LAUNCH DATE AUG 12 1973 FLIGHT TIME 136.00 ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC DISTANCE 339.298 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.748 GAL 1.93 AZL 89.44 HCA 108.99 SMA 218.77 ECC .30241 INC .5584 V1 29.392

PLANETOCENTRIC CONIC
C3 20.990 VHL 4.577 DLA 15.63 RAL 27.24 RAD 6643.3 VEL 11.872 PTH 6.89 VHP 5.155 DPA 8.93 RAP 47.84 ECC 1.3448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3420 TRA -.7458 TC3 .9404 BAU .2881 SGT 1365.4 SGR 713.9 S63 398.7 ST 25.9 SR 28.0 S8 16.8

LAUNCH DATE AUG 12 1973 FLIGHT TIME 138.00 ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC DISTANCE 342.808 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.690 GAL 1.97 AZL 89.40 HCA 108.04 SMA 215.48 ECC .29823 INC .5960 V1 29.392

PLANETOCENTRIC CONIC
C3 20.840 VHL 4.832 DLA 15.75 RAL 26.66 RAD 6643.1 VEL 11.855 PTH 6.87 VHP 5.014 DPA 8.70 RAP 47.99 ECC 1.3380
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3442 TRA -.7345 TC3 .9710 BAU .2915 SGT 1376.6 SGR 721.7 S63 422.2 ST 26.2 SR 27.7 S8 17.1

LAUNCH DATE AUG 12 1973

FLIGHT TIME 140.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC

DISTANCE 346.342

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.638 GAL 2.01 AZL 89.37 HCA 109.10 SMA 214.22 ECC .29429 INC .6339 V1 29.392  
 RP 226.95 LAP .60 LOP 68.24 VP 23.452 GAP 16.78 AZP 90.21 TAL 8.83 TAP 117.93 RCA 151.18 APO 277.27 V2 24.234  
 RC 123.556 GL 4.75 GP -9.05 ZAL 70.83 ZAP 157.85 ETS 204.67 ZAE 160.91 ETE 328.53 ZAC 73.47 ETC 282.38 LVI -6.71

PLANETOCENTRIC CONIC

C3 20.161 VHL 4.490 DLA 15.88 RAL 26.08 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 4.677 DPA 8.46 RAP 48.12 ECC 1.3318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 40 33 3455.55 -45.51 124.08 259.48 105.72 11 38 29 2455.6 -34.49 95.76  
 60.00 11 2 24 3398.30 -39.31 120.82 261.37 99.70 11 59 2 2398.3 -31.27 92.91  
 70.00 11 33 55 3303.53 -33.82 114.20 262.26 95.05 12 29 0 2305.5 -28.27 86.90  
 80.00 12 22 35 3153.01 -29.80 102.92 262.55 91.90 13 15 8 2153.0 -25.99 76.14  
 90.00 13 35 10 2918.70 -28.27 85.74 262.59 90.74 14 23 49 1918.7 -25.12 59.17  
 100.00 15 5 27 2627.48 -29.80 64.29 262.55 91.90 15 49 14 1627.5 -25.99 37.51  
 110.00 16 33 21 2352.35 -33.82 43.11 262.26 95.05 17 12 33 1352.4 -28.27 15.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3466 TRA -.7233 TC3 1.0011 BAU .2972 SGT 1307.4 SGR 730.8 SG3 447.1 ST 26.4 SR 27.4 SS 17.9  
 RDE -.4248 RRA .1969 RC3 -.4618 FAU .13210 RRT -.3786 RRF .4667 RTF -.7403 CRT .7491 CRS .9403 CST .8988  
 FDE .6478 FRA .2690 FC3-5.6723 BSP 2269 SGB 1568.1 R23 -.1122 R13 .7590 LSA 39.7 MSA 13.5 S5A 2.8  
 BDE .5483 BRA .7497 BC3 1.1025 FSP 866 SG1 1422.6 SG2 659.7 THA 165.55 EL1 35.6 EL2 13.5 ALF 46.38

LAUNCH DATE AUG 12 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC

DISTANCE 349.899

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.588 GAL 2.04 AZL 89.33 HCA 110.15 SMA 213.07 ECC .29058 INC .6722 V1 29.392  
 RP 227.34 LAP .63 LOP 69.29 VP 23.338 GAP 16.46 AZP 90.23 TAL 9.05 TAP 119.23 RCA 151.16 APO 274.99 V2 24.193  
 RC 126.208 GL 5.08 GP -9.33 ZAL 70.39 ZAP 156.62 ETS 204.21 ZAE 161.29 ETE 326.80 ZAC 73.18 ETC 282.39 LVI -6.43

PLANETOCENTRIC CONIC

C3 19.811 VHL 4.451 DLA 16.02 RAL 25.52 RAD 6642.8 VEL 11.825 PTH 6.84 VHP 4.745 DPA 8.19 RAP 48.23 ECC 1.3260  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 38 5 3454.26 -45.48 123.97 258.66 105.80 11 35 39 2454.3 -34.44 95.68  
 60.00 10 59 24 3397.49 -39.30 120.76 260.55 99.75 11 56 2 2397.5 -31.24 92.86  
 70.00 11 30 42 3303.39 -33.82 114.18 261.44 95.06 12 25 47 2305.4 -28.26 86.89  
 80.00 12 19 8 3153.58 -29.80 102.96 261.73 91.88 13 11 42 2153.6 -26.00 76.18  
 90.00 13 31 37 2919.63 -28.27 85.81 261.77 90.71 14 20 17 1919.6 -25.13 59.24  
 100.00 15 2 0 2628.05 -29.80 64.33 261.73 91.88 15 45 48 1628.1 -26.00 37.55  
 110.00 16 30 8 2352.21 -33.82 43.10 261.44 95.06 17 9 20 1352.2 -28.26 15.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3483 TRA -.7123 TC3 1.0274 BAU .3022 SGT 1395.5 SGR 741.0 SG3 472.8 ST 26.6 SR 27.1 SS 18.6  
 RDE -.4158 RRA .1944 RC3 -.4958 FAU .13852 RRT -.3985 RRF .4928 RTF -.7423 CRT .7539 CRS .9446 CST .8955  
 FDE .6879 FRA .2690 FC3-6.0533 BSP 2296 SGB 1580.1 R23 -.1208 R13 .7633 LSA 40.0 MSA 13.4 S5A 2.8  
 BDE .5424 BRA .7383 BC3 1.1408 FSP 710 SG1 1435.2 SG2 660.8 THA 164.74 EL1 35.6 EL2 13.3 ALF 45.80

LAUNCH DATE AUG 12 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC

DISTANCE 353.476

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.541 GAL 2.08 AZL 89.29 HCA 111.19 SMA 212.00 ECC .28709 INC .7107 V1 29.392  
 RP 227.73 LAP .66 LOP 70.34 VP 23.228 GAP 16.15 AZP 90.26 TAL 9.33 TAP 120.52 RCA 151.14 APO 272.87 V2 24.152  
 RC 128.887 GL 5.41 GP -9.63 ZAL 69.96 ZAP 155.56 ETS 203.79 ZAE 161.68 ETE 324.48 ZAC 72.89 ETC 282.41 LVI -6.14

PLANETOCENTRIC CONIC

C3 19.488 VHL 4.415 DLA 16.17 RAL 24.97 RAD 6642.8 VEL 11.811 PTH 6.83 VHP 4.618 DPA 7.91 RAP 48.33 ECC 1.3207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 35 17 3453.42 -45.47 123.89 257.88 105.86 11 32 50 2453.4 -34.41 95.63  
 60.00 10 56 24 3397.18 -39.30 120.73 259.78 99.76 11 53 2 2397.2 -31.23 92.84  
 70.00 11 27 27 3303.79 -33.82 114.21 260.66 95.04 12 22 33 2305.8 -28.27 86.91  
 80.00 12 15 39 3154.76 -29.81 103.05 260.95 91.83 13 8 14 2154.8 -26.03 76.26  
 90.00 13 28 1 2921.20 -28.27 85.92 260.98 90.65 14 16 42 1921.2 -25.16 59.34  
 100.00 14 58 31 2629.23 -29.81 64.42 260.95 91.83 15 42 20 1629.2 -26.03 37.63  
 110.00 16 26 54 2352.60 -33.82 43.13 260.66 95.04 17 6 6 1352.6 -28.27 15.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3307 TRA -.7014 TC3 1.0513 BAU .3070 SGT 1402.6 SGR 752.3 SG3 500.0 ST 26.9 SR 26.7 SS 19.4  
 RDE -.4064 RRA .1917 RC3 -.5319 FAU .14529 RRT -.4183 RRF .5180 RTF -.7438 CRT .7591 CRS .9488 CST .8924  
 FDE .7339 FRA .2452 FC3-6.4542 BSP 2320 SGB 1591.6 R23 -.1295 R13 .7673 LSA 40.3 MSA 13.2 S5A 2.9  
 BDE .5368 BRA .7271 BC3 1.1782 FSP 756 SG1 1447.3 SG2 682.2 THA 163.90 EL1 35.5 EL2 13.1 ALF 44.72

LAUNCH DATE AUG 12 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC

DISTANCE 357.073

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.497 GAL 2.11 AZL 89.25 HCA 112.24 SMA 211.00 ECC .28379 INC .7497 V1 29.392  
 RP 228.12 LAP .69 LOP 71.38 VP 23.121 GAP 15.83 AZP 90.28 TAL 9.56 TAP 121.80 RCA 151.12 APO 270.88 V2 24.110  
 RC 131.592 GL 5.74 GP -9.94 ZAL 69.55 ZAP 154.48 ETS 203.40 ZAE 162.08 ETE 322.16 ZAC 72.59 ETC 282.43 LVI -5.86

PLANETOCENTRIC CONIC

C3 19.189 VHL 4.381 DLA 16.33 RAL 24.44 RAD 6642.5 VEL 11.799 PTH 6.82 VHP 4.496 DPA 7.62 RAP 48.42 ECC 1.3158  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 32 30 3453.04 -45.46 123.86 257.14 105.88 11 30 3 2453.0 -34.39 95.60  
 60.00 10 53 25 3397.37 -39.30 120.75 259.04 99.75 11 50 2 2397.4 -31.24 92.85  
 70.00 11 24 12 3306.73 -33.83 114.29 259.92 95.00 12 19 19 2306.7 -28.29 86.98  
 80.00 12 12 8 3156.54 -29.81 103.18 260.20 91.76 13 4 44 2156.5 -26.06 76.39  
 90.00 13 24 21 2923.40 -28.27 86.08 260.24 90.57 14 13 5 1923.4 -25.19 59.50  
 100.00 14 55 0 2631.01 -29.81 64.55 260.20 91.76 15 38 51 1631.0 -26.06 37.75  
 110.00 16 23 38 2353.55 -33.83 43.21 259.92 95.00 17 2 52 1353.5 -28.29 15.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3326 TRA -.6908 TC3 1.0721 BAU .3115 SGT 1407.6 SGR 765.0 SG3 528.4 ST 27.1 SR 26.3 SS 20.2  
 RDE -.3970 RRA .1887 RC3 -.5701 FAU .15238 RRT -.4382 RRF .5459 RTF -.7444 CRT .7639 CRS .9525 CST .8893  
 FDE .7814 FRA .2185 FC3-6.8746 BSP 2346 SGB 1602.0 R23 -.1392 R13 .7711 LSA 40.6 MSA 13.1 S5A 3.0  
 BDE .5310 BRA .7161 BC3 1.2143 FSP 804 SG1 1458.0 SG2 663.9 THA 162.97 EL1 35.4 EL2 13.0 ALF 43.85

LAUNCH DATE AUG 12 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.485 GAL 2.14 AZL 89.21 HCA 113.28 SMA 210.08 ECC .28068 INC .7893 V1 29.392  
 RP 228.51 LAP .73 LOP 72.42 VP 23.017 GAP 15.52 AZP 90.31 TAL 9.79 TAP 123.07 RCA 151.10 APO 269.03 V2 24.069  
 RC 134.321 GL 6.08 GP -10.26 ZAL 69.16 ZAP 193.37 ETS 203.03 ZAE 162.47 ETE 319.60 ZAC 72.28 ETC 282.46 LVI -5.56

PLANETOCENTRIC CONIC

C3 18.913 VHL 4.349 DLA 16.50 RAL 23.91 RAD 6642.3 VEL 11.787 PTH 6.81 VHP 4.377 DPA 7.30 RAP 48.48 ECC 1.3113  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 29 43 3453.09 -45.46 123.86 256.45 105.88 11 27 16 2453.1 -34.39 95.60  
 60.00 10 50 24 3398.00 -39.31 120.80 258.34 99.72 11 47 2 2398.0 -31.26 92.89  
 70.00 11 20 55 3308.17 -33.84 114.40 259.22 94.93 12 16 3 2308.2 -28.33 87.08  
 80.00 12 8 34 3158.87 -29.82 103.35 259.49 91.67 13 1 13 2158.9 -26.10 76.55  
 90.00 13 20 39 2926.18 -26.28 86.29 259.52 90.47 14 9 25 1926.2 -25.23 59.69  
 100.00 14 51 26 2633.35 -29.82 64.72 259.49 91.67 15 35 19 1633.3 -26.10 37.92  
 110.00 16 20 22 2354.99 -33.84 43.32 259.22 94.93 16 59 37 1355.0 -28.33 15.99

DIFFERENTIAL CORRECTIONS

TDE -.3409 TRA -.6665 TC3 1.1186 BAU .3223  
 RDE -.3877 RRA .1852 RC3 -.6110 FAU .15996  
 FDE .8276 FRA .1892 FC3 -7.3221 BSP 2197  
 BDE .5163 BRA .6917 BC3 1.2746 FSP 848

MID-COURSE EXECUTION ACCURACY

SGT 1409.6 SGR 779.8 SG3 558.7  
 RRT -.4737 RRF .5736 RTF -.7591  
 SGB 1610.9 R23 -.1276 R13 .7868  
 SG1 1470.2 SG2 658.5 THA 161.47

ORBIT DETERMINATION ACCURACY

ST 26.4 SR 25.8 SS 21.0  
 CRT .7633 CRS .9559 CST .8824  
 LSA 40.3 MSA 12.9 SSA 3.1  
 EL1 34.7 EL2 12.7 ALF 44.24

LAUNCH DATE AUG 12 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.415 GAL 2.17 AZL 89.17 HCA 114.31 SMA 209.19 ECC .27776 INC .8293 V1 29.392  
 RP 228.90 LAP .76 LOP 73.46 VP 22.917 GAP 15.22 AZP 90.34 TAL 10.01 TAP 124.32 RCA 151.09 APO 267.30 V2 24.028  
 RC 137.073 GL 6.42 GP -10.59 ZAL 68.79 ZAP 192.25 ETS 202.69 ZAE 162.85 ETE 316.81 ZAC 71.97 ETC 282.49 LVI -5.27

PLANETOCENTRIC CONIC

C3 18.659 VHL 4.320 DLA 16.68 RAL 23.41 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 4.264 DPA 6.97 RAP 48.52 ECC 1.3071  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 26 57 3453.61 -45.47 123.91 255.81 105.05 11 24 31 2453.6 -34.42 95.64  
 60.00 10 47 24 3399.17 -39.32 120.90 257.69 99.66 11 44 3 2399.2 -31.30 92.97  
 70.00 11 17 37 3310.22 -33.85 114.56 258.56 94.84 12 12 48 2310.2 -28.37 87.22  
 80.00 12 4 57 3161.89 -29.82 103.58 258.82 91.56 12 57 39 2161.9 -26.15 76.76  
 90.00 13 16 54 2929.68 -26.28 86.54 258.85 90.34 14 5 43 1929.7 -25.29 59.93  
 100.00 14 47 49 2636.36 -29.82 64.95 258.82 91.56 15 31 45 1636.4 -26.15 38.12  
 110.00 16 17 4 2357.04 -33.85 43.48 258.56 94.84 16 56 21 1357.0 -28.37 16.13

DIFFERENTIAL CORRECTIONS

TDE -.3483 TRA -.6620 TC3 1.1223 BAU .3240  
 RDE -.3777 RRA .1821 RC3 -.6534 FAU .16766  
 FDE .8842 FRA .1573 FC3 -7.7791 BSP 2287  
 BDE .5138 BRA .6866 BC3 1.2987 FSP 904

MID-COURSE EXECUTION ACCURACY

SGT 1412.0 SGR 795.7 SG3 589.7  
 RRT -.4868 RRF .6004 RTF -.7530  
 SGB 1620.8 R23 -.1468 R13 .7856  
 SG1 1478.6 SG2 663.8 THA 160.60

ORBIT DETERMINATION ACCURACY

ST 26.9 SR 25.3 SS 22.0  
 CRT .7699 CRS .9587 CST .8815  
 LSA 40.9 MSA 12.8 SSA 3.2  
 EL1 34.8 EL2 12.5 ALF 42.76

LAUNCH DATE AUG 12 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.378 GAL 2.20 AZL 89.13 HCA 115.34 SMA 208.37 ECC .27501 INC .8697 V1 29.392  
 RP 229.28 LAP .79 LOP 74.49 VP 22.820 GAP 14.91 AZP 90.37 TAL 10.22 TAP 125.56 RCA 151.07 APO 265.68 V2 23.988  
 RC 139.847 GL 6.78 GP -10.93 ZAL 68.43 ZAP 191.10 ETS 202.36 ZAE 163.21 ETE 313.76 ZAC 71.64 ETC 282.52 LVI -4.96

PLANETOCENTRIC CONIC

C3 18.424 VHL 4.292 DLA 16.87 RAL 22.92 RAD 6642.1 VEL 11.788 PTH 6.79 VHP 4.154 DPA 6.62 RAP 48.55 ECC 1.3032  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 24 12 3454.58 -45.49 124.00 255.21 105.78 11 21 47 2454.6 -34.45 95.70  
 60.00 10 44 24 3400.82 -39.34 121.03 257.08 99.56 11 41 5 2400.8 -31.35 93.08  
 70.00 11 14 18 3312.80 -33.87 114.76 257.94 94.72 12 9 31 2312.8 -28.43 87.39  
 80.00 12 1 18 3165.50 -29.83 103.85 258.19 91.41 12 54 3 2165.5 -26.21 77.01  
 90.00 13 13 4 2933.82 -26.28 86.85 258.21 90.19 14 1 58 1933.8 -25.35 60.22  
 100.00 14 44 10 2639.97 -29.83 65.21 258.19 91.41 15 28 10 1640.0 -26.21 38.37  
 110.00 16 13 44 2359.61 -33.86 43.68 257.94 94.72 16 53 4 1359.6 -28.43 16.31

DIFFERENTIAL CORRECTIONS

TDE -.3534 TRA -.6553 TC3 1.1263 BAU .3264  
 RDE -.3674 RRA .1788 RC3 -.6979 FAU .17564  
 FDE .9444 FRA .1251 FC3 -8.2533 BSP 2347  
 BDE .5098 BRA .6792 BC3 1.3250 FSP 962

MID-COURSE EXECUTION ACCURACY

SGT 1411.7 SGR 813.4 SG3 622.0  
 RRT -.5013 RRF .8269 RTF -.7183  
 SGB 1629.2 R23 -.1632 R13 .7861  
 SG1 1485.7 SG2 668.7 THA 159.57

ORBIT DETERMINATION ACCURACY

ST 27.3 SR 24.8 SS 23.0  
 CRT .7754 CRS .9612 CST .8799  
 LSA 41.4 MSA 12.7 SSA 3.3  
 EL1 34.8 EL2 12.3 ALF 41.47

LAUNCH DATE AUG 12 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.343 GAL 2.22 AZL 89.09 HCA 116.37 SMA 207.81 ECC .27242 INC .9108 V1 29.392  
 RP 229.87 LAP .82 LOP 75.52 VP 22.725 GAP 14.81 AZP 90.40 TAL 10.42 TAP 126.79 RCA 151.05 APO 264.17 V2 23.947  
 RC 142.841 GL 7.13 GP -11.29 ZAL 68.10 ZAP 149.94 ETS 202.05 ZAE 163.54 ETE 310.43 ZAC 71.31 ETC 282.56 LVI -4.66

PLANETOCENTRIC CONIC

C3 18.207 VHL 4.267 DLA 17.07 RAL 22.44 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 4.049 DPA 6.25 RAP 48.56 ECC 1.2996  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 21 28 3455.97 -45.52 124.12 254.65 105.69 11 19 4 2456.0 -34.51 95.79  
 60.00 10 41 23 3402.94 -39.36 121.21 256.51 99.45 11 38 6 2402.9 -31.41 93.22  
 70.00 11 10 57 3315.91 -33.88 115.00 257.35 94.58 12 6 12 2315.9 -28.50 87.61  
 80.00 11 57 35 3169.73 -29.83 104.16 257.59 91.25 12 50 25 2169.7 -26.29 77.30  
 90.00 13 9 11 2938.82 -26.28 87.20 257.61 90.01 13 58 10 1938.6 -25.42 60.55  
 100.00 14 40 27 2644.20 -29.83 65.53 257.59 91.25 15 24 31 1644.2 -26.29 38.67  
 110.00 16 10 23 2362.73 -33.88 43.92 257.35 94.58 16 49 46 1362.7 -28.50 16.53

DIFFERENTIAL CORRECTIONS

TDE -.3574 TRA -.6481 TC3 1.1273 BAU .3289  
 RDE -.3567 RRA .1749 RC3 -.7447 FAU .18389  
 FDE 1.0094 FRA .0918 FC3 -8.7437 BSP 2393  
 BDE .5050 BRA .6713 BC3 1.3511 FSP 1022

MID-COURSE EXECUTION ACCURACY

SGT 1408.8 SGR 832.8 SG3 655.3  
 RRT -.5158 RRF .6529 RTF -.7437  
 SGB 1636.5 R23 -.1786 R13 .7874  
 SG1 1491.3 SG2 674.0 THA 158.42

ORBIT DETERMINATION ACCURACY

ST 27.6 SR 24.2 SS 24.0  
 CRT .7801 CRS .9633 CST .8784  
 LSA 42.0 MSA 12.6 SSA 3.3  
 EL1 34.7 EL2 12.1 ALF 40.22

LAUNCH DATE AUG 12 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

DISTANCE 375.290

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.310 GAL 2.25 AZL 89.05 HCA 117.40 SMA 206.80 ECC .26998 INC .9525 V1 29.392
RP 230.05 LAP .85 LOP 76.95 VP 22.634 GAP 14.31 AZP 90.44 TAL 10.80 TAP 126.00 RCA 151.04 APO 262.75 V2 23.907
RC 145.456 GL 7.49 GP -11.66 ZAL 67.79 ZAP 146.74 ETS 201.76 ZAE 163.82 ETE 306.84 ZAC 70.97 ETC 292.80 LVI -4.34

PLANETOCENTRIC CONIC

C3 18.007 VHL 4.244 DLA 17.28 RAL 21.97 RAD 6641.9 VEL 11.749 PTH 6.78 VHP 3.947 DPA 5.86 RAP 48.55 ECC 1.2964
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.00 10 18 44 3457.79 -45.55 124.28 254.14 105.57 11 16 21 2457.8 -34.58 95.90
60.00 10 38 21 3405.53 -39.39 121.42 255.98 99.31 11 35 7 2405.5 -31.49 93.40
70.00 11 7 33 3319.57 -33.90 115.28 256.80 94.41 12 2 53 2319.6 -28.59 87.86
80.00 11 53 49 3174.58 -29.84 104.52 257.03 91.06 12 46 44 2174.6 -26.37 77.63
90.00 13 5 14 2944.07 -28.28 87.60 257.04 89.81 13 54 18 1944.1 -25.51 69.93
100.00 14 36 41 2649.05 -29.84 65.89 257.03 91.06 15 20 30 1649.1 -26.37 39.00
110.00 16 7 0 2366.39 -33.90 44.20 256.80 94.41 16 46 26 1366.4 -28.59 16.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3602 TRA -.6401 TC3 1.1271 BAU .3319 SGT 1403.9 SGR 854.6 SG3 690.2 ST 27.9 SR 23.6 SS 25.1
RDE -.3457 RRA .1710 RC3 -.7940 FAU .19249 RRT -.5305 RRF .6785 RTF -.7394 CRT .7840 CRS .9651 CST .8767
FDE 1.0781 FRA .0555 FC3-9.2542 BSP 2420 SGB 1643.5 R23 -.1926 R13 .7898 LSA 42.4 HSA 12.5 SSA 3.4
BDE .4992 BRA .6625 BC3 1.3787 FSP 1084 SG1 1496.4 SG2 679.6 THA 157.13 EL1 34.6 EL2 11.8 ALF 39.02

LAUNCH DATE AUG 12 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

DISTANCE 376.972

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.279 GAL 2.27 AZL 89.01 HCA 118.42 SMA 206.22 ECC .26768 INC .9947 V1 29.392
RP 230.44 LAP .87 LOP 77.57 VP 22.546 GAP 14.02 AZP 90.47 TAL 10.78 TAP 129.20 RCA 151.02 APO 261.43 V2 23.867
RC 148.289 GL 7.86 GP -12.04 ZAL 67.49 ZAP 147.53 ETS 201.47 ZAE 164.08 ETE 302.97 ZAC 70.63 ETC 282.65 LVI -4.03

PLANETOCENTRIC CONIC

C3 17.823 VHL 4.222 DLA 17.50 RAL 21.52 RAD 6641.9 VEL 11.741 PTH 6.77 VHP 3.650 DPA 5.44 RAP 48.52 ECC 1.2933
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 16 0 3460.04 -45.59 124.49 253.66 105.42 11 13 40 2460.0 -34.67 96.05
60.00 10 35 19 3408.60 -39.42 121.68 255.48 99.14 11 32 8 2408.6 -31.58 93.60
70.00 11 4 8 3323.77 -33.92 115.61 256.28 94.23 11 59 32 2323.8 -28.68 88.15
80.00 11 49 59 3180.06 -29.85 104.93 256.50 90.85 12 42 39 2180.1 -26.46 78.01
90.00 13 1 12 2950.20 -28.28 88.04 256.50 89.59 13 50 22 1950.2 -25.60 61.39
100.00 14 32 51 2654.53 -29.85 66.30 256.50 90.85 15 17 6 1654.5 -26.46 39.38
110.00 16 3 34 2370.59 -33.92 44.53 256.28 94.22 16 43 5 1370.6 -28.68 17.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3623 YRA -.6316 TC3 1.1241 BAU .3352 SGT 1396.6 SGR 878.7 SG3 726.5 ST 28.1 SR 23.0 SS 26.3
RDE -.3342 RRA .1666 RC3 -.8460 FAU .20145 RRT -.5444 RRF .7035 RTF -.7348 CRT .7875 CRS .9668 CST .8747
FDE 1.1517 FRA .0145 FC3-9.7851 B8P 2440 SGB 1850.0 R23 -.2058 R13 .7927 LSA 42.9 HSA 12.5 SSA 3.5
BDE .4929 BRA .6532 BC3 1.4068 FSP 1148 SG1 1500.6 SG2 686.0 THA 155.71 EL1 34.4 EL2 11.6 ALF 37.82

LAUNCH DATE AUG 12 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

DISTANCE 382.665

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.249 GAL 2.29 AZL 88.96 HCA 119.44 SMA 205.80 ECC .26552 INC 1.0377 V1 29.392
RP 230.82 LAP .90 LOP 78.59 VP 22.460 GAP 13.73 AZP 90.51 TAL 10.95 TAP 130.39 RCA 151.01 APO 260.19 V2 23.827
RC 151.140 GL 8.23 GP -12.43 ZAL 67.22 ZAP 146.29 ETS 201.19 ZAE 164.23 ETE 298.84 ZAC 70.27 ETC 282.70 LVI -3.70

PLANETOCENTRIC CONIC

C3 17.654 VHL 4.202 DLA 17.74 RAL 21.09 RAD 6641.8 VEL 11.734 PTH 6.76 VHP 3.758 DPA 5.01 RAP 48.47 ECC 1.2908
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 13 16 3462.71 -45.64 124.73 253.23 105.24 11 10 59 2462.7 -34.77 96.22
60.00 10 32 16 3412.15 -39.46 121.97 255.03 98.94 11 29 8 2412.1 -31.69 93.84
70.00 11 0 40 3328.51 -33.95 115.98 255.81 94.01 11 56 9 2328.5 -28.79 88.46
80.00 11 46 5 3188.17 -29.85 105.38 256.00 90.61 12 39 11 2186.2 -26.57 78.44
90.00 12 37 3 2957.02 -28.27 88.54 256.00 89.34 13 46 22 1957.0 -25.70 61.83
100.00 14 28 57 2660.64 -29.85 66.75 256.00 90.61 15 13 18 1660.6 -26.57 39.81
110.00 16 0 7 2375.33 -33.95 44.90 255.81 94.01 16 39 42 1375.3 -28.79 17.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3640 TRA -.6238 TC3 1.1182 BAU .3385 SGT 1387.0 SGR 905.2 SG3 784.0 ST 28.2 SR 22.3 SS 27.5
RDE -.3222 RRA .1621 RC3 -.9004 FAU .21069 RRT -.3566 RRF .7275 RTF -.7191 CRT .7903 CRS .9679 CST .8729
FDE 1.2301 FRA -.0268 FC-10.3318 B8P 2454 SGB 1636.3 R23 -.2190 R13 .7959 LSA 43.4 HSA 12.4 SSA 3.5
BDE .4861 BRA .6445 BC3 1.4341 F8P 1214 SG1 1504.1 SG2 693.5 THA 154.16 EL1 34.1 EL2 11.3 ALF 36.57

LAUNCH DATE AUG 12 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 386.367

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 33.221 GAL 2.31 AZL 88.92 HCA 120.45 SMA 205.01 ECC .26349 INC 1.0814 V1 29.392
RP 231.20 LAP .93 LOP 79.61 VP 22.377 GAP 13.44 AZP 90.55 TAL 11.11 TAP 131.57 RCA 150.99 APO 259.03 V2 23.787
RC 154.008 GL 8.61 GP -12.85 ZAL 66.98 ZAP 145.03 ETS 200.92 ZAE 164.32 ETE 294.48 ZAC 69.91 ETC 282.76 LVI -3.37

PLANETOCENTRIC CONIC

C3 17.499 VHL 4.183 DLA 17.99 RAL 20.66 RAD 6641.7 VEL 11.727 PTH 6.76 VHP 3.666 DPA 4.56 RAP 48.40 ECC 1.2880
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 33 3465.81 -45.69 125.00 252.84 105.03 11 8 19 2465.8 -34.89 96.41
60.00 10 29 12 3416.17 -39.50 122.30 254.61 98.72 11 26 8 2416.2 -31.81 94.11
70.00 10 57 10 3333.81 -33.97 116.39 255.36 93.76 11 52 44 2333.8 -28.91 88.84
80.00 11 42 7 3192.93 -29.86 105.88 255.53 90.34 12 35 20 2192.9 -26.68 78.91
90.00 12 52 52 2964.54 -28.27 89.09 255.52 89.06 13 42 17 1964.5 -25.80 62.35
100.00 14 24 59 2667.41 -29.86 67.25 255.53 90.34 15 9 26 1667.4 -26.68 40.28
110.00 15 56 36 2380.63 -33.97 45.31 255.36 93.76 16 36 17 1380.6 -28.91 17.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3650 TRA -.6155 TC3 1.1036 BAU .3418 SGT 1374.1 SGR 934.3 SG3 802.7 ST 28.3 SR 21.5 SS 28.8
RDE -.3098 RRA .1571 RC3 -.9575 FAU .22018 RRT -.5671 RRF .7505 RTF -.7223 CRT .7927 CRS .9689 CST .8709
FDE 1.3129 FRA -.0732 FC-10.8934 BSP 2465 SGB 1661.6 R23 -.2314 R13 .7997 LSA 43.9 HSA 12.4 SSA 3.6
BDE .4787 BRA .6353 BC3 1.4610 F8P 1283 SG1 1506.0 SG2 702.1 THA 152.44 EL1 33.9 EL2 11.0 ALF 35.30

LAUNCH DATE AUG 12 1973 FLIGHT TIME 164.00 ARRIVAL DATE JAN 23 1974

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 33.195 GAL 2.33 AZL 88.87 HCA 121.47 SMA 204.46 ECC .26156 INC 1.1259 V1 29.392  
 RP 231.98 LAP .98 LOP 80.62 VP 22.296 GAP 13.15 AZP 90.59 TAL 11.26 TAP 132.73 RCA 150.98 APO 257.95 V2 23.748  
 RC 156.890 GL 9.00 GP -13.27 ZAL 66.73 ZAP 143.74 ETS 200.65 ZAE 164.33 ETE 289.93 ZAC 69.53 ETC 282.82 LVI -3.04

Planetary Conic: C3 17.356 VHL 4.168 DLA 18.25 RAL 20.26 RAD 6641.6 VEL 11.721 PTH 6.75 VHP 3.980 DPA 4.09 RAP 46.31 ECC 1.2856  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 7 49 3469.33 -45.75 125.32 252.49 104.79 11 5 39 2469.3 -35.03 96.64  
 60.00 10 26 6 3420.66 -39.55 122.68 254.22 98.47 11 23 7 2420.7 -31.95 94.42  
 70.00 10 53 37 3339.67 -34.00 118.85 254.95 93.49 11 49 16 2339.7 -29.04 89.25  
 80.00 11 38 3 3200.36 -29.86 106.44 255.10 90.05 12 31 24 2200.4 -26.80 79.43  
 90.00 12 48 33 2972.79 -28.26 89.69 255.08 88.76 13 38 6 1972.8 -25.92 62.93  
 100.00 14 20 55 2674.83 -29.86 67.80 255.10 90.05 15 5 30 1674.8 -26.80 40.80  
 110.00 15 53 3 2386.49 -34.00 45.76 254.95 93.49 16 32 49 1386.5 -29.04 18.17

Differential Corrections: TDE -.3654 TRA -.6084 TC3 1.0873 BAU .3456 MGR 1359.9 SGR 966.4 SG3 842.8  
 RDE -.2987 RRA .1521 RC3-1.0176 FAU .23004 RRT -.5761 RRF .7725 RTF -.7146 CRT .7939 CRS .9694 CST .8689  
 FDE 1.4008 FRA -.1184 FC-11.4745 BSP 2468 SGB 1868.3 R23 -.2429 R13 .8041 LSA 44.5 MSA 12.4 SSA 3.6  
 BDE .4707 BRA .6271 BC3 1.4892 FSP 1353 SGI 1908.8 SG2 712.0 THA 150.58 EL1 33.5 EL2 10.7 ALF 33.97

LAUNCH DATE AUG 12 1973 FLIGHT TIME 166.00 ARRIVAL DATE JAN 25 1974

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 33.171 GAL 2.34 AZL 88.83 HCA 122.47 SMA 203.95 ECC .25978 INC 1.1712 V1 29.392  
 RP 231.95 LAP .99 LOP 81.83 VP 22.217 GAP 12.86 AZP 90.63 TAL 11.40 TAP 133.88 RCA 150.97 APO 256.93 V2 23.708  
 RC 159.785 GL 9.39 GP -13.71 ZAL 66.51 ZAP 142.43 ETS 200.39 ZAE 164.23 ETE 285.24 ZAC 69.15 ETC 282.89 LVI -2.70

Planetary Conic: C3 17.226 VHL 4.150 DLA 18.52 RAL 19.86 RAD 6641.6 VEL 11.716 PTH 6.75 VHP 3.497 DPA 3.59 RAP 48.20 ECC 1.2835  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 5 6 3473.27 -45.82 125.68 252.18 104.52 11 2 59 2473.3 -35.18 96.89  
 60.00 10 22 59 3425.64 -39.60 123.09 253.88 98.19 11 20 5 2425.6 -32.09 94.76  
 70.00 10 50 0 3348.10 -34.02 117.35 254.57 93.20 11 45 46 2346.1 -29.18 89.70  
 80.00 11 33 54 3208.47 -29.86 107.04 254.70 89.74 12 27 23 2208.5 -26.93 80.00  
 90.00 12 44 8 2981.77 -28.24 90.35 254.67 88.43 13 33 50 1981.8 -26.04 63.56  
 100.00 14 16 46 2682.94 -29.86 68.41 254.70 89.74 15 1 29 1682.9 -26.93 41.37  
 110.00 15 49 26 2392.92 -34.02 46.26 254.57 93.20 16 29 19 1392.9 -29.18 18.62

Differential Corrections: TDE -.3656 TRA -.6013 TC3 1.0646 BAU .3493 MGR 1342.3 SGR 1001.1 SG3 883.9  
 RDE -.2931 RRA .1466 RC3-1.0802 FAU .24010 RRT -.5819 RRF .7932 RTF -.7048 CRT .7949 CRS .9696 CST .8688  
 FDE 1.4946 FRA -.1683 FC-12.0669 BSP 2483 SGB 1874.5 R23 -.2536 R13 .8089 LSA 45.1 MSA 12.4 SSA 3.6  
 BDE .4623 BRA .6189 BC3 1.5168 FSP 1429 SGI 1510.1 SG2 723.7 THA 148.54 EL1 33.1 EL2 10.3 ALF 32.55

LAUNCH DATE AUG 12 1973 FLIGHT TIME 168.00 ARRIVAL DATE JAN 27 1974

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 33.148 GAL 2.36 AZL 88.78 HCA 123.48 SMA 203.47 ECC .25809 INC 1.2172 V1 29.392  
 RP 232.33 LAP 1.02 LOP 82.63 VP 22.141 GAP 12.58 AZP 90.67 TAL 11.53 TAP 135.01 RCA 150.96 APO 255.99 V2 23.670  
 RC 162.693 GL 9.79 GP -14.16 ZAL 66.32 ZAP 141.09 ETS 200.12 ZAE 164.03 ETE 280.47 ZAC 68.76 ETC 282.96 LVI -2.39

Planetary Conic: C3 17.107 VHL 4.136 DLA 18.80 RAL 19.48 RAD 6641.5 VEL 11.711 PTH 6.74 VHP 3.418 DPA 3.07 RAP 48.07 ECC 1.2815  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 2 21 3477.64 -45.90 126.07 251.90 104.23 11 0 19 2477.6 -35.35 97.18  
 60.00 10 19 50 3431.10 -39.65 123.55 253.56 97.89 11 17 1 2431.1 -32.26 95.13  
 70.00 10 46 19 3353.10 -34.05 117.89 254.22 92.88 11 42 13 2353.1 -29.33 90.19  
 80.00 11 29 39 3217.27 -29.85 107.69 254.32 89.39 12 23 17 2217.3 -27.07 80.82  
 90.00 12 39 35 2991.53 -28.22 91.06 254.28 88.08 13 29 27 1991.5 -26.17 64.24  
 100.00 14 12 31 2691.74 -29.85 69.08 254.32 89.39 14 57 23 1691.7 -27.07 41.98  
 110.00 15 45 46 2399.92 -34.05 46.81 254.22 92.88 16 25 46 1399.9 -29.33 19.11

Differential Corrections: TDE -.3655 TRA -.5930 TC3 1.0378 BAU .3536 MGR 1323.4 SGR 1039.2 SG3 926.5  
 RDE -.2686 RRA .1407 RC3-1.1462 FAU .25054 RRT -.5853 RRF .8127 RTF -.6335 CRT .7951 CRS .9695 CST .8646  
 FDE 1.5935 FRA -.2209 FC-12.8789 BSP 2489 SGB 1862.7 R23 -.2629 R13 .8145 LSA 45.7 MSA 12.5 SSA 3.6  
 BDE .4536 BRA .6114 BC3 1.5462 FSP 1504 SGI 1512.6 SG2 737.2 THA 146.32 EL1 32.7 EL2 10.0 ALF 31.01

LAUNCH DATE AUG 12 1973 FLIGHT TIME 170.00 ARRIVAL DATE JAN 29 1974

Heliocentric Conic: RL 151.59 LAL -0.00 LOL 319.15 VL 33.126 GAL 2.37 AZL 88.74 HCA 124.48 SMA 203.02 ECC .25650 INC 1.2644 V1 29.392  
 RP 232.70 LAP 1.04 LOP 83.64 VP 22.087 GAP 12.30 AZP 90.72 TAL 11.65 TAP 136.14 RCA 150.95 APO 255.10 V2 23.631  
 RC 165.610 GL 10.20 GP -14.63 ZAL 66.14 ZAP 139.73 ETS 199.86 ZAE 163.72 ETE 279.70 ZAC 68.36 ETC 283.04 LVI -1.89

Planetary Conic: C3 16.999 VHL 4.123 DLA 19.10 RAL 19.11 RAD 6641.5 VEL 11.706 PTH 6.74 VHP 3.342 DPA 2.53 RAP 47.92 ECC 1.2798  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 36 3482.41 -45.98 126.50 251.67 103.90 10 57 38 2482.4 -35.53 97.49  
 60.00 10 16 39 3437.02 -39.71 124.04 253.28 97.55 11 13 56 2437.0 -32.43 95.53  
 70.00 10 42 35 3360.66 -34.07 118.48 253.91 92.53 11 38 35 2360.7 -29.49 90.72  
 80.00 11 25 18 3226.75 -29.84 108.40 253.97 89.02 12 19 5 2226.8 -27.21 81.28  
 90.00 12 34 55 3002.04 -28.19 91.83 253.92 87.69 13 24 57 2002.0 -26.31 64.98  
 100.00 14 8 10 2701.23 -29.84 69.77 253.97 89.02 14 53 11 1701.2 -27.21 42.65  
 110.00 15 42 1 2407.48 -34.07 47.40 253.91 92.53 16 22 9 1407.5 -29.49 18.63

Differential Corrections: TDE -.3535 TRA -.5779 TC3 1.0298 BAU .3624 MGR 1298.0 SGR 1082.5 SG3 971.8  
 RDE -.2549 RRA .1332 RC3-1.2176 FAU .26177 RRT -.6014 RRF .8315 RTF -.6931 CRT .7927 CRS .9692 CST .8580  
 FDE 1.6835 FRA -.2923 FC-13.3313 BSP 2374 SGB 1690.2 R23 -.2535 R13 .8280 LSA 45.7 MSA 12.4 SSA 3.6  
 BDE .4358 BRA .5931 BC3 1.5947 FSP 1561 SGI 1520.3 SG2 738.4 THA 143.44 EL1 31.6 EL2 9.6 ALF 30.38



LAUNCH DATE AUG 12 1973

FLIGHT TIME 172.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 33.106 GAL 2.38 AZL 88.65 HCA 125.48 SMA 202.61 ECC .29501 INC 1.3124 V1 29.392  
 RP 233.07 LAP 1.07 LOP 84.63 VP 21.996 GAP 12.02 AZP 90.76 TAL 11.76 TAP 137.24 RCA 150.94 APO 254.27 V2 23.593  
 RC 168.537 GL 10.62 GP -15.12 ZAL 65.98 ZAP 138.35 ETS 199.59 ZAE 163.28 ETE 271.01 ZAC 67.95 ETC 263.12 LVI -1.63

DISTANCE 404.996 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.901 VHL 4.111 DLA 19.41 RAL 18.76 RAD 6641.4 VEL 11.702 PTH 6.74 VHP 3.270 DPA 1.97 RAP 47.75 ECC 1.2782  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 51 3487.64 -46.06 126.98 251.47 103.54 10 34 58 2487.6 -35.73 97.83  
 60.00 10 13 25 3443.48 -39.76 124.58 253.04 97.19 11 10 49 2443.5 -32.62 95.98  
 70.00 10 38 46 3388.87 -34.09 119.12 253.62 92.15 11 34 55 2368.9 -29.66 91.29  
 80.00 11 20 49 3237.05 -29.83 109.16 253.66 88.62 12 14 46 2237.1 -27.36 82.01  
 90.00 12 30 5 3013.46 -26.16 92.67 253.59 87.28 13 20 18 2013.5 -26.45 65.79  
 100.00 14 3 41 2711.52 -29.83 70.53 253.66 88.62 14 48 52 1711.5 -27.36 43.38  
 110.00 15 38 12 2415.69 -34.09 48.04 253.62 92.15 16 18 28 1415.7 -29.66 20.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3602 TRA -.5810 TC3 .9701 BAU .3640 SGT 1274.9 SGR 1124.3 SG3 1013.9 ST 28.2 SR 16.9 SS 36.0  
 RDE -.2379 RRA .1277 RC3-1.2863 FAU .27187 RRT -.5854 RRF .8475 RTF -.6665 CRT .7920 CRS .9670 CST .8583  
 FDE 1.8080 FRA -.3365 FC-13.9258 BSP 2479 SGB 1699.9 R23 -.2708 R13 .8301 LSA 47.0 MSA 12.6 SSA 3.6  
 BDE .4317 BRA .5949 BC3 1.6111 F8P 1637 SG1 1517.6 SG2 763.8 THA 141.07 EL1 31.6 EL2 9.2 ALF 27.94

LAUNCH DATE AUG 12 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 33.086 GAL 2.39 AZL 88.64 HCA 126.48 SMA 202.22 ECC .29361 INC 1.3616 V1 29.392  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.926 GAP 11.75 AZP 90.81 TAL 11.86 TAP 138.34 RCA 150.93 APO 253.50 V2 23.554  
 RC 171.472 GL 11.04 GP -15.61 ZAL 65.85 ZAP 136.94 ETS 199.32 ZAE 162.73 ETE 266.44 ZAC 67.53 ETC 263.21 LVI -1.26

DISTANCE 408.740 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.813 VHL 4.100 DLA 19.74 RAL 18.41 RAD 6641.4 VEL 11.698 PTH 6.73 VHP 3.202 DPA 1.38 RAP 47.57 ECC 1.2767  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 54 4 3495.30 -46.15 127.50 251.32 103.15 10 52 17 2493.3 -35.94 98.20  
 60.00 10 10 9 3450.44 -39.82 125.16 252.84 96.80 11 7 40 2450.4 -32.82 96.46  
 70.00 10 34 52 3377.69 -34.11 119.81 253.37 91.75 11 31 9 2377.7 -29.84 91.92  
 80.00 11 16 12 3248.10 -29.81 109.98 253.37 88.19 12 10 20 2248.1 -27.52 82.79  
 90.00 12 25 5 3025.73 -28.12 93.56 253.28 86.83 13 15 31 2025.7 -26.60 68.65  
 100.00 13 59 4 2722.57 -29.81 71.35 253.37 88.19 14 44 26 1722.6 -27.52 44.16  
 110.00 15 34 18 2424.51 -34.11 48.72 253.37 91.75 16 14 43 1424.5 -29.84 20.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3610 TRA -.5790 TC3 .9193 BAU .3690 SGT 1249.6 SGR 1171.1 SG3 1058.4 ST 28.3 SR 15.7 SS 37.7  
 RDE -.2206 RRA .1211 RC3-1.3601 FAU .28263 RRT -.5739 RRF .8627 RTF -.8441 CRT .7893 CRS .9660 CST .8563  
 FDE 1.9315 FRA -.3918 FC-14.5328 BSP 2518 SGB 1712.6 R23 -.2757 R13 .8374 LSA 48.0 MSA 12.7 SSA 3.5  
 BDE .4231 BRA .5915 BC3 1.6416 F8P 1742 SG1 1520.4 SG2 788.2 THA 138.23 EL1 31.2 EL2 8.8 ALF 25.85

LAUNCH DATE AUG 12 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 33.069 GAL 2.40 AZL 88.59 HCA 127.47 SMA 201.85 ECC .29230 INC 1.4118 V1 29.392  
 RP 233.60 LAP 1.12 LOP 86.62 VP 21.858 GAP 11.48 AZP 90.86 TAL 11.95 TAP 139.42 RCA 150.93 APO 252.78 V2 23.517  
 RC 174.413 GL 11.48 GP -16.13 ZAL 65.73 ZAP 135.51 ETS 199.04 ZAE 162.06 ETE 262.05 ZAC 67.10 ETC 263.31 LVI -.88

DISTANCE 412.491 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.735 VHL 4.091 DLA 20.08 RAL 18.08 RAD 6641.3 VEL 11.695 PTH 6.73 VHP 3.137 DPA .78 RAP 47.36 ECC 1.2754  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 15 3499.39 -46.24 128.06 251.19 102.73 10 49 34 2499.4 -36.17 98.60  
 60.00 10 6 50 3457.90 -39.88 125.79 252.66 96.38 11 4 28 2457.9 -33.03 96.98  
 70.00 10 30 52 3387.13 -34.13 120.54 253.14 91.31 11 27 19 2387.1 -30.03 92.59  
 80.00 11 11 26 3259.95 -29.78 110.86 253.10 87.73 12 5 46 2260.0 -27.69 83.63  
 90.00 12 19 54 3038.90 -26.06 94.52 253.00 86.35 13 10 33 2038.9 -26.75 67.59  
 100.00 13 54 18 2734.42 -29.78 72.23 253.10 87.73 14 39 52 1734.4 -27.69 45.00  
 110.00 15 30 18 2433.95 -34.13 49.46 253.14 91.31 16 10 52 1433.9 -30.03 21.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3589 TRA -.5753 TC3 .8867 BAU .3755 SGT 1221.3 SGR 1221.3 SG3 1103.7 ST 28.3 SR 14.3 SS 39.5  
 RDE -.8025 RRA .1138 RC3-1.4371 FAU .29358 RRT -.3610 RRF .8767 RTF -.8407 CRT .7845 CRS .9632 CST .8532  
 FDE 2.0591 FRA -.4519 FC-15.1877 BSP 2538 SGB 1727.2 R23 -.2752 R13 .8474 LSA 48.9 MSA 12.9 SSA 3.3  
 BDE .4121 BRA .5865 BC3 1.6782 F8P 1826 SG1 1525.9 SG2 809.2 THA 135.00 EL1 30.7 EL2 8.3 ALF 25.80

LAUNCH DATE AUG 12 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 33.052 GAL 2.40 AZL 88.54 HCA 128.46 SMA 201.51 ECC .29108 INC 1.4632 V1 29.392  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.793 GAP 11.21 AZP 90.91 TAL 12.03 TAP 140.48 RCA 150.92 APO 252.11 V2 23.479  
 RC 177.360 GL 11.92 GP -16.66 ZAL 65.63 ZAP 134.05 ETS 198.75 ZAE 161.28 ETE 257.88 ZAC 66.66 ETC 263.41 LVI -.50

DISTANCE 416.245 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 16.665 VHL 4.082 DLA 20.43 RAL 17.76 RAD 6641.3 VEL 11.692 PTH 6.73 VHP 3.075 DPA .15 RAP 47.14 ECC 1.2743  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 25 3505.93 -46.34 128.66 251.11 102.28 10 46 51 2505.9 -36.41 99.04  
 60.00 10 3 27 3465.88 -39.94 126.46 252.52 95.93 11 1 15 2465.9 -33.25 97.54  
 70.00 10 26 46 3397.22 -34.14 121.33 252.95 90.85 11 23 23 2397.2 -30.23 93.30  
 80.00 11 6 30 3272.65 -29.74 111.80 252.86 87.23 12 1 3 2272.7 -27.86 84.54  
 90.00 12 14 31 3053.05 -28.00 95.55 252.74 85.84 13 5 24 2053.0 -26.91 68.59  
 100.00 13 49 22 2747.12 -29.74 73.17 252.86 87.23 14 35 9 1747.1 -27.86 45.91  
 110.00 15 26 12 2444.04 -34.14 50.25 252.95 90.85 16 6 56 1444.0 -30.23 22.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3550 TRA -.5721 TC3 .8085 BAU .3830 SGT 1190.8 SGR 1275.2 SG3 1148.4 ST 28.0 SR 13.2 SS 41.2  
 RDE -.1838 RRA .1061 RC3-1.5171 FAU .30464 RRT -.5435 RRF .8895 RTF -.5932 CRT .7773 CRS .9592 CST .8489  
 FDE 2.1881 FRA -.5150 FC-15.8259 BSP 2556 SGB 1744.8 R23 -.2653 R13 .8590 LSA 49.8 MSA 13.0 SSA 3.4  
 BDE .3997 BRA .5818 BC3 1.7191 F8P 1907 SG1 1534.3 SG2 830.8 THA 131.41 EL1 30.0 EL2 7.8 ALF 21.89

LAUNCH DATE AUG 12 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC DISTANCE 420.004 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.036 GAL 2.41 AZL 88.48 HCA 129.45 SMA 201.20 ECC .24993 INC 1.5159 V1 29.392

PLANETOCENTRIC CONIC
C3 16.604 VHL 4.075 DLA 20.80 RAL 17.45 RAD 6641.3 VEL 11.689 PTH 6.72 VHP 3.016 DPA -.51 RAP 46.90 ECC 1.2733
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3900 TRA -.5689 TC3 .7461 BAW .3920 SGT 1159.4 SGR 1332.9 SG3 1196.1 ST 27.8 SR 11.9 SS 43.1

LAUNCH DATE AUG 12 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC DISTANCE 423.768 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.022 GAL 2.41 AZL 88.43 HCA 130.43 SMA 200.90 ECC .24885 INC 1.5699 V1 29.392

PLANETOCENTRIC CONIC
C3 16.551 VHL 4.068 DLA 21.19 RAL 17.15 RAD 6641.3 VEL 11.687 PTH 6.72 VHP 2.961 DPA -1.18 RAP 46.64 ECC 1.2724
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3390 TRA -.5624 TC3 .6875 BAW .4035 SGT 1124.0 SGR 1395.6 SG3 1244.0 ST 27.1 SR 10.5 SS 44.7

LAUNCH DATE AUG 12 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC DISTANCE 427.533 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 33.008 GAL 2.41 AZL 88.37 HCA 131.41 SMA 200.63 ECC .24785 INC 1.6254 V1 29.392

PLANETOCENTRIC CONIC
C3 16.506 VHL 4.063 DLA 21.59 RAL 18.86 RAD 6641.2 VEL 11.685 PTH 6.72 VHP 2.909 DPA -1.88 RAP 46.37 ECC 1.2717
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3394 TRA -.8674 TC3 .9940 BAW .4128 SGT 1098.6 SGR 1456.2 SG3 1287.3 ST 27.2 SR 8.9 SS 47.0

LAUNCH DATE AUG 12 1973 FLIGHT TIME 186.00 ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC DISTANCE 431.303 EARTH TO MARS
RL 181.59 LAL -.00 LOL 319.18 VL 32.998 GAL 2.41 AZL 88.32 HCA 132.39 SMA 200.38 ECC .24681 INC 1.6825 V1 29.392

PLANETOCENTRIC CONIC
C3 16.470 VHL 4.058 DLA 22.01 RAL 16.58 RAD 6641.2 VEL 11.684 PTH 6.72 VHP 2.860 DPA -2.59 RAP 46.08 ECC 1.2711
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3316 TRA -.5675 TC3 .5104 BAW .4257 SGT 1066.6 SGR 1523.5 SG3 1333.0 ST 26.8 SR 7.4 SS 49.0

LAUNCH DATE AUG 12 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC										DISTANCE 435.075										EARTH TO MARS																																																																																																																																												
RL	151.59	LAL	-.00	LOL	319.15	VL	32.984	GAL	2.41	AZL	88.28	HCA	133.38	SMA	200.15	ECC	.24603	INC	1.7410	V1	29.392	RP	233.94	LAP	1.27	LOP	92.92	VP	21.491	GAP	9.89	AZP	91.20	TAL	12.27	TAP	148.63	RCA	130.90	APO	249.39	V2	23.297	RC	192.165	GL	14.30	GP	-19.52	ZAL	65.42	ZAP	126.48	ETS	197.14	ZAE	159.89	ETE	240.81	ZAC	64.35	ETC	283.98	LVI	1.58																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	16.441	VHL	4.055	DLA	22.44	RAL	16.31	RAD	6641.2	VEL	11.682	PTH	6.72	VHP	2.814	DPA	-3.33	RAP	45.79	ECC	1.2706	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		9	33	34	3545.59	-46.85		132.35		251.25		99.47		10	32	40	2348.6		-37.05		101.74		60.00		9	45	22	3514.18	-40.20		130.54		252.27		93.17		10	43	56	2514.2		-34.55		100.98		70.00		10	4	16	3458.51	-34.10		126.12		252.34		88.02		11	1	54	2458.5		-31.35		97.73		80.00		10	38	36	3350.79	-29.34		117.58		251.97		84.22		11	34	27	2350.8		-28.77		90.17		90.00		11	43	33	3141.12	-27.40		101.92		251.71		82.71		12	35	54	2141.1		-27.69		74.92		100.00		13	21	28	2825.26	-29.34		78.94		251.97		84.22		14	8	34	1825.3		-28.77		51.53		110.00		15	3	42	2505.33	-34.10		55.03		252.34		88.02		15	45	27	1505.3		-31.35		26.65
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-.3231	TRA	-.5683	TC3	.4193	BAU	.4401		SGT	1038.7	SGR	1593.8	SG3	1378.0		ST	26.3	SR	5.7	SS	91.1	RDE	-.0712	RRA	.0613	RC3	-1.9580	FAU	.35928		RRT	-.3475	RRF	.9371	RTF	-.3611		CRT	.6316	CRS	.8446	CST	.8152	FDE	2.9422	FRA	-.8533	FC	-18.9184	BSP	2792		SGB	1902.4	R23	-.1435	R13	.9268		LSA	55.9	MSA	14.0	MSA	3.0	BDE	.3309	BRA	.5716	BC3	2.0024	FSP	2328		SG1	1655.1	SG2	937.9	THA	109.11		EL1	26.5	EL2	4.4	ALF	8.08																																																																									

LAUNCH DATE AUG 12 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC										DISTANCE 438.850										EARTH TO MARS																																																																																																																																												
RL	151.59	LAL	-.00	LOL	319.15	VL	32.973	GAL	2.41	AZL	88.20	HCA	134.33	SMA	199.93	ECC	.24522	INC	1.8014	V1	29.392	RP	236.29	LAP	1.29	LOP	93.49	VP	21.436	GAP	9.63	AZP	91.26	TAL	12.29	TAP	146.62	RCA	150.90	APO	248.95	V2	23.261	RC	195.134	GL	14.81	GP	-20.13	ZAL	65.44	ZAP	124.91	ETS	196.78	ZAE	154.56	ETE	238.11	ZAC	63.86	ETC	284.11	LVI	2.01																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	16.420	VHL	4.052	DLA	22.89	RAL	16.04	RAD	6641.2	VEL	11.682	PTH	6.72	VHP	2.771	DPA	-4.09	RAP	45.48	ECC	1.2702	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		9	30	25	3555.01	-46.95		133.24		251.39		98.80		10	29	40	2555.0		-38.18		102.40		60.00		9	41	26	3525.66	-40.24		131.52		252.30		92.51		10	40	12	2525.7		-34.84		101.81		70.00		9	59	15	3473.19	-34.06		127.26		252.29		87.34		10	57	8	2473.2		-31.59		98.80		80.00		10	32	11	3369.90	-29.21		118.98		251.84		83.50		11	28	21	2369.9		-28.95		91.56		90.00		11	36	15	3183.01	-27.20		103.49		251.55		81.94		12	28	58	2163.0		-27.84		76.50		100.00		13	15	3	2844.37	-29.21		80.35		251.84		83.50		14	2	27	1844.4		-28.95		52.93		110.00		14	58	41	2520.01	-34.06		56.18		252.29		87.34		15	40	41	1520.0		-31.59		27.72
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-.3129	TRA	-.5703	TC3	.3210	BAU	.4560		SGT	1014.7	SGR	1666.5	SG3	1421.3		ST	25.7	SR	4.2	SS	53.2	RDE	-.0444	RRA	.0514	RC3	-2.0525	FAU	.36948		RRT	-.2803	RRF	.9438	RTF	-.2887		CRT	.4922	CRS	.7066	CST	.8040	FDE	3.1124	FRA	-.9196	FC	-19.4802	BSP	2872		SGB	1951.1	R23	-.1080	R13	.9380		LSA	57.5	MSA	14.2	SSA	2.9	BDE	.3160	BRA	.5726	BC3	2.0774	FSP	2408		SG1	1702.2	SG2	953.6	THA	104.24		EL1	25.6	EL2	3.6	ALF	4.67																																																																									

LAUNCH DATE AUG 12 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC										DISTANCE 442.627										EARTH TO MARS																																																																																																																																												
RL	151.59	LAL	-.00	LOL	319.15	VL	32.963	GAL	2.41	AZL	88.14	HCA	135.30	SMA	199.73	ECC	.24446	INC	1.8636	V1	29.392	RP	236.63	LAP	1.31	LOP	94.46	VP	21.383	GAP	9.37	AZP	91.32	TAL	12.30	TAP	147.60	RCA	130.90	APO	248.55	V2	23.226	RC	198.104	GL	15.33	GP	-20.76	ZAL	65.47	ZAP	123.33	ETS	196.39	ZAE	153.17	ETE	235.61	ZAC	63.37	ETC	284.25	LVI	2.46																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	16.407	VHL	4.051	DLA	23.36	RAL	15.78	RAD	6641.2	VEL	11.681	PTH	6.72	VHP	2.732	DPA	-4.87	RAP	45.15	ECC	1.2700	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		9	27	12	3564.96	-47.05		134.18		251.36		98.08		10	26	36	2565.0		-39.53		103.10		60.00		9	37	23	3537.80	-40.27		132.55		252.37		91.81		10	36	21	2537.8		-35.14		102.70		70.00		9	54	1	3488.80	-34.01		128.48		252.26		86.62		10	52	10	2488.8		-31.84		99.95		80.00		10	25	23	3390.41	-29.04		120.48		251.72		82.73		11	21	53	2390.4		-29.12		93.06		90.00		11	28	28	3186.73	-26.96		105.19		251.39		81.13		12	21	35	2186.7		-27.97		78.22		100.00		13	8	15	2864.89	-29.04		81.85		251.72		82.73		13	56	0	1864.9		-29.12		54.42		110.00		14	53	27	2535.62	-34.01		57.39		252.26		86.62		15	33	43	1535.6		-31.84		28.87
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-.3007	TRA	-.5723	TC3	.2195	BAU	.4743		SGT	995.1	SGR	1744.0	SG3	1484.9		ST	25.0	SR	3.0	SS	55.4	RDE	-.0165	RRA	.0402	RC3	-2.1312	FAU	.37978		RRT	-.2043	RRF	.9499	RTF	-.1181		CRT	.1573	CRS	.3242	CST	.7898	FDE	3.2828	FRA	-.9849	FC	-20.0389	BSP	2961		SGB	1827.9	R23	-.1078	R13	.9472		LSA	59.0	MSA	14.4	SSA	2.8	BDE	.3012	BRA	.5737	BC3	2.1624	FSP	2483		SG1	1781.0	SG2	984.7	THA	99.34		EL1	25.1	EL2	3.0	ALF	1.10																																																																									

LAUNCH DATE AUG 12 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC										DISTANCE 446.406										EARTH TO MARS																																																																																																																																												
RL	151.59	LAL	-.00	LOL	319.15	VL	32.953	GAL	2.40	AZL	88.07	HCA	136.27	SMA	199.54	ECC	.24375	INC	1.9279	V1	29.392	RP	236.98	LAP	1.33	LOP	95.43	VP	21.330	GAP	9.12	AZP	91.39	TAL	12.30	TAP	148.57	RCA	150.90	APO	248.18	V2	23.191	RC	201.073	GL	15.87	GP	-21.40	ZAL	65.52	ZAP	121.74	ETS	195.99	ZAE	151.72	ETE	233.30	ZAC	62.86	ETC	284.38	LVI	2.92																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	16.402	VHL	4.050	DLA	23.85	RAL	15.53	RAD	6641.2	VEL	11.681	PTH	6.72	VHP	2.693	DPA	-5.67	RAP	44.82	ECC	1.2690	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		9	23	52	3575.46	-47.14		135.18		251.77		97.32		10	23	28	2575.5		-38.89		103.85		60.00		9	33	11	3550.64	-40.29		133.64		252.48		91.07		10	32	22	2550.6		-35.45		103.65		70.00		9	48	33	3505.39	-33.93		129.77		252.25		85.87		10	46	58	2505.4		-32.09		101.18		80.00		10	18	9	3412.51	-28.84		122.09		251.61		81.90		11	15	2	2412.5		-29.29		94.68		90.00		11	20	5	3212.56	-26.68		107.02		251.23		80.25		12	13	37	2212.6		-28.09		80.10		100.00		13	1	1	2886.98	-28.84		83.46		251.61		81.90		13	49	6	1887.0		-29.29		56.04		110.00		14	47	59	2552.21	-33.93		58.68		252.25		85.87		15	30	31	1552.2		-32.09		30.10
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-.2861	TRA	-.5749	TC3	.1122	BAU	.4942		SGT	981.2	SGR	1823.9	SG3	1506.4		ST	24.2	SR	3.0	SS	57.5	RDE	.0128	RRA	.0286	RC3	-2.2510	FAU	.38952		RRT	-.1187	RRF	.9553	RTF	-.1182		CRT	-.3848	CRS	-.3745	CST	.7718	FDE	3.4561	FRA	-1.0692	FC	-20.5595	BSP</																																																																																																														

LAUNCH DATE AUG 12 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.945 GAL 2.40 AZL 89.01 HCA 137.23 SMA 199.38 ECC .24310 INC 1.9941 V1 29.392  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.280 GAP 8.87 AZP 91.46 TAL 12.29 TAP 149.52 RCA 150.91 APO 247.84 V2 23.157  
 RC 204.040 GL 16.43 GP -22.06 ZAL 65.59 ZAP 120.13 ETS 195.97 ZAE 190.21 ETE 231.16 ZAC 62.35 ETC 284.53 LVI 3.39

PLANETOCENTRIC CONIC  
 C3 16.406 VHL 4.050 DLA 24.35 RAL 15.28 RAD 6641.2 VEL 11.681 PTH 6.72 VHP 2.662 DPA -6.49 RAP 44.48 ECC 1.2700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 27 3586.54 -47.24 136.23 252.01 96.51 10 20 14 2586.5 -39.26 104.64  
 60.00 9 28 50 3564.21 -40.30 134.79 252.58 90.29 10 28 14 2564.2 -35.77 104.66  
 70.00 9 42 48 3523.04 -33.84 131.13 252.25 85.06 10 41 31 2523.0 -32.34 102.50  
 80.00 10 10 26 3436.38 -28.60 123.82 251.51 81.02 11 7 42 2436.4 -29.45 96.43  
 90.00 11 10 59 3240.84 -26.34 109.02 251.06 79.30 12 4 59 2240.8 -28.19 82.17  
 100.00 12 53 17 2910.85 -26.60 85.19 251.51 81.02 13 41 48 1910.8 -29.45 57.80  
 110.00 14 42 15 2569.86 -33.84 60.05 252.25 85.06 15 25 4 1569.9 -32.34 31.42

DIFFERENTIAL CORRECTIONS  
 TDE -.2679 TRA -.5765 TC3 .0038 BAW .3165 SGT 972.0 SGR 1908.6 8G3 1547.5 ST 23.2 SR 4.2 58 59.5  
 RDE .0428 RRA .0156 RC3-2.3548 FAU .39927 RRT -.0272 RRF .9602 RTF -.0226 CRT -.6409 CRS -.7750 CST .7476 CRT -.6409 CRS -.7750 CST .7476  
 FDE 3.6231 FRA-1.1928 FC-21.0696 BSP 3165 SGB 2141.9 R23 -.0127 R13 .9601 LSA 62.3 MSA 14.8 88A 2.6  
 BDE .2713 BRA .5767 BC3 2.3548 FSP 2611 SGI 1908.9 8G2 971.5 THA 91.07 EL1 23.4 EL2 3.2 ALF 173.29

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 12 1973

FLIGHT TIME 198.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.937 GAL 2.39 AZL 87.94 HCA 138.19 SMA 199.22 ECC .24250 INC 2.0626 V1 29.392  
 RP 237.65 LAP 1.38 LOP 97.35 VP 21.231 GAP 8.61 AZP 91.54 TAL 12.28 TAP 150.47 RCA 150.91 APO 247.53 V2 23.123  
 RC 207.005 GL 17.00 GP -22.72 ZAL 65.67 ZAP 118.52 ETS 195.13 ZAE 148.86 ETE 229.17 ZAC 61.83 ETC 284.67 LVI 3.87

PLANETOCENTRIC CONIC  
 C3 16.417 VHL 4.052 DLA 24.88 RAL 15.04 RAD 6641.2 VEL 11.681 PTH 6.72 VHP 2.631 DPA -7.32 RAP 44.14 ECC 1.2702  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 55 3598.24 -47.32 137.35 252.30 95.65 10 16 54 2598.2 -39.65 105.50  
 60.00 9 24 18 3578.58 -40.30 136.02 252.73 89.46 10 23 57 2578.6 -36.10 103.73  
 70.00 9 36 45 3541.89 -33.72 132.59 252.27 84.21 10 35 47 2541.9 -32.59 103.91  
 80.00 10 2 6 3462.34 -28.31 125.70 251.40 80.08 10 59 49 2462.3 -29.59 98.35  
 90.00 11 0 59 3272.18 -25.92 111.22 250.89 78.28 11 55 31 2272.2 -28.25 84.45  
 100.00 12 44 58 2936.81 -26.31 87.07 251.40 80.08 13 33 55 1936.8 -29.59 59.72  
 110.00 14 36 11 2588.71 -33.72 61.51 252.27 84.21 15 19 20 1588.7 -32.59 32.83

DIFFERENTIAL CORRECTIONS  
 TDE -.2560 TRA -.5873 TC3 -.1314 BAW .5387 SGT 990.2 SGR 1989.1 8G3 1581.4 ST 22.7 SR 6.3 88 62.2  
 RDE .0782 RRA .0057 RC3-2.4508 FAU .40680 RRT .0829 RRF .9643 RTF .0884 CRT -.7108 CRS -.9146 CST .7281  
 FDE 3.8290 FRA-1.1997 FC-21.4528 BSP 3344 SGB 2221.9 R23 .0176 R13 .9642 LSA 64.7 MSA 15.1 88A 2.5  
 BDE .2677 BRA .5873 BC3 2.4543 FSP 2706 SGI 1991.3 8G2 985.7 THA 86.87 EL1 23.2 EL2 4.3 ALF 168.47

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 12 1973

FLIGHT TIME 200.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.930 GAL 2.38 AZL 87.87 HCA 139.15 SMA 199.08 ECC .24194 INC 2.1336 V1 29.392  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.183 GAP 8.37 AZP 91.61 TAL 12.25 TAP 151.40 RCA 150.91 APO 247.24 V2 23.090  
 RC 209.964 GL 17.59 GP -23.40 ZAL 65.77 ZAP 116.91 ETS 194.67 ZAE 147.06 ETE 227.31 ZAC 61.31 ETC 284.82 LVI 4.37

PLANETOCENTRIC CONIC  
 C3 16.437 VHL 4.054 DLA 25.43 RAL 14.80 RAD 6641.2 VEL 11.682 PTH 6.72 VHP 2.604 DPA -8.17 RAP 43.79 ECC 1.2705  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 13 16 3610.58 -47.40 138.53 252.61 94.74 10 13 27 2610.6 -40.05 106.41  
 60.00 9 19 34 3593.77 -40.28 137.31 252.90 88.58 10 19 28 2593.8 -36.44 106.88  
 70.00 9 30 21 3561.99 -33.57 134.14 252.30 83.30 10 29 43 2562.0 -32.83 105.43  
 80.00 9 53 5 3490.87 -27.96 127.73 251.29 79.06 10 51 15 2490.7 -29.72 100.44  
 90.00 10 49 52 3307.21 -25.41 113.66 250.89 77.16 11 45 0 2307.2 -28.28 87.02  
 100.00 12 35 56 2965.14 -27.96 89.10 251.29 79.06 13 25 22 1965.1 -29.72 61.81  
 110.00 14 29 48 2608.80 -33.57 63.06 252.30 83.30 15 13 16 1608.8 -32.83 34.34

DIFFERENTIAL CORRECTIONS  
 TDE -.2371 TRA -.5943 TC3 -.2597 BAW .5836 SGT 1010.7 SGR 2073.4 8G3 1615.4 ST 21.8 SR 8.6 88 64.9  
 RDE .1138 RRA -.0065 RC3-2.5518 FAU .41452 RRT .1865 RRF .9680 RTF .1339 CRT -.7001 CRS -.9588 CST .6934  
 FDE 4.0191 FRA-1.2646 FC-21.8332 BSP 3502 SGB 2308.4 R23 .0402 R13 .9673 LSA 66.9 MSA 15.3 88A 2.4  
 BDE .2629 BRA .5944 BC3 2.5650 FSP 2772 SGI 2088.4 8G2 987.7 THA 83.30 EL1 22.7 EL2 5.9 ALF 163.39

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 12 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.923 GAL 2.37 AZL 87.79 HCA 140.10 SMA 198.98 ECC .24143 INC 2.2072 V1 29.392  
 RP 238.30 LAP 1.42 LOP 99.27 VP 21.137 GAP 8.12 AZP 91.69 TAL 12.22 TAP 152.32 RCA 150.92 APO 246.98 V2 23.056  
 RC 212.919 GL 18.19 GP -24.09 ZAL 65.89 ZAP 115.29 ETS 194.19 ZAE 145.43 ETE 225.57 ZAC 60.78 ETC 284.98 LVI 4.87

PLANETOCENTRIC CONIC  
 C3 16.465 VHL 4.058 DLA 25.99 RAL 14.56 RAD 6641.2 VEL 11.684 PTH 6.72 VHP 2.580 DPA -9.04 RAP 43.43 ECC 1.2710  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 28 3623.55 -47.46 139.78 252.96 93.78 10 9 52 2623.5 -40.46 107.38  
 60.00 9 14 37 3609.84 -40.24 138.67 253.09 87.65 10 14 47 2609.8 -36.78 108.11  
 70.00 9 23 33 3583.48 -33.39 135.79 252.34 82.34 10 23 17 2583.5 -33.08 107.08  
 80.00 9 43 11 3521.86 -27.53 129.95 251.16 77.97 10 41 53 2521.9 -29.81 102.78  
 90.00 10 37 16 3347.14 -24.78 116.41 250.45 75.92 11 33 4 2347.1 -28.24 89.93  
 100.00 12 26 3 2996.33 -27.53 91.32 251.16 77.97 13 15 59 1996.3 -29.81 64.13  
 110.00 14 23 0 2630.30 -33.39 64.71 252.34 82.34 15 6 50 1630.3 -33.08 35.97

DIFFERENTIAL CORRECTIONS  
 TDE -.2162 TRA -.6024 TC3 -.3929 BAW .5906 SGT 1044.2 SGR 2164.6 8G3 1647.2 ST 20.9 SR 11.2 88 66.9  
 RDE .1511 RRA -.0193 RC3-2.6540 FAU .42167 RRT .2877 RRF .9714 RTF .2962 CRT -.6658 CRS -.9774 CST .6321  
 FDE 4.2114 FRA-1.3283 FC-22.1713 BSP 3672 SGB 2403.3 R23 .0592 R13 .9697 LSA 69.2 MSA 15.5 88A 2.3  
 BDE .2636 BRA .6027 BC3 2.6829 FSP 2830 SGI 2190.8 8G2 988.1 THA 80.05 EL1 22.3 EL2 7.8 ALF 157.53

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 12 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

DISTANCE 465.321

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.017 GAL 2.36 AZL 87.72 HCA 141.05 SMA 190.83 ECC .24095 INC 2.2838 V1 29.392
RP 236.63 LAP 1.44 LOP 100.22 VP 21.092 GAP 7.87 AZP 91.78 TAL 12.18 TAP 153.23 RCA 150.92 APO 246.74 V2 23.024
RC 215.868 GL 18.82 GP -24.80 ZAL 86.03 ZAP 113.67 ETS 193.68 ZAE 143.77 ETE 223.94 ZAC 60.24 ETC 285.14 LVI 5.39

PLANETOCENTRIC CONIC

C3 16.503 VHL 4.062 DLA 26.58 RAL 14.32 RAD 8641.2 VEL 11.685 PTH 6.72 VHP 2.558 DPA -9.92 RAP 43.08 ECC 1.2716
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 5 31 3637.24 -47.51 141.10 253.35 92.77 10 6 9 2637.2 -40.89 108.41
60.00 9 9 25 3626.85 -40.19 140.12 253.30 86.68 10 9 52 2626.9 -37.12 109.42
70.00 9 16 18 3606.34 -33.16 137.56 252.38 81.32 10 16 25 2606.5 -33.31 108.82
80.00 9 32 13 3556.59 -27.02 132.40 251.01 76.78 10 31 29 2556.6 -29.85 105.34
90.00 10 22 33 3393.97 -23.97 119.60 250.14 74.52 11 19 7 2394.0 -28.11 93.35
100.00 12 15 5 3031.07 -27.02 93.77 251.01 76.78 13 5 36 2031.1 -29.85 66.71
110.00 14 15 45 2653.36 -33.16 66.47 252.38 81.32 14 59 58 1653.4 -33.31 37.73

DIFFERENTIAL CORRECTIONS

TDE -.1926 TRA -.6113 TC3 -.5308 BAU .6193
RDE .1900 RRA -.0329 RC3-2.7561 FAU .42805
FDE 4.3996 FRA-1.3942 FC-22.4545 BSP 3837
BDE .2706 BRA .6122 BC3 2.8067 FSP 2883

MID-COURSE EXECUTION ACCURACY

SGT 1090.5 SGR 2255.9 SG3 1675.8
RRR .3833 RRF .9743 RTF .3925
SGB 2505.6 R23 .0747 R13 .9717
SG1 2303.2 S62 986.5 THA 77.10

ORBIT DETERMINATION ACCURACY

ST 19.9 SR 13.8 SS 69.2
CRT -.6138 CRS -.9865 CST .5983
LSA 71.6 MSA 15.7 SBA 2.2
EL1 22.1 EL2 9.8 ALF 150.50

LAUNCH DATE AUG 12 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

DISTANCE 469.107

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.912 GAL 2.34 AZL 87.64 HCA 142.00 SMA 198.73 ECC .24052 INC 2.3620 V1 29.392
RP 236.95 LAP 1.45 LOP 101.17 VP 21.048 GAP 7.63 AZP 91.86 TAL 12.13 TAP 154.13 RCA 150.93 APO 246.53 V2 22.991
RC 218.810 GL 19.47 GP -25.51 ZAL 86.19 ZAP 112.06 ETS 193.15 ZAE 142.08 ETE 222.40 ZAC 59.69 ETC 285.30 LVI 5.92

PLANETOCENTRIC CONIC

C3 16.551 VHL 4.068 DLA 27.20 RAL 14.08 RAD 8641.3 VEL 11.687 PTH 6.72 VHP 2.540 DPA -10.82 RAP 42.73 ECC 1.2724
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 1 24 3651.67 -47.55 142.49 253.77 91.70 10 2 15 2651.7 -41.32 109.52
60.00 9 3 56 3644.89 -40.10 141.65 253.53 85.64 10 4 41 2644.9 -37.47 110.83
70.00 9 8 32 3631.36 -32.89 139.44 252.42 80.24 10 9 3 2631.4 -33.53 110.72
80.00 9 19 49 3595.91 -26.37 135.15 250.81 75.47 10 19 45 2595.9 -29.84 108.26
90.00 10 4 22 3451.91 -22.86 123.48 249.71 72.88 11 1 54 2451.9 -27.82 97.56
100.00 12 2 41 3070.38 -26.37 96.52 250.81 75.47 12 53 51 2070.4 -29.84 89.63
110.00 14 7 58 2678.17 -32.89 68.36 252.42 80.24 14 52 36 1678.2 -33.53 39.64

DIFFERENTIAL CORRECTIONS

TDE -.1666 TRA -.6209 TC3 -.6725 BAU .6496
RDE .2312 RRA -.0474 RC3-2.8577 FAU .43359
FDE 4.5891 FRA-1.4602 FC-22.6794 BSP 4052
BDE .2849 BRA .6227 BC3 2.9358 FSP 2926

MID-COURSE EXECUTION ACCURACY

SGT 1149.4 SGR 2349.1 SG3 1701.1
RRR .4703 RRF .9770 RTF .4797
SGB 2615.2 R23 .0871 R13 .9734
SG1 2423.3 S62 983.2 THA 74.41

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 16.7 SS 71.6
CRT -.5449 CRS -.9914 CST .5292
LSA 74.2 MSA 15.8 SBA 2.1
EL1 22.2 EL2 11.9 ALF 141.34

LAUNCH DATE AUG 12 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

DISTANCE 472.894

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.907 GAL 2.33 AZL 87.55 HCA 142.95 SMA 198.64 ECC .24013 INC 2.4453 V1 29.392
RP 239.26 LAP 1.47 LOP 102.12 VP 21.006 GAP 7.39 AZP 91.95 TAL 12.07 TAP 155.02 RCA 150.94 APO 246.33 V2 22.960
RC 221.744 GL 20.13 GP -26.24 ZAL 86.36 ZAP 110.45 ETS 192.60 ZAE 140.36 ETE 220.94 ZAC 59.13 ETC 285.46 LVI 6.46

PLANETOCENTRIC CONIC

C3 16.610 VHL 4.075 DLA 27.83 RAL 13.84 RAD 8641.3 VEL 11.690 PTH 6.72 VHP 2.525 DPA -11.72 RAP 42.38 ECC 1.2734
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 57 5 3666.89 -47.57 143.97 254.22 90.56 9 58 11 2666.9 -41.77 110.70
60.00 8 58 9 3664.02 -39.99 143.26 253.78 84.55 9 59 13 2664.0 -37.82 112.33
70.00 9 0 8 3656.18 -32.56 141.46 252.43 79.08 10 1 6 2638.2 -33.73 112.79
80.00 9 5 26 3641.53 -25.56 138.29 250.34 74.01 10 6 7 2641.5 -29.74 111.65
90.00 9 38 50 3535.51 -21.12 128.84 249.00 70.75 10 37 43 2533.5 -27.17 103.44
100.00 11 48 18 3116.01 -25.56 99.66 250.54 74.01 12 40 14 2116.0 -29.74 73.01
110.00 13 59 34 2705.00 -32.56 70.38 252.43 79.08 14 44 39 1705.0 -33.73 41.70

DIFFERENTIAL CORRECTIONS

TDE -.1364 TRA -.6301 TC3 -.8142 BAU .6821
RDE .2736 RRA -.0637 RC3-2.9618 FAU .43880
FDE 4.7691 FRA-1.5351 FC-22.8712 BSP 4252
BDE .3057 BRA .6333 BC3 3.0717 FSP 2953

MID-COURSE EXECUTION ACCURACY

SGT 1216.8 SGR 2446.7 SG3 1724.6
RRR .5474 RRF .9794 RTF .5071
SGB 2732.6 R23 .0955 R13 .9750
SG1 2552.3 S62 976.2 THA 72.06

ORBIT DETERMINATION ACCURACY

ST 17.9 SR 19.8 SS 73.8
CRT -.4507 CRS -.9943 CST .4363
LSA 76.8 MSA 16.0 SBA 2.0
EL1 22.7 EL2 13.8 ALF 129.03

LAUNCH DATE AUG 12 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

DISTANCE 476.680

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.903 GAL 2.31 AZL 87.47 HCA 143.90 SMA 198.53 ECC .23977 INC 2.5313 V1 29.392
RP 239.37 LAP 1.49 LOP 103.07 VP 20.965 GAP 7.14 AZP 92.05 TAL 12.00 TAP 155.90 RCA 150.95 APO 246.16 V2 22.928
RC 224.672 GL 20.83 GP -26.97 ZAL 86.55 ZAP 108.85 ETS 192.02 ZAE 138.63 ETE 219.56 ZAC 58.57 ETC 285.63 LVI 7.02

PLANETOCENTRIC CONIC

C3 16.679 VHL 4.084 DLA 28.50 RAL 13.59 RAD 8641.3 VEL 11.693 PTH 6.73 VHP 2.513 DPA -12.54 RAP 42.04 ECC 1.2745
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 52 33 3682.96 -47.57 145.52 254.71 89.37 9 53 56 2683.0 -42.23 111.97
60.00 8 52 1 3684.38 -39.85 144.97 254.03 83.40 9 53 25 2684.4 -38.17 113.95
70.00 8 51 0 3687.37 -32.17 143.65 252.47 77.85 9 52 27 2687.4 -33.90 115.05
80.00 8 47 57 3696.95 -24.46 142.04 250.14 72.33 9 49 34 2696.9 -29.48 115.74
86.34 8 23 9 3777.06 -17.75 145.28 247.50 67.33 9 26 6 2777.1 -25.53 120.93
100.00 11 30 49 3171.42 -24.46 103.41 250.14 72.33 12 23 40 2171.4 -29.48 77.11
110.00 13 50 26 2734.19 -32.17 72.57 252.47 77.85 14 36 0 1734.2 -33.90 43.97

DIFFERENTIAL CORRECTIONS

TDE -.1071 TRA -.6444 TC3 -.9685 BAU .7150
RDE .3211 RRA -.0768 RC3-3.0570 FAU .44184
FDE 4.9706 FRA-1.5756 FC-22.9342 BSP 4495
BDE .3385 BRA .6490 BC3 3.2068 FSP 3002

MID-COURSE EXECUTION ACCURACY

SGT 1306.3 SGR 2540.2 SG3 1740.6
RRR .6128 RRF .9814 RTF .6216
SGB 2856.4 R23 .1057 R13 .9760
SG1 2684.2 S62 976.9 THA 69.70

ORBIT DETERMINATION ACCURACY

ST 17.2 SR 22.9 SS 76.4
CRT -.3460 CRS -.9961 CST .3309
LSA 79.9 MSA 16.2 SBA 1.9
EL1 24.3 EL2 15.2 ALF 114.99

LAUNCH DATE AUG 12 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC													DISTANCE 480.467			EARTH TO MARS									
RL	151.59	LAL	-0.00	LOL	319.15	VL	32.889	GAL	2.30	AZL	87.38	HCA	144.84	SMA	198.48	ECC	.23945	INC	2.6211	V1	29.392				
RP	239.88	LAP	1.51	LOP	104.01	VP	20.925	GAP	6.90	AZP	92.14	TAL	11.93	TAP	156.77	RCA	150.95	APO	246.00	V2	22.897				
RC	227.591	GL	21.54	GP	-27.72	ZAL	66.75	ZAP	107.26	ETS	191.42	ZAE	136.89	ETE	218.24	ZAC	57.99	ETC	285.80	LVI	7.59				
PLANETOCENTRIC CONIC													DISTANCE 480.467			EARTH TO MARS									
C3	16.780	VHL	4.094	DLA	29.18	RAL	13.35	RAD	6641.4	VEL	11.896	PTH	6.73	VHP	2.503	DPA	-13.58	RAP	41.70	ECC	1.2758				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	47	46	3699.93	-47.55		147.16		255.22		86.10		9	49	26	2699.9		-42.70				113.33		
60.00		8	45	28	3706.06	-39.66		146.79		254.30		82.18		9	47	14	2706.1		-38.52				115.69		
70.00		8	40	58	3719.34	-31.68		146.01		252.45		76.53		9	42	57	2719.3		-34.04				117.53		
80.00		8	24	33	3771.04	-22.84		146.95		249.49		70.23		9	27	24	2771.0		-28.92				121.18		
82.47		7	50	38	3879.90	-18.12		153.01		247.50		66.72		8	55	18	2879.9		-26.14				128.64		
100.00		11	7	25	3245.51	-22.84		108.32		249.49		70.23		12	1	30	2245.5		-28.92				82.55		
110.00		13	40	24	2766.16	-31.68		74.93		252.45		76.53		14	26	31	1766.2		-34.04				46.45		
DIFFERENTIAL CORRECTIONS													MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY									
TDE	-.0728	TRA	-.6577	TC3	-1.1200	BAU	.7500	SGT	1401.0	SGR	2838.2	SG3	1754.6	ST	16.7	SR	26.2	SS	78.7	CRT	-.2081	CRS	-.9973	CST	.1940
RDE	.3693	RRA	-.0927	RC3	-3.1544	FAU	.44455	RRT	.6689	RRF	.9833	RTF	.6772	LSA	83.0	MSA	16.3	SSA	1.8	EL1	26.6	EL2	16.1	ALF	101.97
FDE	5.1540	FRA	-1.6325	FC	-22.9631	BSP	4731	SGB	2987.1	R23	.1120	R13	.9772												
BDE	.3764	BRA	.6642	BC3	3.3473	FSP	3027	SG1	2824.3	SG2	972.8	THA	67.65												

LAUNCH DATE AUG 12 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC													DISTANCE 484.254			EARTH TO MARS									
RL	151.59	LAL	-0.00	LOL	319.15	VL	32.896	GAL	2.28	AZL	87.29	HCA	145.78	SMA	198.41	ECC	.23916	INC	2.7148	V1	29.392				
RP	240.18	LAP	1.53	LOP	104.95	VP	20.886	GAP	6.67	AZP	92.25	TAL	11.85	TAP	157.63	RCA	150.96	APO	245.87	V2	22.866				
RC	230.502	GL	22.29	GP	-20.48	ZAL	66.98	ZAP	105.69	ETS	190.79	ZAE	135.13	ETE	216.98	ZAC	57.41	ETC	285.97	LVI	8.18				
PLANETOCENTRIC CONIC													DISTANCE 484.254			EARTH TO MARS									
C3	16.854	VHL	4.105	DLA	29.90	RAL	13.09	RAD	6641.4	VEL	11.700	PTH	6.73	VHP	2.497	DPA	-14.52	RAP	41.38	ECC	1.2774				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	42	43	3717.86	-47.49		148.89		255.76		86.77		9	44	41	2717.9		-43.17				114.80		
60.00		8	38	28	3729.19	-39.43		148.71		254.56		80.89		9	40	37	2729.2		-38.85				117.36		
70.00		8	29	50	3754.71	-31.09		148.60		252.40		75.10		9	32	24	2754.7		-34.13				120.29		
79.86		7	29	18	3946.26	-18.50		158.10		247.52		66.08		8	35	5	2946.3		-26.75				133.72		
79.86		7	29	18	3946.26	-18.50		158.10		247.52		66.08		8	35	5	2946.3		-26.75				133.72		
79.86		7	29	18	3946.26	-18.50		158.10		247.52		66.08		8	35	5	2946.3		-26.75				133.72		
110.00		13	29	16	2801.52	-31.09		77.52		252.40		75.10		14	15	58	1801.5		-34.13				49.21		
DIFFERENTIAL CORRECTIONS													MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY									
TDE	-.0342	TRA	-.6709	TC3	-1.2708	BAU	.7867	SGT	1502.5	SGR	2738.9	SG3	1765.1	ST	16.5	SR	29.6	SS	80.8	CRT	-.0413	CRS	-.9980	CST	.0289
RDE	.4183	RRA	-.1106	RC3	-3.2519	FAU	.44659	RRT	.7169	RRF	.9849	RTF	.7248	LSA	86.0	MSA	16.4	SSA	1.7	EL1	29.6	EL2	16.4	ALF	91.90
FDE	5.3203	FRA	-1.6965	FC	-22.9395	BSP	4971	SGB	3124.0	R23	.1150	R13	.9785												
BDE	.4197	BRA	.6800	BC3	3.4913	FSP	3035	SG1	2971.0	SG2	965.7	THA	65.81												

LAUNCH DATE AUG 12 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC													DISTANCE 488.041			EARTH TO MARS									
RL	151.59	LAL	-0.00	LOL	319.15	VL	32.893	GAL	2.26	AZL	87.19	HCA	146.71	SMA	198.36	ECC	.23890	INC	2.8129	V1	29.392				
RP	240.48	LAP	1.54	LOP	105.89	VP	20.849	GAP	6.43	AZP	92.35	TAL	11.76	TAP	158.48	RCA	150.97	APO	245.75	V2	22.836				
RC	233.405	GL	23.06	GP	-29.25	ZAL	67.22	ZAP	104.13	ETS	190.14	ZAE	133.37	ETE	219.78	ZAC	56.82	ETC	286.15	LVI	8.78				
PLANETOCENTRIC CONIC													DISTANCE 488.041			EARTH TO MARS									
C3	16.983	VHL	4.119	DLA	30.64	RAL	12.83	RAD	6641.5	VEL	11.705	PTH	6.74	VHP	2.494	DPA	-15.47	RAP	41.07	ECC	1.2792				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	37	22	3736.85	-47.40		150.72		256.33		85.37		9	39	39	2736.8		-43.65				116.37		
60.00		8	30	57	3753.97	-39.14		150.75		254.83		79.53		9	33	31	2754.0		-39.17				119.59		
70.00		8	17	15	3794.44	-30.36		151.47		252.27		73.55		9	20	29	2794.4		-34.15				123.39		
77.67		7	11	58	3999.54	-18.89		162.26		247.56		65.41		8	18	38	2999.5		-27.38				137.87		
77.67		7	11	58	3999.54	-18.89		162.26		247.56		65.41		8	18	38	2999.5		-27.38				137.87		
77.67		7	11	58	3999.54	-18.89		162.26		247.56		65.41		8	18	38	2999.5		-27.38				137.87		
110.00		13	16	41	2841.26	-30.36		80.38		252.27		73.55		14	4	3	1841.3		-34.15				52.31		
DIFFERENTIAL CORRECTIONS													MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY									
TDE	.0054	TRA	-.6877	TC3	-1.4287	BAU	.8238	SGT	1619.1	SGR	2836.2	SG3	1768.7	ST	16.8	SR	33.3	SS	83.2	CRT	.1289	CRS	-.9986	CST	-.1383
RDE	.4728	RRA	-.1269	RC3	-3.3401	FAU	.44682	RRT	.7558	RRF	.9864	RTF	.728	LSA	89.6	MSA	16.6	SSA	1.6	EL1	33.4	EL2	16.6	ALF	85.14
FDE	5.5031	FRA	-1.7400	FC	-22.7948	BSP	5238	SGB	3265.8	R23	.1209	R13	.9793												
BDE	.4728	BRA	.6893	BC3	3.6328	FSP	3053	SG1	3120.5	SG2	963.6	THA	64.00												

LAUNCH DATE AUG 12 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC													DISTANCE 491.828			EARTH TO MARS									
RL	151.59	LAL	-0.00	LOL	319.15	VL	32.891	GAL	2.24	AZL	87.08	HCA	147.65	SMA	198.31	ECC	.23867	INC	2.8158	V1	29.392				
RP	240.78	LAP	1.56	LOP	106.83	VP	20.812	GAP	6.19	AZP	92.46	TAL	11.67	TAP	159.32	RCA	150.98	APO	245.64	V2	22.807				
RC	238.297	GL	23.86	GP	-30.03	ZAL	67.48	ZAP	102.60	ETS	189.47	ZAE	131.61	ETE	214.61	ZAC	56.21	ETC	286.33	LVI	9.40				
PLANETOCENTRIC CONIC													DISTANCE 491.828			EARTH TO MARS									
C3	17.088	VHL	4.134	DLA	31.42	RAL	12.55	RAD	6641.5	VEL	11.710	PTH	6.74	VHP	2.494	DPA	-16.44	RAP	40.78	ECC	1.2812				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	31	40	3758.97	-47.28		152.65		256.91		83.69		9	34	17	2757.0		-44.13				118.06		
60.00		8	22	49	3780.80	-38.79		152.93		255.08		78.09		9	25	50	2780.6		-39.46				121.79		
70.00		8	2	43	3840.43	-29.44		154.69		252.05		71.85		9	6	43	2840.0		-34.08				126.95		
75.71		6	58	52	4045.43	-19.29		165.91		247.62		64.71		8	4	17	3045.4		-28.02				141.52		
75.71		6	58	52	4045.43	-19.29		165.91		247.62		64.71		8	4	17	3045.4		-28.02				141.52		

LAUNCH DATE AUG 12 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.889 GAL 2.22 AZL 86.98 HCA 148.58 SMA 198.28 ECC .23848 INC 3.0239 V1 29.392  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.777 GAP 5.96 AZP 92.58 TAL 11.37 TAP 160.15 RCA 150.99 APO 245.58 V2 22.777  
 RC 239.179 GL 24.69 GP -30.82 ZAL 87.75 ZAP 101.09 ETS 188.77 ZAE 129.85 ETE 213.49 ZAC 55.60 ETC 286.51 LVI 10.04

DISTANCE 495.614  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.227 VHL 4.150 DLA 32.22 RAL 12.27 RAD 6641.6 VEL 11.716 PTH 6.75 VHP 2.497 DPA -17.41 RAP 40.50 ECC 1.2635  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 35 3778.32 -47.10 154.68 257.51 82.33 9 28 34 2778.3 -44.61 119.89  
 60.00 8 13 58 3809.34 -38.36 155.25 255.30 76.57 9 17 28 2809.3 -39.75 124.19  
 70.00 7 45 16 3894.27 -28.23 158.45 251.66 69.93 8 50 11 2894.3 -33.81 131.16  
 73.87 6 43 13 4086.45 -19.69 169.23 247.69 63.96 7 51 20 3086.4 -26.69 144.83  
 73.87 6 43 13 4086.45 -19.69 169.23 247.69 63.96 7 51 20 3086.4 -26.69 144.83  
 73.87 6 43 13 4086.45 -19.69 169.23 247.69 63.96 7 51 20 3086.4 -26.69 144.83  
 110.00 12 44 43 2941.09 -28.23 87.37 251.66 69.93 13 33 44 1941.1 -33.81 60.08

DIFFERENTIAL CORRECTIONS  
 TDE .0969 TRA -.7230 TC3-1.7389 BAU .9023 SGT 1869.1 SGR 3036.8 SG3 1764.3  
 RDE .5882 RRA -.1628 RC3-3.5106 FAU .44414 RRT .8155 RRF .9889 RTF .8211  
 FDE 5.8312 FRA-1.8257 FC-22.3207 BSP 5778 SGB 5865.9 R23 .1286 R13 .9811  
 BDE .5961 BRA .7411 BC3 3.9177 FSP 3044 SG1 3435.3 SG2 956.4 THA 60.87

ORBIT DETERMINATION ACCURACY  
 ST 19.0 SR 41.0 SS 87.6  
 CRT .4500 CRS -.9992 CST -.4584  
 LSA 97.1 MSA 16.9 SSA 1.5  
 EL1 42.1 EL2 16.6 ALF 75.98

LAUNCH DATE AUG 12 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.887 GAL 2.20 AZL 86.86 HCA 149.51 SMA 198.24 ECC .23829 INC 3.1376 V1 29.392  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.743 GAP 5.73 AZP 92.70 TAL 11.46 TAP 160.97 RCA 151.00 APO 245.48 V2 22.749  
 RC 242.049 GL 25.56 GP -31.63 ZAL 68.05 ZAP 99.61 ETS 188.05 ZAE 126.10 ETE 212.40 ZAC 54.97 ETC 286.70 LVI 10.70

DISTANCE 499.401  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.386 VHL 4.170 DLA 33.06 RAL 11.97 RAD 6641.7 VEL 11.723 PTH 6.75 VHP 2.504 DPA -18.39 RAP 40.24 ECC 1.2861  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 4 3801.04 -46.87 156.83 258.12 80.69 9 22 25 2801.0 -45.09 121.88  
 60.00 8 4 17 3840.54 -37.84 157.74 255.49 74.96 9 8 17 2840.5 -39.99 126.81  
 70.00 7 22 44 3963.70 -26.52 163.12 250.97 67.64 8 28 47 2963.7 -33.26 136.51  
 72.11 6 30 36 4124.01 -20.10 172.33 247.77 63.18 7 39 20 3124.0 -29.38 147.93  
 72.11 6 30 36 4124.01 -20.10 172.33 247.77 63.18 7 39 20 3124.0 -29.38 147.93  
 72.11 6 30 36 4124.01 -20.10 172.33 247.77 63.18 7 39 20 3124.0 -29.38 147.93  
 110.00 12 22 10 3010.52 -26.52 92.04 250.97 67.64 13 12 20 2010.5 -33.26 65.42

DIFFERENTIAL CORRECTIONS  
 TDE .1483 TRA -.7429 TC3-1.8928 BAU .9428 SGT 2004.2 SGR 3136.8 SG3 1754.4  
 RDE .6507 RRA -.1816 RC3-3.5878 FAU .44101 RRT .8379 RRF .9899 RTF .8424  
 FDE 5.9842 FRA-1.8607 FC-21.9607 BSP 6070 SGB 3722.4 R23 .1287 R13 .9818  
 BDE .6674 BRA .7647 BC3 4.0565 FSP 3034 SG1 3598.2 SG2 953.7 THA 59.47

ORBIT DETERMINATION ACCURACY  
 ST 21.1 SR 45.2 SS 89.7  
 CRT .5762 CRS -.9994 CST -.5832  
 LSA 101.2 MSA 17.0 SSA 1.4  
 EL1 47.0 EL2 16.5 ALF 72.76

LAUNCH DATE AUG 12 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.886 GAL 2.18 AZL 86.74 HCA 150.44 SMA 198.22 ECC .23814 INC 3.2575 V1 29.392  
 RP 241.64 LAP 1.61 LOP 109.62 VP 20.710 GAP 5.49 AZP 92.83 TAL 11.35 TAP 161.79 RCA 151.02 APO 245.43 V2 22.720  
 RC 244.907 GL 26.46 GP -32.45 ZAL 68.36 ZAP 98.15 ETS 187.30 ZAE 126.35 ETE 211.34 ZAC 54.32 ETC 286.90 LVI 11.37

DISTANCE 503.186  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.566 VHL 4.191 DLA 33.94 RAL 11.85 RAD 6641.7 VEL 11.730 PTH 6.76 VHP 2.514 DPA -19.37 RAP 40.01 ECC 1.2891  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 3 3825.24 -46.58 159.10 259.73 78.97 9 15 48 2825.2 -45.55 124.02  
 60.00 7 53 33 3874.65 -37.20 160.41 255.61 73.24 8 58 8 2874.7 -40.17 129.69  
 70.00 6 45 25 4077.46 -23.36 170.43 249.42 64.35 7 53 22 3077.5 -31.83 145.08  
 70.41 6 18 45 4158.86 -20.52 175.25 247.88 62.36 7 28 4 3158.9 -30.08 150.87  
 70.41 6 18 45 4158.86 -20.52 175.25 247.88 62.36 7 28 4 3158.9 -30.08 150.87  
 70.41 6 18 45 4158.86 -20.52 175.25 247.88 62.36 7 28 4 3158.9 -30.08 150.87  
 110.00 11 44 51 3124.26 -23.36 99.37 249.42 64.35 12 36 55 2124.3 -31.83 73.98

DIFFERENTIAL CORRECTIONS  
 TDE .2037 TRA -.7838 TC3-2.0436 BAU .9845 SGT 2143.6 SGR 3238.0 SG3 1740.1  
 RDE .7159 RRA -.2025 RC3-3.6607 FAU .43688 RRT .8570 RRF .9909 RTF .8014  
 FDE 6.1231 FRA-1.9001 FC-21.5320 BSP 6362 SGB 3883.3 R23 .1300 R13 .9826  
 BDE .7443 BRA .7900 BC3 4.1925 FSP 3009 SG1 3765.3 SG2 949.9 THA 56.17

ORBIT DETERMINATION ACCURACY  
 ST 23.6 SR 49.4 SS 91.7  
 CRT .6758 CRS -.9995 CST -.6813  
 LSA 105.4 MSA 17.1 SSA 1.3  
 EL1 52.2 EL2 16.5 ALF 70.05

LAUNCH DATE AUG 12 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.885 GAL 2.15 AZL 86.62 HCA 151.36 SMA 198.21 ECC .23802 INC 3.3842 V1 29.392  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.678 GAP 5.26 AZP 92.97 TAL 11.23 TAP 162.59 RCA 151.03 APO 245.38 V2 22.692  
 RC 247.751 GL 27.40 GP -33.29 ZAL 68.69 ZAP 96.73 ETS 186.53 ZAE 124.82 ETE 210.32 ZAC 53.66 ETC 287.10 LVI 12.07

DISTANCE 508.971  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.768 VHL 4.215 DLA 34.85 RAL 11.31 RAD 6641.8 VEL 11.739 PTH 6.77 VHP 2.527 DPA -20.37 RAP 39.81 ECC 1.2924  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 26 3851.11 -46.22 161.49 259.32 77.16 9 8 38 2851.1 -46.00 126.36  
 60.00 7 41 32 3912.33 -36.43 163.31 255.65 71.41 8 46 45 2912.3 -40.28 132.89  
 68.74 6 7 29 4191.59 -20.93 178.06 247.99 61.48 7 17 21 3191.6 -30.81 153.69  
 68.74 6 7 29 4191.59 -20.93 178.06 247.99 61.48 7 17 21 3191.6 -30.81 153.69  
 68.74 6 7 29 4191.59 -20.93 178.06 247.99 61.48 7 17 21 3191.6 -30.81 153.69  
 68.74 6 7 29 4191.59 -20.93 178.06 247.99 61.48 7 17 21 3191.6 -30.81 153.69  
 68.74 6 7 29 4191.59 -20.93 178.06 247.99 61.48 7 17 21 3191.6 -30.81 153.69

DIFFERENTIAL CORRECTIONS  
 TDE .2637 TRA -.7859 TC3-2.1907 BAU 1.0268 SGT 2287.7 SGR 3358.7 SG3 1720.7  
 RDE .7856 RRA -.2237 RC3-3.7262 FAU .43141 RRT .8729 RRF .9917 RTF .8766  
 FDE 6.2581 FRA-1.9307 FC-21.0197 BSP 6664 SGB 4047.2 R23 .1311 R13 .9833  
 BDE .8289 BRA .8171 BC3 4.3225 FSP 2979 SG1 3934.9 SG2 947.1 THA 56.96

ORBIT DETERMINATION ACCURACY  
 ST 26.6 SR 53.9 SS 93.6  
 CRT .7511 CRS -.9996 CST -.7555  
 LSA 109.9 MSA 17.2 SSA 1.2  
 EL1 57.8 EL2 16.4 ALF 67.75

LAUNCH DATE AUG 12 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -0.00 LOL 319.15 VL 32.885 GAL 2.13 AZL 86.48 HCA 152.29 SMA 198.20 ECC .23792 INC 3.5181 V1 29.392  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.648 GAP 5.03 AZP 93.12 TAL 11.10 TAP 163.39 RCA 151.04 APO 245.35 V2 22.665  
 RC 250.580 GL 26.38 6P -34.14 ZAL 69.03 ZAP 95.35 ETS 185.74 ZAE 122.90 ETE 209.31 ZAC 52.98 ETC 287.30 LVI 12.79

PLANETOCENTRIC CONIC

C3 17.997 VHL 4.242 DLA 35.79 RAL 10.94 RAD 6641.9 VEL 11.748 PTH 6.78 VHP 2.544 DPA -21.38 RAP 39.63 ECC 1.2962  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 56 10 3878.84 -45.77 164.01 259.88 75.26 9 0 49 2878.8 -46.42 128.90  
 60.00 7 27 53 3954.51 -35.46 166.47 255.57 69.45 8 33 47 2954.5 -40.29 136.48  
 67.08 5 56 40 4222.69 -21.35 180.77 248.12 60.56 7 7 3 3222.7 -31.56 156.43  
 67.08 5 56 40 4222.69 -21.35 180.77 248.12 60.56 7 7 3 3222.7 -31.56 156.43  
 67.08 5 56 40 4222.69 -21.35 180.77 248.12 60.56 7 7 3 3222.7 -31.56 156.43  
 67.08 5 56 40 4222.69 -21.35 180.77 248.12 60.56 7 7 3 3222.7 -31.56 156.43

DIFFERENTIAL CORRECTIONS

TDE .3277 TRA -.8099 TC3-2.3337 BAU 1.0700  
 RDE .8582 RRA -.2462 RC3-3.7857 FAU .42486  
 FDE 6.3728 FRA-1.9586 FC-20.4373 BSP 6967  
 BDE .9186 BRA .8465 BC3 4.4472 FSP 2938

DISTANCE 510.756

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 2436.2 SGR 3439.3 SG3 1696.2  
 RRT .8863 RRF .9925 RTF .8895  
 SGB 4214.7 R23 .1320 R13 .9839  
 SG1 4107.4 SG2 944.8 THA 55.82

ORBIT DETERMINATION ACCURACY

ST 30.1 SR 58.5 SS 95.4  
 CRT .8066 CR8 -.9997 CST -.8101  
 LSA 114.5 MSA 17.3 S8A 1.1  
 EL1 63.7 EL2 16.3 ALF 65.74

LAUNCH DATE AUG 12 1973

FLIGHT TIME 230.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -0.00 LOL 319.15 VL 32.884 GAL 2.10 AZL 86.34 HCA 153.21 SMA 198.19 ECC .23784 INC 3.6603 V1 29.392  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.618 GAP 4.81 AZP 93.27 TAL 10.97 TAP 164.18 RCA 151.05 APO 245.33 V2 22.638  
 RC 253.394 GL 29.41 6P -35.01 ZAL 69.40 ZAP 94.01 ETS 184.93 ZAE 121.19 ETE 208.33 ZAC 52.29 ETC 287.52 LVI 12.53

PLANETOCENTRIC CONIC

C3 18.256 VHL 4.273 DLA 36.78 RAL 10.54 RAD 6642.1 VEL 11.759 PTH 6.79 VHP 2.564 DPA -22.39 RAP 39.49 ECC 1.3004  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 7 3908.68 -45.22 166.67 260.40 73.27 8 52 16 2908.7 -46.80 131.68  
 60.00 7 11 59 4002.73 -34.25 169.99 253.31 67.32 8 18 42 3002.7 -40.15 140.57  
 65.43 5 46 11 4252.48 -21.77 183.42 248.27 59.59 6 57 3 3252.5 -32.33 159.12  
 65.43 5 46 11 4252.48 -21.77 183.42 248.27 59.59 6 57 3 3252.5 -32.33 159.12  
 65.43 5 46 11 4252.48 -21.77 183.42 248.27 59.59 6 57 3 3252.5 -32.33 159.12  
 65.43 5 46 11 4252.48 -21.77 183.42 248.27 59.59 6 57 3 3252.5 -32.33 159.12

DIFFERENTIAL CORRECTIONS

TDE .3967 TRA -.8351 TC3-2.4700 BAU 1.1141  
 RDE .9347 RRA -.2702 RC3-3.8389 FAU .41730  
 FDE 6.4741 FRA-1.9838 FC-19.7893 BSP 7270  
 BDE 1.0154 BRA .8777 BC3 4.5649 FSP 2884

DISTANCE 514.540

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 2587.1 SGR 3540.8 SG3 1887.3  
 RRT .8977 RRF .9932 RTF .9005  
 SGB 4385.2 R23 .1324 R13 .9845  
 SG1 4282.8 SG2 942.3 THA 54.78

ORBIT DETERMINATION ACCURACY

ST 34.0 SR 63.2 SS 97.0  
 CRT .8483 CR8 -.9998 CST -.8510  
 LSA 119.4 MSA 17.4 S8A 1.1  
 EL1 69.9 EL2 16.3 ALF 63.95

LAUNCH DATE AUG 12 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -0.00 LOL 319.15 VL 32.885 GAL 2.07 AZL 86.19 HCA 154.13 SMA 198.20 ECC .23778 INC 3.8115 V1 29.392  
 RP 242.73 LAP 1.66 LOP 113.32 VP 20.589 GAP 4.58 AZP 93.43 TAL 10.83 TAP 164.96 RCA 151.07 APO 245.32 V2 22.612  
 RC 256.191 GL 30.48 6P -35.90 ZAL 69.79 ZAP 92.71 ETS 184.09 ZAE 119.51 ETE 207.37 ZAC 51.57 ETC 287.74 LVI 14.30

PLANETOCENTRIC CONIC

C3 18.547 VHL 4.307 DLA 37.81 RAL 10.11 RAD 6642.2 VEL 11.772 PTH 6.80 VHP 2.589 DPA -23.41 RAP 39.38 ECC 1.3052  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 8 3940.94 -44.95 169.49 260.85 71.19 8 42 49 2940.9 -47.13 134.73  
 60.00 6 52 48 4059.80 -32.68 174.01 254.76 64.97 8 0 28 3059.8 -39.78 145.38  
 63.78 5 35 58 4281.11 -22.19 186.02 248.42 58.56 6 47 19 3281.1 -33.12 161.77  
 63.78 5 35 58 4281.11 -22.19 186.02 248.42 58.56 6 47 19 3281.1 -33.12 161.77  
 63.78 5 35 58 4281.11 -22.19 186.02 248.42 58.56 6 47 19 3281.1 -33.12 161.77  
 63.78 5 35 58 4281.11 -22.19 186.02 248.42 58.56 6 47 19 3281.1 -33.12 161.77

DIFFERENTIAL CORRECTIONS

TDE .4703 TRA -.8624 TC3-2.6004 BAU 1.1589  
 RDE 1.0161 RRA -.2959 RC3-3.8835 FAU .40851  
 FDE 6.3637 FRA-2.0067 FC-19.0685 BSP 7585  
 BDE 1.1197 BRA .9117 BC3 4.6737 FSP 2828

DISTANCE 518.323

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 2741.7 SGR 3842.0 SG3 1833.5  
 RRT .9075 RRF .9938 RTF .5088  
 SGB 4558.7 R23 .1329 R13 .9850  
 SG1 4480.6 SG2 940.5 THA 53.80

ORBIT DETERMINATION ACCURACY

ST 36.3 SR 68.2 SS 98.5  
 CRT .8792 CR8 -.9998 CST -.8812  
 LSA 124.5 MSA 17.4 S8A 1.0  
 EL1 76.5 EL2 16.3 ALF 62.38

LAUNCH DATE AUG 12 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -0.00 LOL 319.15 VL 32.885 GAL 2.05 AZL 86.03 HCA 155.04 SMA 198.20 ECC .23775 INC 3.9726 V1 29.392  
 RP 242.99 LAP 1.68 LOP 114.24 VP 20.561 GAP 4.35 AZP 93.60 TAL 10.69 TAP 165.73 RCA 151.08 APO 245.33 V2 22.586  
 RC 258.972 GL 31.60 6P -36.82 ZAL 70.19 ZAP 91.45 ETS 183.23 ZAE 117.85 ETE 206.42 ZAC 50.82 ETC 287.98 LVI 15.10

PLANETOCENTRIC CONIC

C3 18.876 VHL 4.345 DLA 38.88 RAL 9.64 RAD 6642.3 VEL 11.785 PTH 6.81 VHP 2.618 DPA -24.45 RAP 39.31 ECC 1.3107  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 26 3 3976.01 -43.73 172.47 261.20 69.01 8 32 19 2976.0 -47.39 138.08  
 60.00 6 27 55 4132.24 -30.49 178.90 253.71 62.25 7 36 47 3132.2 -39.00 151.38  
 62.12 5 25 55 4308.85 -22.60 188.59 248.59 57.47 6 37 44 3308.8 -33.92 164.41  
 62.12 5 25 55 4308.85 -22.60 188.59 248.59 57.47 6 37 44 3308.8 -33.92 164.41  
 62.12 5 25 55 4308.85 -22.60 188.59 248.59 57.47 6 37 44 3308.8 -33.92 164.41  
 62.12 5 25 55 4308.85 -22.60 188.59 248.59 57.47 6 37 44 3308.8 -33.92 164.41

DIFFERENTIAL CORRECTIONS

TDE .5490 TRA -.8916 TC3-2.7221 BAU 1.2043  
 RDE 1.1014 RRA -.3237 RC3-3.9198 FAU .39868  
 FDE 6.6322 FRA-2.0271 FC-18.2848 BSP 7895  
 BDE 1.2306 BRA .9485 BC3 4.7723 FSP 2759

DISTANCE 522.105

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 2898.4 SGR 3743.2 SG3 1594.9  
 RRT .9159 RRF .9943 RTF .9178  
 SGB 4734.2 R23 .1330 R13 .9855  
 SG1 4640.2 SG2 938.7 THA 52.88

ORBIT DETERMINATION ACCURACY

ST 42.9 SR 73.3 SS 99.7  
 CRT .9025 CR8 -.9999 CST -.9040  
 LSA 129.8 MSA 17.5 S8A .9  
 EL1 83.3 EL2 16.2 ALF 60.96



LAUNCH DATE AUG 12 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

DISTANCE 525.885

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.886 GAL 2.02 AZL 85.86 MCA 155.98 SMA 198.22 ECC .23773 INC 4.1449 V1 29.392
RP 243.24 LAP 1.69 LOP 115.16 VP 20.535 GAP 4.13 AZP 93.79 TAL 10.54 TAP 166.50 RCA 151.10 APO 245.34 V2 22.560
RC 261.736 GL 32.78 GP -37.75 ZAL 70.62 ZAP 90.25 ETS 182.35 ZAE 116.22 ETE 205.50 ZAC 50.05 ETC 288.22 LVI 15.92

PLANETOCENTRIC CONIC

C3 19.249 VHL 4.387 DLA 40.00 RAL 9.13 RAD 6642.5 VEL 11.801 PTH 6.82 VHP 2.651 DPA -25.49 RAP 39.29 ECC 1.3168
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 13 36 4014.44 -42.75 175.64 261.41 66.73 8 20 30 3014.4 -47.54 141.78
60.00 5 46 59 4248.52 -26.97 186.24 251.28 58.51 6 37 48 3248.5 -37.07 160.65
60.44 5 15 59 4335.86 -23.00 191.14 248.77 56.32 6 28 15 3335.9 -34.74 167.05
60.44 5 15 59 4335.86 -23.00 191.14 248.77 56.32 6 28 15 3335.9 -34.74 167.05
60.44 5 15 59 4335.86 -23.00 191.14 248.77 56.32 6 28 15 3335.9 -34.74 167.05
60.44 5 15 59 4335.86 -23.00 191.14 248.77 56.32 6 28 15 3335.9 -34.74 167.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6331 TRA -.9228 TC3-2.0344 BAU 1.2504 SGT 3056.9 SGR 3844.6 SG3 1551.7 ST 47.7 SR 78.6 SS 100.9
RDE 1.1928 RRA -.3534 RC3-3.9466 FAU .38774 RRT .9231 RRF .9948 RTF .9246 CRT .9202 CRS -.9999 CST -.9212
FDE 6.6871 FRA-2.0435 FC-17.4387 BSP 8205 SGB 4911.8 R23 .1332 R13 .9860 LSA 135.3 MSA 17.6 SSA .9
BDE 1.3502 BRA .9882 BC3 4.8590 FSP 2682 SC1 4821.5 S2 937.5 THA 52.03 EL1 90.5 EL2 16.2 ALF 59.71

LAUNCH DATE AUG 12 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

DISTANCE 529.665

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.887 GAL 1.99 AZL 85.67 MCA 156.87 SMA 198.24 ECC .23774 INC 4.3295 V1 29.392
RP 243.50 LAP 1.70 LOP 116.08 VP 20.509 GAP 3.91 AZP 93.98 TAL 10.39 TAP 167.26 RCA 151.11 APO 245.37 V2 22.533
RC 264.483 GL 34.02 GP -38.71 ZAL 71.07 ZAP 89.09 ETS 181.45 ZAE 114.62 ETE 204.58 ZAC 49.25 ETC 288.48 LVI 16.78

PLANETOCENTRIC CONIC

C3 19.672 VHL 4.435 DLA 41.17 RAL 8.56 RAD 6642.7 VEL 11.819 PTH 6.84 VHP 2.689 DPA -26.55 RAP 39.31 ECC 1.3237
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 59 26 4056.89 -41.55 179.02 261.41 64.34 8 7 3 3057.0 -47.57 145.90
58.73 5 6 6 4362.27 -23.38 193.68 248.94 55.09 6 18 49 3362.3 -35.57 169.72
58.73 5 6 6 4362.27 -23.38 193.68 248.94 55.09 6 18 49 3362.3 -35.57 169.72
58.73 5 6 6 4362.27 -23.38 193.68 248.94 55.09 6 18 49 3362.3 -35.57 169.72
58.73 5 6 6 4362.27 -23.38 193.68 248.94 55.09 6 18 49 3362.3 -35.57 169.72
58.73 5 6 6 4362.27 -23.38 193.68 248.94 55.09 6 18 49 3362.3 -35.57 169.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7227 TRA -.9562 TC3-2.9356 BAU 1.2969 SGT 3216.4 SGR 3944.9 SG3 1503.6 ST 52.9 SR 84.0 SS 101.7
RDE 1.2883 RRA -.3862 RC3-3.8622 FAU .37583 RRT .9295 RRF .9953 RTF .9306 CRT .9339 CRS -.9999 CST -.9346
FDE 6.7180 FRA-2.0590 FC-16.5317 BSP 8515 SGB 5090.0 R23 .1331 R13 .9864 LSA 141.0 MSA 17.6 SSA .8
BDE 1.4772 BRA 1.0312 BC3 4.9312 FSP 2595 SC1 5003.3 S2 935.4 THA 51.24 EL1 97.9 EL2 16.2 ALF 58.56

LAUNCH DATE AUG 12 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

DISTANCE 533.444

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.888 GAL 1.98 AZL 85.47 MCA 157.78 SMA 198.26 ECC .23776 INC 4.3280 V1 29.392
RP 243.74 LAP 1.71 LOP 116.99 VP 20.484 GAP 3.68 AZP 94.19 TAL 10.23 TAP 168.01 RCA 151.12 APO 245.40 V2 22.511
RC 267.212 GL 35.31 GP -39.70 ZAL 71.53 ZAP 87.99 ETS 180.54 ZAE 113.04 ETE 203.68 ZAC 48.42 ETC 288.76 LVI 17.68

PLANETOCENTRIC CONIC

C3 20.153 VHL 4.489 DLA 42.39 RAL 7.92 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 2.732 DPA -27.62 RAP 39.37 ECC 1.3317
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 2 4104.81 -40.07 182.65 261.14 61.83 7 51 27 3104.8 -47.40 150.51
57.00 4 56 12 4388.29 -23.75 196.24 249.12 53.79 6 9 20 3388.3 -36.41 172.42
57.00 4 56 12 4388.29 -23.75 196.24 249.12 53.79 6 9 20 3388.3 -36.41 172.42
57.00 4 56 12 4388.29 -23.75 196.24 249.12 53.79 6 9 20 3388.3 -36.41 172.42
57.00 4 56 12 4388.29 -23.75 196.24 249.12 53.79 6 9 20 3388.3 -36.41 172.42
57.00 4 56 12 4388.29 -23.75 196.24 249.12 53.79 6 9 20 3388.3 -36.41 172.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8178 TRA -.9920 TC3-3.0245 BAU 1.3438 SGT 3378.8 SGR 4044.5 SG3 1450.8 ST 58.3 SR 89.6 SS 102.3
RDE 1.3903 RRA -.4206 RC3-3.9662 FAU .36247 RRT .9349 RRF .9957 RTF .9356 CRT .9444 CRS -.9999 CST -.9448
FDE 6.7289 FRA-2.0657 FC-15.5713 BSP 8848 SGB 5268.8 R23 .1332 R13 .9868 LSA 146.8 MSA 17.7 SSA .8
BDE 1.6130 BRA 1.0775 BC3 4.9878 FSP 2511 SC1 5185.2 S2 934.8 THA 50.49 EL1 105.6 EL2 16.3 ALF 57.54

LAUNCH DATE AUG 12 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

DISTANCE 537.222

EARTH TO MARS

RL 151.59 LAL -.00 LOL 319.15 VL 32.890 GAL 1.93 AZL 85.26 MCA 158.69 SMA 198.29 ECC .23780 INC 4.7422 V1 29.392
RP 243.88 LAP 1.72 LOP 117.90 VP 20.480 GAP 3.46 AZP 94.42 TAL 10.06 TAP 168.75 RCA 151.14 APO 245.44 V2 22.487
RC 269.924 GL 36.68 GP -40.72 ZAL 72.02 ZAP 86.93 ETS 179.60 ZAE 111.51 ETE 202.80 ZAC 47.56 ETC 289.05 LVI 18.60

PLANETOCENTRIC CONIC

C3 20.701 VHL 4.550 DLA 43.66 RAL 7.22 RAD 6643.1 VEL 11.862 PTH 6.88 VHP 2.781 DPA -28.70 RAP 39.49 ECC 1.3407
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 23 33 4159.82 -38.23 186.63 260.46 59.18 7 32 53 3159.8 -46.96 155.75
55.23 4 46 12 4414.03 -24.09 198.81 249.29 52.41 5 59 46 3414.0 -37.25 175.18
55.23 4 46 12 4414.03 -24.09 198.81 249.29 52.41 5 59 46 3414.0 -37.25 175.18
55.23 4 46 12 4414.03 -24.09 198.81 249.29 52.41 5 59 46 3414.0 -37.25 175.18
55.23 4 46 12 4414.03 -24.09 198.81 249.29 52.41 5 59 46 3414.0 -37.25 175.18
55.23 4 46 12 4414.03 -24.09 198.81 249.29 52.41 5 59 46 3414.0 -37.25 175.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9199 TRA -1.0298 TC3-3.0979 BAU 1.3912 SGT 3535.9 SGR 4144.7 SG3 1394.0 ST 64.0 SR 95.3 SS 102.6
RDE 1.4995 RRA -.4587 RC3-3.9586 FAU .34834 RRT .9398 RRF .9960 RTF .9401 CRT .9529 CRS -.9999 CST -.9530
FDE 6.7189 FRA-2.0709 FC-14.5680 BSP 9185 SGB 5448.0 R23 .1329 R13 .9872 LSA 152.9 MSA 17.8 SSA .7
BDE 1.7591 BRA 1.1273 BC3 5.0267 FSP 2417 SC1 5367.6 S2 932.9 THA 49.82 EL1 113.7 EL2 16.3 ALF 56.62

LAUNCH DATE AUG 12 1973 FLIGHT TIME 244.00 ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC DISTANCE 540.998 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 32.891 GAL 1.90 AZL 85.03 HCA 159.60 SMA 198.33 ECC .23785 INC 4.9739 V1 29.392
RP 244.22 LAP 1.73 LOP 118.81 VP 20.437 GAP 3.24 AZP 94.66 TAL 9.90 TAP 169.49 RCA 151.15 APO 245.50 V2 22.464
RC 272.618 GL 38.11 GP -41.77 ZAL 72.53 ZAP 85.97 ETS 178.85 ZAE 110.00 ETE 201.92 ZAC 46.85 ETC 289.37 LVI 19.57

PLANETOCENTRIC CONIC
C3 21.329 VHL 4.618 DLA 44.99 RAL 6.42 RAD 6643.4 VEL 11.888 PTH 6.90 VHP 2.836 DPA -29.80 RAP 39.67 ECC 1.3510
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 59 18 4225.84 -35.83 191.11 259.14 56.31 7 9 44 3225.8 -46.10 161.89
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01
53.43 4 36 3 4439.62 -24.40 201.40 249.45 50.95 5 50 2 3439.6 -38.09 178.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.0262 TRA-1.0724 TC3-3.1593 BAU 1.4403 SGT 3698.0 SGR 4246.8 SG3 1333.8 ST 69.8 SR 101.2 SS 102.5
RDE 1.6145 RRA -.5015 RC3-3.9407 FAU .33350 RRT .9441 RRF .9964 RTF .9440 CRT .9594 CRS-1.0000 CST -.9593
FDE 6.6795 FRA-2.0758 FC-13.5365 BSP 9489 SGB 5631.2 R23 .1329 R13 .9875 LSA 159.0 MSA 17.8 SSA .7
BDE 1.9130 BRA 1.1839 BC3 5.0508 F8P 2308 SG1 5553.5 SG2 932.1 THA 49.18 EL1 121.8 EL2 16.3 ALF 55.81

LAUNCH DATE AUG 12 1973 FLIGHT TIME 246.00 ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC DISTANCE 544.772 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 32.893 GAL 1.86 AZL 84.77 HCA 160.50 SMA 198.36 ECC .23792 INC 5.2258 V1 29.392
RP 244.45 LAP 1.74 LOP 119.72 VP 20.415 GAP 3.02 AZP 94.93 TAL 9.72 TAP 170.22 RCA 151.17 APO 245.56 V2 22.441
RC 275.292 GL 39.62 GP -42.85 ZAL 73.07 ZAP 85.06 ETS 177.69 ZAE 108.54 ETE 201.08 ZAC 45.71 ETC 289.72 LVI 20.50

PLANETOCENTRIC CONIC
C3 22.052 VHL 4.696 DLA 46.37 RAL 5.53 RAD 6643.7 VEL 11.918 PTH 6.92 VHP 2.899 DPA -30.91 RAP 39.91 ECC 1.3629
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 25 52 4313.29 -32.38 196.81 256.62 53.02 6 37 45 3313.3 -44.43 169.65
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93
51.58 4 25 39 4465.21 -24.67 204.03 249.58 49.40 5 40 4 3465.2 -38.92 180.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.1393 TRA-1.1171 TC3-3.2015 BAU 1.4892 SGT 3856.9 SGR 4347.2 SG3 1268.8 ST 75.7 SR 107.1 SS 102.1
RDE 1.7377 RRA -.5474 RC3-3.9071 FAU .31756 RRT .9479 RRF .9966 RTF .9474 CRT .9647 CRS-1.0000 CST -.9643
FDE 6.6145 FRA-2.0711 FC-12.4673 BSP 9813 SGB 5811.5 R23 .1327 R13 .9878 LSA 165.3 MSA 17.9 SSA .6
BDE 2.0779 BRA 1.2440 BC3 5.0512 F8P 2197 SG1 5736.4 SG2 931.0 THA 48.61 EL1 130.2 EL2 16.4 ALF 55.09

LAUNCH DATE AUG 12 1973 FLIGHT TIME 248.00 ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC DISTANCE 548.546 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 32.895 GAL 1.83 AZL 84.50 HCA 161.40 SMA 198.41 ECC .23801 INC 5.5006 V1 29.392
RP 244.66 LAP 1.75 LOP 120.63 VP 20.394 GAP 2.80 AZP 95.22 TAL 9.55 TAP 170.98 RCA 151.18 APO 245.63 V2 22.418
RC 277.948 GL 41.21 GP -43.97 ZAL 73.63 ZAP 84.21 ETS 176.72 ZAE 107.12 ETE 200.21 ZAC 44.73 ETC 289.09 LVI 21.63

PLANETOCENTRIC CONIC
C3 22.887 VHL 4.784 DLA 47.81 RAL 4.51 RAD 6644.1 VEL 11.953 PTH 6.95 VHP 2.969 DPA -32.04 RAP 40.21 ECC 1.3767
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95
49.69 4 14 56 4490.92 -24.88 206.70 249.67 47.75 5 29 47 3490.9 -39.72 183.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.2576 TRA-1.1661 TC3-3.2262 BAU 1.5395 SGT 4015.2 SGR 4449.2 SG3 1200.6 ST 81.6 SR 113.2 SS 101.2
RDE 1.8686 RRA -.5991 RC3-3.8608 FAU .30093 RRT .9514 RRF .9969 RTF .9505 CRT .9689 CRS-1.0000 CST -.9683
FDE 6.5172 FRA-2.0639 FC-11.3832 BSP 10137 SGB 5993.1 R23 .1325 R13 .9881 LSA 171.4 MSA 18.0 SSA .6
BDE 2.2523 BRA 1.3110 BC3 5.0313 F8P 2081 SG1 5920.6 SG2 929.7 THA 48.08 EL1 138.6 EL2 16.5 ALF 54.47

LAUNCH DATE AUG 12 1973 FLIGHT TIME 250.00 ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC DISTANCE 552.517 EARTH TO MARS
RL 151.59 LAL -.00 LOL 319.15 VL 32.898 GAL 1.80 AZL 84.20 HCA 162.30 SMA 198.48 ECC .23811 INC 5.8018 V1 29.392
RP 244.90 LAP 1.76 LOP 121.53 VP 20.374 GAP 2.58 AZP 95.53 TAL 9.37 TAP 171.67 RCA 151.20 APO 245.71 V2 22.387
RC 280.584 GL 42.89 GP -45.13 ZAL 74.21 ZAP 83.44 ETS 175.74 ZAE 105.75 ETE 199.37 ZAC 43.71 ETC 290.49 LVI 22.73

PLANETOCENTRIC CONIC
C3 23.857 VHL 4.884 DLA 49.31 RAL 3.35 RAD 6644.5 VEL 11.993 PTH 6.99 VHP 3.049 DPA -33.18 RAP 40.59 ECC 1.3928
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10
47.76 4 3 47 4516.95 -25.02 209.41 249.70 46.01 5 19 3 3516.9 -40.49 187.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.3813 TRA-1.2195 TC3-3.2301 BAU 1.5896 SGT 4170.9 SGR 4549.7 SG3 1128.5 ST 87.6 SR 119.3 SS 99.9
RDE 2.0094 RRA -.6566 RC3-3.7956 FAU .26320 RRT .9544 RRF .9971 RTF .9530 CRT .9722 CRS-1.0000 CST -.9719
FDE 6.3908 FRA-2.0502 FC-10.2768 BSP 10469 SGB 6172.2 R23 .1325 R13 .9883 LSA 177.6 MSA 18.1 SSA .5
BDE 2.4383 BRA 1.3650 BC3 4.9840 F8P 1960 SG1 6102.0 SG2 928.3 THA 47.61 EL1 147.1 EL2 16.6 ALF 53.95

LAUNCH DATE AUG 12 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 21 1974

**HELIOCENTRIC CONIC**  
 RL 151.99 LAL -.00 LOL 319.15 VL 32.900 GAL 1.76 AZL 83.67 HCA 163.20 SMA 196.50 ECC .23023 INC 6.1336 V1 29.392  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.354 GAP 2.37 AZP 95.87 TAL 9.10 TAP 172.38 RCA 151.21 APO 245.79 V2 22.375  
 RC 283.198 GL 44.66 GP -48.34 ZAL 74.82 ZAP 82.75 ETS 174.75 ZAE 104.42 ETE 196.54 ZAC 42.63 ETC 290.94 LVI 23.87

**PLANETOCENTRIC CONIC**  
 C3 24.992 VHL 4.999 DLA 50.87 RAL 2.01 RAD 6645.0 VEL 12.040 PTH 7.03 VHP 3.140 DPA -34.35 RAP 41.04 ECC 1.4113  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.78 3 52 8 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38  
 45.78 3 52 6 4543.35 -25.08 212.17 249.64 44.17 5 7 50 3543.4 -41.20 190.38

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.5092 TRA-1.2780 TC3-3.2131 BAU 1.6418 SGT 4324.2 SGR 4654.4 SG3 1054.1 ORBIT DETERMINATION ACCURACY  
 RDE 2.1589 RRA -.7231 RC3-3.7177 FAU .26503 RRT .9574 RRF .9973 RTF .9555 ST 93.4 SR 125.4 SS 98.0  
 FDE 6.2264 FRA-2.0353 FC3-9.1807 BSP 10789 SGB 6355.1 R23 .1321 R13 .9885 CRT .9749 CRS-1.0000 CST -.9740  
 BDE 2.6341 BRA 1.4684 BC3 4.9138 FSP 1630 SG1 6285.4 SG2 924.9 THA 47.20 LSA 183.6 MSA 18.1 SSA .5  
 EL1 155.4 EL2 16.8 ALF 53.54

LAUNCH DATE AUG 12 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 23 1974

**HELIOCENTRIC CONIC**  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.903 GAL 1.73 AZL 83.50 HCA 164.10 SMA 198.56 ECC .23836 INC 6.5010 V1 29.392  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.336 GAP 2.15 AZP 96.25 TAL 8.99 TAP 173.09 RCA 151.23 APO 245.88 V2 22.354  
 RC 285.791 GL 46.53 GP -47.58 ZAL 75.45 ZAP 82.15 ETS 173.77 ZAE 103.15 ETE 187.73 ZAC 41.51 ETC 291.43 LVI 25.06

**PLANETOCENTRIC CONIC**  
 C3 26.328 VHL 5.131 DLA 52.48 RAL .47 RAD 6645.5 VEL 12.095 PTH 7.07 VHP 3.242 DPA -35.53 RAP 41.58 ECC 1.4333  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82  
 43.76 3 39 44 4570.42 -25.04 214.98 249.46 42.24 4 55 54 3570.4 -41.84 193.82

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.6385 TRA-1.3424 TC3-3.1740 BAU 1.6950 SGT 4473.8 SGR 4758.7 SG3 976.5 ORBIT DETERMINATION ACCURACY  
 RDE 2.3185 RRA -.7939 RC3-3.6216 FAU .24608 RRT .9598 RRF .9974 RTF .9574 ST 98.6 SR 131.4 SS 95.5  
 FDE 6.0240 FRA-2.0065 FC3-8.0916 BSP 11114 SGB 6531.4 R23 .1323 R13 .9886 CRT .9766 CRS-1.0000 CST -.9757  
 BDE 2.8390 BRA 1.5606 BC3 4.8157 FSP 1698 SG1 6465.8 SG2 923.8 THA 46.84 LSA 189.2 MSA 18.3 SSA .4  
 EL1 163.5 EL2 17.0 ALF 53.25

LAUNCH DATE AUG 12 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 25 1974

**HELIOCENTRIC CONIC**  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.906 GAL 1.69 AZL 83.09 HCA 164.99 SMA 198.61 ECC .23850 INC 6.9103 V1 29.392  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.318 GAP 1.94 AZP 96.68 TAL 8.80 TAP 173.79 RCA 151.24 APO 245.98 V2 22.334  
 RC 288.361 GL 48.51 GP -48.87 ZAL 76.10 ZAP 81.60 ETS 172.80 ZAE 101.94 ETE 196.94 ZAC 40.34 ETC 291.98 LVI 26.31

**PLANETOCENTRIC CONIC**  
 C3 27.915 VHL 5.283 DLA 54.14 RAL 358.67 RAD 6646.2 VEL 12.160 PTH 7.12 VHP 3.360 DPA -36.72 RAP 42.21 ECC 1.4594  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41  
 41.69 3 26 29 4598.33 -24.87 217.83 249.11 40.21 4 43 7 3598.3 -42.38 197.41

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.7620 TRA-1.4168 TC3-3.1145 BAU 1.7576 SGT 4821.9 SGR 4865.7 SG3 800.4 ORBIT DETERMINATION ACCURACY  
 RDE 2.4689 RRA -.8984 RC3-3.5327 FAU .22837 RRT .9638 RRF .9976 RTF .9512 ST 103.4 SR 136.3 SS 91.8  
 FDE 5.7363 FRA-2.0141 FC3-7.0824 BSP 11244 SGB 6725.4 R23 .1278 R13 .9894 CRT .9788 CRS-1.0000 CST -.9774  
 BDE 3.0332 BRA 1.6776 BC3 4.7096 FSP 1519 SG1 6664.5 SG2 903.3 THA 46.65 LSA 193.3 MSA 18.2 SSA .4  
 EL1 170.3 EL2 17.0 ALF 52.96

LAUNCH DATE AUG 12 1973

FLIGHT TIME 258.00

ARRIVAL DATE APR 27 1974

**HELIOCENTRIC CONIC**  
 RL 151.59 LAL -.00 LOL 319.15 VL 32.909 GAL 1.66 AZL 82.63 HCA 165.88 SMA 198.67 ECC .23866 INC 7.3693 V1 29.392  
 RP 245.73 LAP 1.79 LOP 125.14 VP 20.302 GAP 1.72 AZP 97.15 TAL 8.61 TAP 174.49 RCA 151.26 APO 246.09 V2 22.514  
 RC 290.907 GL 50.60 GP -50.21 ZAL 76.79 ZAP 81.17 ETS 171.84 ZAE 100.79 ETE 198.16 ZAC 39.12 ETC 292.99 LVI 27.61

**PLANETOCENTRIC CONIC**  
 C3 29.816 VHL 5.460 DLA 55.86 RAL 356.56 RAD 6646.9 VEL 12.237 PTH 7.19 VHP 3.494 DPA -37.93 RAP 42.93 ECC 1.4907  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16  
 39.59 3 12 10 4627.27 -24.56 220.72 248.53 38.10 4 29 17 3627.3 -42.78 201.16

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.8837 TRA-1.4968 TC3-3.0271 BAU 1.8131 SGT 4760.9 SGR 4991.8 SG3 817.8 ORBIT DETERMINATION ACCURACY  
 RDE 2.6475 RRA -.9941 RC3-3.3951 FAU .20779 RRT .9656 RRF .9977 RTF .9521 ST 107.5 SR 141.8 SS 88.0  
 FDE 5.4497 FRA-1.9629 FC3-6.0335 BSP 11600 SGB 6898.2 R23 .1292 R13 .9893 CRT .9794 CRS-1.0000 CST -.9777  
 BDE 3.2493 BRA 1.7969 BC3 4.5486 FSP 1391 SG1 6838.8 SG2 903.3 THA 46.40 LSA 197.6 MSA 18.6 SSA .4  
 EL1 177.1 EL2 17.4 ALF 52.99

LAUNCH DATE AUG 12 1973

FLIGHT TIME 260.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 32.912 GAL 1.62 AZL 82.11 HCA 166.77 SMA 198.74 ECC .23883 INC 7.8879 V1 29.382
RP 245.93 LAP 1.80 LOP 126.04 VP 20.286 GAP 1.51 AZP 97.66 TAL 8.41 TAP 175.18 RCA 151.27 APO 246.20 V2 22.295
RC 293.430 GL 52.82 GP -31.60 ZAL 77.49 ZAP 80.82 ETS 170.92 ZAE 99.71 ETE 195.44 ZAC 37.84 ETC 293.27 LVI 28.96

DISTANCE 571.145

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.116 VHL 5.667 DLA 57.61 RAL 354.07 RAD 6647.8 VEL 12.330 PTH 7.26 VHP 3.650 DPA -39.16 RAP 43.77 ECC 1.5285
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06
37.47 2 56 29 4657.56 -24.06 223.63 247.63 35.92 4 14 7 3657.6 -43.00 205.06

DIFFERENTIAL CORRECTIONS

TDE 1.9908 TRA-1.5858 TC3-2.9158 BAU 1.8724
RDE 2.8303 RRA-1.1044 RC3-3.2426 FAU .16705
FDE 5.1078 FRA-1.8988 FC3-5.0422 BSP 11958
BDE 3.4603 BRA 1.9325 BC3 4.3608 FSP 1258

MID-COURSE EXECUTION ACCURACY

SGT 4891.7 SGR 5102.9 SG3 734.0
RRT .9672 RRF .9977 RTF .9627
SGB 7068.8 R23 .1312 R13 .9891
SG1 7010.7 SG2 904.6 THA 46.25

ORBIT DETERMINATION ACCURACY

ST 110.3 SR 146.6 SS 83.2
CRT .9792 CR3 -.9999 CBT -.9771
LSA 200.5 MSA 19.1 S8A .3
EL1 182.5 EL2 18.0 ALF 53.19

LAUNCH DATE AUG 12 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 32.916 GAL 1.58 AZL 81.52 HCA 167.65 SMA 198.80 ECC .23901 INC 8.4787 V1 29.392
RP 246.12 LAP 1.81 LOP 126.93 VP 20.271 GAP 1.30 AZP 98.29 TAL 8.21 TAP 175.87 RCA 151.29 APO 246.32 V2 22.276
RC 295.928 GL 55.17 GP -53.02 ZAL 78.23 ZAP 80.58 ETS 170.04 ZAE 98.70 ETE 194.75 ZAC 36.51 ETC 294.03 LVI 30.38

DISTANCE 574.903

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.933 VHL 5.910 DLA 59.37 RAL 351.11 RAD 6648.9 VEL 12.443 PTH 7.34 VHP 3.630 DPA -40.38 RAP 44.72 ECC 1.5749
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08
35.34 2 39 8 4689.43 -23.35 226.53 246.31 33.70 3 57 17 3689.4 -43.00 209.08

DIFFERENTIAL CORRECTIONS

TDE 2.0695 TRA-1.6881 TC3-2.7811 BAU 1.9368
RDE 3.0094 RRA-1.2405 RC3-3.0765 FAU .16627
FDE 4.7026 FRA-1.8322 FC3-4.1206 BSP 12238
BDE 3.6523 BRA 2.0949 BC3 4.1472 FSP 1112

MID-COURSE EXECUTION ACCURACY

SGT 9015.2 SGR 5225.8 SG3 650.4
RRT .9688 RRF .9976 RTF .9631
SGB 7243.0 R23 .1331 R13 .9888
SG1 7186.4 SG2 903.3 THA 46.22

ORBIT DETERMINATION ACCURACY

ST 111.4 SR 150.2 SS 77.4
CRT .9781 CR3 -.9999 CBT -.9753
LSA 201.4 MSA 19.7 S8A .3
EL1 186.1 EL2 18.7 ALF 53.62

LAUNCH DATE AUG 12 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 32.919 GAL 1.54 AZL 80.84 HCA 168.54 SMA 198.87 ECC .23920 INC 9.1582 V1 29.392
RP 246.30 LAP 1.81 LOP 127.83 VP 20.257 GAP 1.08 AZP 98.98 TAL 8.01 TAP 176.55 RCA 151.30 APO 246.44 V2 22.258
RC 298.401 GL 57.66 GP -54.49 ZAL 78.99 ZAP 80.44 ETS 169.22 ZAE 97.78 ETE 194.12 ZAC 35.13 ETC 294.89 LVI 31.81

DISTANCE 578.657

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.430 VHL 6.199 DLA 61.14 RAL 347.55 RAD 6650.1 VEL 12.582 PTH 7.45 VHP 4.041 DPA -41.61 RAP 45.79 ECC 1.6325
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17
33.24 2 19 40 4723.21 -22.39 229.39 244.44 31.47 3 38 23 3723.2 -42.73 213.17

DIFFERENTIAL CORRECTIONS

TDE 2.1036 TRA-1.8015 TC3-2.6198 BAU 2.0045
RDE 3.1778 RRA-1.3984 RC3-2.8913 FAU .14517
FDE 4.2388 FRA-1.7458 FC3-3.2703 BSP 12575
BDE 3.8108 BRA 2.2812 BC3 3.9015 FSP 970

MID-COURSE EXECUTION ACCURACY

SGT 5121.2 SGR 5353.2 SG3 586.2
RRT .9701 RRF .9975 RTF .5028
SGB 7408.3 R23 .1384 R13 .9883
SG1 7352.9 SG2 904.5 THA 46.31

ORBIT DETERMINATION ACCURACY

ST 110.2 SR 152.3 SS 70.6
CRT .9755 CR3 -.9999 CBT -.9717
LSA 199.8 MSA 20.7 S8A .3
EL1 187.0 EL2 19.8 ALF 54.33

LAUNCH DATE AUG 12 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 24 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.042 GAL .15 AZL 98.94 HCA 191.75 SMA 201.32 ECC .24705 INC 8.9423 V1 29.392
RP 249.12 LAP 1.81 LOP 150.75 VP 20.155 GAP -4.03 AZP 81.24 TAL .74 TAP 192.49 RCA 151.58 APO 251.06 V2 21.982
RC 352.974 GL -57.50 GP 50.07 ZAL 86.40 ZAP 67.87 ETS 212.59 ZAE 79.74 ETE 194.17 ZAC 135.72 ETC 290.58 LVI -69.40

DISTANCE 676.955

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 37.091 VHL 6.090 DLA -39.01 RAL 59.31 RAD 6649.6 VEL 12.529 PTH 7.41 VHP 4.157 DPA 52.31 RAP 352.56 ECC 1.6104
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 17 4 5 2427.40 -3.76 83.36 290.52 137.46 17 44 33 1427.4 14.55 47.44
80.00 19 23 30 2054.83 8.43 41.48 302.04 129.56 19 57 45 1054.8 23.52 21.82
61.93 20 41 3 1834.39 16.24 29.15 308.23 125.97 21 11 37 834.4 29.46 7.27
61.93 20 41 3 1834.39 16.24 29.15 308.23 125.97 21 11 37 834.4 29.46 7.27
61.93 20 41 3 1834.39 16.24 29.15 308.23 125.97 21 11 37 834.4 29.46 7.27
61.93 20 41 3 1834.39 16.24 29.15 308.23 125.97 21 11 37 834.4 29.46 7.27
61.93 20 41 3 1834.39 16.24 29.15 308.23 125.97 21 11 37 834.4 29.46 7.27

DIFFERENTIAL CORRECTIONS

TDE-6.5576 TRA 2.4868 TC3-4.9598 BAU 2.7014
RDE 2.7923 RRA-1.8563 RC3 2.2537 FAU .13648
FDE-3.1980 FRA 2.8544 FC3-3.1850 BSP 17589
BDE 7.1274 BRA 3.1032 BC3 5.4478 FSP 817

MID-COURSE EXECUTION ACCURACY

SGT 9144.5 SGR 4414.5 SG3 507.0
RRT -.9799 RRF -.9951 RTF .9630
SGB10154.3 R23 .2215 R13 -.9720
SG110123.1 SG2 795.4 THA 154.51

ORBIT DETERMINATION ACCURACY

ST 311.9 SR 135.7 SS 56.8
CRT -.9944 CR3 .9982 CBT -.9864
LSA 344.5 MSA 15.5 S8A .3
EL1 339.9 EL2 13.2 ALF 156.57

LAUNCH DATE AUG 12 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 26 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.048 GAL .09 AZL 98.31 MCA 192.61 SMA 201.43 ECC .24745 INC 8.3079 V1 29.392  
 RP 249.15 LAP 1.81 LOP 151.63 VP 20.161 GAP -4.22 AZP 81.89 TAL .46 TAP 193.07 RCA 151.59 APO 251.28 V2 21.979  
 RC 354.652 GL -95.12 GP 46.19 ZAL 86.55 ZAP 65.74 ETS 212.73 ZAE 78.45 ETE 194.80 ZAC 133.96 ETC 289.75 LVI -67.80

DISTANCE 680.689

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.885 VML 5.821 DLA -36.66 RAL 58.64 RAD 6648.5 VEL 12.401 PTH 7.31 VHP 3.988 DPA 50.78 RAP 354.33 ECC 1.5577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 41 52 2470.97 -5.95 65.19 286.97 137.29 17 23 3 1471.0 12.41 49.37  
 60.00 18 35 16 2168.74 3.45 46.99 295.93 130.18 19 11 25 1168.7 19.07 28.27  
 65.63 20 56 56 1757.49 16.24 22.85 305.58 123.33 21 26 14 757.5 28.45 .42  
 65.63 20 56 56 1757.49 16.24 22.85 305.58 123.33 21 26 14 757.5 28.45 .42  
 65.63 20 56 56 1757.49 16.24 22.85 305.58 123.33 21 26 14 757.5 28.45 .42  
 65.63 20 56 56 1757.49 16.24 22.85 305.58 123.33 21 26 14 757.5 28.45 .42

DIFFERENTIAL CORRECTIONS

TDE-6.2116 TRA 2.4255 TC3-5.4578 BAU 2.6875  
 RDE 2.4747 RRA-1.7373 RC3 2.3252 FAU .15054  
 FDE-3.2927 FRA 2.8887 FC3-3.8462 BSP 17915  
 BDE 6.6864 BRA 2.9835 BC3 5.9324 FSP 938

MID-COURSE EXECUTION ACCURACY

SGT 9306.5 SGR 4219.6 SG3 567.3  
 RRT -.9788 RRF -.9951 RTF .9625  
 SGB10218.4 R23 .2254 R13 -.9708  
 SGI10187.9 SG2 789.7 THA 155.92

ORBIT DETERMINATION ACCURACY

ST 309.1 SR 126.0 SS 58.8  
 CRT -.9938 CRS .9982 CST -.9852  
 LSA 338.5 MSA 15.8 SSA .3  
 EL1 333.5 EL2 13.0 ALF 157.91

LAUNCH DATE AUG 12 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 26 1974

HELIOCENTRIC CONIC

RL 151.59 LAL -.00 LOL 319.15 VL 33.053 GAL .03 AZL 97.75 MCA 193.47 SMA 201.54 ECC .24786 INC 7.7535 V1 29.392  
 RP 249.18 LAP 1.80 LOP 152.50 VP 20.167 GAP -4.40 AZP 82.46 TAL .17 TAP 193.65 RCA 151.59 APO 251.50 V2 21.977  
 RC 356.296 GL -52.87 GP 46.38 ZAL 86.75 ZAP 64.26 ETS 212.77 ZAE 77.17 ETE 195.33 ZAC 132.24 ETC 289.17 LVI -68.20

DISTANCE 684.427

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.281 VML 5.593 DLA -34.43 RAL 58.09 RAD 6647.5 VEL 12.297 PTH 7.23 VHP 3.848 DPA 49.31 RAP 355.98 ECC 1.5148  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 23 27 2509.48 -7.87 66.82 284.14 137.08 17 5 16 1509.5 10.51 51.06  
 60.00 18 3 26 2243.26 .17 50.55 291.83 130.30 18 40 49 1243.3 16.03 32.21  
 69.48 21 16 22 1672.57 16.06 15.98 303.24 120.87 21 44 15 672.6 27.33 353.14  
 69.48 21 16 22 1672.57 16.06 15.98 303.24 120.87 21 44 15 672.6 27.33 353.14  
 69.48 21 16 22 1672.57 16.06 15.98 303.24 120.87 21 44 15 672.6 27.33 353.14  
 69.48 21 16 22 1672.57 16.06 15.98 303.24 120.87 21 44 15 672.6 27.33 353.14  
 69.48 21 16 22 1672.57 16.06 15.98 303.24 120.87 21 44 15 672.6 27.33 353.14

DIFFERENTIAL CORRECTIONS

TDE-5.9088 TRA 2.3137 TC3-5.9788 BAU 2.6955  
 RDE 2.2130 RRA-1.5714 RC3 2.4082 FAU .16565  
 FDE-3.3570 FRA 2.9731 FC3-4.5845 BSP 17478  
 BDE 6.3097 BRA 2.7968 BC3 6.4456 FSP 954

MID-COURSE EXECUTION ACCURACY

SGT 9467.1 SGR 4025.6 SG3 621.6  
 RRT -.9800 RRF -.9950 RTF .9630  
 SGB10287.4 R23 .2187 R13 -.9720  
 SGI10260.8 SG2 739.7 THA 157.25

ORBIT DETERMINATION ACCURACY

ST 305.9 SR 117.1 SS 60.1  
 CRT -.9938 CRS .9982 CST -.9855  
 LSA 332.7 MSA 15.2 SSA .3  
 EL1 327.3 EL2 12.2 ALF 159.13

LAUNCH DATE AUG 13 1973 FLIGHT TIME 98.00 ARRIVAL DATE NOV 19 1973

**HELIOCENTRIC CONIC**  
 RL 151.56 LAL -.00 LOL 320.11 VL 35.634 GAL 1.20 AZL 90.11 HCA 85.79 8MA 275.62 ECC .45050 INC .1104 V1 29.397  
 RP 219.08 LAP -.11 LOP 45.89 VP 27.020 GAP 24.19 AZP 90.01 TAL 3.86 TAP 89.65 RCA 151.45 APO 399.79 V2 25.087  
 RC 78.631 GL -.83 GP -5.09 ZAL 80.44 ZAP 174.40 ETS 247.32 ZAE 161.25 ETE 345.22 ZAC 78.12 ETC 282.69 LVI -11.73

**PLANETOCENTRIC CONIC**  
 CS 39.933 VHL 6.319 DLA 14.39 RAL 36.33 RAD 6650.6 VEL 12.641 PTH 7.49 VHP 8.985 DPA 10.92 RAP 42.89 ECC 1.6572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 31 51 3594.49 -47.29 136.99 286.73 95.93 12 31 45 2594.5 -39.52 105.22  
 60.00 11 55 17 3532.11 -40.25 132.06 287.42 92.14 12 54 9 2532.1 -35.00 102.28  
 70.00 12 29 7 3432.52 -34.15 124.09 287.51 89.22 13 26 20 2432.5 -30.90 95.84  
 80.00 13 20 9 3272.62 -29.74 111.80 287.35 87.23 14 14 42 2272.6 -27.86 84.54  
 90.00 14 33 52 3034.70 -28.08 94.21 287.24 86.50 15 24 26 2034.7 -26.70 67.29  
 100.00 16 3 1 2747.09 -29.74 73.17 287.35 87.23 16 48 48 1747.1 -27.86 45.90  
 110.00 17 28 34 2479.33 -34.15 53.01 287.51 89.22 18 9 53 1479.3 -30.90 24.76

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3130 TRA -.9532 TC3 .2692 BAV .1489 SGT 979.4 SGR 819.2 SG3 125.5 ST 19.3 SR 28.8 88 8.2  
 RDE -.6315 RRA .2317 RC3 -.0732 FAU .05100 RRT -.0963 RRF .1160 RTF -.5858 CRT .6531 CRS .7785 CST .9638  
 FDE .1952 FRA .3761 FC3-1.1058 B8P 1360 SGB 1158.8 R23 -.0230 R13 .5884 LSA 32.9 MSA 13.5 88A 1.4  
 BDE .7048 BRA .9615 BC3 .2789 F8P 149 SGI 982.4 SG2 614.5 THA 174.26 EL1 32.1 EL2 13.1 ALF 61.07

LAUNCH DATE AUG 13 1973 FLIGHT TIME 100.00 ARRIVAL DATE NOV 21 1973

**HELIOCENTRIC CONIC**  
 RL 151.56 LAL -.00 LOL 320.11 VL 35.475 GAL 1.25 AZL 90.08 HCA 86.91 8MA 269.27 ECC .43759 INC .0737 V1 29.397  
 RP 219.45 LAP -.08 LOP 47.02 VP 26.771 GAP 23.80 AZP 90.00 TAL 4.12 TAP 91.04 RCA 151.44 APO 387.10 V2 25.046  
 RC 80.245 GL -.43 GP -5.22 ZAL 79.91 ZAP 173.92 ETS 240.89 ZAE 160.72 ETE 345.00 ZAC 77.84 ETC 282.65 LVI -11.51

**PLANETOCENTRIC CONIC**  
 CS 38.024 VHL 6.166 DLA 14.41 RAL 37.74 RAD 6650.0 VEL 12.566 PTH 7.43 VHP 8.706 DPA 10.91 RAP 43.24 ECC 1.6258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 29 26 3582.54 -47.20 135.85 284.93 96.80 12 29 8 2582.5 -39.13 104.36  
 60.00 11 52 50 3520.23 -40.22 131.06 285.75 92.82 12 51 30 2520.2 -34.70 101.42  
 70.00 12 26 39 3420.73 -34.15 123.17 285.92 89.76 13 23 39 2420.7 -30.68 94.99  
 80.00 13 17 38 3260.93 -29.78 110.94 285.80 87.69 14 11 59 2260.9 -27.70 83.70  
 90.00 14 31 20 3023.06 -28.13 93.37 285.71 86.93 15 21 43 2023.1 -26.57 66.47  
 100.00 16 0 30 2735.40 -29.78 72.30 285.80 87.69 16 46 6 1735.4 -27.70 45.07  
 110.00 17 26 5 2467.54 -34.15 52.08 285.92 89.76 18 7 12 1467.5 -30.68 23.91

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3139 TRA -.9250 TC3 .2966 BAV .1564 SGT 1003.2 SGR 824.7 SG3 133.9 ST 19.8 SR 29.0 88 8.4  
 RDE -.6196 RRA .2300 RC3 -.0817 FAU .05323 RRT -.1034 RRF .1254 RTF -.5948 CRT .6563 CRS .7875 CST .9615  
 FDE .2046 FRA .3790 FC3-1.2110 B8P 1374 SGB 1181.8 R23 -.0261 R13 .5977 LSA 33.3 MSA 13.7 88A 1.4  
 BDE .6948 BRA .9532 BC3 .3077 F8P 160 SGI 1006.5 SG2 619.3 THA 174.06 EL1 32.4 EL2 13.3 ALF 60.45

LAUNCH DATE AUG 13 1973 FLIGHT TIME 102.00 ARRIVAL DATE NOV 23 1973

**HELIOCENTRIC CONIC**  
 RL 151.56 LAL -.00 LOL 320.11 VL 35.324 GAL 1.31 AZL 90.04 HCA 88.04 8MA 263.58 ECC .42546 INC .0357 V1 29.397  
 RP 219.82 LAP -.04 LOP 48.14 VP 26.532 GAP 23.41 AZP 90.00 TAL 4.39 TAP 92.43 RCA 151.43 APO 375.70 V2 25.008  
 RC 81.936 GL -.23 GP -5.35 ZAL 79.36 ZAP 173.37 ETS 235.45 ZAE 160.25 ETE 344.74 ZAC 77.75 ETC 282.62 LVI -11.29

**PLANETOCENTRIC CONIC**  
 CS 36.275 VHL 6.023 DLA 14.43 RAL 37.14 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 8.438 DPA 10.89 RAP 43.58 ECC 1.6870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 26 57 33971.09 -47.11 134.78 283.17 97.63 12 26 28 2571.1 -38.74 103.83  
 60.00 11 50 19 3308.86 -40.18 130.09 284.10 93.47 12 48 40 2508.9 -34.41 100.59  
 70.00 12 24 8 3409.45 -34.15 122.29 284.38 90.28 13 20 55 2409.4 -30.47 94.18  
 80.00 13 15 4 3249.78 -29.80 110.11 284.28 88.12 14 9 13 2249.8 -27.55 82.91  
 90.00 14 28 45 3011.94 -28.16 92.55 284.21 87.33 15 18 57 2011.9 -26.43 65.68  
 100.00 15 57 56 2724.23 -29.80 71.47 284.28 88.12 16 43 20 1724.2 -27.55 44.28  
 110.00 17 23 32 2456.27 -34.15 51.20 284.35 90.28 18 4 28 1456.3 -30.47 23.10

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3143 TRA -.9157 TC3 .3267 BAV .1645 SGT 1026.3 SGR 829.9 SG3 142.9 ST 20.1 SR 29.1 88 8.7  
 RDE -.6080 RRA .2293 RC3 -.0909 FAU .05587 RRT -.1112 RRF .1345 RTF -.6448 CRT .6595 CRS .7985 CST .9884  
 FDE .2157 FRA .3806 FC3-1.3261 B8P 1433 SGB 1204.2 R23 -.0278 R13 .6080 LSA 33.7 MSA 13.8 88A 1.5  
 BDE .6844 BRA .9437 BC3 .3391 F8P 173 SGI 1030.1 SG2 623.7 THA 173.82 EL1 32.7 EL2 13.5 ALF 60.86

LAUNCH DATE AUG 13 1973 FLIGHT TIME 104.00 ARRIVAL DATE NOV 25 1973

**HELIOCENTRIC CONIC**  
 RL 181.96 LAL -.00 LOL 320.11 VL 38.182 GAL 1.37 AZL 90.00 HCA 89.18 8MA 258.41 ECC .41407 INC .0000 V1 29.397  
 RP 220.19 LAP -.00 LOP 49.26 VP 26.304 GAP 23.02 AZP 90.00 TAL 4.67 TAP 93.83 RCA 151.41 APO 365.41 V2 24.964  
 RC 83.701 GL -.02 GP -9.48 ZAL 78.81 ZAP 172.76 ETS 230.88 ZAE 159.83 ETE 344.44 ZAC 77.56 ETC 282.59 LVI -11.07

**PLANETOCENTRIC CONIC**  
 CS 34.671 VHL 5.888 DLA 14.46 RAL 36.53 RAD 6648.8 VEL 12.433 PTH 7.34 VHP 8.179 DPA 10.86 RAP 43.82 ECC 1.9706  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 24 24 3360.16 -47.00 133.72 281.45 98.43 12 23 44 2560.2 -38.36 102.78  
 60.00 11 47 45 3498.00 -40.13 129.17 282.49 94.10 12 46 3 2498.0 -34.13 99.81  
 70.00 12 21 29 3398.70 -34.15 121.45 282.81 90.78 13 18 8 2398.7 -30.26 93.41  
 80.00 13 12 25 3239.12 -29.83 109.32 282.78 88.54 14 6 24 2239.1 -27.39 82.16  
 90.00 14 26 5 3001.36 -28.20 91.78 282.72 87.72 15 16 6 2001.4 -26.30 64.93  
 100.00 15 55 17 2713.60 -29.83 70.68 282.78 88.54 16 40 30 1713.6 -27.39 43.52  
 110.00 17 20 56 2445.52 -34.15 50.36 282.81 90.78 18 1 41 1445.5 -30.26 22.33

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3150 TRA -.9050 TC3 .3595 BAV .1731 SGT 1048.9 SGR 835.0 SG3 152.4 ST 20.5 SR 29.2 88 9.0  
 RDE -.5967 RRA .2268 RC3 -.1009 FAU .05806 RRT -.1194 RRF .1450 RTF -.6160 CRT .6636 CRS .8078 CST .9558  
 FDE .2265 FRA .3821 FC3-1.4497 B8P 1477 SGB 1226.1 R23 -.0305 R13 .6195 LSA 34.1 MSA 13.9 88A 1.5  
 BDE .6748 BRA .9329 BC3 .3734 F8P 187 SGI 1053.1 SG2 627.9 THA 173.57 EL1 33.0 EL2 13.6 ALF 59.27

LAUNCH DATE AUG 13 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 27 1973

HELIOCENTRIC CONIC

DISTANCE 290.617

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 35.047 GAL 1.42 AZL 89.97 HCA 90.27 SMA 253.75 ECC .40336 INC .0305 V1 29.397
RP 220.57 LAP .03 LOP 50.38 VP 26.084 GAP 22.64 AZP 90.00 TAL 4.95 TAP 95.23 RCA 151.40 APO 356.10 V2 24.023
RC 85.536 GL .20 GP -5.62 ZAL 78.24 ZAP 172.10 ETS 227.03 ZAE 159.48 ETE 344.09 ZAC 77.37 ETC 282.57 LVI -10.85

PLANETOCENTRIC CONIC

C3 33.201 VHL 5.762 DLA 14.48 RAL 35.90 RAD 6648.2 VEL 12.374 PTH 7.29 VHP 7.931 DPA 10.82 RAP 44.25 ECC 1.5464
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 21 48 3549.75 -46.89 132.74 279.78 99.18 12 20 58 2549.7 -38.00 102.03
60.00 11 45 7 3487.68 -40.07 128.30 280.92 94.69 12 43 15 2487.7 -33.85 99.08
70.00 12 18 49 3388.50 -34.13 120.65 281.30 91.25 13 15 18 2388.5 -30.06 92.68
80.00 13 9 42 3229.04 -29.84 108.57 281.31 88.93 14 3 31 2229.0 -27.25 81.44
90.00 14 23 21 2991.33 -28.22 91.05 281.26 88.08 15 13 13 1991.3 -26.17 64.23
100.00 15 52 34 2703.51 -29.84 69.94 281.31 88.93 16 37 38 1703.5 -27.25 42.81
110.00 17 18 15 2435.31 -34.13 49.57 281.30 91.25 17 58 51 1435.3 -30.06 21.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3158 TRA -.8950 TC3 .3934 BAU .1815 SGT 1071.9 SGR 639.8 SG3 162.8 ST 20.9 SR 29.3 SS 9.3
RDE -.5858 RRA .2252 RC3 -.1117 FAU .06089 RRT -.1285 RRF .1558 RTF -.6265 CRT .6674 CRS .8181 CST .9526
FDE .2389 FRA .3831 FC3-1.5826 B3P 1527 SGB 1248.4 R23 -.0327 R13 .6302 LSA 34.4 MSA 14.0 SSA 1.6
BDE .6655 BRA .9229 BC3 .4089 F3P 203 SG1 1076.8 SG2 631.7 THA 173.30 EL1 33.3 EL2 13.7 ALF 58.67

LAUNCH DATE AUG 13 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 29 1973

HELIOCENTRIC CONIC

DISTANCE 293.301

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 34.920 GAL 1.48 AZL 89.93 HCA 91.38 SMA 249.51 ECC .39329 INC .0674 V1 29.397
RP 220.95 LAP .07 LOP 51.49 VP 25.874 GAP 22.26 AZP 90.00 TAL 5.24 TAP 96.63 RCA 151.38 APO 347.05 V2 24.882
RC 87.440 GL .43 GP -5.77 ZAL 77.67 ZAP 171.40 ETS 223.78 ZAE 159.19 ETE 343.70 ZAC 77.17 ETC 282.54 LVI -10.63

PLANETOCENTRIC CONIC

C3 31.850 VHL 5.644 DLA 14.51 RAL 35.27 RAD 6647.7 VEL 12.320 PTH 7.25 VHP 7.691 DPA 10.77 RAP 44.58 ECC 1.5242
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 19 9 3539.87 -46.78 131.81 278.14 99.88 12 18 9 2539.9 -37.65 101.34
60.00 11 42 26 3477.90 -40.02 127.47 279.38 95.24 12 40 24 2477.9 -33.59 98.38
70.00 12 16 6 3378.84 -34.12 119.90 279.83 91.69 13 12 24 2378.8 -29.87 92.00
80.00 13 6 56 3219.52 -29.85 107.86 279.87 89.30 14 0 36 2219.5 -27.10 80.77
90.00 14 20 34 2981.87 -28.24 90.36 279.83 88.43 15 10 16 1981.9 -26.04 63.57
100.00 15 49 48 2693.99 -29.85 69.23 279.87 89.30 16 34 42 1694.0 -27.10 42.14
110.00 17 15 32 2425.66 -34.12 48.81 279.83 91.69 17 55 58 1425.7 -29.87 20.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3167 TRA -.8842 TC3 .4287 BAU .1899 SGT 1094.2 SGR 644.5 SG3 173.1 ST 21.3 SR 29.4 SS 9.6
RDE -.5751 RRA .2238 RC3 -.1233 FAU .06343 RRT -.1379 RRF .1673 RTF -.6371 CRT .6718 CRS .8278 CST .9496
FDE .2518 FRA .3834 FC3-1.7240 B3P 1572 SGB 1269.9 R23 -.0350 R13 .6412 LSA 34.8 MSA 14.1 SSA 1.6
BDE .6566 BRA .9121 BC3 .4461 F3P 218 SG1 1099.6 SG2 635.2 THA 173.02 EL1 33.6 EL2 13.6 ALF 58.07

LAUNCH DATE AUG 13 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 1 1973

HELIOCENTRIC CONIC

DISTANCE 298.092

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 34.800 GAL 1.53 AZL 89.90 HCA 92.49 SMA 245.65 ECC .38383 INC .1040 V1 29.397
RP 221.33 LAP .10 LOP 52.60 VP 25.871 GAP 21.88 AZP 90.00 TAL 5.34 TAP 98.03 RCA 151.36 APO 339.94 V2 24.840
RC 89.407 GL .86 GP -5.92 ZAL 77.09 ZAP 170.67 ETS 221.02 ZAE 158.96 ETE 343.26 ZAC 76.97 ETC 282.51 LVI -10.40

PLANETOCENTRIC CONIC

C3 30.610 VHL 5.533 DLA 14.54 RAL 34.63 RAD 6647.2 VEL 12.269 PTH 7.21 VHP 7.460 DPA 10.71 RAP 44.89 ECC 1.5038
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 16 28 3530.53 -46.87 130.94 276.96 100.55 12 15 19 2530.5 -37.31 100.70
60.00 11 39 42 3468.67 -39.96 126.69 277.88 95.77 12 37 31 2468.7 -33.33 97.73
70.00 12 13 19 3369.74 -34.10 119.19 278.38 92.11 13 9 29 2369.7 -29.68 91.36
80.00 13 4 7 3210.57 -29.86 107.20 278.46 89.65 13 57 38 2210.6 -26.96 80.14
90.00 14 17 43 2973.00 -28.25 89.71 278.44 88.75 15 7 16 1973.0 -25.92 62.94
100.00 15 46 59 2685.04 -29.86 68.58 278.46 89.65 16 31 44 1685.0 -26.96 41.51
110.00 17 12 45 2416.56 -34.10 48.11 278.38 92.11 17 53 2 1416.6 -29.68 20.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3177 TRA -.8740 TC3 .4645 BAU .1981 SGT 1116.6 SGR 649.1 SG3 184.3 ST 21.8 SR 29.5 SS 9.9
RDE -.5648 RRA .2223 RC3 -.1358 FAU .06632 RRT -.1479 RRF .1798 RTF -.6464 CRT .6761 CRS .8375 CST .9462
FDE .2651 FRA .3823 FC3-1.8758 B3P 1626 SGB 1291.5 R23 -.0379 R13 .6508 LSA 35.1 MSA 14.2 SSA 1.7
BDE .6480 BRA .9018 BC3 .4840 F3P 237 SG1 1122.7 SG2 638.4 THA 172.72 EL1 33.8 EL2 13.9 ALF 57.46

LAUNCH DATE AUG 13 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 3 1973

HELIOCENTRIC CONIC

DISTANCE 298.976

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 34.887 GAL 1.59 AZL 89.86 HCA 93.80 SMA 242.12 ECC .37492 INC .1399 V1 29.397
RP 221.71 LAP .14 LOP 53.70 VP 25.477 GAP 21.51 AZP 90.01 TAL 5.83 TAP 99.43 RCA 151.35 APO 332.90 V2 24.799
RC 91.436 GL .90 GP -6.08 ZAL 76.51 ZAP 169.92 ETS 218.66 ZAE 158.78 ETE 342.78 ZAC 76.77 ETC 282.49 LVI -10.17

PLANETOCENTRIC CONIC

C3 29.470 VHL 5.429 DLA 14.58 RAL 33.98 RAD 6646.8 VEL 12.223 PTH 7.18 VHP 7.238 DPA 10.65 RAP 45.20 ECC 1.4850
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 11 13 45 3521.72 -46.58 130.12 275.02 101.17 12 12 26 2521.7 -36.99 100.10
60.00 11 36 56 3459.98 -39.89 125.96 276.42 96.26 12 34 36 2460.0 -33.09 97.12
70.00 12 10 30 3361.21 -34.07 118.52 276.98 92.51 13 6 31 2361.2 -29.50 90.76
80.00 13 1 15 3202.21 -29.86 106.57 277.08 89.98 13 54 37 2202.2 -26.83 79.56
90.00 14 14 49 2964.71 -28.27 89.10 277.07 89.08 15 4 14 1964.7 -25.81 62.37
100.00 15 44 6 2676.68 -29.86 67.94 277.08 89.98 16 28 43 1676.7 -26.83 40.93
110.00 17 9 56 2408.03 -34.07 47.44 276.98 92.51 17 50 4 1408.0 -29.50 19.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3188 TRA -.8626 TC3 .5014 BAU .2081 SGT 1137.9 SGR 653.5 SG3 196.3 ST 22.0 SR 29.5 SS 10.2
RDE -.5548 RRA .2208 RC3 -.1494 FAU .06943 RRT -.1584 RRF .1926 RTF -.6554 CRT .6809 CRS .8475 CST .9424
FDE .2798 FRA .3798 FC3-2.0397 B3P 1669 SGB 1312.2 R23 -.0408 R13 .6603 LSA 35.4 MSA 14.2 SSA 1.8
BDE .6398 BRA .8906 BC3 .5232 F3P 255 SG1 1144.8 SG2 641.4 THA 172.40 EL1 34.0 EL2 13.9 ALF 56.84

LAUNCH DATE AUG 13 1973 FLIGHT TIME 114.00 ARRIVAL DATE DEC 5 1973

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 34.580 GAL 1.64 AZL 89.82 HCA 94.70 SMA 238.89 ECC .36654 INC .1760 V1 29.397  
 RP 222.09 LAP .18 LOP 94.80 VP 25.290 GAP 21.14 AZP 90.01 TAL 6.13 TAP 100.83 RCA 151.33 APO 326.45 V2 24.757  
 RC 93.523 GL 1.14 GP -6.24 ZAL 75.93 ZAP 169.14 ETS 216.62 ZAE 158.66 ETE 342.24 ZAC 76.56 ETC 282.46 LVI -9.93

Distance 301.944 Earth to Mars

Planetocentric Conic: C3 28.422 VHL 5.331 DLA 14.61 RAL 33.33 RAD 6646.4 VEL 12.181 PTH 7.14 VHP 7.023 DPA 10.57 RAP 45.49 ECC 1.4677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 10 59 3513.46 -46.44 129.35 273.53 101.75 12 9 33 2513.5 -36.69 99.54  
 60.00 11 34 8 3451.84 -39.83 125.28 275.00 96.72 12 31 40 2451.8 -32.86 96.56  
 70.00 12 7 38 3353.25 -34.05 117.90 275.61 92.87 13 3 31 2353.2 -29.33 90.20  
 80.00 12 58 19 3194.43 -29.86 106.00 275.74 90.28 13 51 34 2194.4 -24.70 79.02  
 90.00 14 11 53 2957.03 -28.27 88.54 275.74 89.34 15 1 10 1957.0 -25.70 61.83  
 100.00 15 41 11 2668.90 -29.86 67.36 275.74 90.28 16 23 40 1668.9 -26.70 40.38  
 110.00 17 7 5 2400.07 -34.05 46.82 275.61 92.87 17 47 5 1400.1 -29.33 19.12

Differential Corrections: TDE -.3204 TRA -.8522 TC3 .5391 BAU .2141 SGT 1159.7 SGR 657.9 SG3 208.8 ST 22.3 SR 29.5 SS 10.6  
 RDE -.3449 RRA .2193 RC3 -.1638 FAU .07265 RRT -.1694 RRF .2082 RTF -.6641 CRT .6859 CRS .8572 CST .9367  
 FDE .2956 FRA .3768 FC3-2.2128 BSP 1719 SGB 1333.3 R23 -.0440 R13 .6694 LSA 35.7 MSA 14.2 SSA 1.8  
 BDE .8321 BRA .8800 BC3 .5634 FSP 275 SG1 1167.4 SG2 644.1 THA 172.09 EL1 34.3 EL2 14.0 ALF 56.19

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973 FLIGHT TIME 116.00 ARRIVAL DATE DEC 7 1973

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 34.479 GAL 1.70 AZL 89.79 HCA 95.79 SMA 235.92 ECC .35864 INC .2117 V1 29.397  
 RP 222.48 LAP .21 LOP 55.90 VP 25.110 GAP 20.77 AZP 90.02 TAL 6.44 TAP 102.23 RCA 151.31 APO 320.53 V2 24.715  
 RC 95.665 GL 1.40 GP -6.42 ZAL 75.35 ZAP 168.33 ETS 214.86 ZAE 158.59 ETE 341.64 ZAC 76.34 ETC 282.44 LVI -9.70

Distance 304.987 Earth to Mars

Planetocentric Conic: C3 27.458 VHL 5.240 DLA 14.66 RAL 32.67 RAD 6646.0 VEL 12.141 PTH 7.11 VHP 6.816 DPA 10.48 RAP 45.78 ECC 1.4519  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 8 12 3505.70 -46.33 128.64 272.08 102.29 12 6 38 2505.7 -36.40 99.02  
 60.00 11 31 18 3444.23 -39.77 124.64 273.62 97.15 12 28 42 2444.2 -32.64 96.03  
 70.00 12 4 44 3345.82 -34.02 117.32 274.27 93.21 13 0 30 2345.8 -29.17 89.68  
 80.00 12 55 21 3187.20 -29.85 105.46 274.43 90.57 13 48 29 2187.2 -26.58 78.51  
 90.00 14 8 53 2949.90 -28.28 88.02 274.43 89.60 14 58 3 1949.9 -25.59 61.33  
 100.00 15 38 13 2661.67 -29.85 66.83 274.43 90.57 16 22 35 1661.7 -26.58 39.88  
 110.00 17 4 10 2392.64 -34.02 46.24 274.27 93.21 17 44 3 1392.6 -29.17 18.60

Differential Corrections: TDE -.3106 TRA -.8295 TC3 .5939 BAU .2277 SGT 1175.5 SGR 662.0 SG3 221.9 ST 22.1 SR 29.5 SS 11.0  
 RDE -.5351 RRA .2180 RC3 -.1790 FAU .07595 RRT -.1915 RRF .2196 RTF -.6878 CRT .6831 CRS .8675 CST .9318  
 FDE .3154 FRA .3751 FC3-2.3947 BSP 1630 SGB 1349.1 R23 -.0318 R13 .6929 LSA 35.7 MSA 14.1 SSA 1.9  
 BDE .6187 BRA .8577 BC3 .6203 FSP 300 SG1 1185.2 SG2 644.4 THA 171.23 EL1 34.1 EL2 13.9 ALF 56.64

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973 FLIGHT TIME 118.00 ARRIVAL DATE DEC 9 1973

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 34.383 GAL 1.75 AZL 89.75 HCA 96.89 SMA 233.19 ECC .35122 INC .2474 V1 29.397  
 RP 222.86 LAP .25 LOP 56.99 VP 24.937 GAP 20.41 AZP 90.03 TAL 6.74 TAP 103.63 RCA 151.29 APO 315.09 V2 24.673  
 RC 97.860 GL 1.65 GP -6.59 ZAL 74.77 ZAP 167.51 ETS 213.32 ZAE 158.57 ETE 340.99 ZAC 76.13 ETC 282.42 LVI -9.46

Distance 308.098 Earth to Mars

Planetocentric Conic: C3 26.568 VHL 5.154 DLA 14.70 RAL 32.02 RAD 6645.6 VEL 12.105 PTH 7.08 VHP 6.616 DPA 10.38 RAP 46.05 ECC 1.4372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 5 24 3490.52 -46.23 127.98 270.69 102.79 12 3 43 2498.5 -36.14 98.55  
 60.00 11 28 26 3437.21 -39.71 124.06 272.28 97.54 12 25 44 2437.2 -32.43 95.55  
 70.00 12 1 48 3339.02 -33.99 116.79 272.98 93.52 12 57 27 2339.0 -29.02 89.21  
 80.00 12 52 21 3180.63 -29.85 104.97 273.16 90.82 13 45 22 2180.6 -26.47 78.05  
 90.00 14 5 50 2943.44 -28.28 87.55 273.17 89.84 14 54 54 1943.4 -25.50 60.88  
 100.00 15 35 13 2655.10 -29.85 66.34 273.16 90.82 16 19 28 1655.1 -26.47 39.42  
 110.00 17 1 14 2385.84 -33.99 45.71 272.98 93.52 17 41 0 1385.8 -29.02 18.12

Differential Corrections: TDE -.3161 TRA -.8227 TC3 .6265 BAU .2331 SGT 1197.7 SGR 666.4 SG3 236.1 ST 22.6 SR 29.5 SS 11.4  
 RDE -.5258 RRA .2163 RC3 -.1957 FAU .07982 RRT -.2005 RRF .2356 RTF -.6495 CRT .6912 CRS .8765 CST .9285  
 FDE .3322 FRA .3681 FC3-2.3946 BSP 1722 SGB 1370.7 R23 -.0410 R13 .6954 LSA 36.1 MSA 14.1 SSA 1.9  
 BDE .6135 BRA .8507 BC3 .6564 FSP 321 SG1 1208.2 SG2 647.2 THA 171.05 EL1 34.4 EL2 14.0 ALF 56.61

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973 FLIGHT TIME 120.00 ARRIVAL DATE DEC 11 1973

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 34.292 GAL 1.80 AZL 89.72 HCA 97.98 SMA 230.87 ECC .34423 INC .2833 V1 29.397  
 RP 223.25 LAP .28 LOP 58.08 VP 24.771 GAP 20.05 AZP 90.04 TAL 7.04 TAP 105.02 RCA 151.27 APO 310.07 V2 24.631  
 RC 100.104 GL 1.92 GP -6.78 ZAL 74.20 ZAP 166.67 ETS 211.98 ZAE 158.60 ETE 340.27 ZAC 75.91 ETC 282.40 LVI -9.22

Distance 311.271 Earth to Mars

Planetocentric Conic: C3 25.750 VHL 5.074 DLA 14.76 RAL 31.37 RAD 6645.3 VEL 12.071 PTH 7.05 VHP 6.423 DPA 10.27 RAP 46.32 ECC 1.4238  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 2 36 3491.87 -46.13 127.37 269.34 103.25 12 0 48 2491.9 -35.89 98.11  
 60.00 11 25 34 3430.73 -39.65 123.52 270.99 97.91 12 22 44 2430.7 -32.24 95.10  
 70.00 11 58 51 3332.78 -33.97 116.31 271.72 93.81 12 54 23 2332.8 -28.89 88.77  
 80.00 12 49 19 3174.65 -29.84 104.53 271.93 91.06 13 42 13 2174.6 -26.37 77.64  
 90.00 14 2 45 2937.58 -28.28 87.12 271.95 90.05 14 51 43 1937.6 -25.41 60.48  
 100.00 15 32 10 2649.12 -29.84 65.89 271.93 91.06 16 16 20 1649.1 -26.37 39.01  
 110.00 16 58 17 2379.60 -33.97 45.23 271.72 93.81 17 37 56 1379.6 -28.89 17.69

Differential Corrections: TDE -.3206 TRA -.8141 TC3 .6614 BAU .2393 SGT 1218.7 SGR 670.9 SG3 251.1 ST 23.1 SR 29.4 SS 11.8  
 RDE -.5167 RRA .2147 RC3 -.2135 FAU .08348 RRT -.2112 RRF -.2523 RTF -.6933 CRT .6987 CRS .8850 CST .9252  
 FDE .3504 FRA .3607 FC3-2.8068 BSP 1799 SGB 1391.2 R23 -.0488 R13 .7000 LSA 36.5 MSA 14.1 SSA 2.0  
 BDE .6080 BRA .8420 BC3 .6950 FSP 344 SG1 1230.2 SG2 649.7 THA 170.78 EL1 34.7 EL2 14.0 ALF 54.68

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 13 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 34.207 GAL 1.85 AZL 89.68 HCA 99.06 SMA 228.35 ECC .33764 INC .3191 V1 29.397  
 RP 223.64 LAP .32 LOP 59.17 VP 24.611 GAP 19.70 AZP 90.05 TAL 7.34 TAP 106.40 RCA 151.25 APO 305.44 V2 24.590  
 RC 102.397 GL 2.19 GP -6.97 ZAL 73.63 ZAP 165.81 ETS 210.79 ZAE 158.68 ETE 339.49 ZAC 75.68 ETC 282.39 LVI -8.97

DISTANCE 314.498 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 24.997 VHL 5.000 DLA 14.82 RAL 30.72 RAD 6645.0 VEL 12.040 PTH 7.03 VHP 6.237 DPA 10.14 RAP 46.57 ECC 1.4114  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 59 46 3485.74 -46.03 126.81 268.05 103.67 11 57 52 2485.7 -35.65 97.70  
 60.00 11 22 40 3424.80 -39.59 123.02 269.75 98.24 12 19 45 2424.8 -32.07 94.70  
 70.00 11 55 51 3327.12 -33.94 115.87 270.51 94.07 12 51 18 2327.1 -28.76 88.38  
 80.00 12 46 14 3169.26 -29.83 104.13 270.74 91.27 13 39 3 2169.3 -26.28 77.27  
 90.00 13 59 38 2932.33 -28.28 86.74 270.76 90.24 14 48 31 1932.3 -25.33 60.11  
 100.00 15 29 6 2643.73 -29.83 65.49 270.74 91.27 16 13 9 1643.7 -26.28 38.63  
 110.00 16 55 18 2373.93 -33.94 44.79 270.51 94.07 17 34 52 1373.9 -28.76 17.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3237 TRA -.8044 TC3 .6970 BAU .2455 SGT 1237.9 SGR 675.5 SG3 266.8 ST 23.4 SR 29.3 SS 12.2  
 RDE -.5077 RRA .2130 RC3 -.2324 FAU .08751 RRT -.2235 RRF .2698 RTF -.6975 CRT .7051 CRS .8934 CST .9212  
 FDE .5699 FRA .3515 FC3-3.0308 BSP 1863 SGB 1410.3 R23 -.0553 R13 .7051 LSA 36.8 MSA 14.1 SSA 2.1  
 BDE .6021 BRA .8321 BC3 .7347 F5P 368 SG1 1250.6 SG2 651.8 THA 170.42 EL1 34.9 EL2 14.0 ALF 53.89

LAUNCH DATE AUG 13 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 34.126 GAL 1.90 AZL 89.64 HCA 100.14 SMA 226.20 ECC .33144 INC .3551 V1 29.397  
 RP 224.03 LAP .35 LOP 60.25 VP 24.456 GAP 19.35 AZP 90.06 TAL 7.64 TAP 107.78 RCA 151.23 APO 301.17 V2 24.548  
 RC 104.735 GL 2.46 GP -7.17 ZAL 73.07 ZAP 164.93 ETS 209.73 ZAE 158.81 ETE 338.63 ZAC 75.45 ETC 282.38 LVI -8.73

DISTANCE 317.775 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 24.302 VHL 4.930 DLA 14.88 RAL 30.07 RAD 6644.7 VEL 12.012 PTH 7.00 VHP 6.058 DPA 10.01 RAP 46.81 ECC 1.3999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 55 5 3480.13 -45.94 126.30 266.81 104.06 11 54 57 2480.1 -35.44 97.34  
 60.00 11 19 45 3419.42 -39.54 122.57 268.55 98.54 12 16 44 2419.4 -31.91 94.33  
 70.00 11 52 51 3322.02 -33.91 115.47 269.34 94.30 12 48 13 2322.0 -28.64 88.03  
 80.00 12 43 7 3164.48 -29.83 103.77 269.58 91.45 13 35 52 2164.5 -26.20 76.93  
 90.00 13 56 29 2927.70 -28.28 86.40 269.61 90.41 14 45 16 1927.7 -25.26 59.79  
 100.00 15 25 59 2638.95 -29.83 65.14 269.58 91.45 16 9 58 1638.9 -26.20 38.30  
 110.00 16 52 17 2368.84 -33.91 44.39 269.34 94.30 17 31 46 1368.8 -28.64 16.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3263 TRA -.7943 TC3 .7346 BAU .2524 SGT 1257.3 SGR 680.4 SG3 283.6 ST 23.8 SR 29.2 SS 12.6  
 RDE -.4989 RRA .2113 RC3 -.2527 FAU .09182 RRT -.2376 RRF .2886 RTF -.7028 CRT .7111 CRS .9011 CST .9172  
 FDE .3908 FRA .3418 FC3-3.2709 BSP 1918 SGB 1429.6 R23 -.0613 R13 .7112 LSA 37.1 MSA 14.0 SSA 2.2  
 BDE .5962 BRA .8219 BC3 .7768 F5P 394 SG1 1271.5 SG2 653.5 THA 170.01 EL1 35.0 EL2 14.0 ALF 53.14

LAUNCH DATE AUG 13 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 34.050 GAL 1.95 AZL 89.61 HCA 101.22 SMA 224.20 ECC .32560 INC .3912 V1 29.397  
 RP 224.42 LAP .38 LOP 61.33 VP 24.307 GAP 19.00 AZP 90.08 TAL 7.94 TAP 109.16 RCA 151.20 APO 297.20 V2 24.506  
 RC 107.119 GL 2.74 GP -7.38 ZAL 72.52 ZAP 164.03 ETS 208.79 ZAE 158.98 ETE 337.68 ZAC 75.21 ETC 282.37 LVI -8.48

DISTANCE 321.098 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 23.661 VHL 4.864 DLA 14.95 RAL 29.44 RAD 6644.4 VEL 11.985 PTH 6.98 VHP 5.884 DPA 9.86 RAP 47.03 ECC 1.3894  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 54 7 3475.04 -45.85 125.84 265.62 104.40 11 52 2 2475.0 -35.25 97.01  
 60.00 11 16 50 3414.57 -39.49 122.17 267.39 98.81 12 13 44 2414.6 -31.76 94.00  
 70.00 11 49 49 3317.49 -33.89 115.12 268.21 94.51 12 45 6 2317.5 -28.54 87.72  
 80.00 12 39 59 3160.29 -29.82 103.46 268.46 91.62 13 32 39 2160.3 -26.12 76.65  
 90.00 13 53 17 2923.68 -28.27 86.10 268.50 90.56 14 42 1 1923.7 -25.19 59.52  
 100.00 15 22 50 2634.76 -29.82 64.83 268.46 91.62 16 6 45 1634.8 -26.12 38.01  
 110.00 16 49 15 2364.31 -33.89 44.04 268.21 94.51 17 28 39 1364.3 -28.54 16.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3286 TRA -.7837 TC3 .7714 BAU .2590 SGT 1275.1 SGR 685.4 SG3 301.1 ST 24.1 SR 29.1 SS 13.0  
 RDE -.4902 RRA .2095 RC3 -.2741 FAU .09628 RRT -.2524 RRF .3080 RTF -.7076 CRT .7169 CRS .9088 CST .9127  
 FDE .4131 FRA .3297 FC3-3.5226 BSP 1972 SGB 1447.6 R23 -.0672 R13 .7170 LSA 37.4 MSA 14.0 SSA 2.2  
 BDE .5902 BRA .8112 BC3 .8187 F5P 423 SG1 1290.9 SG2 655.1 THA 169.55 EL1 35.2 EL2 13.9 ALF 52.44

LAUNCH DATE AUG 13 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.977 GAL 1.99 AZL 89.57 HCA 102.30 SMA 222.36 ECC .32009 INC .4276 V1 29.397  
 RP 224.81 LAP .42 LOP 62.40 VP 24.163 GAP 18.66 AZP 90.09 TAL 8.23 TAP 110.53 RCA 151.18 APO 293.53 V2 24.464  
 RC 109.544 GL 3.03 GP -7.60 ZAL 71.98 ZAP 163.11 ETS 207.94 ZAE 159.18 ETE 336.65 ZAC 74.97 ETC 282.36 LVI -8.22

DISTANCE 324.461 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 23.070 VHL 4.803 DLA 15.03 RAL 28.80 RAD 6644.2 VEL 11.961 PTH 6.96 VHP 5.717 DPA 9.70 RAP 47.25 ECC 1.3797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 51 17 3470.46 -45.77 125.42 264.47 104.72 11 49 7 2470.5 -35.07 96.71  
 60.00 11 13 54 3410.25 -39.44 121.81 266.28 99.04 12 10 44 2410.2 -31.63 93.71  
 70.00 11 46 45 3313.52 -33.87 114.81 267.12 94.69 12 41 59 2313.5 -28.45 87.44  
 80.00 12 36 48 3156.71 -29.81 103.19 267.39 91.76 13 29 25 2156.7 -26.06 76.40  
 90.00 13 50 3 2920.28 -28.27 85.86 267.42 90.68 14 38 43 1920.3 -25.14 59.28  
 100.00 15 19 40 2631.18 -29.81 64.56 267.39 91.76 16 3 31 1631.2 -26.06 37.77  
 110.00 16 46 12 2360.34 -33.87 43.73 267.12 94.69 17 25 32 1360.3 -28.45 16.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3314 TRA -.7728 TC3 .8074 BAU .2653 SGT 1291.8 SGR 690.7 SG3 319.6 ST 24.4 SR 29.0 SS 13.5  
 RDE -.4815 RRA .2076 RC3 -.2969 FAU .10099 RRT -.2677 RRF .3280 RTF -.7124 CRT .7232 CRS .9162 CST .9086  
 FDE .4387 FRA .3168 FC3-3.7898 BSP 2016 SGB 1464.9 R23 -.0733 R13 .7228 LSA 37.7 MSA 13.9 SSA 2.3  
 BDE .5845 BRA .8002 BC3 .8602 F5P 453 SG1 1309.6 SG2 656.5 THA 169.08 EL1 35.3 EL2 13.9 ALF 51.67

LAUNCH DATE		AUG 13 1973		FLIGHT TIME		130.00		ARRIVAL DATE		DEC 21 1973															
HELIOCENTRIC CONIC				DISTANCE 327.662				EARTH TO MARS																	
RL	191.56	LAL	-0.00	LOL	320.11	VL	33.909	GAL	2.04	AZL	89.54	HCA	103.37	SMA	220.64	ECC	.31491	INC	.4630	V1	29.397				
RP	225.20	LAP	.45	LOP	63.47	VP	24.024	GAP	18.32	AZP	90.11	TAL	8.52	TAP	111.89	RCA	151.16	APO	290.12	V2	24.422				
RC	112.011	GL	3.32	GP	-7.83	ZAL	71.45	ZAP	162.18	ETS	207.18	ZAE	159.43	ETE	335.51	ZAC	74.73	ETC	282.35	LVI	-7.97				
PLANETOCENTRIC CONIC																									
C3	22.524	VHL	4.746	DLA	15.11	RAL	28.18	RAD	6643.9	VEL	11.938	PTH	6.94	VHP	5.556	DPA	9.52	RAP	47.44	ECC	1.3707				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		10	48	27	3466.38	-45.70		125.05	263.38	104.99	11	46	13				2466.4		-34.91			96.45			
60.00		11	10	57	3406.46	-39.40		121.50	265.22	99.29	12	7	44				2406.5		-31.52			93.46			
70.00		11	43	41	3310.12	-33.85		114.55	266.07	94.84	12	38	51				2310.1		-28.37			87.21			
80.00		12	33	36	3153.72	-29.80		102.97	266.39	91.87	13	26	10				2153.7		-26.01			78.19			
90.00		13	46	47	2917.50	-28.27		85.65	266.39	90.79	14	35	23				1917.5		-25.10			59.09			
100.00		15	16	28	2628.19	-29.80		64.34	266.35	91.87	16	0	18				1628.2		-26.01			37.56			
110.00		16	43	8	2356.94	-33.85		43.47	266.07	94.84	17	22	29				1356.9		-28.37			16.13			
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY																	
TDE	-.3334	TRA	-.7617	TC3	.8429	BAU	.2716	S6T	1307.4	S6R	896.4	S6S	339.1	ST	24.7	SR	28.6	SS	14.0						
RDE	-.4710	RRA	.2056	RC3	-.3211	FAU	.10593	RRT	-.2844	RRF	.3493	RTF	-.7170	CRT	.7288	CRS	.9289	CST	.9042						
FDE	.4653	FRA	.3022	FC3	-4.0723	BSP	2037	S6B	1481.3	R23	-.0702	R13	.7286	LSA	38.0	MSA	13.6	SSA	2.4						
BDE	.5786	BRA	.7889	BC3	.9020	FSP	485	S6I	1327.3	S6Z	657.6	THA	168.54	ELI	35.4	ELZ	13.8	ALF	50.97						

LAUNCH DATE		AUG 13 1973		FLIGHT TIME		132.00		ARRIVAL DATE		DEC 23 1973															
HELIOCENTRIC CONIC				DISTANCE 331.297				EARTH TO MARS																	
RL	191.56	LAL	-0.00	LOL	320.11	VL	33.844	GAL	2.08	AZL	89.50	HCA	104.43	SMA	219.05	ECC	.31802	INC	.5004	V1	29.397				
RP	225.59	LAP	.48	LOP	64.54	VP	23.890	GAP	17.98	AZP	90.12	TAL	8.81	TAP	113.24	RCA	151.14	APO	286.95	V2	24.380				
RC	114.316	GL	3.61	GP	-8.08	ZAL	70.94	ZAP	161.23	ETS	206.30	ZAE	159.71	ETE	334.26	ZAC	74.47	ETC	282.35	LVI	-7.71				
PLANETOCENTRIC CONIC																									
C3	22.021	VHL	4.693	DLA	15.21	RAL	27.57	RAD	6643.7	VEL	11.917	PTH	6.92	VHP	5.400	DPA	9.34	RAP	47.63	ECC	1.3624				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		10	45	38	3462.79	-45.64		124.73	262.33	105.23	11	43	20				2462.8		-34.77			96.22			
60.00		11	8	1	3403.19	-39.37		121.23	264.19	99.43	12	4	44				2403.2		-31.42			93.24			
70.00		11	40	36	3307.28	-33.83		114.33	265.06	94.97	12	55	43				2307.3		-28.31			87.02			
80.00		12	30	22	3151.33	-29.80		102.79	265.35	91.97	13	22	34				2151.3		-25.96			76.03			
90.00		13	43	29	2915.33	-28.27		85.49	265.40	90.86	14	32	4				1915.3		-25.06			58.94			
100.00		15	13	14	2629.80	-29.80		64.18	265.35	91.97	15	57	0				1629.8		-25.98			37.40			
110.00		16	40	3	2394.09	-33.83		43.25	265.06	94.97	17	19	17				1394.1		-28.31			19.93			
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY																	
TDE	-.3393	TRA	-.7503	TC3	.8775	BAU	.2778	S6T	1321.8	S6R	702.6	S6S	359.5	ST	25.0	SR	28.6	SS	14.6						
RDE	-.4644	RRA	.2034	RC3	-.3466	FAU	.11114	RRT	-.3017	RRF	.3713	RTF	-.7212	CRT	.7345	CRS	.9293	CST	.8997						
FDE	.4936	FRA	.2851	FC3	-4.3694	BSP	2094	S6B	1496.9	R23	-.0893	R13	.7341	LSA	38.2	MSA	13.7	SSA	2.5						
BDE	.5728	BRA	.7774	BC3	.9435	FSP	519	S6I	1344.2	S6Z	658.7	THA	167.96	ELI	35.4	ELZ	13.7	ALF	50.28						

LAUNCH DATE		AUG 13 1973		FLIGHT TIME		134.00		ARRIVAL DATE		DEC 25 1973															
HELIOCENTRIC CONIC				DISTANCE 334.763				EARTH TO MARS																	
RL	191.56	LAL	-0.00	LOL	320.11	VL	33.783	GAL	2.12	AZL	89.48	HCA	105.50	SMA	217.56	ECC	.30542	INC	.5373	V1	29.397				
RP	225.98	LAP	.52	LOP	65.60	VP	23.781	GAP	17.65	AZP	90.14	TAL	9.06	TAP	114.58	RCA	151.12	APO	284.01	V2	24.338				
RC	117.057	GL	3.91	GP	-8.31	ZAL	70.43	ZAP	160.26	ETS	205.87	ZAE	160.02	ETE	332.89	ZAC	74.22	ETC	282.35	LVI	-7.44				
PLANETOCENTRIC CONIC																									
C3	21.596	VHL	4.643	DLA	15.31	RAL	26.98	RAD	6643.5	VEL	11.898	PTH	6.91	VHP	5.249	DPA	9.13	RAP	47.80	ECC	1.3548				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		10	42	49	3459.70	-45.58		124.49	261.34	105.44	11	40	28				2459.7		-34.65			96.02			
60.00		11	5	4	3400.44	-39.33		121.00	263.22	99.59	12	1	45				2400.4		-31.33			93.05			
70.00		11	37	30	3304.99	-33.82		114.13	264.10	95.08	12	32	35				2305.0		-28.88			86.86			
80.00		12	27	7	3149.54	-29.79		102.68	264.40	92.04	13	19	36				2149.5		-25.93			75.90			
90.00		13	40	9	2913.79	-28.27		85.38	264.44	90.92	14	28	43				1913.8		-25.04			58.63			
100.00		15	9	9	2624.01	-29.79		64.03	264.40	92.04	15	53	43				1624.0		-25.93			37.27			
110.00		16	38	37	2391.80	-33.82		43.07	264.10	95.08	17	18	8				1391.8		-28.25			19.78			
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY																	
TDE	-.3375	TRA	-.7396	TC3	.8107	BAU	.2637	S6T	1335.6	S6R	709.5	S6S	361.1	ST	25.2	SR	28.4	SS	15.2						
RDE	-.4959	RRA	.2013	RC3	-.3738	FAU	.11863	RRT	-.3197	RRF	.3944	RTF	-.7253	CRT	.7400	CRS	.9348	CST	.8959						
FDE	.5245	FRA	.2885	FC3	-4.6841	BSP	2131	S6B	1512.4	R23	-.0920	R13	.7396	LSA	38.5	MSA	13.6	SSA	2.6						
BDE	.5872	BRA	.7885	BC3	.9844	FSP	555	S6I	1360.9	S6Z	659.8	THA	167.34	ELI	35.8	ELZ	13.6	ALF	49.55						

LAUNCH DATE		AUG 13 1973		FLIGHT TIME		136.00		ARRIVAL DATE		DEC 27 1973															
HELIOCENTRIC CONIC				DISTANCE 338.857				EARTH TO MARS																	
RL	191.56	LAL	-0.00	LOL	320.11	VL	33.726	GAL	2.16	AZL	89.43	HCA	106.85	SMA	216.18	ECC	.30188	INC	.5743	V1	29.397				
RP	226.37	LAP	.53	LOP	66.66	VP	23.636	GAP	17.32	AZP	90.16	TAL	9.38	TAP	115.91	RCA	151.09	APO	281.27	V2	24.297				
RC	119.833	GL	4.22	GP	-8.58	ZAL	69.85	ZAP	159.27	ETS	208.30	ZAE	160.38	ETE	331.39	ZAC	73.85	ETC	282.36	LVI	-7.18				
PLANETOCENTRIC CONIC																									
C3	21.127	VHL	4.596	DLA	15.41	RAL	26.37	RAD	6643.3	VEL	11.880	PTH	6.89	VHP	5.104	DPA	8.91	RAP	47.95	ECC	1.3477				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		10	40	1	3457.08	-45.54		124.22	260.39	105.61	11	37	38				2457.1		-34.55			95.86			
60.00																									

LAUNCH DATE AUG 13 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 29 1973

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 33.671 GAL 2.20 AZL 89.39 HCA 107.61 SMA 214.89 ECC .29699 INC .6116 V1 29.397  
 RP 226.76 LAP .58 LOP 67.72 VP 23.513 GAP 16.99 AZP 90.10 TAL 9.62 TAP 117.23 RCA 151.07 APO 278.71 V2 24.255  
 RC 122.241 GL 4.53 GP -8.82 ZAL 69.48 ZAP 158.26 ETS 204.78 ZAE 160.72 ETE 329.73 ZAC 73.68 ETC 282.36 LVI -6.91

Planeto-centric Conic: C3 20.730 VHL 4.553 DLA 15.53 RAL 25.79 RAD 6643.2 VEL 11.863 PTH 6.88 VHP 4.964 DPA 8.68 RAP 48.09 ECC 1.3412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 37 13 3454.94 -45.50 124.03 259.49 105.76 11 34 48 2454.9 -34.47 95.72  
 60.00 10 59 11 3396.47 -39.29 120.67 261.40 99.80 11 35 48 2396.5 -31.21 92.79  
 70.00 11 31 16 3302.05 -33.80 113.93 262.30 95.21 12 26 18 2302.1 -28.18 86.66  
 80.00 12 20 31 3147.73 -29.79 102.53 262.60 92.11 13 12 58 2147.7 -25.90 79.78  
 90.00 13 33 23 2912.54 -28.26 85.29 262.65 90.97 14 21 55 1912.5 -25.02 58.75  
 100.00 15 3 22 2622.20 -29.79 63.89 262.60 92.11 15 47 5 1622.2 -25.90 37.15  
 110.00 16 30 42 2348.87 -33.80 42.84 262.30 95.21 17 9 51 1348.9 -28.18 15.58

Differential Corrections: TDE -.3414 TRA -.7171 TC3 .9715 BAU .2948 SGT 1358.1 SGR 725.3 SG3 427.6 ST 25.7 SR 27.9 SS 16.4  
 RDE -.4387 RRA .1963 RC3 -.4331 FAU .12842 RRT -.3572 RRF .4429 RTF -.7315 CRT .7511 CR8 .9451 CST .8876  
 FDE .5922 FRA .2253 FC3-5.3631 BSP 2197 SGB 1539.6 R23 -.1066 R13 .7493 LSA 39.0 MSA 13.3 SSA 2.0  
 BDE .5559 BRA .7435 BC3 1.0637 FSP 633 SG1 1390.1 SG2 661.9 THA 165.95 EL1 35.5 EL2 13.3 ALF 48.10

LAUNCH DATE AUG 13 1973

FLIGHT TIME 140.00

ARRIVAL DATE DEC 31 1973

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 33.619 GAL 2.24 AZL 89.35 HCA 108.66 SMA 213.69 ECC .29314 INC .6492 V1 29.397  
 RP 227.15 LAP .62 LOP 68.77 VP 23.398 GAP 16.67 AZP 90.21 TAL 9.88 TAP 118.55 RCA 151.05 APO 276.33 V2 24.214  
 RC 124.878 GL 4.84 GP -9.10 ZAL 69.02 ZAP 157.23 ETS 204.30 ZAE 161.10 ETE 327.91 ZAC 73.40 ETC 282.37 LVI -6.64

Planeto-centric Conic: C3 20.364 VHL 4.513 DLA 15.66 RAL 25.22 RAD 6643.0 VEL 11.848 PTH 6.88 VHP 4.829 DPA 8.43 RAP 48.21 ECC 1.3351  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 34 27 3453.27 -45.47 123.88 258.64 105.87 11 32 0 2453.3 -34.40 95.62  
 60.00 10 56 15 3395.23 -39.27 120.57 260.55 99.87 11 32 50 2395.2 -31.17 92.70  
 70.00 11 28 7 3301.40 -33.80 113.88 261.46 95.24 12 23 9 2301.4 -28.17 86.61  
 80.00 12 17 10 3147.72 -29.79 102.53 261.76 92.11 13 9 38 2147.7 -25.90 79.78  
 90.00 13 29 56 2912.84 -28.27 85.31 261.81 90.96 14 18 29 1912.8 -25.02 58.77  
 100.00 15 0 2 2622.19 -29.79 63.89 261.76 92.11 15 43 44 1622.2 -25.90 37.15  
 110.00 16 27 34 2348.22 -33.80 42.79 261.46 95.24 17 6 42 1348.2 -28.17 15.53

Differential Corrections: TDE -.3438 TRA -.7084 TC3 .9995 BAU .3002 SGT 1368.2 SGR 734.6 SG3 452.7 ST 25.9 SR 27.6 SS 17.1  
 RDE -.4300 RRA .1936 RC3 -.4653 FAU .13479 RRT -.3765 RRF .4682 RTF -.7340 CRT .7567 CR8 .9496 CST .8839  
 FDE .6313 FRA .2012 FC3-5.7302 BSP 2229 SGB 1592.9 R23 -.1146 R13 .7540 LSA 39.3 MSA 13.2 SSA 2.9  
 BDE .5505 BRA .7324 BC3 1.1025 FSP 676 SG1 1404.2 SG2 663.1 THA 165.20 EL1 35.5 EL2 13.2 ALF 47.29

LAUNCH DATE AUG 13 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 2 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 33.571 GAL 2.27 AZL 89.31 HCA 109.71 SMA 212.57 ECC .28951 INC .6872 V1 29.397  
 RP 227.54 LAP .65 LOP 69.82 VP 23.285 GAP 16.35 AZP 90.23 TAL 10.14 TAP 119.85 RCA 151.03 APO 274.11 V2 24.172  
 RC 127.544 GL 5.16 GP -9.38 ZAL 68.58 ZAP 156.18 ETS 203.85 ZAE 161.50 ETE 325.91 ZAC 73.12 ETC 282.39 LVI -6.36

Planeto-centric Conic: C3 20.025 VHL 4.475 DLA 15.79 RAL 24.67 RAD 6642.8 VEL 11.834 PTH 6.85 VHP 4.699 DPA 8.16 RAP 48.31 ECC 1.3298  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 31 41 3452.06 -45.44 123.77 257.83 105.95 11 29 13 2452.1 -34.35 95.54  
 60.00 10 53 18 3394.49 -39.27 120.51 259.75 99.91 11 49 53 2394.5 -31.15 92.66  
 70.00 11 24 58 3301.29 -33.80 113.87 260.66 95.25 12 19 59 2301.3 -28.17 86.61  
 80.00 12 13 48 3148.30 -29.79 102.57 260.96 92.09 13 6 16 2148.3 -25.91 75.82  
 90.00 13 26 27 2913.76 -28.27 85.38 261.00 90.92 14 15 1 1913.8 -25.04 58.83  
 100.00 14 56 39 2622.77 -29.79 63.94 260.96 92.09 15 40 22 1622.8 -25.91 37.19  
 110.00 16 24 24 2348.11 -33.80 42.78 260.66 95.25 17 3 33 1348.1 -28.17 15.52

Differential Corrections: TDE -.3456 TRA -.6955 TC3 1.0238 BAU .3049 SGT 1375.4 SGR 745.0 SG3 478.9 ST 26.2 SR 27.2 SS 17.8  
 RDE -.4212 RRA .1808 RC3 -.4993 FAU .14140 RRT -.3959 RRF .4942 RTF -.7057 CRT .7619 CR8 .9536 CST .8804  
 FDE .6709 FRA .1751 FC3-6.1128 BSP 2251 SGB 1584.2 R23 -.1233 R13 .7582 LSA 39.5 MSA 13.1 SSA 2.9  
 BDE .5449 BRA .7212 BC3 1.1390 FSP 719 SG1 1416.1 SG2 664.5 THA 164.37 EL1 35.4 EL2 13.0 ALF 46.53

LAUNCH DATE AUG 13 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 4 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 33.525 GAL 2.30 AZL 89.27 HCA 110.76 SMA 211.52 ECC .28609 INC .7254 V1 29.397  
 RP 227.93 LAP .68 LOP 70.86 VP 23.176 GAP 16.03 AZP 90.26 TAL 10.38 TAP 121.13 RCA 151.01 APO 272.04 V2 24.131  
 RC 130.237 GL 5.48 GP -9.68 ZAL 68.16 ZAP 155.11 ETS 203.44 ZAE 161.90 ETE 323.70 ZAC 72.83 ETC 282.41 LVI -6.08

Planeto-centric Conic: C3 19.713 VHL 4.440 DLA 15.94 RAL 24.13 RAD 6642.7 VEL 11.821 PTH 6.84 VHP 4.573 DPA 7.88 RAP 48.40 ECC 1.3244  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 28 56 3451.30 -45.43 123.70 257.07 106.00 11 28 27 2451.3 -34.32 95.49  
 60.00 10 50 22 3394.23 -39.26 120.49 258.99 99.93 11 46 56 2394.2 -31.14 92.64  
 70.00 11 21 48 3301.72 -33.80 113.90 259.90 95.23 12 16 50 2301.7 -28.18 86.64  
 80.00 12 10 23 3149.46 -29.79 102.66 260.20 92.04 13 2 53 2149.5 -25.93 75.90  
 90.00 13 22 56 2915.30 -28.27 85.49 260.24 90.87 14 11 31 1915.3 -25.06 58.94  
 100.00 14 53 15 2623.94 -29.79 64.02 260.20 92.04 15 36 59 1623.9 -25.93 37.27  
 110.00 16 21 14 2348.54 -33.80 42.82 259.90 95.23 17 0 23 1348.5 -28.18 15.55

Differential Corrections: TDE -.3476 TRA -.6851 TC3 1.0457 BAU .3096 SGT 1381.6 SGR 756.5 SG3 506.4 ST 26.4 SR 26.9 SS 18.6  
 RDE -.4122 RRA .1877 RC3 -.5352 FAU .14832 RRT -.4155 RRF .5204 RTF -.7368 CRT .7669 CR8 .9571 CST .8768  
 FDE .7155 FRA .1464 FC3-6.5139 BSP 2277 SGB 1375.1 R23 -.1324 R13 .7621 LSA 39.8 MSA 13.0 SSA 3.0  
 BDE .5392 BRA .7103 BC3 1.1747 FSP 766 SG1 1427.4 SG2 666.0 THA 163.49 EL1 35.4 EL2 12.8 ALF 45.72

LAUNCH DATE AUG 13 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 6 1974

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 33.481 GAL 2.33 AZL 89.24 HCA 111.80 SMA 210.35 ECC .28288 INC .7842 V1 29.397  
 RP 228.32 LAP .71 LOP 71.90 VP 23.070 GAP 15.72 AZP 90.28 TAL 10.61 TAP 122.41 RCA 150.99 APO 270.11 V2 24.090  
 RC 132.954 GL 5.81 GP -9.99 ZAL 67.76 ZAP 154.02 ETS 203.06 ZAE 162.30 ETE 321.28 ZAC 72.53 ETC 282.43 LVI -5.80

PLANETOCENTRIC CONIC: C3 19.424 VHL 4.407 DLA 16.09 RAL 23.80 RAD 6642.6 VEL 11.808 PTH 6.83 VHP 4.452 DPA 7.58 RAP 48.47 ECC 1.3197  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 26 12 3450.98 -45.42 123.68 256.36 106.02 11 23 43 2451.0 -34.31 95.47  
 60.00 10 47 26 3394.46 -39.27 120.51 258.28 99.91 11 44 0 2394.5 -31.15 92.65  
 70.00 11 18 37 3302.68 -33.81 113.97 259.18 95.18 12 13 39 2302.7 -28.20 86.70  
 80.00 12 6 57 3151.22 -29.80 102.79 259.47 91.97 12 59 28 2151.2 -25.96 76.02  
 90.00 13 19 22 2917.46 -28.27 85.65 259.51 90.79 14 7 59 1917.5 -25.10 59.09  
 100.00 14 49 48 2625.70 -29.80 64.15 259.47 91.97 15 33 34 1625.7 -25.96 37.39  
 110.00 16 18 3 2349.49 -33.81 42.89 259.18 95.18 16 57 13 1349.5 -28.20 15.62

Differential Corrections: TDE -.3491 TRA -.6747 TC3 1.0644 BAU .3139 SGT 1385.5 SGR 769.5 SG3 535.1 ST 26.5 SR 26.5 S8 19.4  
 RDE -.4032 RRA .1844 RC3 -.5730 FAU .13556 RRT -.4350 RRF .5471 RTF -.7372 CRT .7716 CRS .9601 CST .8734  
 FDE .7608 FRA .1155 FC3-6.9334 BSP 2305 SGB 1584.8 R23 -.1422 R13 .7658 LSA 40.1 MSA 12.9 S8A 3.1  
 BDE .5333 BRA .6994 BC3 1.2088 FSP 816 SG1 1437.2 SG2 667.9 THA 162.53 EL1 35.3 EL2 12.7 ALF 44.92

LAUNCH DATE AUG 13 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 8 1974

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 33.440 GAL 2.36 AZL 89.20 HCA 112.83 SMA 209.63 ECC .27984 INC .8034 V1 29.397  
 RP 228.70 LAP .74 LOP 72.94 VP 22.967 GAP 15.41 AZP 90.31 TAL 10.84 TAP 123.68 RCA 150.97 APO 268.29 V2 24.049  
 RC 135.694 GL 6.15 GP -10.30 ZAL 67.38 ZAP 152.90 ZAE 162.70 ETE 318.62 ZAC 72.23 ETC 282.46 LVI -5.51

PLANETOCENTRIC CONIC: C3 19.157 VHL 4.377 DLA 16.25 RAL 23.08 RAD 6642.5 VEL 11.797 PTH 6.82 VHP 4.335 DPA 7.26 RAP 48.52 ECC 1.3153  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 23 28 3451.08 -45.42 123.68 255.69 106.01 11 21 0 2451.1 -34.32 95.48  
 60.00 10 44 29 3395.13 -39.27 120.56 257.60 99.88 11 41 5 2395.1 -31.17 92.70  
 70.00 11 15 24 3304.13 -33.81 114.09 258.49 95.12 12 10 28 2304.1 -28.23 86.80  
 80.00 12 3 28 3153.53 -29.80 102.96 258.78 91.88 12 56 1 2153.5 -26.00 76.18  
 90.00 13 15 45 2920.19 -28.27 85.85 258.82 90.69 14 4 25 1920.2 -25.14 59.28  
 100.00 14 46 20 2628.01 -29.80 64.33 258.78 91.88 15 30 8 1628.0 -26.00 37.55  
 110.00 16 14 51 2350.95 -33.81 43.00 258.49 95.12 16 54 2 1350.9 -28.23 15.72

Differential Corrections: TDE -.3390 TRA -.6523 TC3 1.1061 BAU .3240 SGT 1387.6 SGR 784.4 SG3 565.7 ST 25.9 SR 26.1 S8 20.1  
 RDE -.3941 RRA .1805 RC3 -.6136 FAU .16333 RRT -.4687 RRF .5746 RTF -.7505 CRT .7720 CRS .9630 CST .8665  
 FDE .8072 FRA .0775 FC3-7.3811 BSP 2175 SGB 1593.9 R23 -.1327 R13 .7806 LSA 39.8 MSA 12.7 S8A 3.2  
 BDE .5198 BRA .6768 BC3 1.2649 FSP 862 SG1 1449.3 SG2 663.4 THA 161.05 EL1 34.8 EL2 12.4 ALF 45.20

LAUNCH DATE AUG 13 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 10 1974

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 33.401 GAL 2.39 AZL 89.16 HCA 113.87 SMA 208.78 ECC .27699 INC .8430 V1 29.397  
 RP 229.09 LAP .77 LOP 73.98 VP 22.868 GAP 15.10 AZP 90.34 TAL 11.06 TAP 124.93 RCA 150.95 APO 266.61 V2 24.008  
 RC 138.457 GL 6.48 GP -10.64 ZAL 67.01 ZAP 151.77 ETS 202.35 ZAE 163.09 ETE 315.71 ZAC 71.92 ETC 282.49 LVI -5.22

PLANETOCENTRIC CONIC: C3 18.911 VHL 4.349 DLA 16.43 RAL 22.59 RAD 6642.3 VEL 11.787 PTH 6.81 VHP 4.222 DPA 6.92 RAP 48.55 ECC 1.3112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 20 46 3451.65 -45.44 123.74 255.06 105.98 11 18 18 2451.6 -34.34 95.51  
 60.00 10 41 33 3396.32 -39.29 120.66 256.96 99.81 11 38 10 2396.3 -31.21 92.78  
 70.00 11 12 11 3306.16 -33.83 114.24 257.85 95.02 12 7 17 2306.2 -28.28 86.94  
 80.00 11 59 57 3156.50 -29.81 103.18 258.13 91.77 12 52 33 2156.5 -26.06 76.38  
 90.00 13 12 5 2923.62 -28.27 86.10 258.17 90.56 14 0 49 1923.6 -25.19 59.51  
 100.00 14 42 48 2630.97 -29.81 64.55 258.13 91.77 15 26 39 1631.0 -26.06 37.75  
 110.00 16 11 37 2352.98 -33.83 43.16 257.85 95.02 16 50 50 1353.0 -28.28 15.88

Differential Corrections: TDE -.3459 TRA -.6472 TC3 1.1078 BAU .3254 SGT 1387.9 SGR 800.2 SG3 596.8 ST 26.4 SR 25.8 S8 21.1  
 RDE -.3843 RRA .1768 RC3 -.6533 FAU .17112 RRT -.4811 RRF .6009 RTF -.542 CRT .7789 CRS .9655 CST .8654  
 FDE .8632 FRA .0424 FC3-7.8335 BSP 2254 SGB 1602.1 R23 -.1515 R13 .7795 LSA 40.4 MSA 12.6 S8A 3.3  
 BDE .5171 BRA .6709 BC3 1.2871 FSP 918 SG1 1455.8 SG2 668.8 THA 160.14 EL1 34.7 EL2 12.2 ALF 43.80

LAUNCH DATE AUG 13 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 12 1974

Heliocentric Conic: RL 151.56 LAL -.00 LOL 320.11 VL 33.365 GAL 2.42 AZL 89.12 HCA 114.90 SMA 207.98 ECC .27430 INC .8832 V1 29.397  
 RP 229.48 LAP .80 LOP 75.01 VP 22.772 GAP 14.80 AZP 90.37 TAL 11.27 TAP 126.17 RCA 150.93 APO 265.03 V2 23.967  
 RC 141.241 GL 6.83 GP -10.98 ZAL 66.87 ZAP 150.61 ETS 202.03 ZAE 163.44 ETE 312.53 ZAC 71.60 ETC 282.52 LVI -4.92

PLANETOCENTRIC CONIC: C3 18.684 VHL 4.323 DLA 16.62 RAL 22.11 RAD 6642.2 VEL 11.777 PTH 6.80 VHP 4.114 DPA 6.57 RAP 48.56 ECC 1.3075  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 18 5 3452.64 -45.45 123.82 254.48 105.91 11 15 38 2452.6 -34.38 95.58  
 60.00 10 38 37 3397.98 -39.31 120.80 256.37 99.72 11 35 15 2398.0 -31.26 92.89  
 70.00 11 8 56 3308.72 -33.84 114.44 257.24 94.91 12 4 5 2308.7 -28.34 87.11  
 80.00 11 56 23 3160.05 -29.82 103.44 257.52 91.63 12 49 3 2160.0 -26.12 76.63  
 90.00 13 8 22 2927.67 -28.28 86.40 257.55 90.41 13 57 10 1927.7 -25.26 59.79  
 100.00 14 39 15 2634.52 -29.82 64.81 257.52 91.63 15 23 9 1634.5 -26.12 38.00  
 110.00 16 8 23 2355.54 -33.84 43.36 257.24 94.91 16 47 38 1355.5 -28.34 16.03

Differential Corrections: TDE -.3505 TRA -.6411 TC3 1.1091 BAU .3275 SGT 1386.2 SGR 817.9 SG3 629.2 ST 26.8 SR 25.1 S8 22.0  
 RDE -.3744 RRA .1730 RC3 -.6993 FAU .17922 RRT -.4950 RRF .6272 RTF -.7388 CRT .7841 CRS .9675 CST .8637  
 FDE .9215 FRA .0059 FC3-8.3041 BSP 2308 SGB 1609.5 R23 -.1681 R13 .7798 LSA 40.8 MSA 12.5 S8A 3.4  
 BDE .5129 BRA .6640 BC3 1.3111 FSP 976 SG1 1461.6 SG2 674.0 THA 159.07 EL1 34.7 EL2 12.0 ALF 42.58

LAUNCH DATE AUG 13 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.330 GAL 2.44 AZL 89.08 HCA 115.93 SMA 207.23 ECC .27177 INC .9238 V1 29.397  
 RP 229.86 LAP .83 LOP 78.04 VP 22.679 GAP 14.50 AZP 90.40 TAL 11.46 TAP 127.39 RCA 150.91 APO 263.55 V2 23.927  
 RC 144.046 GL 7.18 GP -11.33 ZAL 66.35 ZAP 149.43 ETS 201.72 ZAE 163.77 ETE 309.08 ZAC 71.27 ETC 282.56 LVI -4.62

DISTANCE 370.653 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.475 VHL 4.298 DLA 16.81 RAL 21.64 RAD 6642.2 VEL 11.768 PTH 6.79 VHP 4.010 DPA 6.20 RAP 48.56 ECC 1.3040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 15 24 3454.03 -45.48 123.95 253.94 105.82 11 12 58 2454.1 -34.43 95.67  
 60.00 10 35 40 3400.09 -39.33 120.97 255.82 99.60 11 32 20 2400.1 -31.32 93.03  
 70.00 11 5 40 3311.80 -33.86 114.68 256.88 94.77 12 0 52 2311.8 -28.41 87.33  
 80.00 11 52 46 3164.19 -29.83 103.75 256.93 91.47 12 45 30 2164.2 -26.19 78.91  
 90.00 13 4 35 2932.36 -26.28 86.74 256.96 90.24 13 53 28 1932.4 -25.33 60.12  
 100.00 14 35 38 2638.67 -29.83 65.12 256.93 91.47 15 19 37 1638.7 -26.19 38.28  
 110.00 16 5 6 2358.61 -33.86 43.60 256.68 94.77 16 44 25 1358.6 -28.41 16.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3540 TRA -.6340 TC3 1.1100 BAU .3303 SGT 1363.0 SGR 837.8 SG3 663.3 ST 27.1 SR 24.5 SS 23.1  
 RDE -.3641 RRA 1.688 RC3 -.7459 FAU .18776 RRT -.3095 RRF .6534 RTF -.7342 CRT .7888 CRS .9692 CST .8618  
 FDE .9843 FRA -.0338 FC3-8.7985 BSP 2345 SGB 1617.0 R23 -.1830 R13 .7816 LSA 41.2 MSA 12.5 S8A 3.5  
 BDE .5078 BRA .6561 BC3 1.3374 F8P 1035 SG1 1467.3 SG2 679.5 THA 157.86 EL1 34.6 EL2 11.8 ALF 41.42

LAUNCH DATE AUG 13 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.298 GAL 2.47 AZL 89.03 HCA 116.95 SMA 206.54 ECC .26939 INC .9650 V1 29.397  
 RP 230.25 LAP .86 LOP 77.06 VP 22.588 GAP 14.20 AZP 90.44 TAL 11.65 TAP 128.60 RCA 150.90 APO 262.17 V2 23.887  
 RC 146.870 GL 7.53 GP -11.70 ZAL 66.04 ZAP 148.23 ETS 201.42 ZAE 164.05 ETE 305.34 ZAC 70.94 ETC 282.61 LVI -4.31

DISTANCE 374.329 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.281 VHL 4.276 DLA 17.02 RAL 21.18 RAD 6642.1 VEL 11.762 PTH 6.79 VHP 3.910 DPA 5.80 RAP 48.53 ECC 1.3009  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 12 44 3455.89 -45.51 124.11 253.44 105.69 11 10 20 2455.9 -34.50 95.78  
 60.00 10 32 43 3402.68 -39.36 121.19 255.30 99.46 11 29 26 2402.7 -31.40 93.20  
 70.00 11 2 22 3315.40 -33.88 114.96 256.14 94.60 11 57 38 2315.4 -28.49 87.57  
 80.00 11 49 6 3168.94 -29.83 104.10 256.39 91.28 12 41 55 2168.9 -26.27 77.24  
 90.00 13 0 45 2937.69 -26.28 87.13 256.41 90.05 13 49 42 1937.7 -25.41 60.49  
 100.00 14 31 58 2643.42 -29.83 65.47 256.39 91.28 15 16 1 1643.4 -26.27 38.61  
 110.00 16 1 49 2362.22 -33.88 43.88 256.14 94.60 16 41 11 1362.2 -28.49 16.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3570 TRA -.6264 TC3 1.1076 BAU .3332 SGT 1377.2 SGR 859.6 SG3 698.4 ST 27.3 SR 23.9 SS 24.2  
 RDE -.3532 RRA 1.643 RC3 -.7947 FAU .19654 RRT -.5232 RRF .6787 RTF -.7293 CRT .7932 CRS .9707 CST .8802  
 FDE 1.0532 FRA -.0766 FC3-9.3074 BSP 2370 SGB 1623.4 R23 -.1971 R13 .7840 LSA 41.7 MSA 12.4 S8A 3.5  
 BDE .9022 BRA .6475 BC3 1.3632 F8P 1098 SG1 1471.5 SG2 685.6 THA 156.53 EL1 34.5 EL2 11.6 ALF 40.23

LAUNCH DATE AUG 13 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.287 GAL 2.49 AZL 88.99 HCA 117.97 SMA 205.88 ECC .26715 INC 1.0069 V1 29.397  
 RP 230.63 LAP .89 LOP 78.08 VP 22.501 GAP 13.91 AZP 90.47 TAL 11.83 TAP 129.80 RCA 150.88 APO 260.88 V2 23.847  
 RC 149.713 GL 7.89 GP -12.08 ZAL 65.76 ZAP 147.00 ETS 201.14 ZAE 164.27 ETE 301.33 ZAC 70.59 ETC 282.66 LVI -4.00

DISTANCE 378.016 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.103 VHL 4.255 DLA 17.24 RAL 20.74 RAD 6642.0 VEL 11.753 PTH 6.78 VHP 3.813 DPA 5.39 RAP 48.49 ECC 1.2979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 10 5 3458.13 -45.56 124.31 252.99 105.54 11 7 43 2458.1 -34.59 95.92  
 60.00 10 29 46 3405.72 -39.39 121.44 254.82 99.29 11 26 32 2405.7 -31.50 93.41  
 70.00 10 59 2 3319.53 -33.90 115.28 255.65 94.42 11 54 22 2319.5 -28.59 87.86  
 80.00 11 45 23 3174.50 -29.84 104.50 255.88 91.07 12 38 17 2174.3 -26.37 77.61  
 90.00 12 56 50 2943.67 -26.28 87.57 255.89 89.83 13 45 53 1943.7 -25.50 60.90  
 100.00 14 28 15 2648.77 -29.84 65.67 255.88 91.07 15 12 23 1648.8 -26.37 38.98  
 110.00 15 58 29 2366.35 -33.90 44.20 255.65 94.42 16 37 55 1366.4 -28.59 16.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3586 TRA -.6190 TC3 1.1020 BAU .3362 SGT 1369.0 SGR 883.8 SG3 735.0 ST 27.5 SR 23.3 SS 25.3  
 RDE -.3422 RRA 1.596 RC3 -.8460 FAU .20566 RRT -.5363 RRF .7035 RTF -.7238 CRT .7984 CRS .9718 CST .8980  
 FDE 1.1233 FRA -.1213 FC3-9.8352 BSP 2389 SGB 1629.5 R23 -.2106 R13 .7869 LSA 42.1 MSA 12.4 S8A 3.6  
 BDE .4956 BRA .6392 BC3 1.3893 F8P 1164 SG1 1475.2 SG2 692.3 THA 155.05 EL1 34.2 EL2 11.3 ALF 39.11

LAUNCH DATE AUG 13 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.238 GAL 2.51 AZL 88.95 HCA 118.99 SMA 205.27 ECC .26504 INC 1.0495 V1 29.397  
 RP 231.01 LAP .92 LOP 79.10 VP 22.416 GAP 13.81 AZP 90.31 TAL 12.00 TAP 130.99 RCA 150.87 APO 259.68 V2 23.807  
 RC 152.578 GL 8.26 GP -12.48 ZAL 65.49 ZAP 145.75 ETS 200.66 ZAE 164.42 ETE 297.06 ZAC 70.24 ETC 282.71 LVI -3.68

DISTANCE 381.713 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.940 VHL 4.236 DLA 17.47 RAL 20.32 RAD 6641.9 VEL 11.746 PTH 6.77 VHP 3.721 DPA 4.95 RAP 48.42 ECC 1.2952  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 7 25 3460.79 -45.60 124.55 252.57 105.37 11 5 6 2460.8 -34.70 96.09  
 60.00 10 26 48 3409.22 -39.43 121.73 254.38 99.10 11 23 37 2409.2 -31.60 93.64  
 70.00 10 55 40 3324.20 -33.93 115.64 255.18 94.20 11 51 5 2324.2 -28.69 88.18  
 80.00 11 41 36 3180.28 -29.85 104.94 255.40 90.84 12 34 36 2180.3 -26.47 78.03  
 90.00 12 52 50 2950.32 -26.28 88.05 255.40 89.58 13 42 0 1950.3 -25.60 61.36  
 100.00 14 24 27 2654.75 -29.85 66.31 255.40 90.84 15 8 42 1654.8 -26.47 39.40  
 110.00 15 55 7 2371.02 -33.93 44.56 255.18 94.20 16 34 38 1371.0 -28.69 17.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3600 TRA -.6114 TC3 1.0917 BAU .3393 SGT 1358.0 SGR 910.4 SG3 772.8 ST 27.6 SR 22.6 SS 26.8  
 RDE -.3305 RRA 1.544 RC3 -.8998 FAU .21507 RRT -.5476 RRF .7273 RTF -.7173 CRT .7996 CRS .9727 CST .8561  
 FDE 1.2006 FRA -.1700 FC-10.3790 BSP 2398 SGB 1634.9 R23 -.2236 R13 .7902 LSA 42.5 MSA 12.4 S8A 3.6  
 BDE .4887 BRA .6306 BC3 1.4147 F8P 1229 SG1 1477.4 SG2 700.2 THA 153.43 EL1 34.0 EL2 11.1 ALF 37.92

LAUNCH DATE AUG 13 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 33.211 GAL 2.52 AZL 88.91 HCA 120.00 SMA 204.70 ECC .26306 INC 1.0927 V1 29.397  
 RP 231.39 LAP .95 LOP 80.11 VP 22.334 GAP 13.32 AZP 90.55 TAL 12.16 TAP 132.16 RCA 150.85 APO 258.58 V2 23.767  
 RC 155.447 GL 8.63 GP -12.89 ZAL 65.25 ZAP 144.48 ETS 200.59 ZAE 164.48 ETE 292.57 ZAC 69.88 ETC 282.77 LVI -3.36

PLANETOCENTRIC CONIC

C3 17.789 VHL 4.218 DLA 17.71 RAL 19.91 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 3.632 DPA 4.50 RAP 48.34 ECC 1.2928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 4 46 3463.86 -45.66 124.83 252.19 105.16 11 2 30 2463.9 -34.82 96.29  
 60.00 10 23 48 3413.19 -39.47 122.06 253.98 98.68 11 20 41 2413.2 -31.72 93.91  
 70.00 10 52 16 3329.40 -33.95 116.05 254.76 93.97 11 47 45 2329.4 -28.81 88.54  
 80.00 11 37 44 3186.88 -29.85 105.43 254.95 90.58 12 30 51 2186.9 -26.58 78.49  
 90.00 12 48 45 2957.64 -28.27 88.59 254.95 89.32 13 38 3 1957.6 -25.70 61.87  
 100.00 14 20 36 2661.35 -29.85 66.80 254.95 90.58 15 4 57 1661.4 -26.58 39.86  
 110.00 15 51 42 2376.22 -33.95 44.96 254.76 93.97 16 31 18 1376.2 -28.81 17.46

DIFFERENTIAL CORRECTIONS

TDE -.3609 TRA -.6045 TC3 1.0770 BAU .3425  
 RDE -.3184 RRA .1491 RC3 -.9561 FAU .22475  
 FDE 1.2816 FRA -.2199 FC-10.9381 BSP 2412  
 BDE .4813 BRA .6226 BC3 1.4401 FSP 1300

MID-COURSE EXECUTION ACCURACY

SGT 1344.9 SGR 939.5 SG3 811.7  
 RRT -.5571 RRF .7502 RTF -.7096  
 SGB 1640.6 R23 -.2361 R13 .7940  
 SG1 1479.3 SG2 709.4 THA 151.67

ORBIT DETERMINATION ACCURACY

ST 27.7 SR 21.9 SS 27.7  
 CRT .8020 CR8 .9733 CST .8541  
 LSA 43.0 MSA 12.4 S3A 3.7  
 EL1 33.7 EL2 10.8 ALF 36.70

LAUNCH DATE AUG 13 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 33.186 GAL 2.54 AZL 88.86 HCA 121.01 SMA 204.17 ECC .26119 INC 1.1366 V1 29.397  
 RP 231.77 LAP .97 LOP 81.12 VP 22.254 GAP 13.04 AZP 90.59 TAL 12.30 TAP 133.31 RCA 150.84 APO 257.49 V2 23.728  
 RC 158.336 GL 9.01 GP -13.31 ZAL 65.02 ZAP 143.18 ETS 200.32 ZAE 164.46 ETE 287.90 ZAC 69.51 ETC 282.83 LVI -3.03

PLANETOCENTRIC CONIC

C3 17.651 VHL 4.201 DLA 17.96 RAL 19.51 RAD 6641.8 VEL 11.734 PTH 6.76 VHP 3.547 DPA 4.02 RAP 48.23 ECC 1.2905  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 2 7 3467.34 -45.72 125.14 251.86 104.93 10 59 55 2467.3 -34.95 96.51  
 60.00 10 20 48 3417.61 -39.52 122.42 253.61 98.64 11 17 46 2417.6 -31.85 94.21  
 70.00 10 48 49 3335.14 -33.90 116.49 254.36 93.70 11 44 24 2335.1 -28.94 88.94  
 80.00 11 33 48 3194.13 -29.86 105.97 254.53 90.30 12 27 2 2194.1 -26.70 78.99  
 90.00 12 44 35 2965.66 -28.26 89.17 254.52 89.02 13 34 0 1965.7 -25.82 62.43  
 100.00 14 16 40 2668.60 -29.86 67.34 254.53 90.30 15 1 9 1668.6 -26.70 40.36  
 110.00 15 48 15 2381.96 -33.98 45.41 254.36 93.70 16 27 57 1382.0 -28.94 17.85

DIFFERENTIAL CORRECTIONS

TDE -.3611 TRA -.5974 TC3 1.0584 BAU .3461  
 RDE -.3058 RRA .1431 RC3 -1.0153 FAU .23478  
 FDE 1.3667 FRA -.2754 FC-11.5152 BSP 2419  
 BDE .4732 BRA .6143 BC3 1.4667 FSP 1373

MID-COURSE EXECUTION ACCURACY

SGT 1329.3 SGR 971.5 SG3 852.0  
 RRT -.5846 RRF .7720 RTF -.7007  
 SGB 1646.5 R23 -.2474 R13 .7986  
 SG1 1480.8 SG2 719.8 THA 149.72

ORBIT DETERMINATION ACCURACY

ST 27.8 SR 21.1 SS 29.0  
 CRT .8042 CR8 .9736 CST .8517  
 LSA 43.5 MSA 12.4 S3A 3.7  
 EL1 33.3 EL2 10.5 ALF 35.45

LAUNCH DATE AUG 13 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 33.162 GAL 2.55 AZL 88.82 HCA 122.02 SMA 203.67 ECC .25944 INC 1.1813 V1 29.397  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.176 GAP 12.75 AZP 90.63 TAL 12.44 TAP 134.46 RCA 150.83 APO 256.51 V2 23.689  
 RC 161.238 GL 9.39 GP -13.74 ZAL 64.82 ZAP 141.85 ETS 200.05 ZAE 164.33 ETE 283.11 ZAC 69.13 ETC 282.90 LVI -2.70

PLANETOCENTRIC CONIC

C3 17.525 VHL 4.186 DLA 18.23 RAL 19.13 RAD 6641.7 VEL 11.728 PTH 6.76 VHP 3.466 DPA 3.52 RAP 48.11 ECC 1.2884  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 28 3471.23 -45.79 125.49 251.56 104.66 10 57 19 2471.2 -35.10 96.76  
 60.00 10 17 46 3422.51 -39.57 122.83 253.28 98.36 11 14 49 2422.5 -32.00 94.54  
 70.00 10 45 18 3341.44 -34.00 116.98 254.00 93.41 11 41 0 2341.4 -29.08 89.37  
 80.00 11 29 47 3202.03 -29.86 106.56 254.14 89.99 12 23 9 2202.0 -26.83 79.55  
 90.00 12 40 18 2974.40 -28.25 89.81 254.12 88.70 13 29 32 1974.4 -25.94 63.04  
 100.00 14 12 39 2676.50 -29.86 67.93 254.14 89.99 14 57 15 1676.5 -26.83 40.91  
 110.00 15 44 45 2388.25 -34.00 45.90 254.00 93.41 16 24 33 1388.3 -29.08 18.29

DIFFERENTIAL CORRECTIONS

TDE -.3816 TRA -.5914 TC3 1.0327 BAU .3495  
 RDE -.2923 RRA .1371 RC3 -1.0768 FAU .24496  
 FDE 1.4606 FRA -.3311 FC-12.1012 BSP 2426  
 BDE .4650 BRA .6071 BC3 1.4919 FSP 1448

MID-COURSE EXECUTION ACCURACY

SGT 1311.0 SGR 1005.9 SG3 893.2  
 RRT -.5885 RRF .7924 RTF -.6693  
 SGB 1652.5 R23 -.2583 R13 .8034  
 SG1 1481.3 SG2 732.4 THA 147.82

ORBIT DETERMINATION ACCURACY

ST 27.9 SR 20.3 SS 30.4  
 CRT .8039 CR8 .9737 CST .8498  
 LSA 44.0 MSA 12.5 S3A 3.7  
 EL1 32.9 EL2 10.2 ALF 34.04

LAUNCH DATE AUG 13 1973

FLIGHT TIME 168.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 33.139 GAL 2.57 AZL 88.77 HCA 123.02 SMA 203.20 ECC .25780 INC 1.2270 V1 29.397  
 RP 232.51 LAP 1.03 LOP 83.13 VP 22.101 GAP 12.47 AZP 90.67 TAL 12.57 TAP 135.39 RCA 150.82 APO 255.59 V2 23.690  
 RC 164.190 GL 9.78 GP -14.19 ZAL 64.63 ZAP 140.51 ETS 199.78 ZAE 164.09 ETE 278.28 ZAC 68.75 ETC 282.98 LVI -2.38

PLANETOCENTRIC CONIC

C3 17.409 VHL 4.172 DLA 18.51 RAL 18.78 RAD 6641.7 VEL 11.723 PTH 6.75 VHP 3.388 DPA 3.01 RAP 47.96 ECC 1.2865  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 49 3475.54 -45.86 125.88 251.30 104.37 10 54 44 2475.5 -35.27 97.04  
 60.00 10 14 43 3427.87 -39.62 123.28 252.98 98.07 11 11 51 2427.9 -32.16 94.91  
 70.00 10 41 45 3348.28 -34.03 117.52 253.67 93.10 11 37 33 2348.3 -29.23 89.85  
 80.00 11 25 40 3210.60 -29.86 107.20 253.78 89.65 12 19 11 2210.6 -26.96 80.15  
 90.00 12 35 54 2983.87 -28.24 90.51 253.75 88.36 13 25 38 1983.9 -26.07 63.71  
 100.00 14 8 32 2685.07 -29.86 68.57 253.78 89.65 14 53 17 1685.1 -26.96 41.51  
 110.00 15 41 11 2395.10 -34.03 46.43 253.67 93.10 16 21 6 1395.1 -29.23 18.77

DIFFERENTIAL CORRECTIONS

TDE -.3609 TRA -.5863 TC3 1.0034 BAU .3538  
 RDE -.2785 RRA .1307 RC3 -1.1417 FAU .25552  
 FDE 1.5568 FRA -.3877 FC-12.7068 BSP 2430  
 BDE .4558 BRA .6007 BC3 1.5199 FSP 1522

MID-COURSE EXECUTION ACCURACY

SGT 1291.3 SGR 1043.9 SG3 935.8  
 RRT -.5705 RRF .8117 RTF -.6764  
 SGB 1660.5 R23 -.2670 R13 .8094  
 SG1 1483.2 SG2 746.4 THA 145.29

ORBIT DETERMINATION ACCURACY

ST 27.9 SR 19.4 SS 31.7  
 CRT .8062 CR8 .9733 CST .8473  
 LSA 44.6 MSA 12.6 S3A 3.7  
 EL1 32.5 EL2 9.8 ALF 32.62

LAUNCH DATE AUG 13 1973

FLIGHT TIME 170.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.110 GAL 2.50 AZL 88.73 HCA 124.02 SMA 202.77 ECC .25625 INC 1.2735 V1 29.397  
 RP 232.89 LAP 1.06 LOP 84.14 VP 22.028 GAP 12.19 AZP 90.71 TAL 12.68 TAP 136.71 RCA 150.81 APO 254.72 V2 23.612  
 RC 187.073 GL 10.18 GP -14.66 ZAL 64.47 ZAP 139.13 ETS 199.51 ZAE 163.73 ETE 273.47 ZAC 68.36 ETC 283.06 LVI -2.01

DISTANCE 400.324  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.304 VHL 4.180 DLA 18.80 RAL 18.40 RAD 6641.6 VEL 11.719 PTH 6.75 VHP 3.313 DPA 2.46 RAP 47.80 ECC 1.2848  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 54 8 3480.23 -45.94 126.31 251.08 104.05 10 52 9 2480.2 -35.45 97.35  
 60.00 10 11 37 3433.68 -39.68 123.76 252.72 97.74 11 8 51 2433.7 -32.33 95.31  
 70.00 10 38 7 3355.67 -34.06 118.09 253.36 92.76 11 34 3 2355.7 -29.38 90.37  
 80.00 11 21 27 3219.82 -29.85 107.88 253.45 89.29 12 15 7 2219.8 -27.11 80.79  
 90.00 12 31 23 2994.07 -28.21 91.25 253.41 87.98 13 21 17 1994.1 -26.20 64.42  
 100.00 14 4 19 2694.29 -29.85 69.25 253.45 89.29 14 49 14 1694.3 -27.11 42.16  
 110.00 15 37 33 2402.49 -34.06 47.01 253.36 92.76 16 17 36 1402.5 -29.38 19.29

DIFFERENTIAL CORRECTIONS  
 TDE -.3509 TRA -.5724 TC3 .9881 BAU .3616 SGT 1266.1 SGR 1086.6 SG3 981.0 ST 27.2 SR 18.5 SS 32.9  
 RDE -.2650 RRA .1227 RC3-1.2113 FAU .26680 RRT -.5821 RRF .8304 RTF -.6722 CRT .8050 CRS .9727 CST .8408  
 FDE 1.6449 FRA -.4630 FC-13.3481 BSP 2340 SGB 1668.5 R23 -.2600 R13 .8221 LSA 44.7 MSA 12.6 SSA 3.7  
 BDE .4397 BRA .5854 BC3 1.5633 FSP 1584 SG1 1490.0 S2 750.8 THA 142.38 EL1 31.5 EL2 9.5 ALF 31.90

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.098 GAL 2.59 AZL 88.68 HCA 125.02 SMA 202.36 ECC .25480 INC 1.3209 V1 29.397  
 RP 233.25 LAP 1.06 LOP 85.13 VP 21.957 GAP 11.91 AZP 90.76 TAL 12.79 TAP 137.81 RCA 150.80 APO 253.92 V2 23.573  
 RC 170.003 GL 10.59 GP -15.14 ZAL 64.32 ZAP 137.74 ETS 199.23 ZAE 163.25 ETE 268.77 ZAC 67.95 ETC 283.14 LVI -1.65

DISTANCE 404.065  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.209 VHL 4.148 DLA 19.11 RAL 18.06 RAD 6641.6 VEL 11.715 PTH 6.75 VHP 3.243 DPA 1.90 RAP 47.62 ECC 1.2832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 28 3485.37 -46.02 126.77 250.89 103.70 10 49 33 2485.4 -35.64 97.68  
 60.00 10 8 30 3440.01 -39.73 124.29 252.49 97.39 11 5 50 2440.0 -32.52 95.74  
 70.00 10 34 25 3363.68 -34.08 118.72 253.09 92.39 11 30 29 2363.7 -29.55 90.93  
 80.00 11 17 8 3229.82 -29.84 108.63 253.15 88.90 12 10 57 2229.8 -27.26 81.50  
 90.00 12 26 44 3005.13 -28.18 92.06 253.09 87.58 13 16 49 2005.1 -26.35 65.20  
 100.00 13 59 59 2704.29 -29.84 69.99 253.15 88.90 14 45 4 1704.3 -27.26 42.87  
 110.00 15 33 52 2410.50 -34.08 47.63 253.09 92.39 16 14 2 1410.5 -29.55 19.85

DIFFERENTIAL CORRECTIONS  
 TDE -.3566 TRA -.5752 TC3 .9307 BAU .3640 SGT 1243.2 SGR 1128.7 SG3 1023.8 ST 27.7 SR 17.4 SS 34.7  
 RDE -.2484 RRA .1164 RC3-1.2797 FAU .27724 RRT -.5657 RRF .8464 RTF -.6451 CRT .8054 CRS .9716 CST .8410  
 FDE 1.7664 FRA -.5154 FC-13.9471 BSP 2427 SGB 1679.2 R23 -.2743 R13 .8237 LSA 45.8 MSA 12.8 SSA 3.6  
 BDE .4346 BRA .5868 BC3 1.5823 FSP 1676 SG1 1488.4 S2 777.5 THA 139.85 EL1 31.4 EL2 9.1 ALF 29.59

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.079 GAL 2.59 AZL 88.63 HCA 126.01 SMA 201.98 ECC .25345 INC 1.3694 V1 29.397  
 RP 233.62 LAP 1.11 LOP 86.13 VP 21.888 GAP 11.64 AZP 90.81 TAL 12.88 TAP 138.90 RCA 150.79 APO 253.17 V2 23.536  
 RC 172.941 GL 11.00 GP -15.63 ZAL 64.20 ZAP 136.32 ETS 198.95 ZAE 162.65 ETE 264.21 ZAC 67.54 ETC 283.23 LVI -1.29

DISTANCE 407.813  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.123 VHL 4.138 DLA 19.43 RAL 17.73 RAD 6641.5 VEL 11.711 PTH 6.74 VHP 3.175 DPA 1.32 RAP 47.42 ECC 1.2818  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 46 3490.92 -46.11 127.28 250.75 103.32 10 46 57 2490.9 -35.85 98.04  
 60.00 10 5 20 3446.81 -39.79 124.86 252.29 97.00 11 2 47 2446.8 -32.71 96.21  
 70.00 10 30 39 3372.27 -34.10 119.38 252.85 92.00 11 26 51 2372.3 -29.73 91.53  
 80.00 11 12 40 3240.54 -29.82 109.42 252.88 88.48 12 6 41 2240.5 -27.41 82.26  
 90.00 12 21 55 3017.00 -28.15 92.92 252.80 87.15 13 12 12 2017.0 -26.49 66.04  
 100.00 13 55 32 2715.01 -29.82 70.79 252.88 86.48 14 40 47 1715.0 -27.41 43.62  
 110.00 15 30 5 2419.09 -34.10 48.30 252.85 92.00 16 10 24 1419.1 -29.73 20.45

DIFFERENTIAL CORRECTIONS  
 TDE -.3567 TRA -.5736 TC3 .8781 BAU .3690 SGT 1217.1 SGR 1174.9 SG3 1068.2 ST 27.8 SR 16.3 SS 36.3  
 RDE -.2318 RRA .1090 RC3-1.3320 FAU .28809 RRT -.3521 RRF .8615 RTF -.6204 CRT .8040 CRS .9700 CST .8387  
 FDE 1.8869 FRA -.5780 FC-14.5658 BSP 2459 SGB 1691.6 R23 -.2770 R13 .8340 LSA 46.7 MSA 12.9 SSA 3.6  
 BDE .4253 BRA .5839 BC3 1.6121 FSP 1761 SG1 1490.6 S2 799.8 THA 136.83 EL1 31.0 EL2 8.7 ALF 27.63

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.062 GAL 2.60 AZL 88.58 HCA 127.01 SMA 201.83 ECC .25217 INC 1.4190 V1 29.397  
 RP 233.99 LAP 1.13 LOP 87.12 VP 21.821 GAP 11.36 AZP 90.85 TAL 12.97 TAP 139.97 RCA 150.78 APO 252.47 V2 23.498  
 RC 175.886 GL 11.43 GP -16.14 ZAL 64.09 ZAP 134.88 ETS 198.67 ZAE 161.94 ETE 259.86 ZAC 67.12 ETC 283.33 LVI -0.92

DISTANCE 411.566  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.048 VHL 4.129 DLA 19.76 RAL 17.41 RAD 6641.5 VEL 11.708 PTH 6.74 VHP 3.111 DPA .71 RAP 47.20 ECC 1.2805  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 46 3 3496.87 -46.20 127.83 250.63 102.91 10 44 20 2496.9 -36.07 98.44  
 60.00 10 2 7 3434.08 -39.85 125.47 252.13 96.59 10 59 41 2434.1 -32.92 96.71  
 70.00 10 26 47 3381.45 -34.12 120.10 252.64 91.57 11 23 8 2381.4 -29.92 92.18  
 80.00 11 8 5 3252.00 -29.80 110.27 252.62 88.04 12 2 17 2252.0 -27.58 83.07  
 90.00 12 16 56 3029.69 -28.10 93.85 252.53 86.69 13 7 26 2029.7 -26.64 66.94  
 100.00 13 50 56 2726.47 -29.80 71.64 252.62 86.04 14 36 23 1726.5 -27.58 44.44  
 110.00 15 26 13 2428.28 -34.12 49.02 252.64 91.57 16 6 42 1428.3 -29.92 21.10

DIFFERENTIAL CORRECTIONS  
 TDE -.3465 TRA -.5635 TC3 .8418 BAU .3783 SGT 1185.1 SGR 1227.5 SG3 1115.8 ST 27.1 SR 15.2 SS 37.7  
 RDE -.2157 RRA .0997 RC3-1.4306 FAU .29989 RRT -.5494 RRF .8760 RTF -.6051 CRT .8006 CRS .9677 CST .8315  
 FDE 1.9927 FRA -.6603 FC-15.2306 BSP 2402 SGB 1706.2 R23 -.2828 R13 .8487 LSA 47.0 MSA 13.0 SSA 3.8  
 BDE .4081 BRA .5722 BC3 1.6598 FSP 1828 SG1 1502.1 S2 809.1 THA 133.17 EL1 30.0 EL2 8.3 ALF 26.38

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973 FLIGHT TIME 178.00 ARRIVAL DATE FEB 7 1974

Heliocentric Conic: RL 151.96 LAL -.00 LOL 320.11 VL 33.048 GAL 2.61 AZL 88.53 HCA 127.99 SMA 201.30 ECC .25098 INC 1.4697 V1 29.397  
 RP 234.35 LAP 1.16 LOP 88.11 VP 21.756 GAP 11.09 AZP 90.90 TAL 13.04 TAP 141.03 RCA 150.78 APO 251.82 V2 23.461  
 RC 178.836 GL 11.86 GP -16.66 ZAL 64.00 ZAP 133.42 ETS 198.37 ZAE 161.11 ETE 255.76 ZAC 66.70 ETC 283.43 LVI -.55

Distance 415.325 Earth to Mars

Planetocentric Conic: C3 16.978 VHL 4.120 DLA 20.11 RAL 17.11 RAD 6641.5 VEL 11.703 PTH 6.74 VHP 3.050 DPA .08 RAP 46.96 ECC 1.2794  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 18 3503.28 -46.30 128.41 250.56 102.46 10 41 42 2503.3 -36.31 98.66  
 60.00 9 58 51 3461.90 -39.91 126.13 252.00 96.15 10 56 33 2461.9 -33.14 97.26  
 70.00 10 22 49 3391.29 -34.14 120.87 252.46 91.12 11 19 21 2391.3 -30.12 92.68  
 80.00 11 3 20 3264.31 -29.77 111.19 252.40 87.56 11 57 44 2264.3 -27.75 83.94  
 90.00 12 11 46 3043.37 -28.04 94.85 252.29 86.19 13 2 29 2043.4 -26.80 67.91  
 100.00 13 46 12 2738.78 -29.77 72.55 252.40 87.56 14 31 50 1738.8 -27.75 45.31  
 110.00 15 22 16 2438.11 -34.14 49.79 252.46 91.12 16 2 54 1438.1 -30.12 21.00

Differential Corrections: TDE -.3507 TRA -.5691 TC3 .7634 BAU .3832 SGT 1159.2 SGR 1277.9 SG3 1159.3 ST 27.5 SR 13.9 SS 39.7  
 RDE -.1958 RRA .0926 RC3-1.5059 FAU .31034 RRT -.5154 RRF .8882 RTF -.5634 CRT .7967 CR8 .9643 CST .8308  
 FDE 2.1366 FRA -.7142 FC-15.8245 BSP 2502 SGB 1725.3 R23 -.2621 R13 .8575 LSA 48.4 MSA 13.3 SSA 3.5  
 BDE .4016 BRA .5766 BC3 1.6883 FSP 1927 SG1 1505.1 SG2 843.4 THA 129.64 EL1 29.8 EL2 7.7 ALF 23.63

LAUNCH DATE AUG 13 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 9 1974

Heliocentric Conic: RL 151.96 LAL -.00 LOL 320.11 VL 33.031 GAL 2.61 AZL 88.48 HCA 128.98 SMA 200.99 ECC .24986 INC 1.5216 V1 29.397  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.693 GAP 10.83 AZP 90.96 TAL 13.10 TAP 142.08 RCA 150.77 APO 251.21 V2 23.424  
 RC 181.791 GL 12.30 GP -17.20 ZAL 63.93 ZAP 131.94 ETS 198.07 ZAE 160.18 ETE 251.90 ZAC 66.26 ETC 283.53 LVI -.16

Distance 419.084 Earth to Mars

Planetocentric Conic: C3 16.918 VHL 4.113 DLA 20.47 RAL 16.81 RAD 6641.4 VEL 11.703 PTH 6.74 VHP 2.993 DPA -.57 RAP 46.71 ECC 1.2784  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 40 32 3510.11 -46.40 129.04 250.53 101.99 10 39 2 2510.1 -36.57 99.32  
 60.00 9 55 31 3470.21 -39.97 126.82 251.90 95.68 10 53 21 2470.2 -33.37 97.84  
 70.00 10 18 45 3401.76 -34.15 121.69 252.30 90.64 11 15 27 2401.8 -30.32 93.63  
 80.00 10 58 24 3277.44 -29.72 112.16 252.19 87.05 11 53 2 2277.4 -27.92 84.68  
 90.00 12 6 23 3057.99 -27.97 95.91 252.06 85.66 12 57 21 2058.0 -26.96 68.95  
 100.00 13 41 16 2751.92 -29.72 73.53 252.19 87.05 14 27 8 1751.9 -27.92 46.25  
 110.00 15 18 12 2448.58 -34.15 50.60 252.30 90.64 15 59 0 1448.6 -30.32 22.55

Differential Corrections: TDE -.3452 TRA -.5670 TC3 .6996 BAU .3924 SGT 1128.3 SGR 1334.8 SG3 1205.7 ST 27.2 SR 12.6 SS 41.5  
 RDE -.1767 RRA .0836 RC3-1.5877 FAU .32167 RRT -.4901 RRF .8999 RTF -.5289 CRT .7901 CR8 .9594 CST .8252  
 FDE 2.2703 FRA -.7862 FC-16.4610 BSP 2521 SGB 1747.8 R23 -.2448 R13 .8718 LSA 49.2 MSA 13.5 SSA 3.4  
 BDE .3877 BRA .5732 BC3 1.7350 FSP 2009 SG1 1519.3 SG2 864.2 THA 125.49 EL1 29.1 EL2 7.2 ALF 21.51

LAUNCH DATE AUG 13 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 11 1974

Heliocentric Conic: RL 151.96 LAL -.00 LOL 320.11 VL 33.016 GAL 2.61 AZL 88.43 HCA 129.96 SMA 200.71 ECC .24882 INC 1.5749 V1 29.397  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.632 GAP 10.56 AZP 91.01 TAL 13.16 TAP 143.12 RCA 150.77 APO 250.65 V2 23.387  
 RC 184.750 GL 12.75 GP -17.75 ZAL 63.88 ZAP 130.43 ETS 197.75 ZAE 159.15 ETE 248.31 ZAC 65.82 ETC 283.65 LVI .23

Distance 422.849 Earth to Mars

Planetocentric Conic: C3 16.866 VHL 4.107 DLA 20.84 RAL 16.52 RAD 6641.4 VEL 11.700 PTH 6.73 VHP 2.938 DPA -1.24 RAP 46.44 ECC 1.2776  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 37 43 3517.38 -46.50 129.72 250.52 101.48 10 36 20 2517.4 -36.03 99.81  
 60.00 9 52 6 3479.04 -40.02 127.57 251.82 95.18 10 50 5 2479.0 -33.62 98.46  
 70.00 10 14 34 3412.89 -34.15 122.55 252.16 90.12 11 11 27 2412.9 -30.54 94.42  
 80.00 10 53 18 3291.45 -29.67 113.20 252.01 86.50 11 48 9 2291.5 -28.10 85.88  
 90.00 12 0 46 3073.63 -27.69 97.04 251.86 85.10 12 52 0 2073.6 -27.12 70.06  
 100.00 13 36 10 2765.92 -29.67 74.57 252.01 86.50 14 22 16 1765.9 -28.10 47.25  
 110.00 15 14 0 2459.71 -34.15 51.47 252.16 90.12 15 55 0 1459.7 -30.54 23.34

Differential Corrections: TDE -.3338 TRA -.5605 TC3 .6415 BAU .4045 SGT 1093.1 SGR 1397.7 SG3 1254.3 ST 26.5 SR 11.3 SS 43.0  
 RDE -.1577 RRA .0727 RC3-1.6752 FAU .33386 RRT -.4869 RRF .9107 RTF -.4461 CRT .7821 CR8 .9524 CST .8158  
 FDE 2.3939 FRA -.8760 FC-17.1270 BSP 2503 SGB 1774.3 R23 -.2179 R13 .8879 LSA 49.8 MSA 13.6 SSA 3.3  
 BDE .3692 BRA .5652 BC3 1.7938 FSP 2074 SG1 1543.4 SG2 875.3 THA 121.00 EL1 28.0 EL2 6.7 ALF 19.64

LAUNCH DATE AUG 13 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 13 1974

Heliocentric Conic: RL 151.96 LAL -.00 LOL 320.11 VL 33.003 GAL 2.61 AZL 88.37 HCA 130.94 SMA 200.44 ECC .24784 INC 1.6295 V1 29.397  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.573 GAP 10.30 AZP 91.07 TAL 13.20 TAP 144.14 RCA 150.76 APO 250.12 V2 23.351  
 RC 187.714 GL 13.21 GP -18.31 ZAL 63.85 ZAP 128.91 ETS 197.43 ZAE 158.03 ETE 244.99 ZAC 65.36 ETC 283.76 LVI .63

Distance 426.817 Earth to Mars

Planetocentric Conic: C3 16.821 VHL 4.101 DLA 21.24 RAL 16.25 RAD 6641.4 VEL 11.699 PTH 6.73 VHP 2.887 DPA -1.93 RAP 46.16 ECC 1.2768  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 34 51 3525.12 -46.60 130.44 250.56 100.93 10 33 36 2525.1 -37.12 100.33  
 60.00 9 48 38 3488.44 -40.08 128.36 251.78 94.64 10 46 46 2488.4 -33.87 99.13  
 70.00 10 10 15 3424.76 -34.15 123.48 252.06 89.57 11 7 20 2424.8 -30.76 95.28  
 80.00 10 47 59 3306.47 -29.60 114.31 251.85 85.92 11 43 5 2306.5 -28.28 86.96  
 90.00 11 54 53 3090.45 -27.78 98.26 251.67 84.50 12 46 24 2090.4 -27.28 71.27  
 100.00 13 30 50 2780.94 -29.60 75.68 251.85 85.92 14 17 11 1780.9 -28.28 48.33  
 110.00 15 9 41 2471.58 -34.15 52.40 252.06 89.57 15 50 53 1471.6 -30.76 24.20

Differential Corrections: TDE -.3344 TRA -.5684 TC3 .5448 BAU .4138 SGT 1069.5 SGR 1456.9 SG3 1297.1 ST 26.6 SR 9.7 SS 45.2  
 RDE -.1343 RRA .0648 RC3-1.7574 FAU .34381 RRT -.4103 RRF .9197 RTF -.4341 CRT .7676 CR8 .9406 CST .8125  
 FDE 2.5595 FRA -.9296 FC-17.6945 BSP 2617 SGB 1807.3 R23 -.1945 R13 .9011 LSA 51.4 MSA 13.9 SSA 3.2  
 BDE .3604 BRA .5721 BC3 1.8399 FSP 2180 SG1 1561.5 SG2 910.0 THA 116.28 EL1 27.7 EL2 6.0 ALF 16.47



LAUNCH DATE AUG 13 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC

DISTANCE 430.388

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.991 GAL 2.61 AZL 88.31 MCA 131.91 SMA 200.20 ECC .24693 INC 1.6855 V1 29.397
RP 235.77 LAP 1.25 LOP 92.03 VP 21.515 GAP 10.04 AZP 91.13 TAL 13.24 TAP 145.15 RCA 150.76 APO 249.63 V2 23.315
RC 190.680 GL 13.89 GP -10.89 ZAL 63.84 ZAP 127.37 ETS 197.09 ZAE 156.82 ETE 241.92 ZAC 64.91 ETC 283.88 LVI 1.04

PLANETOCENTRIC CONIC

C3 16.785 VHL 4.097 DLA 21.65 RAL 15.98 RAD 8641.4 VEL 11.697 PTH 6.73 VHP 2.839 DPA -2.64 RAP 45.86 ECC 1.2762
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 31 57 3533.32 -46.70 131.20 250.63 100.35 10 30 50 2533.3 -37.41 100.89
80.00 9 45 3 3498.40 -40.13 129.20 251.77 94.07 10 43 22 2498.4 -34.14 99.84
70.00 10 5 47 3437.36 -34.14 124.47 251.97 88.99 11 3 4 2437.4 -30.98 96.19
80.00 10 42 25 3322.47 -29.52 115.49 251.70 85.31 11 37 48 2322.5 -28.47 88.12
90.00 11 48 42 3108.46 -27.66 99.57 251.50 83.86 12 40 31 2108.5 -27.44 72.86
100.00 13 25 17 2796.95 -29.52 76.86 251.70 85.31 14 11 54 1796.9 -28.47 49.48
110.00 19 5 13 2484.17 -34.14 53.38 251.97 88.99 15 46 37 1484.2 -30.98 25.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3271 TRA -.5699 TC3 .4591 BAU .4270 SGT 1042.2 SGR 1523.2 SG3 1342.8 ST 26.2 SR 8.2 SS 47.2
RDE -.1112 RRA .0545 RC3-1.8465 FAU .35481 RRT -.3580 RRF .9282 RTF -.3754 CRT .7476 CR8 .9213 CBT .8041
FDE 2.7129 FRA-1.0051 FC-18.3005 B8P 2676 SGB 1845.6 R23 -.1810 R13 .9153 LSA 52.7 M8A 14.2 B8A 3.1
BDE .3453 BRA .5725 BC3 1.9027 F8P 2263 SG1 1594.4 SG2 929.7 THA 111.32 EL1 27.0 EL2 5.3 ALF 13.68

LAUNCH DATE AUG 13 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

DISTANCE 434.161

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.980 GAL 2.61 AZL 88.26 MCA 132.89 SMA 199.97 ECC .24608 INC 1.7432 V1 29.397
RP 236.12 LAP 1.28 LOP 93.01 VP 21.459 GAP 9.78 AZP 91.19 TAL 13.26 TAP 146.15 RCA 150.76 APO 249.18 V2 23.279
RC 193.649 GL 14.17 GP -19.48 ZAL 63.84 ZAP 125.81 ETS 196.73 ZAE 155.54 ETE 239.07 ZAC 64.44 ETC 284.00 LVI 1.46

PLANETOCENTRIC CONIC

C3 16.756 VHL 4.093 DLA 22.07 RAL 15.72 RAD 8641.4 VEL 11.696 PTH 6.73 VHP 2.794 DPA -3.37 RAP 45.54 ECC 1.2758
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 28 59 3942.00 -46.81 132.01 250.73 99.73 10 28 1 2542.0 -37.72 101.49
80.00 9 41 23 3508.94 -40.18 130.10 251.79 95.47 10 39 52 2508.9 -34.41 100.60
70.00 10 1 9 3450.72 -34.12 125.51 251.91 88.30 10 58 40 2450.7 -31.22 97.16
80.00 10 36 36 3339.58 -29.42 116.75 251.57 84.65 11 32 15 2339.6 -28.65 89.35
90.00 11 42 11 3127.81 -27.51 100.96 251.34 83.17 12 34 19 2127.8 -27.59 73.96
100.00 13 19 28 2814.05 -29.42 78.12 251.57 84.65 14 6 22 1814.1 -28.65 50.72
110.00 15 0 35 2497.54 -34.12 54.43 251.91 88.38 15 42 13 1497.5 -31.22 26.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3183 TRA -.5727 TC3 .3662 BAU .4416 SGT 1018.2 SGR 1591.9 SG3 1387.0 ST 25.8 SR 8.6 SS 49.2
RDE -.0869 RRA .0442 RC3-1.9371 FAU .36542 RRT -.2955 RRF .9358 RTF -.3070 CRT .7129 CR8 .8852 CBT .7939
FDE 2.8710 FRA-1.0784 FC-18.8008 B8P 2750 SGB 1889.7 R23 -.1248 R13 .9280 LSA 54.0 M8A 14.4 B8A 3.1
BDE .3300 BRA .5744 BC3 1.9714 F8P 2347 SG1 1635.3 SG2 946.9 THA 106.30 EL1 26.2 EL2 4.6 ALF 10.88

LAUNCH DATE AUG 13 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

DISTANCE 437.938

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.989 GAL 2.60 AZL 88.20 MCA 133.86 SMA 199.78 ECC .24529 INC 1.8023 V1 29.397
RP 236.46 LAP 1.30 LOP 93.98 VP 21.404 GAP 9.52 AZP 91.25 TAL 13.28 TAP 147.14 RCA 150.76 APO 248.76 V2 23.244
RC 196.819 GL 14.67 GP -20.08 ZAL 63.87 ZAP 124.24 ETS 196.36 ZAE 154.19 ETE 236.48 ZAC 63.97 ETC 284.13 LVI 1.89

PLANETOCENTRIC CONIC

C3 16.734 VHL 4.091 DLA 22.51 RAL 15.48 RAD 8641.3 VEL 11.695 PTH 6.73 VHP 2.752 DPA -4.13 RAP 45.22 ECC 1.2754
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 25 57 3951.17 -46.91 132.88 250.87 99.07 10 25 8 2551.2 -38.05 102.13
80.00 9 37 37 3520.08 -40.22 131.04 251.83 92.83 10 38 17 2520.1 -34.70 101.40
70.00 9 56 20 3464.91 -34.09 126.82 251.87 87.72 10 54 5 2464.9 -31.48 98.20
80.00 10 30 28 3357.88 -29.29 118.10 251.46 83.95 11 28 26 2357.9 -28.83 90.68
90.00 11 35 17 3146.83 -27.33 102.46 251.20 82.44 12 27 45 2146.8 -27.74 75.4
100.00 13 13 20 2832.35 -29.29 79.47 251.46 83.95 14 0 32 1832.3 -28.83 52.03
110.00 14 55 47 2511.73 -34.09 55.53 251.87 87.72 15 37 39 1511.7 -31.48 27.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3082 TRA -.3759 TC3 .2678 BAU .4581 SGT 998.4 SGR 1663.9 SG3 1430.7 ST 25.3 SR 5.0 SS 51.3
RDE -.0611 RRA .0330 RC3-2.0302 FAU .37583 RRT -.2231 RRF .9426 RTF -.2296 CRT .6462 CR8 .8060 CBT .7816
FDE 3.0357 FRA-1.1322 FC-19.4438 B8P 2829 SGB 1940.5 R23 -.0875 R13 .9387 LSA 55.4 M8A 14.6 B8A 3.0
BDE .3142 BRA .5769 BC3 2.0478 F8P 2424 SG1 1806.1 SG2 980.4 THA 101.35 EL1 25.5 EL2 3.8 ALF 7.47

LAUNCH DATE AUG 13 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC

DISTANCE 441.716

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.959 GAL 2.60 AZL 88.14 MCA 134.82 SMA 199.57 ECC .24456 INC 1.8636 V1 29.397
RP 236.81 LAP 1.32 LOP 94.95 VP 21.331 GAP 9.26 AZP 91.31 TAL 13.28 TAP 148.11 RCA 150.76 APO 248.38 V2 23.209
RC 199.589 GL 15.18 GP -20.70 ZAL 63.93 ZAP 122.65 ETS 195.97 ZAE 152.77 ETE 234.03 ZAC 63.48 ETC 284.27 LVI 2.32

PLANETOCENTRIC CONIC

C3 16.720 VHL 4.089 DLA 22.97 RAL 15.22 RAD 8641.3 VEL 11.694 PTH 6.73 VHP 2.714 DPA -4.90 RAP 44.88 ECC 1.2782
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 22 50 3960.88 -47.01 133.79 251.05 98.38 10 22 11 2960.9 -38.39 102.81
80.00 9 33 43 3531.87 -40.25 132.04 251.91 92.15 10 32 38 2531.9 -35.00 102.86
70.00 9 51 20 3479.97 -34.04 127.79 251.85 87.03 10 49 20 2480.0 -31.70 99.30
80.00 10 24 0 3377.48 -29.15 119.53 251.38 83.21 11 20 18 2377.5 -29.01 92.11
90.00 11 27 55 3171.11 -27.12 104.07 251.06 81.88 12 20 46 2171.1 -27.88 77.08
100.00 13 6 52 2851.95 -29.15 80.90 251.38 83.21 13 54 24 1852.0 -29.01 53.49
110.00 14 50 46 2526.79 -34.04 56.71 251.85 87.03 15 32 53 1526.8 -31.70 28.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2961 TRA -.5801 TC3 .1639 BAU .4764 SGT 984.6 SGR 1738.8 SG3 1472.9 ST 24.6 SR 3.6 SS 53.3
RDE -.0341 RRA .0215 RC3-2.1250 FAU .38587 RRT -.1410 RRF .9487 RTF -.1428 CRT .4843 CR8 .5986 CBT .7881
FDE 3.2023 FRA-1.2271 FC-19.9802 B8P 2925 SGB 1998.2 R23 -.0518 R13 .9473 LSA 56.9 M8A 14.8 B8A 2.9
BDE .2981 BRA .5805 BC3 2.1313 F8P 2501 SG1 1748.8 SG2 970.3 THA 96.61 EL1 24.7 EL2 3.1 ALF 4.08

LAUNCH DATE AUG 13 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -1.00 LOL 320.11 VL 32.880 GAL 2.59 AZL 88.07 HCA 138.79 SMA 199.39 ECC .24388 INC 1.9288 V1 29.397  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.300 GAP 9.01 AZP 91.38 TAL 13.28 TAP 149.07 RCA 150.77 APO 248.02 V2 23.174  
 RC 202.937 GL 15.71 GP -21.32 ZAL 63.98 ZAP 121.06 ETS 195.58 ZAE 151.30 ETE 231.78 ZAC 63.00 ETC 284.40 LVI 2.77

PLANETOCENTRIC CONIC  
 C3 16.713 VHL 4.088 DLA 23.45 RAL 14.98 RAD 6641.3 VEL 11.694 PTH 6.73 VHP 2.678 DPA -5.39 RAP 44.54 ECC 1.2751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 19 38 3571.06 -47.11 134.76 251.26 97.64 10 19 9 2571.1 -38.74 103.53  
 60.00 9 29 41 3544.31 -40.28 133.10 252.01 91.43 10 28 45 2544.3 -35.30 103.18  
 70.00 9 46 5 3495.96 -33.98 129.03 251.85 86.30 10 44 21 2496.0 -31.95 100.48  
 80.00 10 17 9 3398.53 -28.97 121.07 251.27 82.42 11 13 48 2398.5 -29.19 93.63  
 90.00 11 20 2 3195.47 -26.87 103.81 250.92 80.83 12 13 18 2195.5 -28.01 78.86  
 100.00 13 0 1 2873.00 -28.97 82.44 251.27 82.42 13 47 54 1873.0 -29.19 55.02  
 110.00 14 45 32 2542.78 -33.98 57.95 251.85 86.30 15 27 55 1542.8 -31.95 29.40

DIFFERENTIAL CORRECTIONS  
 TDE -.2816 TRA -.5841 TC3 .0559 BAU .4969 SGT 978.7 SGR 1817.7 SG3 1914.8 ST 23.8 SR 2.8 SS 55.4  
 RDE -.0060 RRA .0090 RC3-2.2230 FAU .39581 RRT -.0518 RRF .9541 RTF -.0495 CRT .0821 CR8 .0568 CST .7465  
 FDE 3.3685 FRA-1.3070 FC-20.5028 BSP 3025 SGB 2063.5 R23 -.0199 R13 .9539 LSA 58.4 MSA 15.0 SBA 2.8  
 BDE .2817 BRA .5841 BC3 2.2237 FSP 2566 SG1 1818.7 S2 974.9 THA 92.24 EL1 23.8 EL2 2.8 ALF .55

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -1.00 LOL 320.11 VL 32.942 GAL 2.58 AZL 88.01 HCA 136.75 SMA 199.23 ECC .24325 INC 1.9917 V1 29.397  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.250 GAP 8.75 AZP 91.45 TAL 13.27 TAP 150.02 RCA 150.77 APO 247.69 V2 23.140  
 RC 205.523 GL 16.25 GP -21.96 ZAL 64.04 ZAP 119.45 ETS 195.13 ZAE 149.77 ETE 229.70 ZAC 62.50 ETC 284.54 LVI 3.23

PLANETOCENTRIC CONIC  
 C3 16.714 VHL 4.088 DLA 23.94 RAL 14.74 RAD 6641.3 VEL 11.694 PTH 6.73 VHP 2.645 DPA -6.49 RAP 44.19 ECC 1.2751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 21 3581.82 -47.20 135.78 251.50 96.85 10 16 3 2581.8 -39.10 104.30  
 60.00 9 25 30 3557.45 -40.30 134.22 252.13 90.68 10 24 47 2557.5 -35.62 104.15  
 70.00 9 40 36 3512.95 -33.89 130.35 251.86 85.92 10 39 9 2512.9 -32.20 101.75  
 80.00 10 9 51 3421.18 -28.75 122.72 251.18 81.58 11 6 53 2421.2 -29.35 95.31  
 90.00 11 11 32 3222.00 -26.57 107.69 250.78 79.93 12 5 14 2222.0 -28.13 80.79  
 100.00 12 52 43 2895.65 -28.75 84.09 251.18 81.58 13 40 59 1895.6 -29.35 56.68  
 110.00 14 40 3 2559.76 -33.89 59.27 251.86 85.92 15 22 42 1559.8 -32.20 30.66

DIFFERENTIAL CORRECTIONS  
 TDE -.2634 TRA -.5870 TC3 -.0528 BAU .5195 SGT 973.9 SGR 1900.6 SG3 1955.4 ST 22.9 SR 3.3 SS 57.3  
 RDE .0229 RRA -.0050 RC3-2.3241 FAU .40557 RRT .0416 RRF .9591 RTF .0479 CRT -.3721 CR8 -.5772 CST .7203  
 FDE 3.5313 FRA-1.3939 FC-21.0067 BSP 3133 SGB 2135.6 R23 .0082 R13 .9591 LSA 59.9 MSA 15.2 SBA 2.7  
 BDE .2644 BRA .5871 BC3 2.3247 FSP 2622 SG1 1901.2 S2 972.7 THA 88.34 EL1 22.9 EL2 3.0 ALF 176.90

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 198.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -1.00 LOL 320.11 VL 32.935 GAL 2.58 AZL 87.94 HCA 137.71 SMA 199.08 ECC .24266 INC 2.0589 V1 29.397  
 RP 237.81 LAP 1.39 LOP 97.83 VP 21.202 GAP 8.50 AZP 91.52 TAL 13.25 TAP 150.98 RCA 150.77 APO 247.39 V2 23.106  
 RC 208.485 GL 16.80 GP -22.82 ZAL 64.13 ZAP 117.84 ETS 194.88 ZAE 148.21 ETE 227.76 ZAC 62.00 ETC 284.69 LVI 3.69

PLANETOCENTRIC CONIC  
 C3 16.723 VHL 4.089 DLA 24.45 RAL 14.51 RAD 6641.3 VEL 11.694 PTH 6.73 VHP 2.616 DPA -7.32 RAP 43.83 ECC 1.2752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 12 58 3593.18 -47.28 136.87 251.78 96.02 10 12 51 2593.2 -39.48 105.13  
 60.00 9 21 9 3571.36 -40.30 135.40 252.28 89.87 10 20 40 2571.4 -35.94 105.19  
 70.00 9 34 50 3531.05 -33.79 131.75 251.90 84.70 10 33 41 2531.1 -32.45 103.10  
 80.00 10 2 2 3445.72 -28.49 124.50 251.10 80.68 10 59 27 2445.7 -29.51 97.12  
 90.00 11 2 18 3251.17 -26.20 109.75 250.64 78.96 11 36 27 2251.2 -28.21 82.92  
 100.00 12 44 53 2920.19 -28.49 85.87 251.10 80.68 13 33 34 1920.2 -29.51 58.49  
 110.00 14 34 18 2577.87 -33.79 60.67 251.90 84.70 15 17 14 1577.9 -32.45 32.02

DIFFERENTIAL CORRECTIONS  
 TDE -.2529 TRA -.6005 TC3 -.1901 BAU .5419 SGT 1001.8 SGR 1978.0 SG3 1988.3 ST 22.5 SR 3.0 SS 59.8  
 RDE .0578 RRA -.0131 RC3-2.4163 FAU .41287 RRT .1514 RRF .9631 RTF .1582 CRT -.5839 CR8 -.8609 CST .6988  
 FDE 3.7375 FRA-1.4404 FC-21.3734 BSP 3319 SGB 2217.3 R23 .0383 R13 .9625 LSA 62.3 MSA 15.9 SBA 2.5  
 BDE .2590 BRA .6007 BC3 2.4238 FSP 2720 SG1 1985.8 S2 986.4 THA 84.17 EL1 22.7 EL2 4.0 ALF 172.32

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -1.00 LOL 320.11 VL 32.928 GAL 2.57 AZL 87.87 HCA 138.87 SMA 198.95 ECC .24212 INC 2.1284 V1 29.397  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.184 GAP 8.26 AZP 91.60 TAL 13.22 TAP 151.88 RCA 150.78 APO 247.12 V2 23.073  
 RC 211.443 GL 17.37 GP -23.28 ZAL 64.25 ZAP 116.23 ETS 194.21 ZAE 146.80 ETE 226.85 ZAC 61.49 ETC 284.83 LVI 4.17

PLANETOCENTRIC CONIC  
 C3 16.740 VHL 4.091 DLA 24.99 RAL 14.29 RAD 6641.4 VEL 11.695 PTH 6.73 VHP 2.589 DPA -8.15 RAP 43.47 ECC 1.2753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 27 3605.13 -47.36 138.01 252.10 95.14 10 9 32 2605.1 -39.87 106.00  
 60.00 9 16 37 3586.04 -40.29 136.85 252.46 89.03 10 16 23 2586.0 -36.27 106.30  
 70.00 9 28 44 3550.31 -33.66 133.24 251.94 83.83 10 27 55 2550.3 -32.69 104.55  
 80.00 9 53 35 3472.34 -28.19 126.42 251.01 79.72 10 51 28 2472.3 -29.64 99.09  
 90.00 10 52 5 3283.43 -25.76 112.01 250.46 77.91 11 46 48 2283.4 -28.27 85.28  
 100.00 12 36 27 2948.82 -28.19 87.79 251.01 79.72 13 25 34 1948.8 -29.64 60.46  
 110.00 14 28 11 2597.13 -33.66 62.16 251.94 83.83 15 11 28 1597.1 -32.69 33.46

DIFFERENTIAL CORRECTIONS  
 TDE -.2339 TRA -.6093 TC3 -.3189 BAU .5674 SGT 1030.3 SGR 2082.4 SG3 1822.0 ST 21.6 SR 7.1 SS 62.2  
 RDE .0915 RRA -.0282 RC3-2.5149 FAU .42084 RRT .2523 RRF .9689 RTF .2606 CRT -.6119 CR8 -.9389 CST .6639  
 FDE 3.9208 FRA-1.5085 FC-21.7535 BSP 3479 SGB 2305.4 R23 .0574 R13 .9654 LSA 64.3 MSA 15.7 SBA 2.4  
 BDE .2512 BRA .6099 BC3 2.5351 FSP 2784 SG1 2083.5 S2 986.8 THA 80.72 EL1 22.1 EL2 5.5 ALF 167.80

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 13 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 32.921 GAL 2.55 AZL 87.80 HCA 139.62 SMA 198.83 ECC .24163 INC 2.2004 V1 29.397  
 RP 238.47 LAP 1.43 LOP 99.75 VP 21.109 GAP 8.01 AZP 91.68 TAL 13.18 TAP 152.80 RCA 150.78 APO 246.87 V2 23.040  
 RC 214.394 GL 17.96 GP -23.95 ZAL 64.37 ZAP 114.61 ETS 193.72 ZAE 144.96 ETE 224.26 ZAC 60.98 ETC 284.98 LVI 4.66

DISTANCE 460.630

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 16.766 VHL 4.095 DLA 25.54 RAL 14.06 RAD 6641.4 VEL 11.696 PTH 6.73 VHP 2.565 DPA -9.01 RAP 243.11 ECC 1.2759  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 49 3617.72 -47.43 139.22 252.45 94.22 10 6 7 2617.7 -40.28 106.94  
 60.00 9 11 53 3601.55 -40.26 137.97 252.65 88.13 10 11 54 2601.6 -36.60 107.48  
 70.00 9 22 17 3570.87 -33.50 134.83 251.99 82.90 10 21 48 2570.9 -32.94 106.10  
 80.00 9 44 24 3501.46 -27.81 128.50 250.92 78.68 10 42 46 2501.5 -29.75 101.24  
 90.00 10 40 42 3319.65 -25.22 114.52 250.29 76.77 11 36 1 2319.6 -28.28 87.93  
 100.00 12 27 16 2975.93 -27.81 89.87 250.92 78.68 13 16 52 1975.9 -29.75 62.61  
 110.00 14 21 44 2617.69 -33.50 63.74 251.99 82.90 15 5 21 1617.7 -32.94 35.02

DIFFERENTIAL CORRECTIONS

TDE -.2131 TRA -.6189 TC3 -.4920 BAW .5948  
 RDE .1271 RRA -.0422 RC3-2.6147 FAU .42786  
 FDE 4.1032 FRA-1.3791 FC-22.0930 B8P 3653  
 BDE .2481 BRA .6203 BC3 2.6535 F8P 2842

MID-COURSE EXECUTION ACCURACY

SGT 1071.1 SGR 2149.6 S63 1653.6  
 RRT .3485 RRF .9703 RTF .3578  
 SGB 2401.7 R23 .0746 R13 .9677  
 SG1 2190.3 S62 985.3 THA 77.60

ORBIT DETERMINATION ACCURACY

ST 20.7 SR 9.5 S8 64.4  
 CRT -.5919 CRS -.9685 CST .6200  
 LSA 66.4 MSA 15.9 S8A 2.3  
 EL1 21.6 EL2 7.4 ALF 162.76

LAUNCH DATE AUG 13 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 32.916 GAL 2.54 AZL 87.72 HCA 140.57 SMA 198.71 ECC .24117 INC 2.2781 V1 29.397  
 RP 239.79 LAP 1.44 LOP 100.70 VP 21.065 GAP 7.76 AZP 91.76 TAL 13.13 TAP 153.70 RCA 150.79 APO 246.84 V2 23.008  
 RC 217.340 GL 18.57 GP -24.64 ZAL 64.52 ZAP 113.00 ETS 193.21 ZAE 143.29 ETE 222.87 ZAC 60.48 ETC 285.14 LVI 5.16

DISTANCE 464.416

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 16.800 VHL 4.099 DLA 26.12 RAL 13.84 RAD 6641.4 VEL 11.698 PTH 6.73 VHP 2.545 DPA -9.87 RAP 242.75 ECC 1.2788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 2 3630.97 -47.49 140.50 252.83 93.23 10 2 33 2631.0 -40.60 107.94  
 60.00 9 6 55 3617.98 -40.22 139.36 252.87 87.19 10 7 13 2618.0 -36.95 108.74  
 70.00 9 15 25 3592.86 -33.30 136.51 252.04 81.92 10 15 10 2592.9 -33.17 107.77  
 80.00 9 34 18 3533.58 -27.36 130.78 250.80 77.56 10 33 12 2533.6 -29.83 103.63  
 90.00 10 27 41 3361.13 -24.55 117.37 250.05 75.50 11 23 42 2361.1 -26.21 90.96  
 100.00 12 17 10 3008.05 -27.36 92.15 250.80 77.56 13 7 18 2008.0 -29.83 65.00  
 110.00 14 14 52 2639.68 -33.30 65.43 252.04 81.92 14 58 51 1639.7 -33.17 36.69

DIFFERENTIAL CORRECTIONS

TDE -.1903 TRA -.6297 TC3 -.5900 BAW .6236  
 RDE .1653 RRA -.0559 RC3-2.7130 FAU .43405  
 FDE 4.2942 FRA-1.6398 FC-22.3669 B8P 3844  
 BDE .2521 BRA .6322 BC3 2.7764 F8P 2696

MID-COURSE EXECUTION ACCURACY

SGT 1125.1 SGR 2237.7 S63 1661.5  
 RRT .4367 RRF .9734 RTF .4464  
 SGB 2504.6 R23 .0867 R13 .9696  
 SG1 2303.5 S62 983.2 THA 74.78

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 12.1 S8 66.8  
 CRT -.5502 CRS -.9821 CST .5654  
 LSA 68.8 MSA 16.1 S8A 2.2  
 EL1 21.2 EL2 9.4 ALF 156.56

LAUNCH DATE AUG 13 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 32.911 GAL 2.93 AZL 87.65 HCA 141.52 SMA 198.62 ECC .24076 INC 2.3526 V1 29.397  
 RP 239.10 LAP 1.46 LOP 101.65 VP 21.022 GAP 7.52 AZP 91.84 TAL 13.08 TAP 154.60 RCA 150.80 APO 246.43 V2 22.975  
 RC 220.278 GL 19.20 GP -25.33 ZAL 64.68 ZAP 111.39 ETS 192.68 ZAE 141.59 ETE 221.17 ZAC 59.93 ETC 285.29 LVI 5.67

DISTANCE 468.202

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 16.844 VHL 4.104 DLA 26.72 RAL 13.61 RAD 6641.4 VEL 11.700 PTH 6.73 VHP 2.527 DPA -10.75 RAP 242.38 ECC 1.2778  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 5 3644.93 -47.54 141.84 253.25 92.20 9 58 50 2644.9 -41.12 109.00  
 60.00 9 1 41 3635.32 -40.15 140.84 253.10 86.19 10 2 16 2635.3 -37.29 110.08  
 70.00 9 8 5 3616.45 -33.06 138.31 252.10 80.89 10 8 22 2616.4 -33.40 109.57  
 80.00 9 23 3 3569.44 -26.81 133.30 250.65 76.35 10 22 33 2569.4 -29.86 106.29  
 90.00 10 12 20 3410.22 -23.67 120.70 249.73 74.05 11 9 10 2410.2 -26.04 94.54  
 100.00 12 5 55 3043.92 -26.81 94.67 250.65 76.35 12 56 39 2043.9 -29.86 67.68  
 110.00 14 7 32 2663.27 -33.06 67.23 252.10 80.89 14 51 55 1663.3 -33.40 36.49

DIFFERENTIAL CORRECTIONS

TDE -.1643 TRA -.6411 TC3 -.7311 BAW .6546  
 RDE .2040 RRA -.0716 RC3-2.8134 FAU .43968  
 FDE 4.4712 FRA-1.7119 FC-22.6073 B8P 4041  
 BDE .2620 BRA .6450 BC3 2.9068 F8P 2937

MID-COURSE EXECUTION ACCURACY

SGT 1190.2 SGR 2329.5 S63 1707.3  
 RRT .5167 RRF .9761 RTF .5266  
 SGB 2615.9 R23 .0994 R13 .9713  
 SG1 2426.1 S62 978.5 THA 72.23

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 14.8 S8 69.0  
 CRT -.4838 CRS -.9889 CST .4937  
 LSA 71.1 MSA 16.3 S8A 2.1  
 EL1 21.0 EL2 11.6 ALF 148.76

LAUNCH DATE AUG 13 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -.00 LOL 320.11 VL 32.906 GAL 2.51 AZL 87.57 HCA 142.46 SMA 198.53 ECC .24038 INC 2.4333 V1 29.397  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.980 GAP 7.28 AZP 91.93 TAL 13.02 TAP 155.48 RCA 150.81 APO 246.25 V2 22.944  
 RC 223.209 GL 19.85 GP -26.04 ZAL 64.86 ZAP 109.78 ETS 192.12 ZAE 139.87 ETE 219.74 ZAC 59.39 ETC 285.45 LVI 6.20

DISTANCE 471.990

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 16.898 VHL 4.111 DLA 27.34 RAL 13.39 RAD 6641.4 VEL 11.702 PTH 6.74 VHP 2.512 DPA -11.64 RAP 242.03 ECC 1.2781  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 57 3659.64 -47.57 143.26 253.69 91.10 9 54 57 2659.6 -41.56 110.14  
 60.00 8 56 10 3653.72 -40.06 142.39 253.35 85.14 9 57 4 2653.7 -37.64 111.52  
 70.00 9 0 12 3641.85 -32.77 140.23 252.16 79.78 10 0 54 2641.8 -33.61 111.53  
 80.00 9 10 16 3610.22 -26.13 136.14 250.45 75.01 10 10 26 2610.2 -29.82 109.32  
 90.00 9 53 0 3472.10 -22.45 124.82 249.27 72.34 10 50 52 2472.1 -27.68 99.03  
 100.00 11 53 8 3084.69 -26.13 97.51 250.45 75.01 12 44 32 2084.7 -29.82 70.69  
 110.00 13 59 38 2668.67 -32.77 69.15 252.16 79.78 14 44 27 1688.7 -33.61 40.44

DIFFERENTIAL CORRECTIONS

TDE -.1348 TRA -.6525 TC3 -.8731 BAW .6870  
 RDE .2447 RRA -.0875 RC3-2.9132 FAU .44481  
 FDE 4.6471 FRA-1.7787 FC-22.7895 B8P 4248  
 BDE .2794 BRA .6583 BC3 3.0412 F8P 2966

MID-COURSE EXECUTION ACCURACY

SGT 1264.4 SGR 2423.1 S63 1729.7  
 RRT .5861 RRF .9785 RTF .5961  
 SGB 2733.1 R23 .1067 R13 .9731  
 SG1 2554.6 S62 971.7 THA 69.98

ORBIT DETERMINATION ACCURACY

ST 18.0 SR 17.5 S8 71.1  
 CRT -.3942 CRS -.9927 CST .4010  
 LSA 73.6 MSA 16.4 S8A 2.0  
 EL1 21.0 EL2 13.8 ALF 136.99

LAUNCH DATE AUG 13 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC										DISTANCE 475.776										EARTH TO MARS																																																																																																																																																																															
RL	151.56	LAL	-.00	LOL	320.11	VL	32.802	GAL	2.50	AZL	87.48	HCA	143.41	SMA	198.45	ECC	.24003	INC	2.5172	V1	29.397	RP	239.73	LAP	1.30	LOP	103.84	VP	20.939	GAP	7.03	AZP	92.02	TAL	12.95	TAP	136.36	RCA	150.81	APO	246.08	V2	22.912	RC	226.132	GL	20.52	GP	-26.75	ZAL	65.06	ZAP	106.19	ETA	191.94	ZAE	136.14	ETE	218.39	ZAC	58.95	ETC	285.61	LVI	6.74																																																																																																																																		
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																															
C3	16.962	VHL	4.118	DLA	27.99	RAL	13.16	RAD	6641.5	VEL	11.705	PTH	6.74	VHP	2.500	DPA	-12.54	RAP	41.68	ECC	1.2791	ST	17.5	SR	20.7	SS	73.6	CRT	-.2955	CRS	-.9952	CST	-.2982	LSA	76.6	MSA	16.7	SSA	1.9	EL1	22.1	EL2	15.6	ALF	120.27																																																																																																																																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1359.9	SGR	2512.8	SG3	1744.9	RRT	.6451	RRF	.9806	RTF	.6541	SCB	2857.2	R23	.1162	R13	.9741	SG1	2886.9	SG2	971.8	THA	67.68																																																																																																																																																		
50.00	8 49 37	3675.16		-47.58	144.77	254.18		89.95	9 50 53	2675.2		-42.01	111.35	50.00	8 49 37	3675.16		-47.58	144.77	254.18		89.95	9 50 53	2675.2		-42.01	111.35	60.00	8 50 20	3673.26		-39.93	144.04	253.62		84.03	9 51 33	2673.3		-37.98	113.06	60.00	8 50 20	3673.26		-39.93	144.04	253.62		84.03	9 51 33	2673.3		-37.98	113.06	70.00	8 51 39	3669.36		-32.42	142.30	252.20		78.61	9 52 49	2669.4		-33.80	113.65	70.00	8 51 39	3669.36		-32.42	142.30	252.20		78.61	9 52 49	2669.4		-33.80	113.65	80.00	8 55 17	3657.98		-25.24	139.41	250.17		73.50	9 56 15	2658.0		-29.67	112.87	80.00	8 55 17	3657.98		-25.24	139.41	250.17		73.50	9 56 15	2658.0		-29.67	112.87	90.00	9 23 54	3565.39		-20.39	130.89	248.43		69.97	10 23 19	2565.4		-26.84	105.72	90.00	9 23 54	3565.39		-20.39	130.89	248.43		69.97	10 23 19	2565.4		-26.84	105.72	100.00	11 38 8	3132.46		-25.24	100.78	250.17		73.50	12 30 21	2132.5		-29.67	74.23	100.00	11 38 8	3132.46		-25.24	100.78	250.17		73.50	12 30 21	2132.5		-29.67	74.23	110.00	13 51 6	2716.18		-32.42	71.22	252.20		78.61	14 36 22	1716.2		-33.80	42.57	110.00	13 51 6	2716.18		-32.42	71.22	252.20		78.61	14 36 22	1716.2		-33.80	42.57

LAUNCH DATE AUG 13 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC										DISTANCE 479.564										EARTH TO MARS																																																																																																																																																																															
RL	151.56	LAL	-.00	LOL	320.11	VL	32.899	GAL	2.48	AZL	87.40	HCA	144.35	SMA	198.38	ECC	.23972	INC	2.6047	V1	29.397	RP	240.03	LAP	1.52	LOP	104.48	VP	20.900	GAP	6.80	AZP	92.12	TAL	12.87	TAP	157.22	RCA	150.82	APO	245.94	V2	22.882	RC	229.048	GL	21.22	GP	-27.47	ZAL	65.27	ZAP	106.61	ETA	190.93	ZAE	136.40	ETE	217.11	ZAC	58.30	ETC	285.78	LVI	7.29																																																																																																																																		
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																															
C3	17.037	VHL	4.128	DLA	28.66	RAL	12.93	RAD	6641.5	VEL	11.708	PTH	6.74	VHP	2.491	DPA	-13.46	RAP	41.34	ECC	1.2804	ST	17.1	SR	23.8	SS	75.9	CRT	-.1664	CRS	-.9967	CST	-.1673	LSA	79.6	MSA	16.8	SSA	1.9	EL1	24.1	EL2	16.6	ALF	103.07																																																																																																																																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1459.7	SGR	2607.5	SG3	1758.7	RRT	.6950	RRF	.9825	RTF	.7034	SCB	2988.3	R23	.1219	R13	.9753	SG1	2827.2	SG2	967.9	THA	65.71																																																																																																																																																		
50.00	8 45 4	3691.53		-47.56	146.35	254.68		88.73	9 46 36	2691.5		-42.47	112.66	50.00	8 45 4	3691.53		-47.56	146.35	254.68		88.73	9 46 36	2691.5		-42.47	112.66	60.00	8 44 8	3694.02		-39.77	145.78	253.89		82.85	9 45 42	2694.0		-38.33	114.72	60.00	8 44 8	3694.02		-39.77	145.78	253.89		82.85	9 45 42	2694.0		-38.33	114.72	70.00	8 42 21	3699.30		-31.99	144.53	252.22		77.35	9 44 0	2699.3		-33.96	115.97	70.00	8 42 21	3699.30		-31.99	144.53	252.22		77.35	9 44 0	2699.3		-33.96	115.97	80.00	8 36 46	3716.84		-24.05	143.37	249.73		71.75	9 38 43	2716.8		-29.35	117.21	80.00	8 36 46	3716.84		-24.05	143.37	249.73		71.75	9 38 43	2716.8		-29.35	117.21	85.16	8 6 49	3813.44		-17.71	147.94	247.19		67.10	9 10 22	2813.4		-25.62	123.61	85.16	8 6 49	3813.44		-17.71	147.94	247.19		67.10	9 10 22	2813.4		-25.62	123.61	100.00	11 19 38	3191.31		-24.05	104.74	249.73		71.75	12 12 49	2191.3		-29.35	78.58	100.00	11 19 38	3191.31		-24.05	104.74	249.73		71.75	12 12 49	2191.3		-29.35	78.58	110.00	13 41 47	2746.12		-31.99	73.45	252.22		77.35	14 27 33	1746.1		-33.96	44.89	110.00	13 41 47	2746.12		-31.99	73.45	252.22		77.35	14 27 33	1746.1		-33.96	44.89

LAUNCH DATE AUG 13 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC										DISTANCE 483.352										EARTH TO MARS																																																																																																																																																																															
RL	151.56	LAL	-.00	LOL	320.11	VL	32.898	GAL	2.46	AZL	87.30	HCA	145.29	SMA	198.32	ECC	.23944	INC	2.6962	V1	29.397	RP	240.34	LAP	1.54	LOP	105.42	VP	20.862	GAP	6.56	AZP	92.22	TAL	12.79	TAP	158.07	RCA	150.83	APO	245.81	V2	22.851	RC	231.955	GL	21.94	GP	-28.21	ZAL	65.50	ZAP	105.04	ETA	190.31	ZAE	134.65	ETE	215.87	ZAC	57.74	ETC	285.94	LVI	7.86																																																																																																																																		
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																															
C3	17.125	VHL	4.138	DLA	29.35	RAL	12.89	RAD	6641.5	VEL	11.711	PTH	6.74	VHP	2.485	DPA	-14.38	RAP	41.00	ECC	1.2818	ST	16.9	SR	27.0	SS	77.9	CRT	-.0061	CRS	-.9978	CST	.0070	LSA	82.4	MSA	16.9	SSA	1.8	EL1	27.0	EL2	16.9	ALF	90.36																																																																																																																																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1562.2	SGR	2706.0	SG3	1770.0	RRT	.7384	RRF	.9842	RTF	.64	SCB	3124.6	R23	.1239	R13	.9768	SG1	2973.9	SG2	958.6	THA	64.01																																																																																																																																																		
50.00	8 40 16	3708.80		-47.52	148.02	255.22		87.44	9 42 4	2708.8		-42.94	114.05	50.00	8 40 16	3708.80		-47.52	148.02	255.22		87.44	9 42 4	2708.8		-42.94	114.05	60.00	8 37 31	3716.13		-39.57	147.63	254.17		81.82	9 39 27	2716.1		-38.67	116.90	60.00	8 37 31	3716.13		-39.57	147.63	254.17		81.82	9 39 27	2716.1		-38.67	116.90	70.00	8 32 5	3732.15		-31.48	146.96	252.21		76.00	9 34 17	2732.1		-34.08	118.93	70.00	8 32 5	3732.15		-31.48	146.96	252.21		76.00	9 34 17	2732.1		-34.08	118.93	80.00	8 10 49	3799.14		-22.18	148.78	248.98		69.49	9 14 9	2799.1		-28.64	123.22	80.00	8 10 49	3799.14		-22.18	148.78	248.98		69.49	9 14 9	2799.1		-28.64	123.22	81.79	7 38 38	3902.33		-18.08	154.85	247.21		66.48	8 43 40	2902.3		-28.21	130.31	81.79	7 38 38	3902.33		-18.08	154.85	247.21		66.48	8 43 40	2902.3		-28.21	130.31	100.00	10 53 41	3273.62		-22.18	110.14	248.98		69.49	11 48 15	2273.6		-28.64	84.59	100.00	10 53 41	3273.62		-22.18	110.14	248.98		69.49	11 48 15	2273.6		-28.64	84.59	110.00	13 31 31	2778.97		-31.48	75.87	252.21		76.00	14 17 50	1779.0		-34.08	47.43	110.00	13 31 31	2778.97		-31.48	75.87	252.21		76.00	14 17 50	1779.0		-34.08	47.43

LAUNCH DATE AUG 13 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC										DISTANCE 487.139										EARTH TO MARS																																													
RL	151.56	LAL	-.00	LOL	320.11	VL	32.893	GAL	2.44	AZL	87.21	HCA	146.22	SMA	198.27	ECC	.23920	INC	2.7917	V1	29.397	RP	240.63	LAP	1.55	LOP	106.36	VP	20.825	GAP	6.32	AZP	92.32	TAL	12.70	TAP	158.92	RCA	150.85	APO	245.70	V2	22.821	RC	234.852	GL	22.68	GP	-28.96	ZAL	65.75	ZAP	103.49	ETA	189.66	ZAE	132.89	ETE	214.86	ZAC	57.17	ETC	286.11	LVI	8.44
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	17.226	VHL	4.150	DLA	30.08	RAL	12.44	RAD	6641.6	VEL	11.716	PTH	6.75	VHP	2.482	DPA	-15.31	RAP	40.69	ECC	1.2835	ST	17.3	SR	30.6	SS	80.3	CRT	-.1453	CRS	-.9983	CST	-.1462	LSA	86.0	MSA	17.1	SSA	1.7	EL1	30.7	EL2	17.0	ALF	83.22																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1663.6	SGR	2798.2	SG3	1772.6	RRT	.7725	RRF	.9857	RTF	.7795	SCB	3265.6	R23	.1293	R13	.9776	SG1	3121.9	SG2	958.2	THA	62.23																
50.00	8 35 10	3727.08		-47.45	149.78	255.78		86.09	9 37 17	2727.1		-43.																																																					

LAUNCH DATE AUG 13 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 32.891 GAL 2.42 AZL 87.11 HCA 147.16 SMA 198.23 ECC .23898 INC 2.8918 V1 29.397  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.789 GAP 6.08 AZP 92.43 TAL 12.60 TAP 159.75 RCA 150.86 APO 245.60 V2 22.792  
 RC 237.739 GL 23.48 GP -29.71 ZAL 66.01 ZAP 101.97 ETS 188.98 ZAE 131.14 ETE 213.55 ZAC 56.59 ETC 286.29 LVI 9.03

DISTANCE 490.928  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.341 VHL 4.164 DLA 30.83 RAL 12.19 RAD 6641.6 VEL 11.721 PTH 6.75 VHP 2.482 DPA -16.25 RAP 40.39 ECC 1.2854  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 46 3746.42 -47.35 151.64 256.37 64.66 9 32 13 2746.4 -43.88 117.17  
 60.00 8 22 47 3765.08 -39.00 151.67 254.72 78.93 9 25 32 2765.1 -39.30 120.51  
 70.00 8 7 38 3809.80 -30.06 152.56 252.01 72.97 9 11 8 2809.0 -34.13 124.59  
 77.17 7 1 50 4016.16 -18.86 163.49 247.31 65.14 8 8 47 3016.2 -27.45 139.14  
 77.17 7 1 50 4016.16 -18.86 163.49 247.31 65.14 8 8 47 3016.2 -27.45 139.14  
 77.17 7 1 50 4016.16 -18.86 163.49 247.31 65.14 8 8 47 3016.2 -27.45 139.14  
 110.00 13 7 5 2856.62 -30.06 81.48 252.01 72.97 13 54 41 1856.6 -34.13 53.51

DIFFERENTIAL CORRECTIONS  
 TDE .0460 TRA -.7367 TC3-1.6420 BAU .8680 SGT 1807.6 SGR 2894.9 SG3 1773.1 ST 18.1 SR 34.1 SS 82.5  
 RDE .4888 RRA -.1697 RC3-3.3651 FAU .45178 RRT .8019 RRF .9870 RTF .8081 CRT .3032 CRS -.9987 CST -.3045  
 FDE 5.5288 FRA -2.0132 FC-22.5548 B8P 5501 SGB 3412.9 R23 .1318 R13 .9786 LSA 89.4 MSA 17.2 SSA 1.6  
 BDE .4909 BRA .7560 BC3 3.7443 F8P 3063 SG1 3276.9 SG2 954.2 THA 60.68 EL1 34.7 EL2 17.0 ALF 77.94

LAUNCH DATE AUG 13 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 32.889 GAL 2.40 AZL 87.00 HCA 148.09 SMA 198.20 ECC .23879 INC 2.9968 V1 29.397  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.755 GAP 5.85 AZP 92.54 TAL 12.49 TAP 160.58 RCA 150.87 APO 245.52 V2 22.763  
 RC 240.615 GL 24.27 GP -30.48 ZAL 66.30 ZAP 100.47 ETS 188.28 ZAE 129.39 ETE 212.45 ZAC 56.00 ETC 286.46 LVI 9.65

DISTANCE 494.713  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.472 VHL 4.180 DLA 31.62 RAL 11.92 RAD 6641.7 VEL 11.726 PTH 6.76 VHP 2.485 DPA -17.19 RAP 40.10 ECC 1.2875  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 0 3766.91 -47.20 153.60 256.97 83.16 9 26 47 2766.9 -44.36 118.91  
 60.00 8 14 30 3792.31 -38.62 153.88 254.97 77.47 9 17 42 2792.3 -39.59 122.76  
 70.00 7 52 29 3857.37 -29.07 155.90 251.75 71.22 8 56 47 2857.4 -34.00 128.30  
 75.23 6 47 9 4060.82 -19.25 167.06 247.38 64.42 7 54 50 3060.8 -28.10 142.71  
 75.23 6 47 9 4060.82 -19.25 167.06 247.38 64.42 7 54 50 3060.8 -28.10 142.71  
 75.23 6 47 9 4060.82 -19.25 167.06 247.38 64.42 7 54 50 3060.8 -28.10 142.71  
 110.00 12 51 56 2904.19 -29.07 84.82 251.75 71.22 13 40 20 1904.2 -34.00 57.22

DIFFERENTIAL CORRECTIONS  
 TDE .0920 TRA -.7570 TC3-1.7971 BAU .9077 SGT 1938.5 SGR 2990.9 SG3 1768.3 ST 19.5 SR 37.9 SS 84.6  
 RDE .5452 RRA -.1879 RC3-3.4452 FAU .44985 RRT .8261 RRF .9882 RTF .8316 CRT .4451 CRS -.9991 CST -.4466  
 FDE 5.6870 FRA -2.0478 FC-22.2897 B8P 5781 SGB 3564.1 R23 .1342 R13 .9795 LSA 93.1 MSA 17.3 SSA 1.5  
 BDE .5529 BRA .7800 BC3 3.8857 F8P 3060 SG1 3434.9 SG2 951.1 THA 59.22 EL1 39.1 EL2 16.9 ALF 74.07

LAUNCH DATE AUG 13 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 32.888 GAL 2.38 AZL 86.89 HCA 149.02 SMA 198.17 ECC .23862 INC 3.1072 V1 29.397  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.721 GAP 5.62 AZP 92.66 TAL 12.38 TAP 161.40 RCA 150.89 APO 245.46 V2 22.734  
 RC 243.479 GL 25.11 GP -31.26 ZAL 66.60 ZAP 98.99 ETS 187.58 ZAE 127.64 ETE 211.38 ZAC 55.39 ETC 286.64 LVI 10.28

DISTANCE 498.499  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.621 VHL 4.198 DLA 32.43 RAL 11.64 RAD 6641.8 VEL 11.732 PTH 6.76 VHP 2.492 DPA -18.13 RAP 39.84 ECC 1.2900  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 51 3788.88 -47.00 155.66 257.58 81.58 9 20 59 2788.7 -44.84 120.79  
 60.00 8 5 28 3821.73 -38.16 156.24 255.20 75.93 9 9 10 2821.7 -39.85 125.22  
 70.00 7 34 3 3914.74 -27.74 159.84 251.31 69.23 8 39 17 2914.7 -33.68 132.75  
 73.42 6 33 49 4100.94 -19.66 170.32 247.46 63.67 7 42 10 3100.9 -28.78 145.97  
 73.42 6 33 49 4100.94 -19.66 170.32 247.46 63.67 7 42 10 3100.9 -28.78 145.97  
 73.42 6 33 49 4100.94 -19.66 170.32 247.46 63.67 7 42 10 3100.9 -28.78 145.97  
 110.00 12 33 29 2961.56 -27.74 88.76 251.31 69.23 13 22 51 1961.6 -33.68 61.66

DIFFERENTIAL CORRECTIONS  
 TDE .1420 TRA -.7783 TC3-1.9502 BAU .9489 SGT 2074.3 SGR 3088.7 SG3 1759.8 ST 21.4 SR 41.8 SS 86.6  
 RDE .6043 RRA -.2084 RC3-3.5226 FAU .44703 RRT .8469 RRF .9893 RTF .8318 CRT .5667 CRS -.9993 CST -.5661  
 FDE 5.8331 FRA -2.0894 FC-21.9628 B8P 6064 SGB 3720.6 R23 .1355 R13 .9804 LSA 97.0 MSA 17.4 SSA 1.4  
 BDE .6207 BRA .8057 BC3 4.0264 F8P 3044 SG1 3598.1 SG2 946.7 THA 57.88 EL1 43.8 EL2 16.8 ALF 70.94

LAUNCH DATE AUG 13 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 32.887 GAL 2.35 AZL 86.78 HCA 149.94 SMA 198.18 ECC .23848 INC 3.2234 V1 29.397  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.689 GAP 5.39 AZP 92.79 TAL 12.26 TAP 162.20 RCA 150.89 APO 245.40 V2 22.706  
 RC 246.330 GL 25.98 GP -32.06 ZAL 66.92 ZAP 97.55 ETS 186.82 ZAE 125.91 ETE 210.34 ZAC 54.77 ETC 286.83 LVI 10.93

DISTANCE 502.285  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.789 VHL 4.218 DLA 33.28 RAL 11.34 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 2.501 DPA -19.11 RAP 39.61 ECC 1.2928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 13 3811.83 -46.75 157.84 258.20 79.92 9 14 45 2811.8 -45.30 122.83  
 60.00 7 55 32 3853.72 -37.60 158.78 255.37 74.29 8 59 46 2853.7 -40.07 127.92  
 70.00 7 9 23 3990.62 -25.81 164.89 250.49 66.81 8 15 53 2990.6 -32.98 138.56  
 71.67 6 21 24 4137.90 -20.06 173.38 247.56 62.87 7 30 21 3137.9 -29.47 149.04  
 71.67 6 21 24 4137.90 -20.06 173.38 247.56 62.87 7 30 21 3137.9 -29.47 149.04  
 71.67 6 21 24 4137.90 -20.06 173.38 247.56 62.87 7 30 21 3137.9 -29.47 149.04  
 110.00 12 8 49 3037.44 -25.81 93.81 250.49 66.81 12 59 27 2037.4 -32.98 67.47

DIFFERENTIAL CORRECTIONS  
 TDE .1957 TRA -.8010 TC3-2.1010 BAU .9901 SGT 2215.0 SGR 3185.6 SG3 1745.9 ST 23.8 SR 45.8 SS 88.6  
 RDE .6665 RRA -.2283 RC3-3.5939 FAU .44291 RRT .8810 RRF .9903 RTF .8683 CRT .6632 CRS -.9995 CST -.6644  
 FDE 5.9749 FRA -2.1170 FC-21.5549 B8P 6356 SGB 3880.0 R23 .1367 R13 .9812 LSA 101.0 MSA 17.5 SSA 1.3  
 BDE .6947 BRA .8329 BC3 4.1630 F8P 3022 SG1 3765.4 SG2 943.9 THA 56.63 EL1 48.8 EL2 16.7 ALF 68.37

LAUNCH DATE AUG 13 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC										EARTH TO MARS												
RL	151.56	LAL	-0.00	LOL	320.11	VL	32.886	GAL	2.33	AZL	86.65	HCA	150.87	SMA	198.14	ECC	.23837	INC	3.3460	V1	29.397	
RP	242.06	LAP	1.63	LOP	111.02	VP	20.658	GAP	5.16	AZP	92.92	TAL	12.14	TAP	163.00	RCA	150.91	APO	245.37	V2	22.679	
RC	249.167	GL	26.89	GP	-32.87	ZAL	67.25	ZAP	96.14	ETS	186.06	ZAE	124.18	ETE	209.33	ZAC	54.13	ETC	287.02	LVI	11.60	
PLANETOCENTRIC CONIC										EARTH TO MARS												
C3	17.979	VHL	4.240	DLA	34.17	RAL	11.03	RAD	6641.9	VEL	11.748	PTH	6.78	VHP	2.514	DPA	-20.08	RAP	39.39	ECC	1.2959	
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LONG
50.00		8	4	4	3836.52		-46.43		160.14		258.81		78.17		9	8	1	2836.5		-45.75		125.04
60.00		7	44	31	3888.78		-36.92		161.51		255.49		72.55		8	49	20	2888.8		-40.22		130.89
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68		62.03		7	19	16	3172.2		-30.18		151.95
69.97		6	9	44	4172.23		-20.47		176.27		247.68											

LAUNCH DATE AUG 13 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

DISTANCE 521.205

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.887 GAL 2.22 AZL 96.09 HCA 154.54 SMA 198.15 ECC .23812 INC 3.9140 V1 29.397  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.543 GAP 4.25 AZP 93.54 TAL 11.58 TAP 166.12 RCA 150.97 APO 245.33 V2 22.573  
 RC 260.356 GL 30.96 GP -36.28 ZAL 68.79 ZAP 90.90 ETS 182.78 ZAE 117.47 ETE 205.50 ZAC 51.39 ETC 287.85 LVI 14.53

PLANETOCENTRIC CONIC

C3 19.015 VHL 4.361 DLA 38.09 RAL 9.49 RAD 6642.4 VEL 11.791 PTH 6.81 VHP 2.600 DPA -24.04 RAP 38.87 ECC 1.3129  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 20 3954.82 -44.23 170.68 260.88 70.31 8 34 15 2954.8 -47.24 136.05  
 60.00 6 40 55 4082.01 -32.03 175.54 254.38 64.11 7 48 57 3082.0 -39.58 147.23  
 63.34 5 27 19 4293.41 -22.12 186.99 248.26 58.16 6 38 52 3293.4 -33.22 162.82  
 63.34 5 27 19 4293.41 -22.12 186.99 248.26 58.16 6 38 52 3293.4 -33.22 162.82  
 63.34 5 27 19 4293.41 -22.12 186.99 248.26 58.16 6 38 52 3293.4 -33.22 162.82  
 63.34 5 27 19 4293.41 -22.12 186.99 248.26 58.16 6 38 52 3293.4 -33.22 162.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5288 TRA -.9385 TC3-2.7836 BAU 1.2089 SGT 2970.0 SGR 3670.9 SG3 1605.9 ST 42.1 SR 68.5 SS 96.7  
 RDE 1.0307 RRA -.3469 RC3-3.8554 FAU .40549 RRT .9181 RRF .9939 RTF .9198 CRT .8939 CRS -.9998 CST -.8940  
 FDE 6.4877 FRA -2.2088 FC-16.4611 BSP 7869 SCB 4721.9 R23 .1391 R13 .9843 LSA 124.4 MSA 17.9 SSA 1.0  
 BDE 1.1585 BRA .9986 BC3 4.7553 F8P 2778 SG1 4828.7 SG2 933.7 THA 51.54 EL1 78.7 EL2 16.4 ALF 59.76

LAUNCH DATE AUG 13 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

DISTANCE 524.986

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.888 GAL 2.19 AZL 85.92 HCA 155.46 SMA 198.17 ECC .23811 INC 4.0797 V1 29.397  
 RP 243.37 LAP 1.69 LOP 115.62 VP 20.517 GAP 4.02 AZP 93.71 TAL 11.43 TAP 166.89 RCA 150.98 APO 245.35 V2 22.548  
 RC 263.112 GL 32.10 GP -37.18 ZAL 69.22 ZAP 89.70 ETS 181.91 ZAE 115.86 ETE 204.50 ZAC 50.65 ETC 288.08 LVI 15.33

PLANETOCENTRIC CONIC

C3 19.363 VHL 4.400 DLA 39.18 RAL 9.01 RAD 6642.6 VEL 11.806 PTH 6.83 VHP 2.632 DPA -25.05 RAP 38.83 ECC 1.3187  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 54 3990.81 -43.36 173.70 261.19 66.11 8 23 25 2990.8 -47.46 139.50  
 60.00 6 13 33 4161.25 -29.55 180.78 253.10 61.25 7 22 54 3161.2 -38.60 153.74  
 61.67 5 17 18 4321.00 -22.53 189.55 248.43 57.05 6 29 19 3321.0 -34.02 165.47  
 61.67 5 17 18 4321.00 -22.53 189.55 248.43 57.05 6 29 19 3321.0 -34.02 165.47  
 61.67 5 17 18 4321.00 -22.53 189.55 248.43 57.05 6 29 19 3321.0 -34.02 165.47  
 61.67 5 17 18 4321.00 -22.53 189.55 248.43 57.05 6 29 19 3321.0 -34.02 165.47  
 61.67 5 17 18 4321.00 -22.53 189.55 248.43 57.05 6 29 19 3321.0 -34.02 165.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6100 TRA -.9684 TC3-2.8970 BAU 1.2545 SGT 3128.9 SGR 3767.9 SG3 1564.2 ST 46.8 SR 73.4 SS 97.8  
 RDE 1.1158 RRA -.3758 RC3-3.8846 FAU .39477 RRT .9249 RRF .9944 RTF .9262 CRT .9130 CRS -.9999 CST -.9129  
 FDE 6.5429 FRA -2.2183 FC-17.6502 BSP 8190 SCB 4896.3 R23 .1389 R13 .9848 LSA 129.7 MSA 18.0 SSA .9  
 BDE 1.2717 BRA 1.0387 BC3 4.8459 F8P 2708 SG1 4806.9 SG2 931.7 THA 50.73 EL1 85.5 EL2 16.4 ALF 58.54

LAUNCH DATE AUG 13 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

DISTANCE 528.766

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.889 GAL 2.16 AZL 85.74 HCA 156.37 SMA 198.19 ECC .23812 INC 4.2569 V1 29.397  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.491 GAP 3.80 AZP 93.90 TAL 11.27 TAP 167.64 RCA 151.00 APO 245.38 V2 22.523  
 RC 265.850 GL 33.29 GP -36.11 ZAL 69.67 ZAP 88.55 ETS 181.02 ZAE 114.27 ETE 203.68 ZAC 49.88 ETC 288.32 LVI 16.16

PLANETOCENTRIC CONIC

C3 19.757 VHL 4.445 DLA 40.32 RAL 6.48 RAD 6642.7 VEL 11.822 PTH 6.84 VHP 2.668 DPA -26.08 RAP 38.84 ECC 1.3232  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 4 2 4030.38 -42.31 176.92 261.34 65.82 8 11 12 3030.4 -47.57 143.32  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12  
 59.98 5 7 24 4347.87 -22.92 192.10 248.61 55.88 6 19 52 3347.9 -34.84 168.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6961 TRA -1.0028 TC3-3.0011 BAU 1.3908 SGT 3285.8 SGR 3864.3 SG3 1517.8 ST 51.7 SR 78.6 SS 98.8  
 RDE 1.2087 RRA -.4085 RC3-3.9034 FAU .38291 RRT .9308 RRF .9949 RTF .5116 CRT .9273 CRS -.9999 CST -.9273  
 FDE 6.5838 FRA -2.2222 FC-16.7782 BSP 8505 SCB 5072.4 R23 .1391 R13 .9853 LSA 135.2 MSA 18.1 SSA .9  
 BDE 1.3931 BRA 1.0821 BC3 4.9237 F8P 2629 SG1 4886.3 SG2 931.0 THA 49.98 EL1 92.7 EL2 16.4 ALF 57.46

LAUNCH DATE AUG 13 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

DISTANCE 532.545

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.890 GAL 2.13 AZL 85.55 HCA 157.28 SMA 198.22 ECC .23814 INC 4.4472 V1 29.397  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.467 GAP 3.58 AZP 94.10 TAL 11.11 TAP 168.38 RCA 151.01 APO 245.42 V2 22.499  
 RC 268.870 GL 34.54 GP -39.06 ZAL 70.15 ZAP 87.46 ETS 180.12 ZAE 112.71 ETE 202.80 ZAC 49.07 ETC 288.98 LVI 17.02

PLANETOCENTRIC CONIC

C3 20.205 VHL 4.495 DLA 41.50 RAL 7.90 RAD 6642.9 VEL 11.841 PTH 6.86 VHP 2.709 DPA -27.12 RAP 38.90 ECC 1.3328  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 18 4074.29 -41.03 180.35 261.27 63.41 7 57 13 3074.3 -47.53 147.57  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80  
 58.26 4 57 30 4374.25 -23.30 194.65 248.79 54.63 6 10 24 3374.3 -35.67 170.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7883 TRA -1.0389 TC3-3.0921 BAU 1.3471 SGT 3444.3 SGR 3961.1 SG3 1467.3 ST 57.0 SR 84.0 SS 99.5  
 RDE 1.3030 RRA -.4398 RC3-3.9125 FAU .37010 RRT .9360 RRF .9953 RTF .9364 CRT .9391 CRS -.9999 CST -.9368  
 FDE 6.6042 FRA -2.2220 FC-15.8581 BSP 8830 SCB 5249.1 R23 .1389 R13 .9857 LSA 141.0 MSA 18.1 SSA .8  
 BDE 1.5229 BRA 1.1282 BC3 4.9868 F8P 2544 SG1 5166.1 SG2 927.8 THA 49.26 EL1 100.1 EL2 16.4 ALF 56.48

LAUNCH DATE AUG 13 1973 FLIGHT TIME 242.00 ARRIVAL DATE APR 12 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 32.892 GAL 2.10 AZL 85.35 HCA 158.19 SMA 198.25 ECC .23819 INC 4.6520 V1 29.397  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.444 GAP 3.36 AZP 94.32 TAL 10.94 TAP 169.13 RCA 151.03 APO 245.47 V2 22.475  
 RC 271.273 GL 35.86 GP -40.05 ZAL 70.65 ZAP 86.42 ETS 179.19 ZAE 111.19 ETE 201.92 ZAC 48.24 ETC 288.86 LVI 17.92

Planetocentric Conic: C3 20.715 VHL 4.551 DLA 42.73 RAL 7.24 RAD 6643.2 VEL 11.862 PTH 6.88 VHP 2.755 DPA -28.17 RAP 39.00 ECC 1.3409  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 32 9 4123.94 -39.45 184.06 260.88 60.88 7 40 33 3123.9 -47.28 152.34  
 56.52 4 47 34 4400.25 -23.65 197.21 248.97 53.31 6 0 54 3400.2 -36.50 173.53  
 56.52 4 47 34 4400.25 -23.65 197.21 248.97 53.31 6 0 54 3400.2 -36.50 173.53  
 56.52 4 47 34 4400.25 -23.65 197.21 248.97 53.31 6 0 54 3400.2 -36.50 173.53  
 56.52 4 47 34 4400.25 -23.65 197.21 248.97 53.31 6 0 54 3400.2 -36.50 173.53  
 56.52 4 47 34 4400.25 -23.65 197.21 248.97 53.31 6 0 54 3400.2 -36.50 173.53

Differential Corrections: TDE .8857 TRA-1.0779 TC3-3.1704 BAU 1.3945 RDE 1.4049 RRA -.4764 RC3-3.9119 FAU .35645 FDE 6.6018 FRA-2.2212 FC-14.8974 BSP 9142 BDE 1.6608 BRA 1.1785 BC3 5.0354 F8P 2446  
 Mid-Course Execution Accuracy: SGT 3603.4 SGR 4058.9 SG3 1413.0 RRT .9408 RRF .9957 RTF .9407 SGB 5427.7 R23 .1386 R13 .9861 SG1 5347.6 SG2 928.7 TMA 48.61  
 Orbit Determination Accuracy: ST 62.4 SR 89.4 SS 100.0 CRT .9483 CR8 -.9999 C8T -.9477 LSA 146.8 M8A 18.2 88A .7 EL1 107.8 EL2 16.4 ALF 55.60

LAUNCH DATE AUG 13 1973 FLIGHT TIME 244.00 ARRIVAL DATE APR 14 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 32.894 GAL 2.07 AZL 85.13 HCA 159.09 SMA 198.29 ECC .23824 INC 4.8732 V1 29.397  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.421 GAP 3.14 AZP 94.55 TAL 10.77 TAP 169.86 RCA 151.05 APO 245.53 V2 22.452  
 RC 273.957 GL 37.24 GP -41.06 ZAL 71.17 ZAP 85.45 ETS 178.25 ZAE 109.70 ETE 201.06 ZAC 47.37 ETC 289.15 LVI 18.86

Planetocentric Conic: C3 21.297 VHL 4.615 DLA 44.02 RAL 6.51 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 2.807 DPA -29.23 RAP 39.17 ECC 1.3505  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 11 33 4181.58 -37.46 188.14 260.04 50.19 7 21 14 3181.6 -46.72 157.80  
 54.74 4 37 31 4426.00 -23.98 199.79 249.13 51.90 5 51 17 3426.0 -37.34 176.31  
 54.74 4 37 31 4426.00 -23.98 199.79 249.13 51.90 5 51 17 3426.0 -37.34 176.31  
 54.74 4 37 31 4426.00 -23.98 199.79 249.13 51.90 5 51 17 3426.0 -37.34 176.31  
 54.74 4 37 31 4426.00 -23.98 199.79 249.13 51.90 5 51 17 3426.0 -37.34 176.31  
 54.74 4 37 31 4426.00 -23.98 199.79 249.13 51.90 5 51 17 3426.0 -37.34 176.31

Differential Corrections: TDE .9881 TRA-1.1202 TC3-3.2353 BAU 1.4425 RDE 1.5129 RRA -.5169 RC3-3.8990 FAU .34180 FDE 6.3744 FRA-2.2171 FC-13.8944 BSP 9487 BDE 1.8070 BRA 1.2337 BC3 5.0665 F8P 2349  
 Mid-Course Execution Accuracy: SGT 3783.3 SGR 4156.3 SG3 1354.4 RRT .9447 RRF .9961 RTF .9444 SGB 5608.9 R23 .1385 R13 .9864 SG1 5529.6 SG2 927.8 TMA 48.01  
 Orbit Determination Accuracy: ST 68.0 SR 95.0 SS 100.1 CRT .9534 CR8 -.9999 C8T -.9547 LSA 152.8 M8A 18.2 88A .7 EL1 115.7 EL2 16.5 ALF 54.82

LAUNCH DATE AUG 13 1973 FLIGHT TIME 246.00 ARRIVAL DATE APR 16 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 32.896 GAL 2.03 AZL 84.89 HCA 160.00 SMA 198.33 ECC .23832 INC 5.1131 V1 29.397  
 RP 244.56 LAP 1.75 LOP 120.17 VP 20.400 GAP 2.92 AZP 94.81 TAL 10.59 TAP 170.59 RCA 151.06 APO 245.59 V2 22.430  
 RC 276.623 GL 38.69 GP -42.12 ZAL 71.71 ZAP 84.54 ETS 177.30 ZAE 108.25 ETE 200.21 ZAC 46.45 ETC 289.47 LVI 19.83

Planetocentric Conic: C3 21.965 VHL 4.687 DLA 45.37 RAL 5.69 RAD 6643.7 VEL 11.915 PTH 6.92 VHP 2.868 DPA -30.31 RAP 39.39 ECC 1.3615  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 45 24 4252.03 -34.82 192.81 258.45 55.26 6 58 16 3252.0 -45.66 164.26  
 52.92 4 27 17 4451.66 -24.27 202.39 249.28 50.41 5 41 28 3451.7 -38.17 179.17  
 52.92 4 27 17 4451.66 -24.27 202.39 249.28 50.41 5 41 28 3451.7 -38.17 179.17  
 52.92 4 27 17 4451.66 -24.27 202.39 249.28 50.41 5 41 28 3451.7 -38.17 179.17  
 52.92 4 27 17 4451.66 -24.27 202.39 249.28 50.41 5 41 28 3451.7 -38.17 179.17  
 52.92 4 27 17 4451.66 -24.27 202.39 249.28 50.41 5 41 28 3451.7 -38.17 179.17

Differential Corrections: TDE 1.0967 TRA-1.1651 TC3-3.2832 BAU 1.4911 RDE 1.6282 RRA -.5801 RC3-3.8736 FAU .32828 FDE 6.5225 FRA-2.2041 FC-12.8599 BSP 9777 BDE 1.9631 BRA 1.2927 BC3 5.0778 F8P 2239  
 Mid-Course Execution Accuracy: SGT 3921.5 SGR 4283.9 SG3 1291.9 RRT .9483 RRF .9964 RTF .9475 SGB 5785.7 R23 .1384 R13 .9867 SG1 5710.8 SG2 927.5 TMA 47.45  
 Orbit Determination Accuracy: ST 73.8 SR 100.7 SS 99.9 CRT .9611 CR8-1.0000 C8T -.9603 LSA 158.8 M8A 18.3 88A .6 EL1 123.7 EL2 16.8 ALF 54.12

LAUNCH DATE AUG 13 1973 FLIGHT TIME 248.00 ARRIVAL DATE APR 18 1974

Heliocentric Conic: RL 151.56 LAL -0.00 LOL 320.11 VL 32.898 GAL 2.00 AZL 84.63 HCA 160.90 SMA 198.37 ECC .23841 INC 5.3741 V1 29.397  
 RP 244.78 LAP 1.76 LOP 121.08 VP 20.379 GAP 2.70 AZP 95.08 TAL 10.41 TAP 171.31 RCA 151.08 APO 245.67 V2 22.407  
 RC 279.268 GL 40.83 GP -43.20 ZAL 72.28 ZAP 83.70 ETS 176.34 ZAE 106.85 ETE 199.37 ZAC 45.80 ETC 289.82 LVI 20.85

Planetocentric Conic: C3 22.733 VHL 4.788 DLA 46.77 RAL 4.78 RAD 6644.0 VEL 11.947 PTH 6.95 VHP 2.933 DPA -31.41 RAP 39.67 ECC 1.3742  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 7 9 4350.92 -30.82 198.84 255.30 51.77 6 19 40 3350.9 -43.54 172.83  
 51.06 4 16 47 4477.35 -24.51 205.03 249.39 48.83 5 31 24 3477.4 -38.98 182.12  
 51.06 4 16 47 4477.35 -24.51 205.03 249.39 48.83 5 31 24 3477.4 -38.98 182.12  
 51.06 4 16 47 4477.35 -24.51 205.03 249.39 48.83 5 31 24 3477.4 -38.98 182.12  
 51.06 4 16 47 4477.35 -24.51 205.03 249.39 48.83 5 31 24 3477.4 -38.98 182.12  
 51.06 4 16 47 4477.35 -24.51 205.03 249.39 48.83 5 31 24 3477.4 -38.98 182.12

Differential Corrections: TDE 1.2105 TRA-1.2137 TC3-3.3134 BAU 1.5404 RDE 1.7507 RRA -.6092 RC3-3.8349 FAU .30991 FDE 6.4417 FRA-2.1911 FC-11.8012 BSP 10092 BDE 2.1284 BRA 1.3580 BC3 5.0681 F8P 2124  
 Mid-Course Execution Accuracy: SGT 4078.4 SGR 4352.2 SG3 1226.0 RRT .9516 RRF .9966 RTF .9504 SGB 5964.5 R23 .1381 R13 .9870 SG1 5892.2 SG2 925.9 TMA 46.95  
 Orbit Determination Accuracy: ST 79.6 SR 106.5 SS 99.2 CRT .9658 CR8-1.0000 C8T -.9648 LSA 164.9 M8A 18.3 88A .6 EL1 131.9 EL2 16.7 ALF 53.52



LAUNCH DATE AUG 13 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 551.420

EARTH TO MARS

RL 151.86 LAL -.00 LOL 320.11 VL 32.901 GAL 1.96 AZL 84.34 HCA 161.80 SMA 198.42 ECC .23851 INC 5.6595 V1 29.397
RP 245.01 LAP 1.77 LOP 121.99 VP 20.360 GAP 2.48 AZP 95.38 TAL 10.23 TAP 172.02 RCA 151.10 APO 245.75 V2 22.386
RC 281.893 GL 41.85 GP -44.33 ZAL 72.87 ZAP 82.92 ETS 175.37 ZAE 105.48 ETE 198.54 ZAC 44.50 ETC 290.20 LVI 21.92

PLANETOCENTRIC CONIC

C3 23.627 VHL 4.861 DLA 48.22 RAL 3.69 RAD 6644.4 VEL 11.984 PTH 6.98 VHP 3.007 DPA -32.52 RAP 40.03 ECC 1.3888
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18
49.16 4 5 56 4503.18 -24.69 207.71 249.46 47.16 5 20 59 3503.2 -39.77 185.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3297 TRA-1.2667 TC3-3.3257 BAU 1.5911 SGT 4234.6 SGR 4453.2 SG3 1157.1 ST 85.4 SR 112.5 SS 98.3
RDE 1.8631 RRA -.8633 RC3-3.7833 FAU .29288 RRT .9545 RRF .9969 RTF .9529 CRT .9695 CRS-1.0000 CST -.9683
FDE 6.3360 FRA-2.1708 FC-10.7312 BSP 10408 SGB 6145.2 R23 .1380 R13 .9873 LSA 171.1 MSA 16.4 SSA .6
BDE 2.3052 BRA 1.4298 BC3 5.0372 FSP 2004 SG1 6075.1 SG2 925.5 THA 46.51 EL1 140.3 EL2 16.8 ALF 53.03

LAUNCH DATE AUG 13 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

DISTANCE 555.190

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.904 GAL 1.93 AZL 84.03 HCA 162.69 SMA 198.48 ECC .23863 INC 5.9729 V1 29.397
RP 245.22 LAP 1.77 LOP 122.89 VP 20.341 GAP 2.27 AZP 95.70 TAL 10.04 TAP 172.73 RCA 151.11 APO 245.84 V2 22.365
RC 284.497 GL 43.55 GP -45.50 ZAL 73.49 ZAP 82.23 ETS 174.39 ZAE 104.17 ETE 197.72 ZAC 43.46 ETC 290.62 LVI 23.03

PLANETOCENTRIC CONIC

C3 24.666 VHL 4.966 DLA 49.74 RAL 2.48 RAD 6644.9 VEL 12.027 PTH 7.02 VHP 3.092 DPA -33.66 RAP 40.46 ECC 1.4059
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37
47.21 3 54 36 4529.38 -24.80 210.43 249.45 45.39 5 10 5 3529.4 -40.51 188.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4538 TRA-1.3230 TC3-3.3150 BAU 1.6412 SGT 4385.5 SGR 4550.8 SG3 1084.0 ST 91.2 SR 118.5 SS 96.8
RDE 2.0241 RRA -.7219 RC3-3.7122 FAU .27471 RRT .9571 RRF .9971 RTF .9550 CRT .9724 CRS-1.0000 CST -.9711
FDE 6.1963 FRA-2.1393 FC3-9.6419 BSP 10745 SGB 6320.0 R23 .1382 R13 .9874 LSA 177.1 MSA 16.5 SSA .5
BDE 2.4921 BRA 1.5071 BC3 4.9769 FSP 1884 SG1 6252.0 SG2 925.0 THA 46.11 EL1 148.5 EL2 17.0 ALF 52.62

LAUNCH DATE AUG 13 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 558.958

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.906 GAL 1.89 AZL 83.68 HCA 163.59 SMA 198.53 ECC .23876 INC 6.3188 V1 29.397
RP 245.43 LAP 1.78 LOP 123.79 VP 20.323 GAP 2.05 AZP 96.08 TAL 9.85 TAP 173.43 RCA 151.13 APO 245.93 V2 22.344
RC 287.079 GL 45.36 GP -46.71 ZAL 74.13 ZAP 81.61 ETS 173.41 ZAE 102.91 ETE 196.92 ZAC 42.37 ETC 291.08 LVI 24.19

PLANETOCENTRIC CONIC

C3 25.884 VHL 5.088 DLA 51.31 RAL 1.07 RAD 6645.4 VEL 12.077 PTH 7.06 VHP 3.188 DPA -34.81 RAP 40.97 ECC 1.4260
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70
45.22 3 42 41 4556.08 -24.83 213.20 249.35 43.53 4 58 37 3556.1 -41.19 191.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5785 TRA-1.3866 TC3-3.2847 BAU 1.6938 SGT 4535.7 SGR 4653.2 SG3 1008.9 ST 96.6 SR 124.3 SS 94.6
RDE 2.1717 RRA -.7921 RC3-3.6289 FAU .25618 RRT .9597 RRF .9972 RTF .5770 CRT .9747 CRS-1.0000 CST -.9732
FDE 6.0132 FRA-2.1119 FC3-8.3685 BSP 11044 SGB 6490.1 R23 .1381 R13 .9876 LSA 182.7 MSA 18.7 SSA .5
BDE 2.6847 BRA 1.5969 BC3 4.8947 FSP 1751 SG1 6432.3 SG2 922.5 THA 45.76 EL1 156.5 EL2 17.2 ALF 52.32

LAUNCH DATE AUG 13 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 562.727

EARTH TO MARS

RL 151.56 LAL -.00 LOL 320.11 VL 32.909 GAL 1.86 AZL 83.30 HCA 164.48 SMA 198.59 ECC .23890 INC 6.7029 V1 29.397
RP 245.63 LAP 1.79 LOP 124.69 VP 20.308 GAP 1.83 AZP 96.46 TAL 9.65 TAP 174.13 RCA 151.15 APO 246.04 V2 22.324
RC 289.637 GL 47.26 GP -47.97 ZAL 74.80 ZAP 81.07 ETS 172.44 ZAE 101.70 ETE 196.13 ZAC 41.23 ETC 291.58 LVI 25.40

PLANETOCENTRIC CONIC

C3 27.324 VHL 5.227 DLA 52.94 RAL 359.45 RAD 6645.9 VEL 12.136 PTH 7.11 VHP 3.296 DPA -35.98 RAP 41.56 ECC 1.4497
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18
43.18 3 30 1 4583.46 -24.74 216.02 249.10 41.57 4 46 24 3583.5 -41.79 195.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7004 TRA-1.4582 TC3-3.2336 BAU 1.7549 SGT 4683.6 SGR 4778.0 SG3 935.3 ST 101.5 SR 129.2 SS 91.4
RDE 2.3136 RRA -.8869 RC3-3.5529 FAU .23889 RRT .9635 RRF .9974 RTF .9606 CRT .9770 CRS-1.0000 CST -.9753
FDE 5.7590 FRA-2.1142 FC3-7.5691 BSP 11203 SGB 6690.7 R23 .1335 R13 .9885 LSA 187.1 MSA 18.5 SSA .4
BDE 2.8712 BRA 1.7067 BC3 4.8041 FSP 1579 SG1 6629.4 SG2 903.7 THA 45.59 EL1 163.4 EL2 17.1 ALF 52.01

LAUNCH DATE AUG 13 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -0.00 LOL 320.11 VL 32.013 GAL 1.82 AZL 82.87 HCA 165.37 SMA 198.65 ECC .23906 INC 7.1317 V1 29.397
RP 245.83 LAP 1.80 LOP 125.59 VP 20.289 GAP 1.62 AZP 96.90 TAL 9.45 TAP 174.83 RCA 151.16 APO 246.14 V2 22.305
RC 292.172 GL 49.28 GP -49.27 ZAL 75.90 ZAP 80.62 ETS 171.48 ZAE 100.56 ETE 195.36 ZAC 40.03 ETC 292.15 LVI 26.67

DISTANCE 566.481

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.038 VHL 5.389 DLA 54.62 RAL 357.55 RAD 6646.6 VEL 12.206 PTH 7.16 VHP 3.421 DPA -37.16 RAP 42.25 ECC 1.4779
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82
41.11 3 16 24 4611.80 -24.51 218.88 248.66 39.52 4 33 15 3611.0 -42.27 198.82

DIFFERENTIAL CORRECTIONS

TDE 1.8221 TRA-1.5352 TC3-3.1565 BAV 1.8094
RDE 2.4834 RRA-.9738 RC3-3.4291 FAU .21880
FDE 5.9031 FRA-2.0565 FC3-6.5174 B8P 11541
BDE 3.0802 BRA 1.8180 BC3 4.6607 F8P 1452

MID-COURSE EXECUTION ACCURACY

SGT 4824.4 SGR 4881.4 SG3 854.8
RRT .9652 RRF .9975 RTF .9814
SGB 6863.2 R23 .1351 R13 .9883
SG1 6803.1 S62 905.7 THA 45.35

ORBIT DETERMINATION ACCURACY

ST 105.8 SR 134.8 SS 88.1
CRT .9778 CR8 -.9999 CST -.9758
LSA 191.8 M8A 18.9 S8A .4
EL1 170.5 EL2 17.5 ALF 52.02

LAUNCH DATE AUG 13 1973

FLIGHT TIME 260.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -0.00 LOL 320.11 VL 32.918 GAL 1.78 AZL 82.39 HCA 166.28 SMA 198.72 ECC .23923 INC 7.6141 V1 29.397
RP 246.02 LAP 1.80 LOP 126.48 VP 20.274 GAP 1.41 AZP 97.40 TAL 9.25 TAP 175.91 RCA 151.18 APO 246.26 V2 22.286
RC 294.682 GL 51.42 GP -50.63 ZAL 76.23 ZAP 80.27 ETS 170.55 ZAE 99.48 ETE 194.83 ZAC 38.78 ETC 292.78 LVI 27.99

DISTANCE 570.252

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.101 VHL 5.577 DLA 56.34 RAL 355.31 RAD 6647.4 VEL 12.269 PTH 7.23 VHP 3.563 DPA -38.37 RAP 43.04 ECC 1.5118
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61
39.00 3 1 37 4641.22 -24.13 221.76 247.97 37.39 4 18 59 3641.2 -42.61 202.61

DIFFERENTIAL CORRECTIONS

TDE 1.9340 TRA-1.6201 TC3-3.0537 BAV 1.8664
RDE 2.6579 RRA-1.0757 RC3-3.2900 FAU .19807
FDE 5.1970 FRA-1.9923 FC3-5.5134 B8P 11884
BDE 3.2870 BRA 1.9447 BC3 4.4888 F8P 1320

MID-COURSE EXECUTION ACCURACY

SGT 4956.7 SGR 4989.8 SG3 772.8
RRT .9669 RRF .9975 RTF .9821
SGB 7033.3 R23 .1366 R13 .9882
SG1 6974.8 S62 905.3 THA 45.20

ORBIT DETERMINATION ACCURACY

ST 109.2 SR 139.9 SS 84.0
CRT .9780 CR8 -.9999 CST -.9758
LSA 195.4 M8A 19.3 S8A .4
EL1 176.5 EL2 18.0 ALF 52.17

LAUNCH DATE AUG 13 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -0.00 LOL 320.11 VL 32.920 GAL 1.74 AZL 81.84 HCA 167.15 SMA 198.70 ECC .23941 INC 8.1609 V1 29.397
RP 246.21 LAP 1.81 LOP 127.38 VP 20.260 GAP 1.20 AZP 97.96 TAL 9.05 TAP 176.19 RCA 151.20 APO 246.38 V2 22.267
RC 297.167 GL 53.68 GP -52.03 ZAL 76.98 ZAP 80.01 ETS 169.66 ZAE 98.48 ETE 193.93 ZAC 37.47 ETC 293.48 LVI 29.37

DISTANCE 574.010

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.609 VHL 5.797 DLA 58.10 RAL 352.66 RAD 6648.4 VEL 12.390 PTH 7.30 VHP 3.728 DPA -39.58 RAP 43.95 ECC 1.5331
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53
36.88 2 45 23 4672.06 -23.56 224.66 246.93 35.21 4 3 15 3672.1 -42.75 206.53

DIFFERENTIAL CORRECTIONS

TDE 2.0242 TRA-1.7155 TC3-2.9270 BAV 1.9275
RDE 2.8323 RRA-1.1961 RC3-3.1363 FAU .17738
FDE 4.8327 FRA-1.9188 FC3-4.5691 B8P 12207
BDE 3.4813 BRA 2.0913 BC3 4.2899 F8P 1183

MID-COURSE EXECUTION ACCURACY

SGT 5080.6 SGR 5105.1 SG3 889.9
RRT .9684 RRF .9975 RTF .9825
SGB 7202.3 R23 .1388 R13 .9879
SG1 7145.2 S62 905.5 THA 45.14

ORBIT DETERMINATION ACCURACY

ST 111.1 SR 144.0 SS 78.9
CRT .9774 CR8 -.9999 CST -.9744
LSA 197.3 M8A 19.9 S8A .3
EL1 180.9 EL2 18.7 ALF 52.51

LAUNCH DATE AUG 13 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 151.56 LAL -0.00 LOL 320.11 VL 32.923 GAL 1.71 AZL 81.21 HCA 168.03 SMA 198.88 ECC .23960 INC 8.7862 V1 29.397
RP 246.39 LAP 1.82 LOP 128.27 VP 20.246 GAP .98 AZP 98.60 TAL 8.84 TAP 176.87 RCA 151.21 APO 246.51 V2 22.249
RC 299.828 GL 56.08 GP -53.47 ZAL 77.76 ZAP 79.86 ETS 168.82 ZAE 97.55 ETE 193.28 ZAC 36.11 ETC 294.28 LVI 30.79

DISTANCE 577.766

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.696 VHL 6.038 DLA 59.86 RAL 349.50 RAD 6649.5 VEL 12.513 PTH 7.40 VHP 3.921 DPA -40.79 RAP 44.97 ECC 1.6039
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56
34.76 2 27 20 4704.60 -22.76 227.54 245.42 32.99 3 45 44 3704.6 -42.65 210.56

DIFFERENTIAL CORRECTIONS

TDE 2.0792 TRA-1.8238 TC3-2.7761 BAV 1.9937
RDE 3.0018 RRA-1.3410 RC3-2.9678 FAU .15658
FDE 4.4107 FRA-1.8357 FC3-3.6940 B8P 12514
BDE 3.6515 BRA 2.2638 BC3 4.0638 F8P 1041

MID-COURSE EXECUTION ACCURACY

SGT 5194.5 SGR 5231.7 SG3 607.2
RRT .9698 RRF .9974 RTF .9625
SGB 7372.5 R23 .1411 R13 .9875
SG1 7316.6 S62 905.9 THA 45.21

ORBIT DETERMINATION ACCURACY

ST 111.1 SR 147.0 SS 72.8
CRT .9755 CR8 -.9998 CST -.9715
LSA 197.1 M8A 20.7 S8A .3
EL1 183.3 EL2 19.6 ALF 53.11

LAUNCH DATE AUG 13 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.048 GAL .30 AZL 99.34 HCA 191.23 SMA 201.35 ECC .24734 INC 9.3365 V1 29.397  
 RP 249.14 LAP 1.81 LOP 131.19 VP 20.198 GAP -4.11 AZP 80.84 TAL 1.31 TAP 192.73 RCA 151.55 APO 251.15 V2 21.981  
 RC 353.817 GL -58.78 GP 51.04 ZAL 85.64 ZAP 67.81 ETS 212.92 ZAE 79.88 ETE 194.46 ZAC 136.54 ETC 290.68 LVI -70.07

DISTANCE 676.074  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.308 VHL 6.270 DLA -40.35 RAL 59.47 RAD 6650.4 VEL 12.617 PTH 7.47 VHP 4.285 DPA 53.27 RAP 351.96 ECC 1.6469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 17 13 26 2401.19 -2.45 62.26 292.64 137.53 17 53 27 1401.2 15.83 46.26  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00  
 59.93 20 28 29 1875.31 16.11 32.50 309.58 127.51 20 59 44 875.3 29.91 11.00

DIFFERENTIAL CORRECTIONS  
 TDE-6.9034 TRA 2.4216 TC3-4.7350 BAU 2.7422 SGT 9137.0 SGR 4486.5 SG3 461.9 ORBIT DETERMINATION ACCURACY  
 RDE 3.0066 RRA-1.8682 RC3 2.1929 FAU .12607 RRT -.9798 RRF -.9948 RTF .9609 ST 318.6 SR 141.5 SS 54.7  
 FDE-3.0872 FRA 2.4311 FC3-2.7765 BSP 17704 SGB10179.1 R23 .2285 R13 -.9704 CRT -.9947 CR8 .9981 C8T -.9867  
 BDE 7.5297 BRA 3.0586 BC3 5.2181 F8P 746 SG110147.0 S62 807.9 THA 154.13 LSA 352.5 MSA 15.4 S8A .3  
 EL1 348.3 EL2 13.3 ALP 156.13

LAUNCH DATE AUG 13 1973

FLIGHT TIME 316.00

ARRIVAL DATE JUN 27 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.054 GAL .24 AZL 98.65 HCA 192.09 SMA 201.46 ECC .24773 INC 8.6454 V1 29.397  
 RP 249.17 LAP 1.80 LOP 132.06 VP 20.182 GAP -4.30 AZP 81.54 TAL 1.22 TAP 193.31 RCA 151.55 APO 251.37 V2 21.978  
 RC 355.478 GL -56.31 GP 49.13 ZAL 85.74 ZAP 66.24 ETS 213.10 ZAE 78.56 ETE 195.13 ZAC 134.76 ETC 290.01 LVI -68.48

DISTANCE 679.808  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 35.661 VHL 5.972 DLA -37.92 RAL 58.72 RAD 6649.1 VEL 12.472 PTH 7.37 VHP 4.097 DPA 51.71 RAP 353.80 ECC 1.5869  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 48 21 2449.08 -4.85 64.27 288.58 137.39 17 29 10 1449.1 13.49 48.41  
 60.00 18 52 59 2116.55 5.74 44.48 298.63 129.96 19 28 16 1116.5 21.14 25.41  
 63.61 20 42 58 1800.75 16.23 26.36 306.76 124.75 21 12 59 800.7 28.99 4.22  
 63.61 20 42 58 1800.75 16.23 26.36 306.76 124.75 21 12 59 800.7 28.99 4.22  
 63.61 20 42 58 1800.75 16.23 26.36 306.76 124.75 21 12 59 800.7 28.99 4.22  
 63.61 20 42 58 1800.75 16.23 26.36 306.76 124.75 21 12 59 800.7 28.99 4.22  
 63.61 20 42 58 1800.75 16.23 26.36 306.76 124.75 21 12 59 800.7 28.99 4.22

DIFFERENTIAL CORRECTIONS  
 TDE-6.5352 TRA 2.3413 TC3-5.2427 BAU 2.7237 SGT 9307.6 SGR 4282.9 SG3 922.9 ORBIT DETERMINATION ACCURACY  
 RDE 2.6627 RRA-1.7381 RC3 2.2697 FAU .14033 RRT -.9786 RRF -.9948 RTF .9606 ST 316.5 SR 131.7 SS 57.8  
 FDE-3.2275 FRA 2.6625 FC3-3.4068 BSP 17776 SGB10245.7 R23 .2314 R13 -.9695 CRT -.9942 CR8 .9981 C8T -.9858  
 BDE 7.0568 BRA 2.9159 BC3 5.7129 F8P 844 SG110214.2 S62 802.6 THA 155.60 LSA 347.3 MSA 15.7 S8A .3  
 EL1 342.6 EL2 13.1 ALP 187.80

LAUNCH DATE AUG 13 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 29 1974

HELIOCENTRIC CONIC  
 RL 151.56 LAL -.00 LOL 320.11 VL 33.059 GAL .19 AZL 98.05 HCA 192.95 SMA 201.57 ECC .24814 INC 8.0453 V1 29.397  
 RP 249.19 LAP 1.80 LOP 132.94 VP 20.169 GAP -4.49 AZP 82.16 TAL .94 TAP 193.89 RCA 151.56 APO 251.59 V2 21.976  
 RC 357.105 GL -53.98 GP 47.27 ZAL 85.88 ZAP 64.72 ETS 213.17 ZAE 77.25 ETE 195.70 ZAC 133.01 ETC 289.40 LVI -68.87

DISTANCE 683.544  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 32.723 VHL 5.720 DLA -35.81 RAL 58.11 RAD 6648.0 VEL 12.355 PTH 7.28 VHP 3.941 DPA 50.21 RAP 355.53 ECC 1.5388  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 27 57 2490.30 -6.91 66.01 285.36 137.19 17 9 27 1490.3 11.46 50.22  
 60.00 18 14 17 2207.03 1.77 48.82 293.65 130.27 18 31 4 1207.0 17.52 30.31  
 67.39 21 0 33 1720.03 16.15 19.78 304.26 122.18 21 29 13 720.0 27.92 357.16  
 67.39 21 0 33 1720.03 16.15 19.78 304.26 122.18 21 29 13 720.0 27.92 357.16  
 67.39 21 0 33 1720.03 16.15 19.78 304.26 122.18 21 29 13 720.0 27.92 357.16  
 67.39 21 0 33 1720.03 16.15 19.78 304.26 122.18 21 29 13 720.0 27.92 357.16  
 67.39 21 0 33 1720.03 16.15 19.78 304.26 122.18 21 29 13 720.0 27.92 357.16

DIFFERENTIAL CORRECTIONS  
 TDE-6.2005 TRA 2.2687 TC3-5.7400 BAU 2.7098 SGT 9468.2 SGR 4097.4 SG3 981.3 ORBIT DETERMINATION ACCURACY  
 RDE 2.3737 RRA-1.6317 RC3 2.3282 FAU .15349 RRT -.9776 RRF -.9948 RTF .9605 ST 313.5 SR 122.7 SS 59.5  
 FDE-3.3218 FRA 2.8832 FC3-4.0608 BSP 17998 SGB10316.8 R23 .2336 R13 -.9687 CRT -.9936 CR8 .9981 C8T -.9848  
 BDE 6.6394 BRA 2.8108 BC3 6.1942 F8P 943 SG110286.2 S62 793.7 THA 156.92 LSA 341.6 MSA 15.9 S8A .3  
 EL1 336.5 EL2 12.9 ALP 158.72

LAUNCH DATE AUG 14 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 20 1973

HELIOCENTRIC CONIC

DISTANCE 279.630

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 35.865 GAL 1.48 AZL 90.09 HCA 85.39 SMA 273.46 ECC .44845 INC .0925 V1 29.402
RP 219.26 LAP -.09 LOP 46.46 VP 26.930 GAP 24.09 AZP 90.01 TAL 4.79 TAP 90.18 RCA 151.37 APO 395.54 V2 25.087
RC 79.428 GL -.53 GP -5.13 ZAL 78.74 ZAP 174.25 ETS 244.87 ZAE 160.87 ETE 345.29 ZAC 78.03 ETC 282.66 LVI -11.61

PLANETOCENTRIC CONIC

C3 39.615 VHL 6.294 DLA 14.25 RAL 37.58 RAD 6650.5 VEL 12.629 PTH 7.48 VHP 8.898 DPA 10.98 RAP 43.16 ECC 1.6920
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 25 27 3589.71 -47.26 136.53 285.63 98.28 12 25 16 2589.7 -39.37 104.87
60.00 11 49 3 3526.89 -40.24 131.62 286.37 92.44 12 47 50 2526.9 -34.87 101.90
70.00 12 23 5 3426.89 -34.15 123.63 286.50 89.48 13 20 12 2426.7 -30.79 95.42
80.00 13 14 19 3266.17 -29.76 111.32 286.37 87.49 14 8 46 2266.2 -27.77 84.08
90.00 14 26 8 3027.94 -28.11 93.72 286.27 86.75 15 18 36 2027.9 -26.62 66.81
100.00 15 57 11 2740.64 -29.76 72.69 286.37 87.49 16 42 52 1740.6 -27.77 45.44
110.00 17 22 32 2473.51 -34.15 52.55 286.50 89.48 18 3 45 1473.5 -30.79 24.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3087 TRA -.9257 TC3 .2691 BAV .1460 SGT 974.5 SGR 820.5 SCS 126.9 ST 19.2 SR 28.9 SS 7.8
RDE -.6298 RRA .2315 RC3 -.0755 FAU .05168 RRT -.0994 RRF .1174 RTF -.5686 CRT .6310 CRS .7897 CBT .9566
FDE .1899 FRA .3476 FC3 -1.1295 B8P 1344 SGB 1155.3 R23 -.0235 R13 .5714 LSA 32.8 MSA 13.4 S8A 1.4
BDE .7014 BRA .9542 BC3 .2795 F8P 151 SGI 977.7 SGI 815.4 THA 173.99 EL1 32.1 EL2 13.1 ALF 61.41

LAUNCH DATE AUG 14 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 22 1973

HELIOCENTRIC CONIC

DISTANCE 281.798

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 35.428 GAL 1.53 AZL 90.06 HCA 86.52 SMA 267.29 ECC .43375 INC .0551 V1 29.402
RP 219.63 LAP -.06 LOP 47.58 VP 26.684 GAP 23.69 AZP 90.00 TAL 5.06 TAP 91.58 RCA 151.35 APO 383.23 V2 25.026
RC 81.081 GL -.33 GP -5.26 ZAL 78.19 ZAP 173.73 ETS 238.77 ZAE 160.38 ETE 345.05 ZAC 77.85 ETC 282.63 LVI -11.40

PLANETOCENTRIC CONIC

C3 37.755 VHL 6.145 DLA 14.27 RAL 36.97 RAD 6649.9 VEL 12.555 PTH 7.43 VHP 8.622 DPA 10.96 RAP 43.51 ECC 1.6214
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 22 58 3577.88 -47.17 135.41 283.84 97.14 12 22 36 2577.9 -38.97 104.02
60.00 11 46 33 3515.10 -40.20 130.62 284.70 93.12 12 45 8 2515.1 -34.57 101.04
70.00 12 20 35 3414.98 -34.15 122.72 284.91 90.03 13 17 30 2415.0 -30.57 94.57
80.00 13 11 47 3254.52 -29.79 110.46 284.82 87.94 14 6 2 2254.5 -27.61 83.25
90.00 14 25 35 3016.33 -28.15 92.87 284.74 87.17 15 15 51 2016.3 -26.48 65.99
100.00 15 54 39 2728.99 -29.79 71.83 284.82 87.94 16 40 8 1729.0 -27.61 44.62
110.00 17 20 1 2461.79 -34.15 51.64 284.91 90.03 18 1 3 1461.8 -30.57 23.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3117 TRA -.9091 TC3 .3089 BAV .1616 SGT 998.8 SGR 826.0 SCS 135.6 ST 19.6 SR 29.0 SS 8.1
RDE -.6182 RRA .2298 RC3 -.0842 FAU .05399 RRT -.1043 RRF .1263 RTF -.5914 CRT .6604 CRS .8007 CBT .9553
FDE .2000 FRA .3483 FC3 -1.2380 B8P 1374 SGB 1177.1 R23 -.0257 R13 .5944 LSA 33.3 MSA 13.5 S8A 1.5
BDE .6924 BRA .9377 BC3 .3202 F8P 163 SGI 1000.3 SGI 820.4 THA 173.90 EL1 32.4 EL2 13.2 ALF 60.70

LAUNCH DATE AUG 14 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 24 1973

HELIOCENTRIC CONIC

DISTANCE 284.133

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 35.279 GAL 1.58 AZL 90.02 HCA 87.64 SMA 261.75 ECC .42183 INC .0185 V1 29.402
RP 220.00 LAP -.02 LOP 48.70 VP 26.447 GAP 23.30 AZP 90.00 TAL 5.34 TAP 92.98 RCA 151.34 APO 372.17 V2 24.985
RC 82.809 GL -.12 GP -5.39 ZAL 77.63 ZAP 173.16 ETS 233.62 ZAE 159.94 ETE 344.76 ZAC 77.66 ETC 282.60 LVI -11.18

PLANETOCENTRIC CONIC

C3 36.052 VHL 6.004 DLA 14.29 RAL 36.35 RAD 6649.3 VEL 12.488 PTH 7.38 VHP 8.356 DPA 10.94 RAP 43.85 ECC 1.5933
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 20 27 3566.55 -47.06 134.33 282.08 97.96 12 19 53 2566.6 -38.58 103.21
60.00 11 44 0 3503.83 -40.15 129.87 283.06 93.76 12 42 24 2503.8 -34.28 100.23
70.00 12 18 0 3403.78 -34.15 121.84 283.34 90.54 13 14 44 2403.8 -30.36 93.77
80.00 13 9 11 3243.41 -29.82 109.63 283.29 88.37 14 3 14 2243.4 -27.46 82.46
90.00 14 22 58 3005.25 -28.18 92.07 283.23 87.58 15 13 3 2005.3 -26.35 65.21
100.00 15 52 3 2717.88 -29.82 71.00 283.29 88.37 16 37 21 1717.9 -27.46 43.83
110.00 17 17 26 2450.60 -34.15 50.76 283.34 90.54 17 58 17 1450.6 -30.36 22.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3122 TRA -.8988 TC3 .3402 BAV .1701 SGT 1019.3 SGR 831.3 SCS 144.7 ST 20.0 SR 29.2 SS 8.3
RDE -.6070 RRA .2281 RC3 -.0936 FAU .05643 RRT -.1121 RRF .1359 RTF -.6226 CRT .6642 CRS .8110 CBT .9922
FDE .2107 FRA .3492 FC3 -1.3550 B8P 1416 SGB 1199.0 R23 -.0277 R13 .6059 LSA 33.6 MSA 13.6 S8A 1.5
BDE .6826 BRA .9273 BC3 .3528 F8P 177 SGI 1023.2 SGI 824.9 THA 173.65 EL1 32.7 EL2 13.3 ALF 60.14

LAUNCH DATE AUG 14 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC

DISTANCE 286.615

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 35.139 GAL 1.64 AZL 89.98 HCA 88.76 SMA 258.78 ECC .41063 INC .0000 V1 29.402
RP 220.38 LAP .02 LOP 49.82 VP 26.221 GAP 22.91 AZP 90.00 TAL 5.63 TAP 94.39 RCA 151.32 APO 362.18 V2 24.944
RC 84.610 GL .09 GP -5.92 ZAL 77.06 ZAP 172.52 ETS 229.30 ZAE 159.56 ETE 344.44 ZAC 77.47 ETC 282.57 LVI -10.96

PLANETOCENTRIC CONIC

C3 34.491 VHL 5.873 DLA 14.30 RAL 35.72 RAD 6648.7 VEL 12.426 PTH 7.33 VHP 8.100 DPA 10.90 RAP 44.18 ECC 1.5876
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 17 51 3555.75 -46.98 133.31 280.36 98.74 12 17 7 2555.8 -38.21 102.45
60.00 11 41 24 3493.10 -40.10 128.78 281.45 94.38 12 39 37 2493.1 -34.00 99.46
70.00 12 15 22 3393.12 -34.14 121.01 281.80 91.03 13 11 55 2393.1 -30.15 93.01
80.00 13 6 31 3232.84 -29.84 108.85 281.80 88.78 14 0 24 2232.8 -27.30 81.71
90.00 14 20 18 2994.72 -28.21 91.30 281.74 87.96 15 10 12 1994.7 -26.21 64.47
100.00 15 49 23 2707.31 -29.84 70.22 281.80 88.78 16 34 30 1707.3 -27.30 43.08
110.00 17 14 48 2439.94 -34.14 49.93 281.80 91.03 17 55 28 1439.9 -30.15 21.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3129 TRA -.8881 TC3 .3726 BAV .1784 SGT 1041.3 SGR 836.5 SCS 154.3 ST 20.3 SR 29.3 SS 8.6
RDE -.5962 RRA .2265 RC3 -.1037 FAU .05896 RRT -.1202 RRF .1466 RTF -.6132 CRT .6684 CRS .8202 CBT .9492
FDE .2207 FRA .3488 FC3 -1.4798 B8P 1466 SGB 1220.4 R23 -.0306 R13 .6168 LSA 34.0 MSA 13.7 S8A 1.6
BDE .6733 BPA .9165 BC3 .3868 F8P 191 SGI 1045.7 SGI 829.2 THA 173.40 EL1 33.0 EL2 13.4 ALF 59.58

LAUNCH DATE AUG 14 1973

FLIGHT TIME 106.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC  
 RL 151.83 LAL -.00 LOL 321.07 VL 35.006 GAL 1.69 AZL 89.95 HCA 89.87 SMA 252.22 ECC .40011 INC .0493 V1 29.402  
 RP 220.76 LAP .05 LOP 50.94 VP 26.003 GAP 22.53 AZP 90.00 TAL 5.92 TAP 95.79 RCA 151.30 APO 353.13 V2 24.902  
 RC 86.480 GL .31 GP -5.66 ZAL 76.48 ZAP 171.85 ETS 225.66 ZAE 159.24 ETE 344.07 ZAC 77.28 ETC 282.94 LVI -10.74

DISTANCE 289.227  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 33.060 VHL 5.750 DLA 14.32 RAL 35.08 RAD 6648.2 VEL 12.360 PTH 7.29 VHP 7.853 DPA 10.96 RAP 44.90 ECC 1.9441  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 15 13 3345.49 -46.85 132.34 278.69 99.48 12 14 19 2545.5 -37.85 101.73  
 60.00 11 38 44 3482.90 -40.05 127.89 279.68 94.96 12 36 47 2482.9 -33.72 98.74  
 70.00 12 12 40 3383.02 -34.12 120.22 280.30 91.50 13 9 3 2383.0 -29.95 92.29  
 80.00 13 3 48 3222.82 -29.85 108.11 280.35 89.18 13 57 31 2222.8 -27.15 81.01  
 90.00 14 17 33 2984.76 -28.23 90.57 280.29 88.32 15 7 18 1984.8 -26.06 63.77  
 100.00 15 46 40 2697.29 -29.85 69.47 280.33 89.18 16 31 37 1697.3 -27.15 42.37  
 110.00 17 12 7 2429.83 -34.12 49.14 280.30 91.50 17 52 36 1429.8 -29.95 21.21

DIFFERENTIAL CORRECTIONS  
 TDE -.3139 TRA -.8780 TC3 .4064 BAU .1866 SGT 1063.8 SGR 641.4 SG3 164.5 ST 20.7 SR 29.4 SS 8.9  
 RDE -.5858 RRA .2249 RC3 -.1146 FAU .06162 RRT -.1289 RRF .1573 RTF -.6233 CRT .6727 CRS .8307 CST .9455  
 FDE .2325 FRA .3474 FC3-1.6136 B8P 1511 SGB 1242.2 R23 -.0330 R13 .6272 L8A 34.3 M8A 13.8 S8A 1.6  
 BDE .6644 BRA .9064 BC3 .4223 F8P 207 SG1 1068.8 S2 633.1 THA 173.14 EL1 33.3 EL2 13.5 ALF 58.99

LAUNCH DATE AUG 14 1973

FLIGHT TIME 108.00

ARRIVAL DATE NOV 30 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 34.881 GAL 1.75 AZL 89.91 HCA 90.98 SMA 248.09 ECC .39022 INC .0865 V1 29.402  
 RP 221.14 LAP .09 LOP 52.05 VP 25.795 GAP 22.15 AZP 90.00 TAL 6.22 TAP 97.20 RCA 151.28 APO 344.91 V2 24.861  
 RC 88.416 GL .54 GP -5.81 ZAL 75.89 ZAP 171.14 ETS 222.58 ZAE 158.98 ETE 343.66 ZAC 77.09 ETC 282.51 LVI -10.52

DISTANCE 291.953  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 31.747 VHL 5.634 DLA 14.35 RAL 34.44 RAD 6647.7 VEL 12.315 PTH 7.25 VHP 7.616 DPA 10.81 RAP 44.82 ECC 1.5225  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 12 33 3535.75 -46.73 131.43 277.07 100.18 12 11 28 2535.8 -37.50 101.06  
 60.00 11 36 2 3473.24 -39.99 127.08 278.35 95.51 12 33 55 2473.2 -33.46 98.05  
 70.00 12 9 56 3373.46 -34.11 119.48 278.83 91.94 13 6 9 2373.5 -29.76 91.62  
 80.00 13 1 1 3213.38 -29.85 107.40 278.89 89.54 13 54 35 2213.4 -27.01 80.34  
 90.00 14 14 46 2975.36 -28.25 89.88 278.86 88.67 15 4 21 1975.4 -25.95 63.11  
 100.00 15 43 53 2687.85 -29.85 68.77 278.89 89.54 16 28 41 1687.8 -27.01 41.71  
 110.00 17 9 22 2420.28 -34.11 48.40 278.83 91.94 17 49 43 1420.3 -29.76 20.54

DIFFERENTIAL CORRECTIONS  
 TDE -.3151 TRA -.8670 TC3 .4413 BAU .1949 SGT 1085.5 SGR 646.1 SG3 175.3 ST 21.1 SR 29.5 SS 9.2  
 RDE -.5753 RRA .2234 RC3 -.1264 FAU .06446 RRT -.1380 RRF .1685 RTF -.6333 CRT .6776 CRS .8416 CST .9416  
 FDE .2457 FRA .3448 FC3-1.7577 B8P 1560 SGB 1283.3 R23 -.0355 R13 .6376 L8A 34.7 M8A 13.8 S8A 1.7  
 BDE .6559 BRA .8953 BC3 .4592 F8P 223 SG1 1091.1 S2 636.7 THA 172.86 EL1 33.6 EL2 13.6 ALF 58.39

LAUNCH DATE AUG 14 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 2 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 34.763 GAL 1.80 AZL 89.88 HCA 92.09 SMA 244.34 ECC .38092 INC .1221 V1 29.402  
 RP 221.52 LAP .12 LOP 53.15 VP 25.594 GAP 21.77 AZP 90.00 TAL 6.53 TAP 98.61 RCA 151.26 APO 337.41 V2 24.819  
 RC 90.414 GL .77 GP -5.98 ZAL 75.31 ZAP 170.39 ETS 219.97 ZAE 158.78 ETE 343.20 ZAC 76.89 ETC 282.49 LVI -10.29

DISTANCE 294.780  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.541 VHL 5.526 DLA 14.37 RAL 33.78 RAD 6647.2 VEL 12.267 PTH 7.21 VHP 7.387 DPA 10.75 RAP 45.12 ECC 1.5026  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 9 50 3528.56 -46.82 130.57 275.49 100.83 12 8 37 2528.6 -37.17 100.43  
 60.00 11 33 17 3484.13 -39.92 126.31 276.85 96.03 12 31 1 2484.1 -33.20 97.41  
 70.00 12 7 9 3384.47 -34.08 118.78 277.39 92.36 13 3 13 2384.5 -29.57 90.98  
 80.00 12 58 12 3204.51 -29.86 106.74 277.49 89.89 13 51 36 2204.5 -26.87 79.72  
 90.00 14 11 55 2966.56 -28.26 89.24 277.47 88.99 15 1 22 1966.6 -25.83 62.48  
 100.00 15 41 4 2678.98 -29.86 68.11 277.49 89.89 16 25 43 1679.0 -26.87 41.09  
 110.00 17 6 35 2411.29 -34.08 47.89 277.39 92.36 17 48 46 1411.3 -29.57 19.90

DIFFERENTIAL CORRECTIONS  
 TDE -.3163 TRA -.8562 TC3 .4774 BAU .2030 SGT 1107.1 SGR 650.8 SG3 186.7 ST 21.4 SR 29.5 SS 9.5  
 RDE -.5653 RRA .2218 RC3 -.1391 FAU .06744 RRT -.1478 RRF .1809 RTF -.627 CRT .6824 CRS .8514 CST .9377  
 FDE .2588 FRA .3413 FC3-1.9117 B8P 1604 SGB 1284.3 R23 -.0386 R13 .6474 L8A 35.0 M8A 13.8 S8A 1.7  
 BDE .6478 BRA .8845 BC3 .4973 F8P 240 SG1 1113.4 S2 640.0 THA 172.57 EL1 33.8 EL2 13.7 ALF 57.80

LAUNCH DATE AUG 14 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 4 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 34.651 GAL 1.85 AZL 89.84 HCA 93.19 SMA 240.80 ECC .37217 INC .1579 V1 29.402  
 RP 221.90 LAP .16 LOP 54.28 VP 25.402 GAP 21.40 AZP 90.01 TAL 6.83 TAP 100.02 RCA 151.24 APO 330.55 V2 24.778  
 RC 92.473 GL 1.01 GP -6.12 ZAL 74.72 ZAP 169.63 ETS 217.72 ZAE 158.64 ETE 342.89 ZAC 76.68 ETC 282.48 LVI -10.06

DISTANCE 297.698  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.434 VHL 5.425 DLA 14.40 RAL 33.13 RAD 6646.8 VEL 12.222 PTH 7.17 VHP 7.166 DPA 10.67 RAP 45.42 ECC 1.4844  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 7 5 3517.90 -46.51 129.77 273.96 101.44 12 5 43 2517.9 -36.85 99.84  
 60.00 11 30 30 3455.58 -39.86 125.59 275.40 96.51 12 28 6 2455.6 -32.96 96.82  
 70.00 12 4 19 3356.05 -34.06 118.12 275.99 92.74 13 0 15 2356.0 -29.39 90.39  
 80.00 12 55 20 3196.23 -29.86 106.13 276.12 90.21 13 48 36 2196.2 -26.73 79.14  
 90.00 14 9 2 2958.34 -28.27 88.64 276.11 89.29 14 58 20 1958.3 -25.71 61.92  
 100.00 15 38 12 2670.70 -29.86 67.50 276.12 90.21 16 22 42 1670.7 -26.73 40.51  
 110.00 17 3 46 2402.87 -34.06 47.04 275.99 92.74 17 43 49 1402.9 -29.39 19.31

DIFFERENTIAL CORRECTIONS  
 TDE -.3173 TRA -.8454 TC3 .5148 BAU .2112 SGT 1128.6 SGR 655.4 SG3 198.8 ST 21.7 SR 29.6 SS 9.8  
 RDE -.5556 RRA .2202 RC3 -.1327 FAU .07061 RRT -.1585 RRF .1940 RTF -.6518 CRT .6871 CRS .8614 CST .9332  
 FDE .2728 FRA .3365 FC3-2.0768 B8P 1651 SGB 1305.1 R23 -.0413 R13 .6570 L8A 35.3 M8A 13.9 S8A 1.8  
 BDE .6399 BRA .8736 BC3 .5368 F8P 259 SG1 1135.7 S2 643.0 THA 172.24 EL1 34.0 EL2 13.7 ALF 57.22

LAUNCH DATE AUG 14 1973 FLIGHT TIME 114.00 ARRIVAL DATE DEC 6 1973

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 34.846 GAL 1.90 AZL 89.81 HCA 94.29 SMA 237.75 ECC .36395 INC .1937 V1 29.402  
 RP 222.28 LAP .19 LOP 55.35 VP 25.217 GAP 21.03 AZP 90.01 TAL 7.14 TAP 101.43 RCA 151.22 APO 324.27 V2 24.738  
 RC 94.587 GL 1.26 GP -6.29 ZAL 74.13 ZAP 168.83 ETS 215.79 ZAE 158.55 ETE 342.13 ZAC 76.48 ETC 282.44 LVI -9.83

Planetocentric Conic: C3 28.415 VHL 5.331 DLA 14.44 RAL 32.47 RAD 6646.4 VEL 12.180 PTH 7.14 VHP 6.953 DPA 10.59 RAP 45.71 ECC 1.4878  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 4 19 3509.79 -46.39 129.01 272.49 102.01 12 2 49 2509.8 -36.56 99.30  
 60.00 11 27 42 3447.58 -39.80 124.92 273.99 96.96 12 25 9 2447.6 -32.73 96.26  
 70.00 12 1 28 3348.20 -34.03 117.51 274.83 93.10 12 57 16 2348.2 -29.22 89.85  
 80.00 12 52 25 3188.54 -29.85 105.56 274.78 90.51 13 45 34 2188.5 -26.61 78.60  
 90.00 14 6 6 2950.73 -28.28 88.08 274.79 89.57 14 55 16 1950.7 -25.80 61.39  
 100.00 15 35 17 2663.01 -29.85 66.93 274.78 90.51 16 19 40 1663.0 -26.61 39.97  
 110.00 17 0 54 2395.02 -34.03 46.43 274.83 93.10 17 40 49 1395.0 -29.22 18.78

Differential Corrections: TDE -.3185 TRA -.8346 TC3 .5510 BAU .2188 SGT 1149.1 SGR 659.8 SG3 211.5 ST 22.1 SR 29.6 SS 10.1  
 RDE -.5462 RRA .2187 RC3 -.1673 FAU .07391 RRT -.1696 RRF .2077 RTF -.6599 CRT .6920 CRS .8710 CST .9287  
 FDE .2881 FRA .3310 FC3 -2.2520 BSP 1700 SGB 1325.1 R23 -.0446 R13 .6855 LSA 35.6 MSA 13.9 S8A 1.9  
 BDE .6323 BRA .8628 BC3 .5759 F8P 280 SG1 1157.0 SG2 645.8 THA 171.90 EL1 34.2 EL2 13.8 ALF 56.62

LAUNCH DATE AUG 14 1973 FLIGHT TIME 116.00 ARRIVAL DATE DEC 8 1973

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 34.446 GAL 1.95 AZL 89.77 HCA 95.38 SMA 234.85 ECC .35619 INC .2292 V1 29.402  
 RP 222.67 LAP .23 LOP 56.45 VP 25.039 GAP 20.66 AZP 90.02 TAL 7.45 TAP 102.83 RCA 151.20 APO 318.50 V2 24.694  
 RC 96.756 GL 1.51 GP -6.46 ZAL 73.54 ZAP 168.02 ETS 214.11 ZAE 158.51 ETE 341.51 ZAC 76.27 ETC 282.42 LVI -9.60

Planetocentric Conic: C3 27.478 VHL 5.242 DLA 14.47 RAL 31.80 RAD 6646.0 VEL 12.142 PTH 7.11 VHP 6.748 DPA 10.50 RAP 45.98 ECC 1.4922  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 1 32 3502.19 -46.28 128.31 271.05 102.54 11 59 54 2502.2 -36.27 98.79  
 60.00 11 24 51 3440.10 -39.73 124.30 272.62 97.38 12 22 11 2440.1 -32.52 95.75  
 70.00 11 58 34 3340.89 -34.00 116.94 273.30 93.44 12 54 15 2340.9 -29.06 89.34  
 80.00 12 49 28 3181.40 -29.85 105.03 273.48 90.79 13 42 29 2181.4 -26.49 78.11  
 90.00 14 3 7 2943.68 -28.28 87.57 273.49 89.83 14 52 11 1943.7 -25.90 60.90  
 100.00 15 32 20 2655.88 -29.85 66.40 273.48 90.79 16 16 38 1655.9 -26.49 39.48  
 110.00 16 58 0 2387.71 -34.00 45.86 273.30 93.44 17 37 48 1387.7 -29.06 18.23

Differential Corrections: TDE -.3095 TRA -.8133 TC3 .6040 BAU .2318 SGT 1185.5 SGR 664.1 SG3 224.8 ST 21.8 SR 29.6 SS 10.5  
 RDE -.5368 RRA .2173 RC3 -.1826 FAU .07731 RRT -.1911 RRF .2215 RTF -.6824 CRT .6897 CRS .8805 CST .9214  
 FDE .3067 FRA .3269 FC3 -2.4360 BSP 1615 SGB 1341.4 R23 -.0336 R13 .6876 LSA 35.6 MSA 13.9 S8A 1.9  
 BDE .6198 BRA .8418 BC3 .6310 F8P 304 SG1 1175.4 SG2 646.4 THA 171.06 EL1 34.1 EL2 13.7 ALF 57.03

LAUNCH DATE AUG 14 1973 FLIGHT TIME 118.00 ARRIVAL DATE DEC 10 1973

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 34.352 GAL 2.00 AZL 89.73 HCA 96.47 SMA 232.19 ECC .34891 INC .2648 V1 29.402  
 RP 223.06 LAP .26 LOP 57.54 VP 24.867 GAP 20.30 AZP 90.03 TAL 7.76 TAP 104.23 RCA 151.17 APO 313.20 V2 24.652  
 RC 98.976 GL 1.77 GP -6.64 ZAL 72.95 ZAP 167.18 ETS 212.84 ZAE 158.52 ETE 340.84 ZAC 76.05 ETC 282.40 LVI -9.36

Planetocentric Conic: C3 26.616 VHL 5.159 DLA 14.52 RAL 31.14 RAD 6645.7 VEL 12.107 PTH 7.08 VHP 6.550 DPA 10.40 RAP 46.25 ECC 1.4380  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 58 44 3495.16 -46.18 127.67 269.68 103.03 11 58 59 2495.2 -36.01 98.32  
 60.00 11 22 0 3433.22 -39.67 123.72 271.31 97.77 12 19 13 2433.2 -32.32 95.27  
 70.00 11 55 39 3334.19 -33.97 116.42 272.02 93.75 12 51 13 2334.2 -28.92 88.87  
 80.00 12 46 29 3174.91 -29.84 104.55 272.23 91.05 13 39 24 2174.9 -26.38 77.66  
 90.00 14 0 6 2937.29 -28.28 87.10 272.24 90.06 14 49 3 1937.3 -25.40 60.46  
 100.00 15 29 21 2649.39 -29.84 65.91 272.23 91.05 16 13 30 1649.4 -26.38 39.03  
 110.00 16 55 5 2381.01 -33.97 45.34 272.02 93.75 17 34 48 1381.0 -28.92 17.79

Differential Corrections: TDE -.3148 TRA -.8059 TC3 .6368 BAU .2374 SGT 1186.9 SGR 668.7 SG3 239.2 ST 22.3 SR 29.6 SS 10.8  
 RDE -.5279 RRA .2153 RC3 -.1994 FAU .08107 RRT -.2002 RRF .2377 RTF -.6848 CRT .6978 CRS .8889 CST .9178  
 FDE .3220 FRA .3174 FC3 -2.6371 BSP 1708 SGB 1362.3 R23 -.0428 R13 .6910 LSA 36.0 MSA 13.9 S8A 2.0  
 BDE .8148 BRA .8342 BC3 .8673 F8P 325 SG1 1197.6 SG2 649.3 THA 170.85 EL1 34.4 EL2 13.7 ALF 58.07

LAUNCH DATE AUG 14 1973 FLIGHT TIME 120.00 ARRIVAL DATE DEC 12 1973

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 34.283 GAL 2.05 AZL 89.70 HCA 97.56 SMA 229.73 ECC .34209 INC .3007 V1 29.402  
 RP 223.44 LAP .30 LOP 58.63 VP 24.703 GAP 19.94 AZP 90.04 TAL 8.07 TAP 105.83 RCA 151.15 APO 308.31 V2 24.611  
 RC 101.244 GL 2.03 GP -6.83 ZAL 72.38 ZAP 166.33 ETS 211.35 ZAE 158.59 ETE 340.09 ZAC 75.83 ETC 282.38 LVI -9.18

Planetocentric Conic: C3 25.822 VHL 5.082 DLA 14.57 RAL 30.49 RAD 6645.3 VEL 12.074 PTH 7.06 VHP 6.359 DPA 10.28 RAP 46.50 ECC 1.4250  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 55 55 3488.63 -46.08 127.07 268.35 103.47 11 54 4 2488.6 -35.76 97.90  
 60.00 11 19 8 3426.87 -39.61 123.19 270.03 98.12 12 16 15 2426.9 -32.13 94.84  
 70.00 11 52 42 3328.07 -33.94 115.94 270.78 94.03 12 48 10 2328.1 -28.78 88.45  
 80.00 12 43 28 3169.02 -29.83 104.11 271.01 91.28 13 36 17 2169.0 -26.28 77.25  
 90.00 13 57 3 2931.51 -28.28 86.68 271.03 90.27 14 45 54 1931.5 -25.32 60.06  
 100.00 15 26 19 2643.49 -29.83 65.48 271.01 91.28 16 10 23 1643.5 -26.28 38.62  
 110.00 16 52 8 2374.89 -33.94 44.86 270.78 94.03 17 31 43 1374.9 -28.78 17.36

Differential Corrections: TDE -.3185 TRA -.7969 TC3 .6719 BAU .2438 SGT 1207.1 SGR 673.3 SG3 254.4 ST 22.7 SR 29.5 SS 11.2  
 RDE -.5191 RRA .2137 RC3 -.2173 FAU .08504 RRT -.2113 RRF .2544 RTF -.6886 CRT .7050 CRS .8976 CST .9133  
 FDE .3401 FRA .3065 FC3 -2.8513 BSP 1776 SGB 1382.2 R23 -.0499 R13 .6958 LSA 36.3 MSA 13.8 S8A 2.1  
 BDE .6090 BRA .8251 BC3 .7061 F8P 348 SG1 1218.9 SG2 651.8 THA 170.56 EL1 34.6 EL2 13.7 ALF 55.23

LAUNCH DATE AUG 14 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC

DISTANCE 313.348

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 34.179 GAL 2.10 AZL 89.66 HCA 98.64 SMA 227.46 ECC .33560 INC .3364 V1 29.402  
 RP 223.83 LAP .33 LOP 59.71 VP 24.544 GAP 19.59 AZP 90.05 TAL 8.38 TAP 107.02 RCA 151.13 APO 303.80 V2 24.569  
 RC 103.560 GL 2.30 GP -7.02 ZAL 71.81 ZAP 185.46 ETS 210.20 ZAE 158.69 ETE 339.28 ZAC 75.60 ETC 282.37 LVI -8.88

PLANETOCENTRIC CONIC

C3 25.091 VHL 5.009 DLA 14.62 RAL 29.84 RAD 6645.0 VEL 12.044 PTH 7.03 VHP 6.175 DPA 10.15 RAP 46.74 ECC 1.4129  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 53 6 3482.67 -45.98 126.53 267.07 103.88 11 51 9 2482.7 -35.34 97.50  
 60.00 11 16 15 3421.07 -39.55 122.71 268.80 98.44 12 13 16 2421.1 -31.96 94.45  
 70.00 11 49 44 3322.51 -33.92 115.51 269.58 94.28 12 45 7 2322.5 -28.66 88.06  
 80.00 12 40 25 3163.72 -29.82 103.71 269.83 91.48 13 33 8 2163.7 -26.18 76.88  
 90.00 13 53 58 2926.33 -28.28 86.30 269.86 90.46 14 42 44 1926.3 -25.24 59.70  
 100.00 15 23 17 2638.19 -29.82 65.08 269.83 91.48 16 7 15 1638.2 -26.18 38.25  
 110.00 16 49 10 2369.33 -33.92 44.43 269.58 94.28 17 28 40 1369.3 -28.66 18.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3215 TRA -.7872 TC3 .7072 BAU .2501 SGT 1226.0 SGR 678.1 SG3 270.8 ST 23.1 SR 29.4 SS 11.6  
 RDE -.5105 RRA .2119 RC3 -.2363 FAU .08921 RRT -.2238 RRF .2721 RTF -.6930 CRT .7114 CRS .9056 CST .9087  
 FDE .3588 FRA .2946 FC3-3.0780 BSP 1841 SGB 1401.0 R23 -.0565 R13 .7010 LSA 36.6 MSA 13.8 S8A 2.1  
 BDE .6033 BRA .8152 BC3 .7456 FSP 374 SG1 1239.1 SG2 653.9 THA 170.18 EL1 34.8 EL2 13.7 ALF 54.4

LAUNCH DATE AUG 14 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC

DISTANCE 316.844

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 34.099 GAL 2.15 AZL 89.63 HCA 99.72 SMA 225.37 ECC .32952 INC .3721 V1 29.402  
 RP 224.22 LAP .37 LOP 60.79 VP 24.391 GAP 19.24 AZP 90.06 TAL 8.68 TAP 108.40 RCA 151.10 APO 299.63 V2 24.527  
 RC 105.921 GL 2.57 GP -7.22 ZAL 71.24 ZAP 164.57 ETS 209.19 ZAE 158.85 ETE 338.38 ZAC 75.38 ETC 282.36 LVI -8.63

PLANETOCENTRIC CONIC

C3 24.417 VHL 4.941 DLA 14.68 RAL 29.19 RAD 6644.7 VEL 12.018 PTH 7.01 VHP 5.997 DPA 10.01 RAP 46.97 ECC 1.4018  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 50 17 3477.20 -43.89 126.03 265.85 104.26 11 48 15 2477.2 -35.33 97.15  
 60.00 11 13 21 3415.81 -39.50 122.27 267.62 98.74 12 10 17 2415.8 -31.80 94.09  
 70.00 11 46 45 3317.52 -33.89 115.12 268.43 94.51 12 42 3 2317.5 -28.54 87.72  
 80.00 12 37 20 3159.01 -29.82 103.36 268.69 91.67 13 29 59 2159.0 -26.10 76.56  
 90.00 13 50 49 2921.77 -28.27 85.97 268.72 90.63 14 39 31 1921.8 -25.16 59.39  
 100.00 15 20 12 2633.49 -29.82 64.73 268.69 91.67 16 4 5 1633.5 -26.10 37.92  
 110.00 16 46 11 2364.34 -33.89 44.04 268.43 94.51 17 25 36 1364.3 -28.54 16.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3242 TRA -.7770 TC3 .7429 BAU .2566 SGT 1244.1 SGR 683.0 SG3 287.3 ST 23.4 SR 29.3 SS 12.0  
 RDE -.5020 RRA .2100 RC3 -.2565 FAU .09358 RRT -.2374 RRF .2904 RTF -.6978 CRT .7177 CRS .9135 CST .9037  
 FDE .3800 FRA .2612 FC3-3.3180 BSP 1894 SGB 1419.2 R23 -.0625 R13 .7067 LSA 36.9 MSA 13.7 S8A 2.2  
 BDE .5976 BRA .8049 BC3 .7859 FSP 401 SG1 1258.6 SG2 655.7 THA 169.77 EL1 35.0 EL2 13.7 ALF 53.76

LAUNCH DATE AUG 14 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC

DISTANCE 319.984

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 34.024 GAL 2.18 AZL 89.59 HCA 100.80 SMA 223.42 ECC .32379 INC .4081 V1 29.402  
 RP 224.61 LAP .40 LOP 61.87 VP 24.243 GAP 18.89 AZP 90.08 TAL 8.98 TAP 109.78 RCA 151.08 APO 289.76 V2 24.485  
 RC 108.326 GL 2.85 GP -7.43 ZAL 70.69 ZAP 163.66 ETS 208.28 ZAE 159.04 ETE 337.40 ZAC 75.14 ETC 282.35 LVI -8.39

PLANETOCENTRIC CONIC

C3 23.796 VHL 4.878 DLA 14.75 RAL 28.55 RAD 6644.5 VEL 11.991 PTH 6.99 VHP 5.826 DPA 9.86 RAP 47.19 ECC 1.3916  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 47 29 3472.25 -45.80 125.58 264.67 104.59 11 45 21 2472.2 -35.14 96.83  
 60.00 11 10 27 3411.08 -39.45 121.88 266.48 99.00 12 7 18 2411.1 -31.66 93.77  
 70.00 11 43 45 3313.09 -33.87 114.78 267.31 94.71 12 38 58 2313.1 -28.44 87.41  
 80.00 12 34 14 3154.90 -29.81 103.06 267.59 91.83 13 28 49 2154.9 -26.03 76.27  
 90.00 13 47 41 2917.81 -28.27 85.68 267.63 90.77 14 36 19 1917.8 -25.10 59.11  
 100.00 15 17 6 2629.38 -29.81 64.43 267.59 91.83 16 0 55 1629.4 -26.03 37.64  
 110.00 16 43 11 2359.91 -33.87 43.70 267.31 94.71 17 22 31 1359.9 -28.44 16.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3289 TRA -.7864 TC3 .7791 BAU .2631 SGT 1281.4 SGR 688.1 SG3 305.1 ST 23.7 SR 29.2 SS 12.4  
 RDE -.4936 RRA .2080 RC3 -.2780 FAU .09810 RRT -.2523 RRF .3098 RTF -.7030 CRT .7237 CRS .9206 CST .8990  
 FDE .4024 FRA .2670 FC3-3.5719 BSP 1944 SGB 1436.9 R23 -.0683 R13 .7130 LSA 37.2 MSA 13.7 S8A 2.3  
 BDE .5918 BRA .7941 BC3 .8272 FSP 430 SG1 1277.7 SG2 657.4 THA 169.30 EL1 35.1 EL2 13.6 ALF 53.07

LAUNCH DATE AUG 14 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC

DISTANCE 323.364

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.953 GAL 2.24 AZL 89.56 HCA 101.87 SMA 221.62 ECC .31840 INC .4439 V1 29.402  
 RP 225.00 LAP .43 LOP 62.94 VP 24.101 GAP 18.55 AZP 90.09 TAL 9.28 TAP 111.15 RCA 151.05 APO 292.18 V2 24.443  
 RC 110.773 GL 3.13 GP -7.65 ZAL 70.15 ZAP 162.73 ETS 207.47 ZAE 159.27 ETE 336.33 ZAC 74.90 ETC 282.34 LVI -8.14

PLANETOCENTRIC CONIC

C3 23.223 VHL 4.819 DLA 14.82 RAL 27.92 RAD 6644.2 VEL 11.967 PTH 6.97 VHP 5.860 DPA 9.70 RAP 47.39 ECC 1.3822  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 44 40 3467.80 -45.73 125.18 263.55 104.89 11 42 28 2467.8 -34.97 96.54  
 60.00 11 7 33 3406.88 -39.41 121.53 265.38 99.23 12 4 20 2406.9 -31.53 93.49  
 70.00 11 40 44 3309.22 -33.84 114.48 266.24 94.89 12 35 53 2309.2 -28.35 87.15  
 80.00 12 31 6 3151.39 -29.80 102.80 266.53 91.96 13 23 38 2151.4 -25.97 76.03  
 90.00 13 44 30 2914.47 -28.27 85.43 266.57 90.90 14 33 5 1914.5 -25.05 58.88  
 100.00 15 13 58 2625.86 -29.80 64.17 266.53 91.96 15 57 44 1625.9 -25.97 37.40  
 110.00 16 40 10 2356.04 -33.84 43.40 266.24 94.89 17 19 26 1356.0 -28.35 16.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3286 TRA -.7552 TC3 .8137 BAU .2693 SGT 1276.8 SGR 693.6 SG3 323.8 ST 24.0 SR 29.1 SS 12.9  
 RDE -.4854 RRA .2059 RC3 -.3006 FAU .10299 RRT -.2677 RRF .3302 RTF -.7076 CRT .7297 CRS .9272 CST .8940  
 FDE .4256 FRA .2502 FC3-3.8393 BSP 1990 SGB 1453.1 R23 -.0744 R13 .7186 LSA 37.4 MSA 13.6 S8A 2.4  
 BDE .5861 BRA .7828 BC3 .8675 FSP 461 SG1 1295.1 SG2 658.9 THA 168.79 EL1 35.2 EL2 13.6 ALF 52.42

LAUNCH DATE AUG 14 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -1.00 LOL 321.07 VL 33.885 GAL 2.28 AZL 89.52 MCA 102.94 SMA 219.94 ECC .31332 INC .4803 V1 29.402  
 RP 225.39 LAP .47 LOP 84.01 VP 23.963 GAP 18.21 AZP 90.11 TAL 9.57 TAP 112.51 RCA 131.03 APO 288.86 V2 24.401  
 RC 113.259 GL 3.42 GP -7.87 ZAL 69.63 ZAP 181.79 ETS 208.73 ZAE 159.54 ETE 335.15 ZAC 74.66 ETC 282.34 LVI -7.88

PLANETOCENTRIC CONIC  
 C3 22.695 VHL 4.764 DLA 14.90 RAL 27.30 RAD 6644.0 VEL 11.945 PTH 6.95 VHP 5.500 DPA 9.52 RAP 47.58 ECC 1.3733  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 41 52 3463.85 -45.66 124.83 262.48 105.16 11 39 36 2463.8 -34.81 96.29  
 60.00 11 4 39 3403.21 -39.37 121.23 264.34 99.43 12 1 22 2403.2 -31.42 93.24  
 70.00 11 37 42 3305.91 -33.83 114.22 265.21 95.04 12 32 48 2305.9 -28.27 86.92  
 80.00 12 27 57 3148.47 -29.79 102.58 265.51 92.08 13 20 25 2148.5 -25.91 75.83  
 90.00 13 41 18 2911.74 -28.26 85.23 265.55 91.00 14 29 49 1911.7 -25.00 58.69  
 100.00 15 10 49 2622.94 -29.79 63.95 265.51 92.08 15 54 32 1622.9 -25.91 37.20  
 110.00 16 37 9 2352.72 -33.83 45.14 265.21 95.04 17 16 21 1352.7 -28.27 15.84

DIFFERENTIAL CORRECTIONS  
 TDE -.3309 TRA -.7445 TC3 .8484 BAU .2756 SGT 1292.4 SGR 699.4 SG3 343.5 ST 24.3 SR 28.9 88 13.4  
 RDE -.4770 RRA .2037 RC3 -.3248 FAU .10808 RRT -.2840 RRF .3511 RTF -.7122 CRT .7356 CRS .9337 CBT .8892  
 FDE .4528 FRA .2324 FC3-4.1228 BSP 2026 SGB 1469.5 R23 -.0803 R13 .7245 LSA 37.7 MSA 13.5 88A 2.5  
 BDE .5805 BRA .7719 BC3 .9084 FSP 493 SGI 1312.9 SG2 680.1 THA 168.25 EL1 35.3 EL2 13.5 ALF 51.71

LAUNCH DATE AUG 14 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -1.00 LOL 321.07 VL 33.822 GAL 2.32 AZL 89.48 MCA 104.00 SMA 218.39 ECC .30854 INC .5186 V1 29.402  
 RP 225.78 LAP .50 LOP 85.07 VP 23.831 GAP 17.87 AZP 90.12 TAL 9.86 TAP 113.87 RCA 131.01 APO 285.77 V2 24.359  
 RC 115.782 GL 3.71 GP -8.11 ZAL 69.11 ZAP 180.83 ETS 206.06 ZAE 159.84 EYE 333.85 ZAC 74.41 ETC 282.34 LVI -7.63

PLANETOCENTRIC CONIC  
 C3 22.207 VHL 4.712 DLA 14.99 RAL 26.69 RAD 6643.8 VEL 11.925 PTH 6.93 VHP 5.346 DPA 9.32 RAP 47.75 ECC 1.3655  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 39 4 3460.39 -45.60 124.92 261.45 105.39 11 36 45 2460.4 -34.68 96.07  
 60.00 11 1 45 3400.05 -39.33 120.97 263.33 99.61 11 58 25 2400.0 -31.32 93.03  
 70.00 11 34 40 3303.14 -33.81 114.01 264.22 95.16 12 29 43 2303.1 -28.21 86.73  
 80.00 12 24 46 3146.14 -29.79 102.41 264.53 92.17 13 17 13 2146.1 -25.87 75.67  
 90.00 13 38 3 2909.62 -28.26 85.08 264.58 91.07 14 26 33 1909.6 -24.97 58.55  
 100.00 15 7 38 2620.61 -29.79 63.78 264.53 92.17 15 51 19 1620.6 -25.87 37.04  
 110.00 16 34 6 2349.96 -33.81 42.93 264.22 95.16 17 13 16 1350.0 -28.21 15.65

DIFFERENTIAL CORRECTIONS  
 TDE -.3326 TRA -.7334 TC3 .8811 BAU .2815 SGT 1305.8 SGR 705.9 SG3 364.3 ST 24.5 SR 28.8 88 13.9  
 RDE -.4688 RRA .2014 RC3 -.3503 FAU .11342 RRT -.3013 RRF .3733 RTF -.7161 CRT .7412 CRS .9393 CBT .8841  
 FDE .4798 FRA .2119 FC3-4.4218 BSP 2060 SGB 1484.4 R23 -.0867 R13 .7298 LSA 37.9 MSA 13.4 88A 2.6  
 BDE .5748 BRA .7605 BC3 .9482 FSP 527 SGI 1328.9 SG2 681.4 THA 167.65 EL1 35.3 EL2 13.4 ALF 51.07

LAUNCH DATE AUG 14 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -1.00 LOL 321.07 VL 33.782 GAL 2.36 AZL 89.45 MCA 105.07 SMA 216.94 ECC .30403 INC .5532 V1 29.402  
 RP 226.17 LAP .53 LOP 86.13 VP 23.703 GAP 17.54 AZP 90.14 TAL 10.14 TAP 113.21 RCA 150.98 APO 282.89 V2 24.318  
 RC 118.341 GL 4.00 GP -8.35 ZAL 68.62 ZAP 159.85 ETS 205.46 ZAE 160.17 ETE 332.43 ZAC 74.15 ETC 282.34 LVI -7.37

PLANETOCENTRIC CONIC  
 C3 21.757 VHL 4.664 DLA 15.09 RAL 26.09 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 5.197 DPA 9.12 RAP 47.91 ECC 1.3581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 36 18 3457.41 -45.54 124.25 260.48 105.59 11 33 55 2457.4 -34.56 95.88  
 60.00 10 58 50 3397.39 -39.30 120.75 262.38 99.75 11 55 28 2397.4 -31.24 92.85  
 70.00 11 31 37 3300.93 -33.79 113.84 263.28 95.26 12 26 38 2300.9 -28.16 86.58  
 80.00 12 21 34 3144.39 -29.78 102.28 263.59 92.24 13 13 59 2144.4 -25.84 75.55  
 90.00 13 34 47 2908.11 -28.26 84.97 263.64 91.13 14 23 15 1908.1 -24.95 58.44  
 100.00 15 4 26 2618.86 -29.78 63.65 263.59 92.24 15 48 5 1618.9 -25.84 36.92  
 110.00 16 31 3 2347.75 -33.79 42.78 263.28 95.26 17 10 11 1347.7 -28.16 15.50

DIFFERENTIAL CORRECTIONS  
 TDE -.3345 TRA -.7220 TC3 .9127 BAU .2873 SGT 1318.1 SGR 712.8 SG3 386.2 ST 24.8 SR 28.6 88 14.4  
 RDE -.4807 RRA .1988 RC3 -.3774 FAU .11904 RRT -.3189 RRF .3963 RTF -.7198 CRT .7470 CRS .9448 CBT .8793  
 FDE .5093 FRA .1890 FC3-4.7388 BSP 2095 SGB 1498.5 R23 -.0935 R13 .7380 LSA 38.1 MSA 13.3 88A 2.7  
 BDE .5893 BRA .7489 BC3 .9877 FSP 583 SGI 1344.1 SG2 682.6 THA 167.01 EL1 35.4 EL2 13.3 ALF 80.40

LAUNCH DATE AUG 14 1973

FLIGHT TIME 136.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -1.00 LOL 321.07 VL 33.705 GAL 2.40 AZL 89.41 MCA 108.12 SMA 215.88 ECC .29979 INC .5900 V1 29.402  
 RP 226.58 LAP .57 LOP 87.18 VP 23.578 GAP 17.21 AZP 90.16 TAL 10.42 TAP 118.54 RCA 150.96 APO 280.22 V2 24.278  
 RC 120.933 GL 4.31 GP -8.61 ZAL 68.13 ZAP 158.84 ETS 204.90 ZAE 160.53 ETE 330.86 ZAC 73.89 ETC 282.35 LVI -7.11

PLANETOCENTRIC CONIC  
 C3 21.341 VHL 4.620 DLA 15.19 RAL 25.51 RAD 6643.4 VEL 11.889 PTH 6.90 VHP 5.053 DPA 8.89 RAP 48.05 ECC 1.3512  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 33 32 3454.90 -45.50 124.03 259.55 105.76 11 31 7 2454.9 -34.47 95.72  
 60.00 10 55 57 3395.25 -39.27 120.57 261.46 99.87 11 52 32 2395.2 -31.17 92.71  
 70.00 11 28 33 3299.26 -33.78 113.71 262.38 95.34 12 23 33 2299.3 -28.12 86.47  
 80.00 12 18 21 3143.23 -29.78 102.19 262.69 92.28 13 10 44 2143.2 -25.82 75.47  
 90.00 13 31 29 2907.20 -28.26 84.90 262.74 91.16 14 19 56 1907.2 -24.93 58.38  
 100.00 15 1 13 2617.71 -29.78 63.56 262.69 92.28 15 44 51 1617.7 -25.82 36.84  
 110.00 16 28 0 2346.08 -33.78 42.63 262.38 95.34 17 7 6 1346.1 -28.12 15.39

DIFFERENTIAL CORRECTIONS  
 TDE -.3365 TRA -.7111 TC3 .9425 BAU .2928 SGT 1329.5 SGR 720.5 SG3 409.1 ST 25.0 SR 28.3 88 15.0  
 RDE -.4524 RRA .1962 RC3 -.4060 FAU .12493 RRT -.3371 RRF .4201 RTF -.7229 CRT .7527 CRS .9493 CBT .8747  
 FDE .5414 FRA .1649 FC3-5.0680 BSP 2127 SGB 1512.2 R23 -.1007 R13 .7400 LSA 38.4 MSA 13.2 88A 2.8  
 BDE .5838 BRA .7377 BC3 1.0262 FSP 602 SGI 1358.7 SG2 683.7 THA 166.32 EL1 35.4 EL2 13.2 ALF 49.71



LAUNCH DATE AUG 14 1973

FLIGHT TIME 139.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.651 GAL 2.43 AZL 89.37 HCA 107.18 SMA 214.33 ECC .29579 INC .6271 V1 29.402  
 RP 226.95 LAP .60 LOP 68.24 VP 23.459 GAP 16.88 AZP 90.19 TAL 10.89 TAP 117.86 RCA 150.93 APO 277.73 V2 24.234  
 RC 123.856 GL 4.61 GP -0.87 ZAL 67.67 ZAP 157.82 ETS 204.39 ZAE 160.91 ETE 329.14 ZAC 73.62 ETC 282.36 LVI -6.84

DISTANCE 340.744  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.957 VHL 4.578 DLA 15.30 RAL 24.93 RAD 6643.3 VEL 11.873 PTH 6.89 VHP 4.915 DPA 8.66 RAP 48.17 ECC 1.3449  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 30 47 3452.86 -45.46 123.84 258.67 105.90 11 28 20 2452.9 -34.39 95.59  
 60.00 10 53 3 3393.59 -39.26 120.44 260.60 99.96 11 49 37 2393.6 -31.12 92.60  
 70.00 11 25 29 3298.13 -33.78 113.62 261.51 95.39 12 20 27 2298.1 -28.09 86.39  
 80.00 12 15 6 3142.66 -29.78 102.15 261.83 92.30 13 7 29 2142.7 -25.81 75.43  
 90.00 13 28 9 2906.90 -28.26 84.88 261.88 91.17 14 16 36 1906.9 -24.93 58.36  
 100.00 14 57 58 2617.13 -29.78 63.52 261.83 92.30 15 41 35 1617.1 -25.81 36.80  
 110.00 16 24 56 2344.94 -33.78 42.54 261.51 95.39 17 4 1 1344.9 -28.09 15.31

DIFFERENTIAL CORRECTIONS  
 TDE -.3365 TRA -.7004 TC3 .9701 BAU .2980  
 RDE -.4441 RRA .1934 RC3 -.4362 FAU .13110  
 FDE .5761 FRA .1387 FC3-5.4158 BSP 2160  
 BDE .5584 BRA .7266 BC3 1.0637 FSP 643

MID-COURSE EXECUTION ACCURACY  
 SGT 1339.5 SGR 729.0 SG3 433.2  
 RRT -.3557 RRF .4446 RTF -.7256  
 SGB 1525.1 R23 -.1083 R13 .7447  
 SG1 1372.4 SG2 665.0 THA 165.59

ORBIT DETERMINATION ACCURACY  
 ST 25.2 SR 28.1 SS 15.7  
 CRT .7583 CRS .9536 CST .8704  
 LSA 38.6 MSA 13.1 S8A 2.9  
 EL1 35.4 EL2 13.0 ALF 48.99

LAUNCH DATE AUG 14 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.601 GAL 2.47 AZL 89.34 HCA 108.23 SMA 213.16 ECC .29203 INC .6644 V1 29.402  
 RP 227.34 LAP .63 LOP 69.29 VP 23.343 GAP 16.56 AZP 90.21 TAL 10.95 TAP 119.17 RCA 150.91 APO 275.41 V2 24.193  
 RC 126.208 GL 4.92 GP -9.15 ZAL 67.22 ZAP 156.78 ETS 203.92 ZAE 161.31 ETE 327.25 ZAC 73.35 ETC 282.37 LVI -6.57

DISTANCE 344.299  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.603 VHL 4.539 DLA 15.43 RAL 24.37 RAD 6643.1 VEL 11.858 PTH 6.87 VHP 4.781 DPA 8.40 RAP 48.28 ECC 1.3391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 28 4 3451.28 -45.43 123.70 257.84 106.00 11 25 35 2451.3 -34.32 95.49  
 60.00 10 50 10 3392.43 -39.24 120.34 259.77 100.03 11 46 42 2392.4 -31.09 92.52  
 70.00 11 22 25 3297.53 -33.77 113.58 260.69 95.42 12 17 22 2297.5 -28.08 86.38  
 80.00 12 11 90 3142.67 -29.78 102.15 261.01 92.30 13 4 12 2142.7 -25.81 75.43  
 90.00 13 24 47 2907.21 -28.26 84.90 261.06 91.16 14 13 14 1907.2 -24.93 58.36  
 100.00 14 54 42 2617.14 -29.78 63.52 261.01 92.30 15 38 19 1617.1 -25.81 36.80  
 110.00 16 21 51 2344.35 -33.77 42.49 260.69 95.42 17 0 55 1344.3 -28.08 15.27

DIFFERENTIAL CORRECTIONS  
 TDE -.3408 TRA -.6900 TC3 .9948 BAU .3028  
 RDE -.4357 RRA .1904 RC3 -.4680 FAU .13754  
 FDE .6133 FRA .1100 FC3-5.7793 BSP 2189  
 BDE .5530 BRA .7158 BC3 1.0994 FSP 685

MID-COURSE EXECUTION ACCURACY  
 SGT 1347.8 SGR 738.3 SG3 458.4  
 RRT -.3743 RRF .4696 RTF -.7273  
 SGB 1536.8 R23 -.1169 R13 .7488  
 SG1 1384.8 SG2 666.4 THA 164.82

ORBIT DETERMINATION ACCURACY  
 ST 25.4 SR 27.8 SS 16.3  
 CRT .7639 CRS .9574 CST .8662  
 LSA 38.8 MSA 13.0 S8A 2.9  
 EL1 35.4 EL2 12.9 ALF 48.25

LAUNCH DATE AUG 14 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.553 GAL 2.50 AZL 89.30 HCA 109.27 SMA 212.06 ECC .28848 INC .7021 V1 29.402  
 RP 227.73 LAP .66 LOP 70.34 VP 23.232 GAP 16.24 AZP 90.23 TAL 11.20 TAP 120.47 RCA 150.89 APO 273.24 V2 24.152  
 RC 128.887 GL 5.23 GP -9.43 ZAL 66.79 ZAP 155.72 ETS 203.49 ZAE 161.72 ETE 325.16 ZAC 73.06 ETC 282.38 LVI -6.30

DISTANCE 347.874  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.278 VHL 4.503 DLA 15.56 RAL 23.82 RAD 6643.0 VEL 11.844 PTH 6.86 VHP 4.652 DPA 8.13 RAP 48.37 ECC 1.3337  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 25 21 3450.15 -45.41 123.80 257.05 106.08 11 22 51 2450.1 -34.28 95.42  
 60.00 10 47 17 3391.76 -39.23 120.28 258.99 100.06 11 43 49 2391.8 -31.07 92.47  
 70.00 11 19 19 3297.46 -33.77 113.57 259.91 95.42 12 14 17 2297.5 -28.08 86.34  
 80.00 12 8 32 3143.26 -29.78 102.19 260.23 92.28 13 0 55 2143.3 -25.82 75.47  
 90.00 13 21 23 2908.13 -28.26 84.97 260.28 91.13 14 9 51 1908.1 -24.95 58.44  
 100.00 14 51 24 2617.73 -29.78 63.56 260.23 92.28 15 35 1 1617.7 -25.82 36.84  
 110.00 16 18 46 2344.28 -33.77 42.49 259.91 95.42 16 57 50 1344.3 -28.08 15.26

DIFFERENTIAL CORRECTIONS  
 TDE -.3423 TRA -.6793 TC3 1.0173 BAU .3075  
 RDE -.4272 RRA .1871 RC3 -.5018 FAU .14433  
 FDE .6525 FRA .0784 FC3-6.1628 BSP 2210  
 BDE .5475 BRA .7046 BC3 1.1343 FSP 730

MID-COURSE EXECUTION ACCURACY  
 SGT 1334.3 SGR 748.9 SG3 484.9  
 RRT -.3934 RRF .4954 RTF -.1287  
 SGB 1547.6 R23 -.1257 R13 .7528  
 SG1 1396.0 SG2 667.9 THA 163.96

ORBIT DETERMINATION ACCURACY  
 ST 25.6 SR 27.4 SS 17.0  
 CRT .7692 CRS .9607 CST .8621  
 LSA 39.1 MSA 12.9 S8A 3.0  
 EL1 35.3 EL2 12.7 ALF 47.92

LAUNCH DATE AUG 14 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.508 GAL 2.53 AZL 89.26 HCA 110.32 SMA 211.04 ECC .28514 INC .7401 V1 29.402  
 RP 228.12 LAP .69 LOP 71.38 VP 23.123 GAP 15.92 AZP 90.26 TAL 11.44 TAP 121.76 RCA 150.87 APO 271.22 V2 24.110  
 RC 131.592 GL 5.55 GP -9.73 ZAL 66.30 ZAP 154.64 ETS 203.08 ZAE 162.13 ETE 322.86 ZAC 72.78 ETC 282.41 LVI -6.02

DISTANCE 351.469  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.973 VHL 4.469 DLA 15.70 RAL 23.29 RAD 6642.8 VEL 11.831 PTH 6.85 VHP 4.528 DPA 7.84 RAP 48.45 ECC 1.3287  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 22 39 3449.46 -45.39 123.54 256.31 106.12 11 20 9 2449.5 -34.25 95.38  
 60.00 10 44 24 3391.56 -39.23 120.27 258.25 100.07 11 40 56 2391.6 -31.06 92.46  
 70.00 11 16 13 3297.91 -33.78 113.61 259.17 95.40 12 11 11 2297.9 -28.09 86.38  
 80.00 12 5 12 3144.43 -29.78 102.28 259.49 92.24 12 57 36 2144.4 -25.84 75.55  
 90.00 13 17 56 2909.65 -28.26 85.08 259.54 91.07 14 6 26 1909.6 -24.97 58.55  
 100.00 14 48 4 2618.90 -29.78 63.65 259.49 92.24 15 31 43 1618.9 -25.84 36.92  
 110.00 16 15 39 2344.73 -33.78 42.52 259.17 95.40 16 54 44 1344.7 -28.09 15.29

DIFFERENTIAL CORRECTIONS  
 TDE -.3443 TRA -.6694 TC3 1.0372 BAU .3119  
 RDE -.4186 RRA .1838 RC3 -.5374 FAU .15143  
 FDE .6954 FRA .0458 FC3-6.5639 BSP 2236  
 BDE .5420 BRA .6942 BC3 1.1682 FSP 778

MID-COURSE EXECUTION ACCURACY  
 SGT 1359.9 SGR 760.6 SG3 512.8  
 RRT -.4124 RRF .5217 RTF -.7295  
 SGB 1558.1 R23 -.1351 R13 .7567  
 SG1 1406.8 SG2 669.8 THA 163.06

ORBIT DETERMINATION ACCURACY  
 ST 25.8 SR 27.1 SS 17.8  
 CRT .7743 CRS .9636 CST .8586  
 LSA 39.3 MSA 12.8 S8A 3.1  
 EL1 35.3 EL2 12.6 ALF 46.74



LAUNCH DATE AUG 14 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

DISTANCE 369.681

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.317 GAL 2.66 AZL 89.06 HCA 115.48 SMA 206.83 ECC .27116 INC .9367 V1 29.402  
 RP 230.05 LAP .85 LOP 76.55 VP 22.632 GAP 14.39 AZP 90.40 TAL 12.53 TAP 126.00 RCA 150.76 APO 262.94 V2 23.907  
 RC 145.456 GL 7.21 GP -11.38 ZAL 64.61 ZAP 148.91 ETS 201.38 ZAE 164.01 ETE 307.62 ZAC 71.23 ETC 262.57 LVI -4.59

PLANETOCENTRIC CONIC

C3 18.775 VHL 4.333 DLA 16.55 RAL 20.85 RAD 6642.3 VEL 11.781 PTH 6.81 VHP 3.972 DPA 6.14 RAP 48.53 ECC 1.3090  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 9 26 3452.43 -45.45 123.81 253.28 105.92 11 6 58 2452.4 -34.37 95.56  
 60.00 10 30 3 3397.53 -39.30 120.78 255.17 99.75 11 26 41 2397.5 -31.24 92.86  
 70.00 11 0 29 3307.96 -33.84 114.38 256.05 94.94 11 55 37 2308.0 -28.32 87.06  
 80.00 11 48 2 3158.94 -29.82 103.36 256.32 91.67 12 40 41 2158.9 -26.10 76.55  
 90.00 13 0 5 2926.39 -28.28 86.30 256.35 90.46 13 48 51 1926.4 -25.24 59.70  
 100.00 14 30 54 2633.41 -29.82 64.73 256.32 91.67 15 14 47 1633.4 -26.10 37.92  
 110.00 15 59 55 2354.76 -33.84 43.30 256.05 94.94 16 39 10 1354.8 -28.32 15.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3507 TRA -.6210 TC3 1.0901 BAU .3318 SGT 1356.9 SGR 842.6 SCS 671.2 ST 26.5 SR 24.8 SS 22.1  
 RDE -.3719 RRA .1627 RC3 -.7459 FAU .19173 RRT -.3028 RRF .6537 RTF -.7242 CRT .7970 CRS .9729 CST .8426  
 FDE .9582 FRA -.1621 FC3-8.8413 BSP 2296 SGB 1597.3 R23 -.1873 R13 .7756 LSA 40.6 MSA 12.4 SSA 3.6  
 BDE .5112 BRA .6419 BC3 1.3209 FSP 1050 SGI 1442.9 SGI 685.0 THA 157.27 EL1 34.5 EL2 11.6 ALF 42.61

LAUNCH DATE AUG 14 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

DISTANCE 373.382

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.285 GAL 2.68 AZL 89.02 HCA 116.50 SMA 206.17 ECC .26884 INC .9775 V1 29.402  
 RP 230.44 LAP .87 LOP 77.57 VP 22.542 GAP 14.09 AZP 90.44 TAL 12.71 TAP 129.21 RCA 150.75 APO 261.60 V2 23.867  
 RC 148.289 GL 7.56 GP -11.74 ZAL 64.31 ZAP 147.69 ETS 201.08 ZAE 164.27 ETE 303.73 ZAC 70.90 ETC 262.62 LVI -4.28

PLANETOCENTRIC CONIC

C3 18.587 VHL 4.311 DLA 16.75 RAL 20.41 RAD 6642.2 VEL 11.773 PTH 6.80 VHP 3.873 DPA 5.74 RAP 48.49 ECC 1.3059  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 6 50 3454.27 -45.48 123.97 252.80 105.80 11 4 24 2454.3 -34.44 95.68  
 60.00 10 27 11 3400.10 -39.33 120.97 254.67 99.60 11 23 51 2400.1 -31.32 93.03  
 70.00 10 57 16 3311.51 -33.86 114.66 255.53 94.78 11 52 28 2311.5 -28.40 87.31  
 80.00 11 44 28 3163.59 -29.82 103.70 255.79 91.49 12 37 12 2163.6 -26.18 76.87  
 90.00 12 56 21 2931.60 -28.28 86.68 255.82 90.27 13 45 12 1931.6 -25.32 60.06  
 100.00 14 27 20 2638.07 -29.82 65.07 255.79 91.49 15 11 18 1638.1 -26.18 38.24  
 110.00 15 56 43 2358.33 -33.86 43.58 255.63 94.78 16 38 1 1358.3 -28.40 16.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3531 TRA -.6142 TC3 1.0853 BAU .3342 SGT 1350.0 SGR 864.6 SCS 706.7 ST 26.8 SR 24.3 SS 23.2  
 RDE -.3615 RRA .1577 RC3 -.7941 FAU .20069 RRT -.3157 RRF .6789 RTF -.7184 CRT .8012 CRS .9739 CST .8406  
 FDE 1.0242 FRA -.2106 FC3-9.3475 BSP 2317 SGB 1603.1 R23 -.2017 R13 .7778 LSA 40.9 MSA 12.4 SSA 3.6  
 BDE .5053 BRA .6341 BC3 1.3448 FSP 1113 SGI 1446.4 SGI 691.4 THA 155.88 EL1 34.3 EL2 11.3 ALF 41.51

LAUNCH DATE AUG 14 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

DISTANCE 377.054

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.255 GAL 2.70 AZL 88.98 HCA 117.52 SMA 205.94 ECC .26685 INC 1.0190 V1 29.402  
 RP 230.82 LAP .90 LOP 78.59 VP 22.456 GAP 13.79 AZP 90.47 TAL 12.89 TAP 130.41 RCA 150.73 APO 260.34 V2 23.827  
 RC 151.140 GL 7.91 GP -12.12 ZAL 64.04 ZAP 146.45 ETS 200.80 ZAE 164.47 ETE 299.57 ZAC 70.56 ETC 262.67 LVI -3.98

PLANETOCENTRIC CONIC

C3 18.415 VHL 4.291 DLA 16.97 RAL 19.89 RAD 6642.1 VEL 11.766 PTH 6.79 VHP 3.778 DPA 5.33 RAP 48.44 ECC 1.3031  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 4 15 3456.92 -45.33 124.17 252.36 105.65 11 1 51 2456.5 -34.53 95.82  
 60.00 10 24 18 3403.12 -39.36 121.22 254.21 99.44 11 21 1 2403.1 -31.42 93.23  
 70.00 10 54 2 3315.59 -33.88 114.97 255.06 94.80 11 49 18 2315.6 -28.50 87.59  
 80.00 11 40 52 3168.84 -29.83 104.09 255.30 91.28 12 33 40 2168.8 -26.27 77.24  
 90.00 12 52 33 2937.74 -28.28 87.11 255.32 90.06 13 41 30 1937.4 -25.41 60.47  
 100.00 14 23 43 2643.31 -29.83 65.48 255.30 91.28 15 7 47 1643.3 -26.27 38.60  
 110.00 15 53 28 2362.40 -33.88 43.89 255.06 94.80 16 32 51 1362.4 -28.50 16.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3550 TRA -.6074 TC3 1.0766 BAU .3369 SGT 1340.7 SGR 888.7 SCS 743.3 ST 26.9 SR 23.6 SS 24.3  
 RDE -.3506 RRA .1525 RC3 -.8445 FAU .20994 RRT -.3274 RRF .7033 RTF -.7119 CRT .8049 CRS .9746 CST .8387  
 FDE 1.0944 FRA -.2610 FC3-9.8696 BSP 2337 SGB 1608.3 R23 -.2155 R13 .7806 LSA 41.3 MSA 12.4 SSA 3.7  
 BDE .4990 BRA .6262 BC3 1.3684 FSP 1180 SGI 1448.8 SGI 698.7 THA 154.36 EL1 34.1 EL2 11.1 ALF 40.40

LAUNCH DATE AUG 14 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 380.756

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.227 GAL 2.72 AZL 88.94 HCA 118.54 SMA 204.94 ECC .26460 INC 1.0611 V1 29.402  
 RP 231.20 LAP .93 LOP 79.61 VP 22.372 GAP 13.50 AZP 90.51 TAL 13.05 TAP 131.59 RCA 150.71 APO 259.17 V2 23.787  
 RC 154.008 GL 8.27 GP -12.52 ZAL 63.78 ZAP 145.19 ETS 200.92 ZAE 164.60 ETE 295.16 ZAC 70.22 ETC 262.72 LVI -3.87

PLANETOCENTRIC CONIC

C3 18.258 VHL 4.273 DLA 17.19 RAL 19.57 RAD 6642.1 VEL 11.759 PTH 6.79 VHP 3.686 DPA 4.89 RAP 48.36 ECC 1.3005  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 40 3459.16 -45.57 124.41 251.96 105.48 10 59 19 2459.2 -34.63 95.99  
 60.00 10 21 25 3406.58 -39.40 121.51 253.79 99.25 11 18 11 2406.6 -31.52 93.47  
 70.00 10 50 46 3320.17 -33.90 115.33 254.61 94.39 11 46 6 2320.2 -28.60 87.90  
 80.00 11 37 11 3174.68 -29.84 104.53 254.84 91.06 12 30 6 2174.7 -26.37 77.64  
 90.00 12 48 40 2943.92 -28.28 87.58 254.85 89.82 13 37 44 1943.9 -25.50 60.92  
 100.00 14 20 3 2649.16 -29.84 65.90 254.84 91.06 15 4 12 1649.2 -26.37 39.01  
 110.00 15 50 12 2366.99 -33.90 44.25 254.61 94.39 16 29 39 1367.0 -28.60 16.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3559 TRA -.6005 TC3 1.0652 BAU .3400 SGT 1329.2 SGR 915.5 SCS 781.5 ST 27.0 SR 23.0 SS 25.4  
 RDE -.3395 RRA .1468 RC3 -.8976 FAU .21956 RRT -.3380 RRF .7271 RTF -.7047 CRT .8080 CRS .9750 CST .8364  
 FDE 1.1676 FRA -.3157 FC-10.4120 BSP 2346 SGB 1613.9 R23 -.2282 R13 .7842 LSA 41.7 MSA 12.4 SSA 3.7  
 BDE .4918 BRA .6181 BC3 1.3930 FSP 1247 SGI 1450.9 SGI 707.0 THA 152.67 EL1 33.8 EL2 10.8 ALF 39.31

LAUNCH DATE AUG 14 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

DISTANCE 384.467

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.201 GAL 2.74 AZL 88.90 HCA 119.55 SMA 204.39 ECC .26267 INC 1.1038 V1 29.402
RP 231.58 LAP .96 LOP 80.82 VP 22.290 GAP 13.21 AZP 90.54 TAL 13.21 TAP 132.75 RCA 150.70 APO 256.07 V2 23.748
RC 156.890 GL 8.63 GP -12.92 ZAL 83.55 ZAP 143.91 ETS 200.24 ZAE 164.64 ETE 290.53 ZAC 69.86 ETC 282.79 LVI -3.35

PLANETOCENTRIC CONIC

C3 18.110 VHL 4.256 DLA 17.43 RAL 19.18 RAD 6642.0 VEL 11.753 PTH 6.78 VHP 3.599 DPA 4.43 RAP 48.26 ECC 1.2980
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 59 5 3462.21 -45.63 124.68 251.60 105.27 10 56 47 2482.2 -34.75 96.18
60.00 10 18 30 3410.49 -39.45 121.83 253.40 99.03 11 15 21 2410.5 -31.64 93.73
70.00 10 47 27 3325.28 -33.93 115.73 254.20 94.15 11 42 53 2325.3 -28.72 88.25
80.00 11 33 27 3181.14 -29.85 105.01 254.41 90.80 12 26 28 2181.1 -26.48 78.09
90.00 12 44 43 2951.06 -28.28 88.11 254.41 89.56 13 33 54 1951.1 -25.61 61.41
100.00 14 16 19 2655.61 -29.85 66.38 254.41 90.80 15 0 34 1655.6 -26.48 39.46
110.00 15 46 54 2372.10 -33.93 44.64 254.20 94.15 16 26 28 1372.1 -26.72 17.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3569 TRA -.5944 TC3 1.0480 BAU .3430 SGT 1315.3 SGR 944.5 SG3 820.7 ST 27.2 SR 22.3 SS 26.6
RDE -.3277 RRA .1409 RC3 -.9531 FAU .22941 RRT -.5460 RRF .7497 RTF -.6957 CRT .8108 CR3 .9753 CST .8344
FDE 1.2471 FRA -.3719 FC-10.9667 BSP 2354 SGB 1619.3 R23 -.2410 R13 .7880 LSA 42.1 MSA 12.4 SSA 3.7
BDE .4845 BRA .6109 BC3 1.4165 F8P 1317 SG1 1452.0 SG2 716.8 THA 150.85 EL1 33.5 EL2 10.6 ALF 38.12

LAUNCH DATE AUG 14 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

DISTANCE 388.186

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.176 GAL 2.75 AZL 88.85 HCA 120.56 SMA 203.87 ECC .26085 INC 1.1473 V1 29.402
RP 231.93 LAP .99 LOP 81.63 VP 22.211 GAP 12.92 AZP 90.58 TAL 13.35 TAP 133.91 RCA 150.69 APO 257.04 V2 23.708
RC 159.785 GL 9.00 GP -13.34 ZAL 83.34 ZAP 142.80 ETS 199.97 ZAE 164.58 ETE 285.75 ZAC 69.50 ETC 282.85 LVI -3.03

PLANETOCENTRIC CONIC

C3 17.976 VHL 4.240 DLA 17.68 RAL 18.79 RAD 6641.9 VEL 11.747 PTH 6.78 VHP 3.515 DPA 3.96 RAP 48.14 ECC 1.2950
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 56 31 3465.65 -45.69 124.99 251.28 105.04 10 54 16 2465.6 -34.88 96.40
60.00 10 15 35 3414.85 -39.49 122.19 253.05 98.79 11 12 30 2414.9 -31.77 94.02
70.00 10 44 6 3330.91 -33.96 116.16 253.82 93.90 11 39 37 2330.9 -28.84 88.64
80.00 11 29 38 3188.21 -29.85 105.53 254.01 90.53 12 22 46 2188.2 -26.60 78.58
90.00 12 40 41 2958.87 -28.27 88.68 254.00 89.27 13 30 0 1958.9 -25.72 61.96
100.00 14 12 30 2662.68 -29.85 66.90 254.01 90.53 14 56 53 1662.7 -26.60 39.95
110.00 15 43 33 2377.73 -33.96 45.08 253.82 93.90 16 23 10 1377.7 -26.84 17.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3571 TRA -.5889 TC3 1.0270 BAU .3464 SGT 1299.5 SGR 976.8 SG3 861.4 ST 27.2 SR 21.5 SS 27.8
RDE -.3154 RRA .1346 RC3-1.0115 FAU .23965 RRT -.9521 RRF .7714 RTF -.6855 CRT .8129 CR3 .9752 CST .8321
FDE 1.3314 FRA -.4307 FC-11.5415 BSP 2358 SGB 1625.6 R23 -.2524 R13 .7927 LSA 42.5 MSA 12.5 SSA 3.8
BDE .4764 BRA .8041 BC3 1.4415 F8P 1389 SG1 1453.5 SG2 728.0 THA 148.84 EL1 33.1 EL2 10.3 ALF 36.90

LAUNCH DATE AUG 14 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

DISTANCE 391.912

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.152 GAL 2.76 AZL 88.81 HCA 121.56 SMA 203.38 ECC .25915 INC 1.1915 V1 29.402
RP 232.33 LAP 1.02 LOP 82.83 VP 22.134 GAP 12.84 AZP 90.62 TAL 13.48 TAP 135.08 RCA 150.87 APO 256.08 V2 23.670
RC 162.893 GL 9.38 GP -13.77 ZAL 83.14 ZAP 141.28 ETS 199.70 ZAE 164.41 ETE 280.88 ZAC 69.13 ETC 282.92 LVI -2.70

PLANETOCENTRIC CONIC

C3 17.853 VHL 4.225 DLA 17.94 RAL 18.42 RAD 6641.9 VEL 11.742 PTH 6.77 VHP 3.435 DPA 3.46 RAP 48.00 ECC 1.2938
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 53 56 3489.49 -45.76 125.33 250.99 104.78 10 51 46 2469.5 -35.03 96.65
60.00 10 12 39 3419.66 -39.54 122.59 252.73 98.52 11 9 39 2419.7 -31.92 94.35
70.00 10 40 42 3337.07 -33.99 116.64 253.47 93.61 11 36 19 2337.1 -28.98 89.07
80.00 11 25 45 3195.91 -29.86 106.11 253.63 90.23 12 19 1 2195.9 -26.73 79.12
90.00 12 36 33 2967.37 -28.26 89.30 253.62 88.98 13 26 0 1967.4 -25.84 62.55
100.00 14 8 38 2670.38 -29.86 67.47 253.63 90.23 14 53 7 1670.4 -26.73 40.49
110.00 15 40 9 2383.89 -33.99 45.56 253.47 93.61 16 19 53 1383.9 -28.98 17.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3571 TRA -.5932 TC3 .9993 BAU .3488 SGT 1280.0 SGR 1010.9 SG3 902.8 ST 27.3 SR 20.7 SS 29.1
RDE -.3025 RRA .1277 RC3-1.0719 FAU .24998 RRT -.5546 RRF .7817 RTF -.6127 CRT .8151 CR3 .9750 CST .8298
FDE 1.4207 FRA -.4953 FC-12.1218 BSP 2365 SGB 1631.1 R23 -.2626 R13 .7979 LSA 43.0 MSA 12.6 SSA 3.8
BDE .4679 BRA .5970 BC3 1.4655 F8P 1464 SG1 1453.0 SG2 741.0 THA 146.62 EL1 32.8 EL2 10.0 ALF 35.61

LAUNCH DATE AUG 14 1973

FLIGHT TIME 168.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

DISTANCE 398.645

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 33.130 GAL 2.77 AZL 88.78 HCA 122.56 SMA 202.93 ECC .25755 INC 1.2366 V1 29.402
RP 232.70 LAP 1.04 LOP 83.64 VP 22.060 GAP 12.36 AZP 90.67 TAL 13.61 TAP 136.17 RCA 150.66 APO 255.19 V2 23.631
RC 165.810 GL 9.78 GP -14.22 ZAL 82.97 ZAP 139.90 ETS 199.42 ZAE 164.12 ETE 275.99 ZAC 68.75 ETC 283.00 LVI -2.37

PLANETOCENTRIC CONIC

C3 17.741 VHL 4.212 DLA 18.21 RAL 18.07 RAD 6641.8 VEL 11.738 PTH 6.77 VHP 3.358 DPA 2.94 RAP 47.84 ECC 1.2920
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 51 22 3473.72 -45.83 125.72 250.75 104.49 10 49 15 2473.7 -35.20 96.92
60.00 10 9 41 3424.93 -39.59 123.03 252.45 98.23 11 6 46 2424.9 -32.07 94.71
70.00 10 37 15 3343.78 -34.01 117.16 253.16 93.31 11 32 59 2343.8 -29.13 89.54
80.00 11 21 48 3204.25 -29.86 106.73 253.29 89.90 12 15 10 2204.3 -26.86 79.70
90.00 12 32 18 2976.37 -28.25 89.97 253.27 88.62 13 21 55 1976.6 -25.97 63.19
100.00 14 4 38 2678.72 -29.86 68.09 253.29 89.90 14 49 17 1678.7 -26.86 41.07
110.00 15 36 42 2390.58 -34.01 46.08 253.16 93.31 16 15 32 1390.6 -29.13 18.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3568 TRA -.5790 TC3 .9671 BAU .3538 SGT 1259.8 SGR 1048.4 SG3 945.3 ST 27.3 SR 19.9 SS 30.5
RDE -.2888 RRA .1207 RC3-1.1355 FAU .26065 RRT -.5542 RRF .8108 RTF -.6579 CRT .8164 CR3 .9745 CST .8275
FDE 1.5188 FRA -.5586 FC-12.7196 BSP 2370 SGB 1638.8 R23 -.2710 R13 .8042 LSA 43.5 MSA 12.7 SSA 3.8
BDE .4590 BRA .5914 BC3 1.4915 F8P 1540 SG1 1454.1 SG2 756.0 THA 144.21 EL1 32.3 EL2 9.7 ALF 34.20

LAUNCH DATE AUG 14 1973

FLIGHT TIME 170.00

ARRIVAL DATE JAN 31 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.110 GAL 2.78 AZL 88.72 HCA 123.56 SMA 202.50 ECC .25804 INC 1.2025 V1 29.402  
 RP 233.07 LAP 1.07 LOP 84.63 VP 21.988 GAP 12.08 AZP 90.71 TAL 13.72 TAP 137.28 RCA 150.65 APO 254.35 V2 23.593  
 RC 168.537 GL 10.15 GP -14.68 ZAL 82.81 ZAP 138.52 ETS 199.15 ZAE 163.72 ETE 271.15 ZAC 66.36 ETC 283.08 LVI -2.03

**PLANETOCENTRIC CONIC**  
 C3 17.639 VHL 4.200 DLA 18.50 RAL 17.72 RAD 6641.8 VEL 11.733 PTH 6.78 VHP 3.285 DPA 2.40 RAP 47.66 ECC 1.2903  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 46 3478.34 -45.91 126.14 250.54 104.18 10 46 45 2478.3 -35.37 97.22  
 60.00 10 6 42 3430.63 -39.65 123.51 252.20 97.91 11 3 52 2430.6 -32.24 95.10  
 70.00 10 33 45 3350.99 -34.04 117.73 252.87 92.98 11 29 36 2351.0 -29.28 90.04  
 80.00 11 17 42 3213.23 -29.85 107.39 252.98 89.55 12 11 15 2213.2 -27.00 80.33  
 90.00 12 27 56 2986.47 -28.23 90.70 252.94 88.26 13 17 43 1986.5 -26.10 63.89  
 100.00 14 0 33 2687.70 -29.85 68.76 252.98 89.55 14 45 21 1687.7 -27.00 41.70  
 110.00 15 33 11 2397.80 -34.04 46.64 252.87 92.98 16 13 9 1397.8 -29.28 18.96

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3485 TRA -.5675 TC3 .9462 BAU .3611 SGT 1234.6 SGR 1090.7 SG3 990.6 ST 26.8 SR 19.0 SS 31.7  
 RDE -.2784 RRA .1122 RC3-1.2038 FAU .27205 RRT -.5620 RRF .8292 RTF -.6504 CRT .8162 CRS .9734 CST .8213  
 FDE 1.6063 FRA -.6393 FC-13.3528 BSP 2297 SGB 1647.4 R23 -.2654 R13 .8166 LSA 43.7 MSA 12.8 SSA 3.7  
 BDE .4442 BRA .5785 BC3 1.5311 FSP 1805 SG1 1480.1 S2 762.8 THA 141.23 EL1 31.5 EL2 9.3 ALF 33.41

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 2 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.090 GAL 2.79 AZL 88.67 HCA 124.56 SMA 202.11 ECC .25464 INC 1.3294 V1 29.402  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.918 GAP 11.80 AZP 90.75 TAL 13.82 TAP 136.36 RCA 150.64 APO 253.57 V2 23.554  
 RC 171.472 GL 10.55 GP -15.16 ZAL 82.68 ZAP 137.12 ETS 198.87 ZAE 163.19 ETE 266.45 ZAC 67.97 ETC 283.17 LVI -1.69

**PLANETOCENTRIC CONIC**  
 C3 17.546 VHL 4.189 DLA 18.80 RAL 17.39 RAD 6641.7 VEL 11.729 PTH 6.78 VHP 3.215 DPA 1.83 RAP 47.47 ECC 1.2888  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 46 11 3483.39 -45.99 126.59 250.37 103.84 10 44 14 2483.4 -35.57 97.55  
 60.00 10 3 40 3436.83 -39.70 124.02 251.99 97.56 11 0 57 2436.8 -32.42 95.52  
 70.00 10 30 10 3358.80 -34.07 118.33 252.61 92.62 11 26 9 2358.8 -29.45 90.59  
 80.00 11 13 31 3222.94 -29.85 108.11 252.69 89.17 12 7 14 2222.9 -27.15 81.01  
 90.00 12 23 27 2997.18 -28.21 91.48 252.64 87.87 13 13 24 1997.2 -26.24 64.64  
 100.00 13 56 23 2697.41 -29.85 69.48 252.69 89.17 14 41 20 1697.4 -27.15 42.38  
 110.00 15 29 36 2405.62 -34.07 47.25 252.61 92.62 16 9 42 1405.6 -29.45 19.50

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3526 TRA -.5701 TC3 .8896 BAU .3639 SGT 1211.1 SGR 1132.8 SG3 1033.7 ST 27.1 SR 18.0 SS 33.3  
 RDE -.2596 RRA .1050 RC3-1.2712 FAU .28271 RRT -.5448 RRF .8453 RTF -.6220 CRT .8171 CRS .9724 CST .8208  
 FDE 1.7217 FRA -.7000 FC-13.9493 BSP 2367 SGB 1658.3 R23 -.2764 R13 .8217 LSA 44.6 MSA 13.0 SSA 3.7  
 BDE .4378 BRA .5797 BC3 1.5315 FSP 1694 SG1 1458.7 S2 786.8 THA 138.50 EL1 31.3 EL2 9.0 ALF 31.31

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 4 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.072 GAL 2.80 AZL 88.62 HCA 125.55 SMA 201.74 ECC .25331 INC 1.3772 V1 29.402  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.850 GAP 11.52 AZP 90.80 TAL 13.91 TAP 139.46 RCA 150.64 APO 252.84 V2 23.517  
 RC 174.413 GL 10.95 GP -15.84 ZAL 82.58 ZAP 135.69 ETS 198.58 ZAE 162.55 ETE 261.93 ZAC 67.57 ETC 283.26 LVI -1.33

**PLANETOCENTRIC CONIC**  
 C3 17.462 VHL 4.179 DLA 19.11 RAL 17.08 RAD 6641.7 VEL 11.728 PTH 6.78 VHP 3.149 DPA 1.25 RAP 47.25 ECC 1.2874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 34 3488.83 -46.08 127.09 250.23 103.46 10 41 43 2488.8 -35.77 97.91  
 60.00 10 0 36 3443.48 -39.78 124.58 251.80 97.19 10 58 0 2443.5 -32.82 95.98  
 70.00 10 26 31 3367.18 -34.09 118.99 252.39 92.23 11 22 38 2367.2 -29.63 91.18  
 80.00 11 9 13 3233.34 -29.83 108.89 252.43 88.76 12 3 6 2233.3 -27.31 81.75  
 90.00 12 18 49 3008.67 -28.17 92.32 252.37 87.45 13 8 57 2008.7 -26.39 65.45  
 100.00 13 52 5 2707.82 -29.83 70.26 252.43 88.76 14 37 12 1707.8 -27.31 43.12  
 110.00 15 25 57 2414.00 -34.09 47.91 252.39 92.23 16 6 11 1414.0 -29.63 20.09

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3523 TRA -.5698 TC3 .8357 BAU .3691 SGT 1185.1 SGR 1178.6 SG3 1078.1 ST 27.2 SR 18.9 SS 34.9  
 RDE -.2434 RRA .0970 RC3-1.3420 FAU .29369 RRT -.5287 RRF .8603 RTF -.5548 CRT .8167 CRS .9708 CST .8184  
 FDE 1.8383 FRA -.7879 FC-14.5612 BSP 2398 SGB 1671.4 R23 -.2771 R13 .8310 LSA 45.4 MSA 13.2 SSA 3.6  
 BDE .4282 BRA .5778 BC3 1.5809 FSP 1779 SG1 1461.2 S2 811.3 THA 135.30 EL1 30.8 EL2 8.6 ALF 29.45

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 6 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.085 GAL 2.80 AZL 88.57 HCA 126.54 SMA 201.40 ECC .25208 INC 1.4261 V1 29.402  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.784 GAP 11.25 AZP 90.85 TAL 13.99 TAP 140.53 RCA 150.63 APO 252.16 V2 23.479  
 RC 177.380 GL 11.37 GP -16.14 ZAL 82.47 ZAP 134.24 ETS 198.29 ZAE 161.79 ETE 257.63 ZAC 67.16 ETC 283.35 LVI -.97

**PLANETOCENTRIC CONIC**  
 C3 17.386 VHL 4.170 DLA 19.44 RAL 16.77 RAD 6641.7 VEL 11.723 PTH 6.75 VHP 3.086 DPA .64 RAP 47.02 ECC 1.2861  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 40 57 3494.67 -46.17 127.62 250.13 103.06 10 39 11 2494.7 -35.99 98.29  
 60.00 9 57 30 3450.61 -39.82 125.18 251.65 96.79 10 55 0 2450.6 -32.82 96.47  
 70.00 10 22 47 3376.13 -34.11 119.69 252.19 91.82 11 19 3 2376.1 -29.81 91.81  
 80.00 11 4 47 3244.47 -29.82 109.71 252.19 88.33 11 58 52 2244.5 -27.47 82.53  
 90.00 12 14 1 3020.97 -28.13 93.21 252.11 87.00 13 4 22 2021.0 -26.54 66.32  
 100.00 13 47 39 2718.95 -29.82 71.08 252.19 88.33 14 32 58 1718.9 -27.47 43.90  
 110.00 15 22 13 2422.95 -34.11 48.60 252.19 91.82 16 2 36 1423.0 -29.81 20.72

**DIFFERENTIAL CORRECTIONS**  
 TDE -.3493 TRA -.5679 TC3 .7799 BAU .3757 SGT 1156.9 SGR 1227.8 SG3 1123.3 ST 27.0 SR 15.8 SS 36.6  
 RDE -.2265 RRA .0883 RC3-1.4159 FAU .30488 RRT -.5105 RRF .8741 RTF -.5659 CRT .8151 CRS .9685 CST .8145  
 FDE 1.9580 FRA -.8407 FC-15.1813 BSP 2416 SGB 1687.0 R23 -.2697 R13 .8431 LSA 46.1 MSA 13.4 SSA 3.6  
 BDE .4163 BRA .5748 BC3 1.6165 FSP 1863 SG1 1467.3 S2 832.4 THA 131.67 EL1 30.2 EL2 8.2 ALF 27.63

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic  
 RL 151.53 LAL -0.00 LOL 321.07 VL 33.039 GAL 2.81 AZL 88.52 HCA 127.53 SMA 201.08 ECC .25092 INC 1.4760 V1 29.402  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.720 GAP 10.98 AZP 90.90 TAL 14.06 TAP 141.59 RCA 150.62 APO 251.53 V2 23.442  
 RC 180.313 GL 11.79 GP -16.66 ZAL 62.39 ZAP 132.77 ETS 197.99 ZAE 160.92 ETE 253.59 ZAC 66.74 ETC 283.45 LVI -6.1

Planetocentric Conic  
 C3 17.319 VHL 4.162 DLA 19.78 RAL 18.48 RAD 6641.6 VEL 11.720 PTH 6.75 VMP 3.026 DPA .02 RAP 46.77 ECC 1.2850  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 18 3500.93 -46.26 128.20 250.07 102.63 10 36 39 2500.9 -36.23 99.71  
 60.00 9 54 20 3458.22 -39.88 125.82 251.53 96.36 10 51 58 2458.2 -33.04 97.00  
 70.00 10 18 58 3385.69 -34.13 120.43 252.01 91.38 11 15 23 2385.7 -30.01 92.48  
 80.00 11 0 13 3256.37 -29.79 110.60 251.98 87.87 11 54 29 2256.4 -27.64 83.38  
 90.00 12 9 3 3034.14 -28.08 94.17 251.88 86.53 12 59 37 2034.1 -26.70 67.25  
 100.00 13 43 5 2730.84 -29.79 71.97 251.98 87.87 14 28 36 1730.8 -27.64 44.75  
 110.00 15 18 24 2432.51 -34.13 49.35 252.01 91.38 15 58 57 1432.5 -30.01 21.40

Differential Corrections  
 TDE -.3462 TRA -.5677 TC3 .7178 BAU .3836 SGT 1126.7 SGR 1280.8 SG3 1169.4 ST 26.9 SR 14.6 SS 38.2  
 RDE -.2086 RRA .0792 RC3-1.4931 FAU .31628 RRT -.4855 RRF .8869 RTF -.5313 CRT .8126 CRS .9653 CST .8099  
 FDE 2.0840 FRA -.9138 FC-15.8101 B8P 2445 SGB 1707.1 R23 -.2570 R13 .8566 LSA 46.9 M8A 13.6 S8A 3.5  
 BDE .4042 BRA .5732 BC3 1.6567 F8P 1948 SGI 1477.3 SGI 855.5 THA 127.89 EL1 29.6 EL2 7.7 ALF 25.64

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 14 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 10 1974

Heliocentric Conic  
 RL 151.53 LAL -0.00 LOL 321.07 VL 33.025 GAL 2.81 AZL 88.47 HCA 128.51 SMA 200.78 ECC .24983 INC 1.5272 V1 29.402  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.657 GAP 10.71 AZP 90.95 TAL 14.12 TAP 142.63 RCA 150.62 APO 250.94 V2 23.405  
 RC 183.270 GL 12.22 GP -17.19 ZAL 62.33 ZAP 131.27 ETS 197.88 ZAE 159.94 ETE 249.82 ZAC 66.31 ETC 283.86 LVI -2.3

Planetocentric Conic  
 C3 17.259 VHL 4.154 DLA 20.13 RAL 16.19 RAD 6641.6 VEL 11.717 PTH 6.75 VMP 2.969 DPA -.63 RAP 46.50 ECC 1.2840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 35 37 3507.61 -46.36 128.81 250.04 102.16 10 34 4 2507.6 -36.47 99.15  
 60.00 9 51 7 3466.33 -39.94 126.50 251.43 95.90 10 48 53 2466.3 -33.27 97.57  
 70.00 10 15 2 3395.87 -34.14 121.23 251.87 90.91 11 11 38 2395.9 -30.21 93.21  
 80.00 10 55 29 3269.07 -29.75 111.54 251.79 87.37 11 49 58 2269.1 -27.81 84.28  
 90.00 12 3 54 3048.23 -28.02 95.20 251.67 86.02 12 54 42 2048.2 -26.85 68.25  
 100.00 13 38 21 2743.54 -29.75 72.91 251.79 87.37 14 24 4 1743.5 -27.81 45.65  
 110.00 15 14 29 2442.68 -34.14 50.14 251.67 90.91 15 55 11 1442.7 -30.21 22.12

Differential Corrections  
 TDE -.3402 TRA -.5665 TC3 .6528 BAU .3930 SGT 1098.5 SGR 1337.0 SG3 1215.7 ST 26.8 SR 13.4 SS 39.8  
 RDE -.1902 RRA .0693 RC3-1.5731 FAU .32771 RRT -.4565 RRF .8985 RTF -.4930 CRT .8088 CRS .9608 CST .8034  
 FDE 2.2099 FRA -.9963 FC-16.4379 B8P 2460 SGB 1730.4 R23 -.2361 R13 .8720 LSA 47.6 M8A 13.8 S8A 3.5  
 BDE .3897 BRA .5703 BC3 1.7031 F8P 2028 SGI 1492.8 SGI 875.4 THA 123.29 EL1 28.9 EL2 7.2 ALF 23.68

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 14 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 12 1974

Heliocentric Conic  
 RL 151.53 LAL -0.00 LOL 321.07 VL 33.011 GAL 2.81 AZL 88.42 HCA 129.49 SMA 200.50 ECC .24882 INC 1.5796 V1 29.402  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.597 GAP 10.45 AZP 91.00 TAL 14.17 TAP 143.68 RCA 150.61 APO 250.39 V2 23.389  
 RC 186.232 GL 12.66 GP -17.73 ZAL 62.29 ZAP 129.78 ETS 197.36 ZAE 158.87 ETE 248.31 ZAC 65.88 ETC 283.67 LVI .13

Planetocentric Conic  
 C3 17.208 VHL 4.148 DLA 20.50 RAL 15.92 RAD 6641.6 VEL 11.715 PTH 6.75 VMP 2.918 DPA -1.30 RAP 46.21 ECC 1.2832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 32 53 3514.70 -46.48 129.47 250.04 101.66 10 31 28 2514.7 -36.74 99.63  
 60.00 9 47 49 3474.93 -40.00 127.22 251.37 95.41 10 45 44 2474.9 -33.50 98.17  
 70.00 10 11 0 3406.67 -34.15 122.07 251.74 90.41 11 7 47 2406.7 -30.42 93.98  
 80.00 10 50 35 3282.59 -29.71 112.54 251.62 86.85 11 45 17 2282.6 -27.99 85.25  
 90.00 11 58 31 3063.27 -27.94 96.29 251.48 85.47 12 49 34 2063.3 -27.01 69.32  
 100.00 13 33 27 2757.06 -29.71 73.91 251.62 86.85 14 19 24 1757.1 -27.99 46.82  
 110.00 15 10 26 2453.49 -34.15 50.99 251.74 90.41 15 51 20 1453.5 -30.42 22.90

Differential Corrections  
 TDE -.3284 TRA -.5610 TC3 .5937 BAU .4033 SGT 1084.3 SGR 1399.1 SG3 1264.3 ST 25.9 SR 12.1 SS 41.3  
 RDE -.1719 RRA .0878 RC3-1.6888 FAU .33982 RRT -.4301 RRF .9084 RTF -.4487 CRT .8038 CRS .9541 CST .7929  
 FDE 2.3292 FRA -1.0924 FC-17.0968 B8P 2446 SGB 1757.9 R23 -.2063 R13 .8887 LSA 48.1 M8A 14.0 S8A 3.4  
 BDE .3707 BRA .8640 BC3 1.7618 F8P 2091 SGI 1518.8 SGI 889.1 THA 118.61 EL1 27.8 EL2 6.7 ALF 21.99

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 14 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 14 1974

Heliocentric Conic  
 RL 151.53 LAL -0.00 LOL 321.07 VL 32.998 GAL 2.81 AZL 88.37 HCA 130.47 SMA 200.28 ECC .24788 INC 1.6334 V1 29.402  
 RP 235.59 LAP 1.24 LOP 91.85 VP 21.538 GAP 10.18 AZP 91.06 TAL 14.21 TAP 144.68 RCA 150.61 APO 249.89 V2 23.332  
 RC 189.197 GL 13.11 GP -18.28 ZAL 62.27 ZAP 128.23 ETS 197.02 ZAE 157.71 ETE 243.08 ZAC 65.44 ETC 283.78 LVI .84

Planetocentric Conic  
 C3 17.183 VHL 4.143 DLA 20.88 RAL 15.65 RAD 6641.5 VEL 11.713 PTH 6.75 VMP 2.866 DPA -1.98 RAP 45.92 ECC 1.2828  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 30 8 3522.28 -46.56 130.17 250.08 101.13 10 28 50 2522.3 -37.01 100.14  
 60.00 9 44 28 3484.09 -40.05 128.00 251.34 94.89 10 42 32 2484.1 -33.75 98.82  
 70.00 10 6 51 3418.19 -34.15 122.07 251.65 89.88 11 3 49 2418.2 -30.63 94.81  
 80.00 10 45 28 3297.07 -29.85 113.61 251.47 86.29 11 40 26 2297.1 -28.17 86.29  
 90.00 11 52 53 3079.43 -27.85 97.46 251.31 84.89 12 44 13 2079.4 -27.17 70.48  
 100.00 13 28 20 2771.55 -29.65 74.98 251.47 86.29 14 14 32 1771.3 -28.17 47.65  
 110.00 15 6 17 2465.01 -34.15 51.89 251.65 89.88 15 47 22 1465.0 -30.63 23.72

Differential Corrections  
 TDE -.3300 TRA -.5714 TC3 .4937 BAU .4147 SGT 1044.5 SGR 1457.0 SG3 1306.6 ST 26.1 SR 10.8 SS 43.5  
 RDE -.1490 RRA .0492 RC3-1.7388 FAU .34994 RRT -.3659 RRF .9183 RTF -.3874 CRT .7956 CRS .9430 CST .7901  
 FDE 2.4935 FRA -1.1475 FC-17.6515 B8P 2565 SGB 1792.8 R23 -.1788 R13 .9029 LSA 49.7 M8A 14.3 S8A 3.3  
 BDE .3621 BRA .5735 BC3 1.8073 F8P 2198 SGI 1538.2 SGI 920.8 THA 113.59 EL1 27.5 EL2 6.1 ALF 18.83

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 14 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC DISTANCE 429.468 EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.886 GAL 2.81 AZL 88.31 HCA 131.44 SMA 200.01 ECC .24699 INC 1.6886 V1 29.402  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.481 GAP 9.92 AZP 91.12 TAL 14.24 TAP 145.68 RCA 130.61 APO 249.41 V2 23.297  
 RC 192.155 GL 13.57 GP -18.89 ZAL 62.26 ZAP 126.69 ETS 106.67 ZAE 156.48 ETE 240.09 ZAC 64.99 ETC 283.90 LVI .93

PLANETOCENTRIC CONIC

C3 17.126 VHL 4.138 DLA 21.28 RAL 15.40 RAD 6641.5 VEL 11.712 PTH 6.74 VHP 2.819 DPA -2.89 RAP 45.60 ECC 1.2819  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 27 20 3530.26 -46.67 130.91 250.16 100.57 10 26 10 2530.3 -37.30 100.68  
 60.00 9 41 2 3493.77 -40.11 128.81 251.34 94.34 10 39 15 2493.8 -34.01 99.51  
 70.00 10 2 33 3430.39 -34.15 123.92 251.57 89.31 10 59 43 2430.4 -30.86 95.68  
 80.00 10 40 9 3312.48 -29.97 114.75 251.34 85.69 11 35 22 2312.5 -28.35 87.39  
 90.00 11 47 0 3096.68 -27.74 98.71 251.16 84.28 12 38 36 2096.7 -27.33 71.72  
 100.00 13 23 1 2786.95 -29.57 76.12 251.34 85.69 14 9 28 1787.0 -28.35 48.76  
 110.00 15 1 59 2477.21 -34.15 52.84 251.57 89.31 15 43 16 1477.2 -30.86 24.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3230 TRA -.5750 TC3 .4054 BAU .4280 SGT 1021.0 SGR 1521.5 SG3 1351.3 ST 25.8 SR 9.1 SS 45.4  
 RDE -.1266 RRA .0386 RC3-1.8248 FAU .36083 RRT -.3073 RRF .9268 RTF -.3225 CRT .7841 CRS .9298 CST .7812  
 FDE 2.6438 FRA-1.2236 FC-18.2400 BSP 2630 SGB 1832.3 R23 -.1423 R13 .9167 LSA 50.9 MSA 14.6 SSA 3.2  
 BDE .3469 BRA .5763 BC3 1.8693 FSP 2282 SGI 1573.0 SG2 939.8 THA 108.44 EL1 26.8 EL2 5.4 ALF 16.14

LAUNCH DATE AUG 14 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC DISTANCE 433.243 EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.978 GAL 2.80 AZL 88.25 HCA 132.41 SMA 199.79 ECC .24817 INC 1.7453 V1 29.402  
 RP 236.29 LAP 1.29 LOP 93.49 VP 21.428 GAP 9.86 AZP 91.18 TAL 14.26 TAP 146.68 RCA 130.61 APO 248.98 V2 23.261  
 RC 195.134 GL 14.04 GP -19.43 ZAL 62.28 ZAP 125.12 ETS 196.31 ZAE 155.16 ETE 237.33 ZAC 64.54 ETC 284.03 LVI 1.34

PLANETOCENTRIC CONIC

C3 17.096 VHL 4.135 DLA 21.70 RAL 15.15 RAD 6641.5 VEL 11.710 PTH 6.74 VHP 2.775 DPA -3.42 RAP 45.28 ECC 1.2814  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 24 28 3538.71 -46.77 131.71 250.27 99.97 10 23 27 2538.7 -37.61 101.26  
 60.00 9 37 30 3504.02 -40.16 129.68 251.36 93.75 10 35 54 2504.0 -34.28 100.24  
 70.00 9 58 6 3443.33 -34.13 124.93 251.52 88.72 10 55 29 2443.3 -31.09 96.62  
 80.00 10 34 35 3328.91 -29.48 115.97 251.23 85.06 11 30 4 2328.9 -28.54 86.58  
 90.00 11 40 47 3115.18 -27.61 100.05 251.01 83.62 12 32 42 2115.2 -27.49 73.04  
 100.00 13 17 27 2803.39 -29.48 77.33 251.23 85.06 14 4 10 1803.4 -28.54 49.95  
 110.00 14 57 32 2490.15 -34.13 53.85 251.52 88.72 15 39 2 1490.1 -31.09 25.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3142 TRA -.5786 TC3 .3122 BAU .4432 SGT 1000.5 SGR 1589.4 SG3 1395.8 ST 25.3 SR 7.5 SS 47.4  
 RDE -.1030 RRA .0270 RC3-1.9136 FAU .37160 RRT -.2397 RRF .9344 RTF -.2491 CRT .7672 CRS .9034 CST .7701  
 FDE 2.7990 FRA-1.3059 FC-18.8174 BSP 2703 SGB 1878.0 R23 -.1033 R13 .9291 LSA 52.1 MSA 14.8 SSA 3.1  
 BDE .3307 BRA .5793 BC3 1.9389 FSP 2382 SGI 1617.4 SG2 954.5 THA 103.28 EL1 26.0 EL2 4.7 ALF 13.31

LAUNCH DATE AUG 14 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC DISTANCE 437.020 EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.965 GAL 2.80 AZL 88.20 HCA 133.38 SMA 199.59 ECC .24541 INC 1.8035 V1 29.402  
 RP 236.83 LAP 1.31 LOP 94.48 VP 21.372 GAP 9.40 AZP 91.24 TAL 14.27 TAP 147.66 RCA 130.61 APO 248.57 V2 23.226  
 RC 198.104 GL 14.52 GP -20.02 ZAL 62.31 ZAP 123.95 ETS 195.93 ZAE 153.78 ETE 234.79 ZAC 64.08 ETC 284.15 LVI 1.75

PLANETOCENTRIC CONIC

C3 17.073 VHL 4.132 DLA 22.13 RAL 14.91 RAD 6641.5 VEL 11.709 PTH 6.74 VHP 2.734 DPA -4.16 RAP 44.94 ECC 1.2810  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 33 3547.84 -46.87 132.54 250.41 99.33 10 20 41 2547.8 -37.92 101.68  
 60.00 9 33 52 3514.84 -40.20 130.60 251.41 93.13 10 32 26 2514.8 -34.57 101.02  
 70.00 9 53 29 3457.05 -34.11 126.00 251.49 88.08 10 51 6 2457.0 -31.33 97.62  
 80.00 10 28 45 3346.46 -29.37 117.26 251.13 84.39 11 24 31 2346.5 -28.72 89.85  
 90.00 11 34 14 3135.02 -27.45 101.48 250.88 82.92 12 26 29 2135.0 -27.65 74.48  
 100.00 13 11 37 2820.93 -29.37 78.63 251.13 84.39 13 58 37 1820.9 -28.72 51.22  
 110.00 14 52 55 2503.67 -34.11 54.92 251.49 88.08 15 34 39 1503.9 -31.33 26.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3044 TRA -.5838 TC3 .2121 BAU .4600 SGT 986.2 SGR 1659.8 SG3 1439.0 ST 24.8 SR 6.0 SS 49.3  
 RDE -.0780 RRA .0152 RC3-2.0040 FAU .38200 RRT -.1816 RRF .9412 RTF -.1660 CRT .7362 CRS .8517 CST .7570  
 FDE 2.9589 FRA-1.3854 FC-19.3701 BSP 2791 SGB 1930.7 R23 -.0848 R13 .9391 LSA 53.4 MSA 15.1 SSA 3.0  
 BDE .3143 BRA .5840 BC3 2.0132 FSP 2441 SGI 1671.3 SG2 966.5 THA 98.26 EL1 25.2 EL2 4.0 ALF 10.29

LAUNCH DATE AUG 14 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC DISTANCE 440.800 EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.958 GAL 2.79 AZL 88.14 HCA 134.35 SMA 199.41 ECC .24469 INC 1.8636 V1 29.402  
 RP 238.98 LAP 1.33 LOP 95.43 VP 21.320 GAP 9.15 AZP 91.30 TAL 14.28 TAP 148.62 RCA 130.61 APO 248.20 V2 23.191  
 RC 201.073 GL 15.02 GP -20.62 ZAL 62.36 ZAP 121.96 ETS 195.53 ZAE 152.35 ETE 232.44 ZAC 63.61 ETC 284.29 LVI 2.18

PLANETOCENTRIC CONIC

C3 17.058 VHL 4.130 DLA 22.58 RAL 14.68 RAD 6641.5 VEL 11.709 PTH 6.74 VHP 2.696 DPA -4.92 RAP 44.59 ECC 1.2807  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 18 33 3557.05 -46.97 133.43 250.59 98.65 10 17 50 2557.1 -38.25 102.34  
 60.00 9 30 7 3526.28 -40.24 131.57 251.49 92.47 10 28 53 2526.3 -34.86 101.86  
 70.00 9 48 40 3471.59 -34.07 127.14 251.48 87.41 10 46 32 2471.6 -31.57 98.69  
 80.00 10 22 36 3365.21 -29.24 118.64 251.04 83.68 11 18 41 2365.2 -28.90 91.22  
 90.00 11 27 16 3156.38 -27.26 103.02 250.76 82.17 12 19 53 2156.4 -27.79 76.02  
 100.00 13 5 27 2839.68 -29.24 80.00 251.04 83.68 13 52 47 1839.7 -28.90 52.58  
 110.00 14 48 7 2518.41 -34.07 56.05 251.48 87.41 15 30 5 1518.4 -31.57 27.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2924 TRA -.5895 TC3 .1072 BAU .4787 SGT 978.2 SGR 1733.2 SG3 1480.9 ST 24.2 SR 4.4 SS 51.3  
 RDE -.0520 RRA .0029 RC3-2.0964 FAU .39209 RRT -.0755 RRF .9474 RTF -.0754 CRT .6673 CRS .7337 CST .7404  
 FDE 3.1209 FRA-1.4640 FC-19.8998 BSP 2890 SGB 1990.2 R23 -.0802 R13 .9469 LSA 54.8 MSA 15.3 SSA 2.9  
 BDE .2970 BRA .5895 BC3 2.0992 FSP 2516 SGI 1735.5 SG2 971.1 THA 93.56 EL1 24.4 EL2 3.3 ALF 7.10

LAUNCH DATE AUG 14 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.947 GAL 2.78 AZL 88.07 HCA 135.31 SMA 199.24 ECC .24403 INC 1.9254 V1 29.402
RP 237.31 LAP 1.35 LOP 96.39 VP 21.269 GAP 8.89 AZP 91.37 TAL 14.27 TAP 149.58 RCA 150.62 APO 247.86 V2 23.157
RC 204.040 GL 15.93 GP -21.24 ZAL 62.43 ZAP 120.36 ETS 195.12 ZAE 150.85 ETE 230.26 ZAC 63.14 ETC 284.42 LVI 2.61

PLANETOCENTRIC CONIC

C3 17.050 VHL 4.129 DLA 23.04 RAL 14.45 RAD 6641.5 VEL 11.708 PTH 6.74 VHP 2.661 DPA -5.70 RAP 44.24 ECC 1.2808
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 15 29 3566.98 -47.07 134.37 250.80 97.93 10 14 56 2587.0 -38.60 103.24
60.00 9 26 14 3338.34 -40.27 132.59 251.60 91.78 10 25 12 2538.3 -35.16 102.74
70.00 9 43 40 3487.00 -34.01 128.34 251.49 86.71 10 41 47 2467.0 -31.01 99.82
80.00 10 16 5 3385.29 -29.08 120.11 250.97 82.92 11 12 31 2385.3 -29.08 92.68
90.00 11 19 51 3179.42 -27.04 104.66 250.65 81.38 12 12 50 2179.4 -27.93 77.69
100.00 12 58 57 2859.76 -29.08 81.47 250.97 82.92 13 46 37 1859.8 -29.08 54.05
110.00 14 43 6 2533.82 -34.01 57.25 251.49 86.71 15 25 20 1533.8 -31.81 28.74

DIFFERENTIAL CORRECTIONS

TDE -.2779 TRA -.5953 TC3 -.0016 BAU .4994
RDE -.0249 RRA -.0102 RC3-2.1911 FAU .40190
FDE 3.2828 FRA-1.5465 FC-20.4078 BSP 3001
BDE .2790 BRA .5954 BC3 2.1911 FSP 2565

MID-COURSE EXECUTION ACCURACY

SGT 977.0 SGR 1809.9 SG3 1521.8
RRR .0167 RRF .9529 RTF .0208
SGB 2056.7 R23 .0016 R13 .9529
SG1 1810.0 SG2 976.9 THA 89.27

ORBIT DETERMINATION ACCURACY

ST 23.5 SR 3.2 SS 53.3
CRT .4797 CRS .4228 CST .7191
LSA 56.2 MSA 15.5 SSA 2.8
EL1 23.6 EL2 2.8 ALF 3.82

LAUNCH DATE AUG 14 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.939 GAL 2.78 AZL 88.01 HCA 136.27 SMA 199.08 ECC .24342 INC 1.9893 V1 29.402
RP 237.65 LAP 1.38 LOP 97.35 VP 21.220 GAP 8.64 AZP 91.44 TAL 14.25 TAP 150.52 RCA 150.62 APO 247.54 V2 23.123
RC 207.005 GL 16.06 GP -21.86 ZAL 62.51 ZAP 118.75 ETS 194.68 ZAE 149.31 ETE 229.23 ZAC 62.66 ETC 284.56 LVI 3.05

PLANETOCENTRIC CONIC

C3 17.049 VHL 4.129 DLA 23.53 RAL 14.23 RAD 6641.5 VEL 11.708 PTH 6.74 VHP 2.630 DPA -6.50 RAP 43.87 ECC 1.2808
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 12 20 3577.42 -47.16 135.36 251.04 97.17 10 11 57 2577.4 -38.95 103.99
60.00 9 22 13 3551.07 -40.29 133.68 251.72 91.04 10 21 24 2551.1 -35.46 103.68
70.00 9 38 25 3503.35 -33.94 129.61 251.52 85.96 10 36 48 2503.3 -32.06 101.03
80.00 10 9 11 3406.83 -28.89 121.68 250.90 82.11 11 5 58 2406.8 -29.25 94.26
90.00 11 11 53 3204.39 -26.77 106.44 250.53 80.53 12 5 17 2204.4 -28.06 79.51
100.00 12 52 3 2881.30 -28.89 83.05 250.90 82.11 13 40 4 1881.3 -29.25 55.63
110.00 14 37 51 2550.17 -33.94 58.52 251.52 85.96 15 20 21 1550.2 -32.06 29.95

DIFFERENTIAL CORRECTIONS

TDE -.2593 TRA -.5995 TC3 -.1098 BAU .5226
RDE .0023 RRA -.0253 RC3-2.2903 FAU .41184
FDE 3.4339 FRA-1.6422 FC-20.9138 BSP 3108
BDE .2593 BRA .6000 BC3 2.2929 FSP 2634

MID-COURSE EXECUTION ACCURACY

SGT 980.2 SGR 1891.7 SG3 1562.7
RRR .1106 RRF .9579 RTF .1188
SGB 2130.6 R23 .0253 R13 .9578
SG1 1895.9 SG2 972.1 THA 85.55

ORBIT DETERMINATION ACCURACY

ST 22.6 SR 2.9 SS 55.1
CRT .0813 CRS -.1894 CST .6900
LSA 57.4 MSA 15.7 SSA 2.7
EL1 22.6 EL2 2.9 ALF .61

LAUNCH DATE AUG 14 1973

FLIGHT TIME 198.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.932 GAL 2.77 AZL 87.94 HCA 137.23 SMA 198.94 ECC .24286 INC 2.0552 V1 29.402
RP 237.98 LAP 1.40 LOP 98.31 VP 21.172 GAP 8.39 AZP 91.51 TAL 14.23 TAP 151.45 RCA 150.63 APO 247.26 V2 23.090
RC 209.984 GL 16.80 GP -22.50 ZAL 62.61 ZAP 117.14 ETS 194.23 ZAE 147.73 ETE 226.35 ZAC 62.18 ETC 284.70 LVI 3.50

PLANETOCENTRIC CONIC

C3 17.055 VHL 4.130 DLA 24.03 RAL 14.01 RAD 6641.5 VEL 11.708 PTH 6.74 VHP 2.601 DPA -7.31 RAP 43.51 ECC 1.2807
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 9 4 3588.45 -47.25 136.41 251.32 96.37 10 8 53 2588.4 -39.32 104.78
60.00 9 18 3 3564.53 -40.30 134.82 251.88 90.27 10 17 28 2564.5 -35.78 104.68
70.00 9 32 55 3520.75 -33.85 130.96 251.56 85.16 10 31 35 2520.7 -32.31 102.33
80.00 10 1 49 3430.08 -28.66 123.37 250.84 81.25 10 58 59 2430.1 -29.41 95.97
90.00 11 3 15 3231.67 -26.45 108.37 250.41 79.61 11 57 7 2231.7 -28.16 81.50
100.00 12 44 40 2904.55 -28.66 84.74 250.84 81.25 13 33 5 1904.6 -29.41 57.34
110.00 14 32 21 2567.37 -33.85 59.87 251.56 85.16 15 15 8 1567.6 -32.31 31.25

DIFFERENTIAL CORRECTIONS

TDE -.2492 TRA -.8153 TC3 -.2488 BAU .3454
RDE .0363 RRA -.0356 RC3-2.3700 FAU .41897
FDE 3.8393 FRA-1.8839 FC-21.2881 BSP 3298
BDE .2519 BRA .8164 BC3 2.3920 FSP 2734

MID-COURSE EXECUTION ACCURACY

SGT 1017.6 SGR 1966.4 SG3 1994.6
RRR .2182 RRF .9620 RTF .2664
SGB 2214.1 R23 .0549 R13 .9605
SG1 1983.0 SG2 984.7 THA 81.43

ORBIT DETERMINATION ACCURACY

ST 22.3 SR 4.0 SS 57.7
CRT -.3542 CRS -.7320 CST .8682
LSA 59.8 MSA 16.0 SSA 2.6
EL1 22.3 EL2 3.7 ALF 178.29

LAUNCH DATE AUG 14 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.925 GAL 2.75 AZL 87.88 HCA 138.18 SMA 198.81 ECC .24234 INC 2.1233 V1 29.402
RP 238.30 LAP 1.42 LOP 99.27 VP 21.126 GAP 8.14 AZP 91.58 TAL 14.19 TAP 152.38 RCA 150.63 APO 246.99 V2 23.058
RC 212.919 GL 17.15 GP -23.15 ZAL 62.73 ZAP 115.53 ETS 193.75 ZAE 146.11 ETE 224.60 ZAC 61.69 ETC 284.84 LVI 3.97

PLANETOCENTRIC CONIC

C3 17.089 VHL 4.131 DLA 24.55 RAL 13.80 RAD 6641.5 VEL 11.709 PTH 6.74 VHP 2.575 DPA -8.13 RAP 43.14 ECC 1.2809
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 5 42 3600.04 -47.33 137.52 251.64 95.52 10 5 42 2600.0 -39.71 105.63
60.00 9 13 43 3578.71 -40.30 136.03 252.06 89.45 10 13 21 2578.7 -36.10 105.74
70.00 9 27 7 3539.22 -33.74 132.39 251.61 84.33 10 26 6 2539.2 -32.55 103.71
80.00 9 53 54 3455.19 -28.39 125.18 250.77 80.34 10 51 29 2455.2 -29.56 97.82
90.00 10 53 50 3261.60 -26.06 110.48 250.29 78.62 11 48 12 2261.6 -28.24 83.68
100.00 12 36 45 2929.66 -28.39 86.55 250.77 80.34 13 25 35 1929.7 -29.56 59.19
110.00 14 26 33 2586.04 -33.74 61.30 251.61 84.33 15 9 39 1586.0 -32.55 32.63

DIFFERENTIAL CORRECTIONS

TDE -.2311 TRA -.6260 TC3 -.3772 BAU .5713
RDE .0690 RRA -.0494 RC3-2.4751 FAU .42678
FDE 3.8182 FRA-1.7547 FC-21.6462 BSP 3464
BDE .2412 BRA .6279 BC3 2.5036 FSP 2798

MID-COURSE EXECUTION ACCURACY

SGT 1053.9 SGR 2048.7 SG3 1628.1
RRR .3143 RRF .9658 RTF .3238
SGB 2303.9 R23 .0742 R13 .9632
SG1 2083.3 SG2 983.9 THA 78.13

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 5.8 SS 59.9
CRT -.4741 CRS -.8941 CST .6320
LSA 61.7 MSA 16.2 SSA 2.5
EL1 21.7 EL2 5.1 ALF 172.29



LAUNCH DATE AUG 14 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.92D GAL 2.74 AZL 87.81 HCA 139.14 SMA 198.70 ECC .24186 INC 2.1938 V1 29.402  
 RP 238.63 LAP 1.44 LOP 100.22 VP 21.081 GAP 7.90 AZP 91.66 TAL 14.15 TAP 153.29 RCA 150.64 APO 246.75 V2 23.024  
 RC 215.868 GL 17.73 GP -23.80 ZAL 62.87 ZAP 113.92 ETS 193.26 ZAE 144.46 ETE 222.95 ZAC 61.19 ETC 284.99 LVI 4.44

DISTANCE 459.719 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.091 VHL 4.134 DLA 25.09 RAL 13.59 RAD 6641.5 VEL 11.710 PTH 6.74 VHP 2.552 DPA -8.97 RAP 42.76 ECC 1.2813  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 13 3612.23 -47.41 138.69 251.90 94.62 10 2 25 2612.2 -40.10 106.53  
 60.00 9 9 11 3593.69 -40.28 137.30 252.26 88.58 10 9 4 2593.7 -36.44 106.88  
 70.00 9 20 59 3558.90 -33.59 133.90 251.67 83.44 10 20 18 2558.9 -32.80 105.19  
 80.00 9 45 20 3482.49 -28.06 127.15 250.70 79.35 10 43 22 2482.5 -29.68 99.84  
 90.00 10 43 26 3294.81 -25.60 112.80 250.14 77.55 11 38 21 2294.8 -28.28 86.11  
 100.00 12 28 12 2956.96 -28.06 88.51 250.70 79.35 13 17 29 1957.0 -29.68 61.21  
 110.00 14 20 25 2605.72 -33.59 62.82 251.67 83.44 15 3 51 1605.7 -32.80 34.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2108 TRA -.6377 TC3 -.5113 BAU .5989 SGT 1102.9 SGR 2132.6 SG3 1658.6 ST 20.7 SR 8.0 SS 82.0  
 RDE .1032 RRA -.0637 RC3-2.5708 FAU .43378 RRT .4048 RRF .9692 RTF .4150 CRT -.4917 CR8 -.9497 C8T .5866  
 FDE 3.9968 FRA-1.8236 FC-21.9718 BSP 3640 SGB 2400.9 R23 .0899 R13 .9654 LSA 63.8 M8A 16.8 S8A 2.3  
 BDE .2347 BRA .6408 BC3 2.6211 F8P 2854 SG1 2191.1 SGT 981.6 THA 75.13 EL1 21.1 EL2 6.8 ALF 168.01

LAUNCH DATE AUG 14 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.914 GAL 2.73 AZL 87.73 HCA 140.09 SMA 198.59 ECC .24142 INC 2.2669 V1 29.402  
 RP 238.95 LAP 1.45 LOP 101.17 VP 21.037 GAP 7.65 AZP 91.74 TAL 14.10 TAP 154.18 RCA 150.65 APO 246.54 V2 22.991  
 RC 218.810 GL 18.32 GP -24.47 ZAL 63.02 ZAP 112.30 ETS 192.74 ZAE 142.78 ETE 221.40 ZAC 60.69 ETC 285.14 LVI 4.92

DISTANCE 463.505 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.122 VHL 4.138 DLA 25.66 RAL 13.38 RAD 6641.5 VEL 11.711 PTH 6.74 VHP 2.531 DPA -9.82 RAP 42.39 ECC 1.2818  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 36 3625.06 -47.47 139.93 252.36 93.67 9 59 1 2625.1 -40.51 107.49  
 60.00 9 4 26 3609.51 -40.25 138.65 252.48 87.67 10 4 39 2609.5 -36.77 108.09  
 70.00 9 14 28 3579.89 -33.42 135.52 251.75 82.50 10 14 8 2579.9 -33.04 106.78  
 80.00 9 35 59 3512.37 -27.67 129.28 250.62 78.30 10 34 32 2512.4 -29.78 102.05  
 90.00 10 31 46 3332.21 -25.02 115.39 249.95 76.38 11 27 18 2332.2 -28.27 88.84  
 100.00 12 18 51 2986.84 -27.67 90.65 250.62 78.30 13 8 38 1986.8 -29.78 63.42  
 110.00 14 13 55 2626.71 -33.42 64.44 251.75 82.50 14 57 42 1626.7 -33.04 35.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1882 TRA -.6503 TC3 -.6490 BAU .6284 SGT 1163.7 SGR 2219.1 SG3 1686.7 ST 19.9 SR 10.4 SS 84.2  
 RDE .1393 RRA -.0784 RC3-2.6673 FAU .44015 RRT .4862 RRF .9723 RTF .4967 CRT -.4660 CR8 -.9728 C8T .5299  
 FDE 4.1763 FRA-1.8893 FC-22.2557 BSP 3633 SGB 2505.7 R23 .1022 R13 .9673 LSA 65.9 M8A 16.6 S8A 2.3  
 BDE .2341 BRA .6550 BC3 2.7451 F8P 2908 SG1 2306.9 SGT 978.2 THA 72.44 EL1 20.6 EL2 8.8 ALF 163.16

LAUNCH DATE AUG 14 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.909 GAL 2.71 AZL 87.66 HCA 141.03 SMA 198.50 ECC .24102 INC 2.3427 V1 29.402  
 RP 239.26 LAP 1.47 LOP 102.12 VP 20.995 GAP 7.41 AZP 91.82 TAL 14.04 TAP 155.07 RCA 150.65 APO 246.34 V2 22.960  
 RC 221.744 GL 18.93 GP -25.14 ZAL 63.19 ZAP 110.70 ETS 192.20 ZAE 141.08 ETE 219.94 ZAC 60.18 ETC 285.29 LVI 5.42

DISTANCE 467.293 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.181 VHL 4.143 DLA 26.24 RAL 13.17 RAD 6641.5 VEL 11.713 PTH 6.75 VHP 2.514 DPA -10.69 RAP 42.02 ECC 1.2824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 49 3638.56 -47.52 141.23 252.77 92.67 9 59 28 2638.6 -40.93 108.51  
 60.00 8 59 27 3626.23 -40.19 140.07 252.72 86.71 9 59 53 2626.2 -37.11 109.38  
 70.00 9 7 33 3602.35 -33.21 137.24 251.82 81.51 10 7 39 2602.4 -33.27 108.30  
 80.00 9 25 41 3545.40 -27.19 131.62 250.51 77.16 10 24 46 2545.4 -29.84 104.51  
 90.00 10 18 21 3375.28 -24.30 118.33 249.72 75.07 11 14 36 2375.3 -28.18 91.99  
 100.00 12 8 33 3019.87 -27.19 92.98 250.51 77.16 12 58 53 2019.9 -29.84 65.87  
 110.00 14 6 59 2649.17 -33.21 66.15 251.82 81.51 14 51 8 1649.2 -33.27 37.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1631 TRA -.6636 TC3 -.7902 BAU .6594 SGT 1235.5 SGR 2307.1 SG3 1711.4 ST 19.1 SR 12.9 SS 86.4  
 RDE .1769 RRA -.0941 RC3-2.7634 FAU .44569 RRT .3586 RRF .9751 RTF .5090 CRT -.4115 CR8 -.9838 C8T .4583  
 FDE 4.3532 FRA-1.9560 FC-22.4841 BSP 4036 SGB 2617.1 R23 .1116 R13 .9691 LSA 68.2 M8A 16.8 S8A 2.2  
 BDE .2408 BRA .6702 BC3 2.8741 F8P 2948 SG1 2429.4 SGT 973.2 THA 70.00 EL1 20.2 EL2 11.1 ALF 157.15

LAUNCH DATE AUG 14 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.908 GAL 2.70 AZL 87.58 HCA 141.98 SMA 198.41 ECC .24086 INC 2.4214 V1 29.402  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.934 GAP 7.16 AZP 91.91 TAL 13.97 TAP 155.95 RCA 150.66 APO 246.16 V2 22.928  
 RC 224.672 GL 19.56 GP -25.83 ZAL 63.38 ZAP 109.09 ETS 191.64 ZAE 139.36 ETE 218.58 ZAC 59.67 ETC 285.44 LVI 5.92

DISTANCE 471.081 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.210 VHL 4.148 DLA 26.85 RAL 12.98 RAD 6641.6 VEL 11.715 PTH 6.75 VHP 2.500 DPA -11.56 RAP 41.66 ECC 1.2832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 52 3652.77 -47.56 142.60 253.22 91.61 9 51 45 2652.8 -41.36 109.60  
 60.00 8 54 12 3643.92 -40.11 141.56 252.97 85.70 9 54 55 2643.9 -37.46 110.75  
 70.00 9 0 7 3626.45 -32.95 139.07 251.89 80.45 10 0 33 2626.5 -33.49 110.34  
 80.00 9 14 9 3582.39 -26.60 134.21 250.36 75.92 10 13 51 2582.4 -29.85 107.26  
 90.00 10 2 19 3426.74 -23.35 121.81 249.39 73.58 10 59 26 2426.7 -27.96 95.74  
 100.00 11 57 1 3056.86 -26.60 95.58 250.36 75.92 12 47 57 2056.9 -29.85 68.62  
 110.00 13 59 33 2673.27 -32.95 67.99 251.89 80.45 14 44 7 1673.3 -33.49 39.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1339 TRA -.6767 TC3 -.9311 BAU .6925 SGT 1314.7 SGR 2399.6 SG3 1734.7 ST 18.3 SR 15.5 SS 88.4  
 RDE .2149 RRA -.1113 RC3-2.8624 FAU .45100 RRT .6213 RRF .9776 RTF .6318 CRT -.3272 CR8 -.9896 C8T .3650  
 FDE 4.5162 FRA-2.0289 FC-22.6875 BSP 4237 SGB 2736.1 R23 .1172 R13 .9710 LSA 70.4 M8A 17.0 S8A 2.1  
 BDE .2532 BRA .6858 BC3 3.0100 F8P 2969 SG1 2560.1 SGT 965.5 THA 67.89 EL1 19.8 EL2 13.5 ALF 148.48

LAUNCH DATE AUG 14 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 12 1974

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 32.901 GAL 2.66 AZL 87.50 MCA 142.92 SMA 198.34 ECC .24033 INC 2.5034 V1 29.402  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.914 GAP 6.92 AZP 92.00 TAL 13.90 TAP 156.82 RCA 150.67 APO 246.01 V2 22.887  
 RC 227.591 GL 20.21 GP -26.32 ZAL 63.58 ZAP 107.51 ETS 191.06 ZAE 137.63 ETE 217.23 ZAC 59.15 ETC 285.60 LVI 6.44

Planetocentric Conic: C3 17.268 VHL 4.156 DLA 27.48 RAL 12.74 RAD 6641.6 VEL 11.718 PTH 6.75 VHP 2.488 DPA -12.44 RAP 41.30 ECC 1.2842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 44 3667.76 -47.57 144.05 253.69 90.50 9 47 52 2667.8 -41.60 110.77  
 60.00 8 48 39 3682.68 -40.00 143.15 253.25 84.63 9 49 41 2662.7 -37.80 112.23  
 70.00 8 52 7 3652.45 -32.64 141.03 251.96 79.33 9 52 59 2652.5 -33.69 112.34  
 80.00 9 0 58 3624.72 -25.87 137.14 250.16 74.54 10 1 21 2624.7 -29.79 110.40  
 90.00 9 41 38 3493.17 -22.01 126.21 248.88 71.78 10 39 51 2493.2 -27.52 100.55  
 100.00 11 43 48 3099.19 -25.87 98.51 250.16 74.54 12 35 27 2099.2 -29.76 71.77  
 110.00 13 51 33 2699.27 -32.64 69.95 251.96 79.33 14 36 32 1699.3 -35.69 41.28

Differential Corrections: TDE -.1067 TRA -.6854 TC3-1.0864 BAV .7258 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .2591 RRA -.1251 RC3-2.9500 FAU .45363 SGT 1416.0 SGR 2485.3 SG3 1749.0 ST 17.9 SR 18.5 SS 70.9  
 FDE 4.7128 FRA -2.0645 FC-22.7424 BSP 4485 RRT .6738 RRF .9797 RTF .6830 CRT -.2402 CRS -.9934 CST .2671  
 BDE .2802 BRA .7066 BC3 3.1437 FSP 3022 SGB 2860.3 R23 .1263 R13 .9720 LSA 73.4 MSA 17.2 SSA 2.0  
 SGI 2692.4 8G2 965.8 THA 65.67 EL1 20.2 EL2 15.8 ALF 130.99

LAUNCH DATE AUG 14 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 14 1974

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 32.898 GAL 2.66 AZL 87.41 MCA 143.86 SMA 198.28 ECC .24003 INC 2.5888 V1 29.402  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.875 GAP 6.88 AZP 92.09 TAL 13.82 TAP 157.68 RCA 150.69 APO 245.87 V2 22.886  
 RC 230.502 GL 20.88 GP -27.22 ZAL 63.80 ZAP 105.93 ETS 190.45 ZAE 135.89 ETE 215.97 ZAC 58.62 ETC 285.76 LVI 6.97

Planetocentric Conic: C3 17.336 VHL 4.164 DLA 28.13 RAL 12.53 RAD 6641.6 VEL 11.720 PTH 6.75 VHP 2.480 DPA -13.34 RAP 40.95 ECC 1.2853  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 24 3683.55 -47.57 145.58 254.20 89.32 9 43 47 2683.5 -42.25 112.02  
 60.00 8 42 45 3682.59 -39.86 144.82 253.53 83.50 9 44 8 2682.6 -38.14 113.81  
 70.00 8 43 26 3680.60 -32.26 143.14 252.01 78.13 9 44 46 2680.6 -35.87 114.52  
 80.00 8 45 19 3674.65 -24.92 140.54 249.86 72.99 9 46 34 2674.7 -29.60 114.10  
 90.00 9 7 3 3604.30 -19.47 133.37 247.83 69.07 10 7 8 2604.3 -26.38 108.47  
 100.00 11 28 11 3149.13 -24.92 101.91 249.86 72.99 12 20 40 2149.1 -29.60 75.47  
 110.00 13 42 52 2727.42 -32.26 72.06 252.01 78.13 14 28 20 1727.4 -33.87 43.44

Differential Corrections: TDE -.0741 TRA -.7125 TC3-1.2375 BAV .7609 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3033 RRA -.1418 RC3-3.0406 FAU .45610 SGT 1519.4 SGR 2575.8 SG3 1761.9 ST 17.5 SR 21.5 SS 73.1  
 FDE 4.8880 FRA -2.1164 FC-22.7748 BSP 4728 RRT .7187 RRF .9816 RTF .7272 CRT -.1203 CRS -.9955 CST .1414  
 BDE .3122 BRA .7264 BC3 3.2828 FSP 3048 SGB 2990.5 R23 .1310 R13 .9733 LSA 76.2 MSA 17.3 SSA 1.8  
 SGI 2831.9 8G2 980.9 THA 63.78 EL1 21.7 EL2 17.2 ALF 105.18

LAUNCH DATE AUG 14 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 16 1974

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 32.895 GAL 2.64 AZL 87.32 MCA 144.80 SMA 198.22 ECC .23976 INC 2.6778 V1 29.402  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.838 GAP 6.45 AZP 92.19 TAL 13.73 TAP 158.52 RCA 150.70 APO 245.75 V2 22.836  
 RC 233.405 GL 21.58 GP -27.94 ZAL 64.04 ZAP 104.37 ETS 189.82 ZAE 134.14 ETE 214.76 ZAC 58.06 ETC 285.92 LVI 7.52

Planetocentric Conic: C3 17.419 VHL 4.174 DLA 28.81 RAL 12.30 RAD 6641.7 VEL 11.724 PTH 6.75 VHP 2.474 DPA -14.24 RAP 40.61 ECC 1.2867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 49 3700.19 -47.55 147.19 254.73 88.08 9 39 29 2700.2 -42.71 113.35  
 60.00 8 36 29 3703.73 -39.68 146.59 253.81 82.31 9 38 13 2703.7 -38.48 115.50  
 70.00 8 33 56 3711.26 -31.81 145.42 252.03 76.86 9 35 48 2711.3 -34.01 116.90  
 80.00 8 25 40 3737.29 -23.60 144.73 249.38 71.16 9 27 57 2737.3 -29.20 118.71  
 84.25 7 52 56 3842.67 -17.66 150.06 246.95 66.86 8 56 59 2842.7 -25.67 125.77  
 100.00 11 8 32 3211.76 -23.60 106.10 249.38 71.16 12 2 4 2211.8 -29.20 80.08  
 110.00 13 33 23 2758.08 -31.81 74.34 252.03 76.86 14 19 21 1758.1 -34.01 45.82

Differential Corrections: TDE -.0354 TRA -.7274 TC3-1.3819 BAV .7987 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3452 RRA -.1628 RC3-3.1381 FAU .45917 SGT 1622.3 SGR 2674.9 SG3 1775.5 ST 17.4 SR 24.3 SS 74.8  
 FDE 5.0247 FRA -2.1950 FC-22.8209 BSP 4947 RRT .7581 RRF .9835 RTF .7066 CRT .0346 CRS -.9967 CST -.0154  
 BDE .3470 BRA .7454 BC3 3.4290 FSP 3029 SGB 3128.4 R23 .1308 R13 .9753 LSA 78.6 MSA 17.4 SSA 1.8  
 SGI 2980.9 8G2 949.4 THA 62.25 EL1 24.3 EL2 17.3 ALF 87.13

LAUNCH DATE AUG 14 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 151.53 LAL -0.00 LOL 321.07 VL 32.893 GAL 2.82 AZL 87.23 MCA 145.73 SMA 198.18 ECC .23953 INC 2.7709 V1 29.402  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.801 GAP 6.21 AZP 92.29 TAL 13.63 TAP 159.36 RCA 150.71 APO 245.65 V2 22.807  
 RC 236.297 GL 22.31 GP -28.66 ZAL 64.29 ZAP 102.83 ETS 189.17 ZAE 132.39 ETE 213.80 ZAC 57.53 ETC 286.08 LVI 8.08

Planetocentric Conic: C3 17.512 VHL 4.185 DLA 29.52 RAL 12.08 RAD 6641.7 VEL 11.728 PTH 6.76 VHP 2.471 DPA -15.14 RAP 40.29 ECC 1.2882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 32 59 3717.78 -47.49 148.88 255.29 86.78 9 34 87 2717.8 -43.17 114.79  
 60.00 8 29 47 3726.29 -39.46 148.47 254.11 81.05 9 31 54 2726.3 -38.81 117.33  
 70.00 8 23 26 3745.05 -31.26 147.80 252.02 75.49 9 25 51 2745.1 -34.11 119.54  
 80.00 7 56 14 3830.80 -21.42 150.81 248.48 68.68 9 0 5 2830.8 -28.29 125.51  
 81.17 7 27 27 3922.95 -18.04 156.15 246.99 66.23 8 32 50 2922.9 -26.27 131.86  
 100.00 10 39 6 3305.27 -21.42 112.18 248.48 68.68 11 34 12 2305.3 -28.29 86.88  
 110.00 13 22 53 2791.87 -31.26 76.82 252.02 75.49 14 9 24 1791.9 -34.11 48.45

Differential Corrections: TDE .0001 TRA -.7499 TC3-1.5434 BAV .8353 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3974 RRA -.1770 RC3-3.2165 FAU .45823 SGT 1749.5 SGR 2760.6 SG3 1776.3 ST 17.8 SR 27.8 SS 77.3  
 FDE 5.2201 FRA -2.2120 FC-22.6530 BSP 5232 RRT .7881 RRF .9849 RTF .7951 CRT .1654 CRS -.9977 CST -.1522  
 BDE .3974 BRA .7705 BC3 3.5676 FSP 3068 SGB 3266.2 R23 .1369 R13 .9758 LSA 82.2 MSA 17.6 SSA 1.7  
 SGI 3126.9 8G2 950.8 THA 60.46 EL1 28.1 EL2 17.4 ALF 80.14

LAUNCH DATE AUG 14 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 20 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.091 GAL 2.60 AZL 87.13 HCA 146.66 SMA 198.14 ECC .23932 INC 2.8683 V1 29.402  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.766 GAP 5.97 AZP 92.40 TAL 13.53 TAP 160.19 RCA 150.72 APO 245.56 V2 22.777  
 RC 239.179 GL 23.06 GP -29.39 ZAL 64.56 ZAP 101.32 ETS 188.50 ZAE 130.64 ETE 212.48 ZAC 56.97 ETC 286.24 LVI 8.66

**PLANETOCENTRIC CONIC**  
 C3 17.619 VHL 4.198 DLA 30.25 RAL 11.84 RAD 6641.8 VEL 11.732 PTH 6.76 VHP 2.471 DPA -16.06 RAP 39.98 ECC 1.2900  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 51 3736.37 -47.41 150.67 255.87 85.40 9 30 7 2736.4 -43.64 116.33  
 60.00 8 22 36 3750.39 -39.19 150.46 254.39 79.73 9 25 8 2750.4 -39.13 119.30  
 70.00 8 11 40 3782.65 -30.59 150.62 251.95 74.01 9 14 43 2782.7 -34.15 122.47  
 78.78 7 8 20 3982.41 -18.42 160.75 247.04 65.57 8 14 42 2982.4 -26.89 136.45  
 78.78 7 8 20 3982.41 -18.42 160.75 247.04 65.57 8 14 42 2982.4 -26.89 136.45  
 78.78 7 8 20 3982.41 -18.42 160.75 247.04 65.57 8 14 42 2982.4 -26.89 136.45  
 110.00 13 11 7 2629.47 -30.59 79.54 251.95 74.01 13 58 16 1829.5 -34.15 51.39

**DIFFERENTIAL CORRECTIONS**  
 TDE .0414 TRA -.7709 TC3-1.6984 BAU .8741 SGT 1876.2 SGR 2853.3 SG3 1776.7 ST 18.6 SR 31.3 SS 79.5  
 RDE .4488 RRA -.1948 RC3-3.2992 FAU .45756 RRT .8142 RRF .9863 RTF .8205 CRT .3091 CR8 -.9983 CST -.2991  
 FDE 5.3837 FRA-2.2480 FC-22.4823 BSP 5503 SGB 3414.9 R23 .1393 R13 .9769 LSA 85.6 MSA 17.7 SSA 1.6  
 BDE .4507 BRA .7951 BC3 3.7107 FSP 3072 SG1 3260.8 SG2 947.3 THA 58.96 EL1 32.0 EL2 17.3 ALF 75.15

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 22 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.890 GAL 2.58 AZL 87.03 HCA 147.59 SMA 198.11 ECC .23914 INC 2.9704 V1 29.402  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.732 GAP 5.74 AZP 92.51 TAL 13.42 TAP 161.01 RCA 150.74 APO 245.49 V2 22.749  
 RC 242.049 GL 23.84 GP -30.13 ZAL 64.85 ZAP 99.83 ETS 187.80 ZAE 128.90 ETE 211.40 ZAC 56.40 ETC 286.41 LVI 9.25

**PLANETOCENTRIC CONIC**  
 C3 17.742 VHL 4.212 DLA 31.02 RAL 11.59 RAD 6641.8 VEL 11.738 PTH 6.77 VHP 2.474 DPA -16.98 RAP 39.69 ECC 1.2920  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 24 3756.05 -47.28 152.56 256.47 83.95 9 25 0 2756.1 -44.11 117.99  
 60.00 8 14 50 3776.23 -38.85 152.58 254.67 70.33 9 17 46 2776.2 -39.43 121.43  
 70.00 7 58 14 3825.27 -29.75 153.65 251.80 72.39 9 1 59 2825.3 -34.10 125.80  
 76.70 6 52 10 4032.14 -18.81 164.67 247.11 64.87 7 59 22 3032.1 -27.52 140.36  
 76.70 6 52 10 4032.14 -18.81 164.67 247.11 64.87 7 59 22 3032.1 -27.52 140.36  
 76.70 6 52 10 4032.14 -18.81 164.67 247.11 64.87 7 59 22 3032.1 -27.52 140.36  
 110.00 12 57 41 2872.09 -29.75 82.57 251.80 72.39 13 45 33 1872.1 -34.10 54.72

**DIFFERENTIAL CORRECTIONS**  
 TDE .0865 TRA -.7925 TC3-1.8521 BAU .9136 SGT 2007.7 SGR 2945.3 SG3 1772.0 ST 19.9 SR 34.8 SS 81.6  
 RDE .5023 RRA -.2132 RC3-3.3771 FAU .45362 RRT .8363 RRF .9876 RTF .8418 CRT .4428 CR8 -.9988 CST -.4353  
 FDE 5.5374 FRA-2.2797 FC-22.2329 BSP 5780 SGB 3564.5 R23 .1409 R13 .9779 LSA 89.1 MSA 17.8 SSA 1.6  
 BDE .5097 BRA .8207 BC3 3.8517 FSP 3086 SG1 3437.4 SG2 943.3 THA 57.58 EL1 36.2 EL2 17.1 ALF 71.52

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 24 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.888 GAL 2.55 AZL 86.92 HCA 148.52 SMA 198.09 ECC .23898 INC 3.0775 V1 29.402  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.699 GAP 5.51 AZP 92.63 TAL 13.30 TAP 161.82 RCA 150.75 APO 245.43 V2 22.720  
 RC 244.907 GL 24.66 GP -30.89 ZAL 65.18 ZAP 98.36 ETS 187.08 ZAE 127.16 ETE 210.35 ZAC 55.82 ETC 286.58 LVI 9.86

**PLANETOCENTRIC CONIC**  
 C3 17.880 VHL 4.229 DLA 31.81 RAL 11.33 RAD 6641.9 VEL 11.743 PTH 6.77 VHP 2.480 DPA -17.91 RAP 39.43 ECC 1.2943  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 34 3776.91 -47.11 154.55 257.08 82.43 9 19 31 2776.9 -44.58 119.77  
 60.00 8 6 24 3804.04 -38.45 154.83 254.92 76.85 9 9 48 2804.0 -39.70 123.74  
 70.00 7 42 26 3874.92 -28.87 157.12 251.51 70.60 8 47 1 2874.9 -33.92 129.66  
 74.79 6 37 51 4075.65 -19.20 168.16 247.19 64.14 7 45 47 3075.7 -28.18 143.85  
 74.79 6 37 51 4075.65 -19.20 168.16 247.19 64.14 7 45 47 3075.7 -28.18 143.85  
 74.79 6 37 51 4075.65 -19.20 168.16 247.19 64.14 7 45 47 3075.7 -28.18 143.85  
 110.00 12 41 52 2921.74 -28.67 86.04 251.51 70.60 13 30 34 1921.7 -33.92 58.58

**DIFFERENTIAL CORRECTIONS**  
 TDE .1348 TRA -.8157 TC3-2.0051 BAU .9544 SGT 2144.9 SGR 3039.1 SG3 1763.7 ST 21.7 SR 38.5 SS 83.8  
 RDE .3587 RRA -.2328 RC3-3.4526 FAU .45282 RRT .8548 RRF .9887 RTF .8596 CRT .5570 CR8 -.9991 CST -.5513  
 FDE 5.6847 FRA-2.3090 FC-21.9248 BSP 8065 SGB 3719.8 R23 .1422 R13 .9788 LSA 92.8 MSA 17.9 SSA 1.5  
 BDE .5747 BRA .8483 BC3 3.8926 FSP 3053 SG1 3599.1 SG2 940.0 THA 56.29 EL1 40.8 EL2 17.0 ALF 68.71

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 28 1974

**HELIOCENTRIC CONIC**  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.888 GAL 2.53 AZL 86.81 HCA 149.48 SMA 198.07 ECC .23885 INC 3.1903 V1 29.402  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.668 GAP 5.28 AZP 92.75 TAL 13.18 TAP 162.63 RCA 150.76 APO 245.38 V2 22.692  
 RC 247.751 GL 25.50 GP -31.66 ZAL 65.48 ZAP 96.93 ETS 186.35 ZAE 125.44 ETE 209.33 ZAC 55.22 ETC 286.76 LVI 10.49

**PLANETOCENTRIC CONIC**  
 C3 18.037 VHL 4.247 DLA 32.64 RAL 11.06 RAD 6642.0 VEL 11.750 PTH 6.78 VHP 2.489 DPA -18.85 RAP 39.18 ECC 1.2988  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 19 3799.07 -46.89 156.64 257.70 80.83 9 13 38 2799.1 -45.03 121.70  
 60.00 7 57 11 3834.14 -37.95 157.23 255.14 73.28 9 1 5 2834.1 -39.94 126.27  
 70.00 7 22 52 3935.75 -27.23 161.26 250.99 68.54 8 28 28 2935.7 -33.52 134.36  
 72.99 6 24 46 4115.06 -19.60 171.37 247.29 63.37 7 33 21 3115.1 -28.85 147.07  
 72.99 6 24 46 4115.06 -19.60 171.37 247.29 63.37 7 33 21 3115.1 -28.85 147.07  
 72.99 6 24 46 4115.06 -19.60 171.37 247.29 63.37 7 33 21 3115.1 -28.85 147.07  
 110.00 12 22 18 2982.57 -27.23 90.18 250.99 68.54 13 12 1 1982.6 -33.52 63.28

**DIFFERENTIAL CORRECTIONS**  
 TDE .1867 TRA -.8402 TC3-2.1557 BAU .9958 SGT 2286.5 SGR 3131.9 SG3 1750.1 ST 24.0 SR 42.3 SS 85.5  
 RDE .6172 RRA -.2526 RC3-3.5224 FAU .44875 RRT .8704 RRF .9897 RTF .8746 CRT .6504 CR8 -.9993 CST -.6460  
 FDE 5.8188 FRA-2.3323 FC-21.5387 BSP 6351 SGB 3877.7 R23 .1431 R13 .9797 LSA 96.7 MSA 18.0 SSA 1.4  
 BDE .6448 BRA .8773 BC3 4.1297 FSP 3029 SG1 3762.8 SG2 937.0 THA 55.09 EL1 45.6 EL2 16.9 ALF 66.35

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 14 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.887 GAL 2.50 AZL 86.89 HCA 180.37 SMA 198.07 ECC .23874 INC 3.3090 V1 29.402
RP 242.19 LAP 1.64 LOP 111.48 VP 20.637 GAP 5.05 AZP 92.88 TAL 13.05 TAP 163.42 RCA 150.78 APO 245.35 V2 22.665
RC 250.580 GL 26.38 GP -32.44 ZAL 69.83 ZAP 95.53 ETS 185.59 ZAE 123.73 ETE 208.34 ZAC 54.61 ETC 286.94 LVI 11.13

PLANETOCENTRIC CONIC

C3 18.215 VHL 4.268 DLA 33.50 RAL 10.76 RAD 6642.0 VEL 11.758 PTH 6.78 VHP 2.501 DPA -19.79 RAP 38.97 ECC 1.2988
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 3 35 3822.66 -46.62 158.85 258.32 79.15 9 7 18 2822.7 -45.51 123.79
60.00 7 47 1 3866.92 -37.35 159.81 255.31 73.63 8 51 28 2866.9 -40.14 129.03
70.00 6 55 32 4019.75 -25.01 166.78 250.02 65.95 8 2 32 3019.8 -32.64 140.76
71.25 6 12 32 4151.45 -20.01 174.40 247.40 62.56 7 21 44 3151.5 -29.54 150.11
71.25 6 12 32 4151.45 -20.01 174.40 247.40 62.56 7 21 44 3151.5 -29.54 150.11
71.25 6 12 32 4151.45 -20.01 174.40 247.40 62.56 7 21 44 3151.5 -29.54 150.11
110.00 11 54 58 3066.57 -25.01 95.70 250.02 65.95 12 46 5 2066.6 -32.64 69.68

DIFFERENTIAL CORRECTIONS

TDE .2425 TRA -.8657 TC3-2.3032 BAU 1.0381
RDE .6793 RRA -.2738 RC3-3.5873 FAU .44360
FDE 5.9467 FRA-2.3529 FC-21.0843 B8P 6649
BDE .7213 BRA .9080 BC3 4.2631 F8P 3001

MID-COURSE EXECUTION ACCURACY

SGT 2431.8 SGR 3225.2 SG3 1732.3
RRT .8837 RRF .9906 RTF .8873
SGB 4039.2 R23 .1438 R13 .9805
SG1 3929.7 S62 934.2 THA 53.97

ORBIT DETERMINATION ACCURACY

ST 26.7 SR 46.3 SS 87.3
CRT .7242 CR8 -.9995 CST -.7208
LSA 100.8 MSA 18.1 SSA 1.3
EL1 50.7 EL2 16.8 ALF 64.36

LAUNCH DATE AUG 14 1973

FLIGHT TIME 228.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.887 GAL 2.48 AZL 86.57 HCA 151.29 SMA 198.08 ECC .23865 INC 3.4345 V1 29.402
RP 242.46 LAP 1.65 LOP 112.40 VP 20.607 GAP 4.82 AZP 93.01 TAL 12.92 TAP 164.21 RCA 150.80 APO 245.33 V2 22.638
RC 253.394 GL 27.30 GP -33.24 ZAL 66.19 ZAP 94.17 ETS 184.80 ZAE 122.03 ETE 207.37 ZAC 53.98 ETC 287.12 LVI 11.80

PLANETOCENTRIC CONIC

C3 18.415 VHL 4.291 DLA 34.39 RAL 10.45 RAD 6642.1 VEL 11.766 PTH 6.79 VHP 2.517 DPA -20.74 RAP 38.78 ECC 1.3031
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 56 19 3847.82 -46.27 161.18 258.94 77.38 9 0 26 2847.8 -45.95 126.06
60.00 7 35 41 3902.94 -36.63 162.59 255.40 71.86 8 40 44 2902.9 -40.26 132.09
69.56 6 1 2 4185.31 -20.42 177.26 247.53 61.70 7 10 48 3185.3 -30.26 153.00
69.56 6 1 2 4185.31 -20.42 177.26 247.53 61.70 7 10 48 3185.3 -30.26 153.00
69.56 6 1 2 4185.31 -20.42 177.26 247.53 61.70 7 10 48 3185.3 -30.26 153.00
69.56 6 1 2 4185.31 -20.42 177.26 247.53 61.70 7 10 48 3185.3 -30.26 153.00
69.56 6 1 2 4185.31 -20.42 177.26 247.53 61.70 7 10 48 3185.3 -30.26 153.00

DIFFERENTIAL CORRECTIONS

TDE .3026 TRA -.8926 TC3-2.4459 BAU 1.0807
RDE .7445 RRA -.2955 RC3-3.6454 FAU .43719
FDE 6.0637 FRA-2.3687 FC-20.3536 B8P 6949
BDE .6037 BRA .9402 BC3 4.3899 F8P 2963

MID-COURSE EXECUTION ACCURACY

SGT 2579.8 SGR 3317.4 SG3 1709.3
RRT .8950 RRF .9914 RTF .8981
SGB 4202.5 R23 .1442 R13 .9812
SG1 4097.9 S62 931.5 THA 52.93

ORBIT DETERMINATION ACCURACY

ST 29.8 SR 50.4 SS 89.1
CRT .7816 CR8 -.9996 CST -.7789
LSA 105.1 MSA 18.2 SSA 1.2
EL1 56.1 EL2 16.7 ALF 62.60

LAUNCH DATE AUG 14 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.887 GAL 2.45 AZL 86.43 HCA 152.21 SMA 198.07 ECC .23859 INC 3.5672 V1 29.402
RP 242.73 LAP 1.66 LOP 113.32 VP 20.579 GAP 4.59 AZP 93.16 TAL 12.78 TAP 164.99 RCA 150.81 APO 245.33 V2 22.612
RC 256.191 GL 28.28 GP -34.05 ZAL 66.57 ZAP 92.84 ETS 184.00 ZAE 120.36 ETE 206.42 ZAC 53.34 ETC 287.31 LVI 12.50

PLANETOCENTRIC CONIC

C3 18.640 VHL 4.317 DLA 35.33 RAL 10.11 RAD 6642.2 VEL 11.775 PTH 6.80 VHP 2.536 DPA -21.69 RAP 38.62 ECC 1.3060
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 24 3874.76 -45.84 163.64 259.52 75.53 8 52 39 2874.8 -46.36 128.52
60.00 7 22 54 3942.97 -35.74 165.62 255.39 69.98 8 28 37 2943.0 -40.30 135.49
67.89 5 50 2 4217.36 -20.83 180.03 247.67 60.80 7 0 19 3217.4 -30.99 155.79
67.89 5 50 2 4217.36 -20.83 180.03 247.67 60.80 7 0 19 3217.4 -30.99 155.79
67.89 5 50 2 4217.36 -20.83 180.03 247.67 60.80 7 0 19 3217.4 -30.99 155.79
67.89 5 50 2 4217.36 -20.83 180.03 247.67 60.80 7 0 19 3217.4 -30.99 155.79

DIFFERENTIAL CORRECTIONS

TDE .3667 TRA -.9209 TC3-2.5839 BAU 1.1245
RDE .8132 RRA -.3185 RC3-3.6994 FAU .42998
FDE 6.1684 FRA-2.3800 FC-19.9692 B8P 7245
BDE .8921 BRA .9745 BC3 4.5124 F8P 2913

MID-COURSE EXECUTION ACCURACY

SGT 2731.1 SGR 3411.3 SG3 1682.7
RRT .9047 RRF .9922 RTF .5072
SGB 4369.9 R23 .1444 R13 .9819
SG1 4269.8 S62 929.7 THA 51.96

ORBIT DETERMINATION ACCURACY

ST 33.3 SR 54.7 SS 90.7
CRT .8254 CR8 -.9997 CST -.8232
LSA 109.6 MSA 18.3 SSA 1.2
EL1 61.9 EL2 16.6 ALF 61.05

LAUNCH DATE AUG 14 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.888 GAL 2.42 AZL 86.29 HCA 153.13 SMA 198.08 ECC .23855 INC 3.7080 V1 29.402
RP 242.99 LAP 1.68 LOP 114.24 VP 20.551 GAP 4.37 AZP 93.31 TAL 12.63 TAP 165.76 RCA 150.83 APO 245.33 V2 22.886
RC 258.972 GL 29.27 GP -34.88 ZAL 66.87 ZAP 91.56 ETS 183.18 ZAE 118.70 ETE 205.48 ZAC 52.67 ETC 287.31 LVI 13.21

PLANETOCENTRIC CONIC

C3 18.895 VHL 4.347 DLA 36.30 RAL 9.74 RAD 6642.3 VEL 11.786 PTH 6.81 VHP 2.558 DPA -22.66 RAP 38.50 ECC 1.3110
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 39 46 3903.68 -45.31 168.23 260.07 73.60 8 44 49 2903.7 -46.74 131.21
60.00 7 8 10 3988.23 -34.63 168.95 255.22 67.95 8 14 39 2988.2 -40.21 139.34
66.23 5 39 24 4247.89 -21.24 182.71 247.82 59.85 6 50 12 3247.9 -31.75 158.52
66.23 5 39 24 4247.89 -21.24 182.71 247.82 59.85 6 50 12 3247.9 -31.75 158.52
66.23 5 39 24 4247.89 -21.24 182.71 247.82 59.85 6 50 12 3247.9 -31.75 158.52
66.23 5 39 24 4247.89 -21.24 182.71 247.82 59.85 6 50 12 3247.9 -31.75 158.52

DIFFERENTIAL CORRECTIONS

TDE .4356 TRA -.9506 TC3-2.7153 BAU 1.1684
RDE .8857 RRA -.3428 RC3-3.7447 FAU .42141
FDE 6.2609 FRA-2.3873 FC-19.3083 B8P 7564
BDE .9870 BRA 1.0105 BC3 4.6256 F8P 2864

MID-COURSE EXECUTION ACCURACY

SGT 2884.3 SGR 3503.7 SG3 1650.9
RRT .9130 RRF .9929 RTF .9151
SGB 4538.1 R23 .1446 R13 .9825
SG1 4442.3 S62 927.8 THA 51.05

ORBIT DETERMINATION ACCURACY

ST 37.2 SR 59.2 SS 92.3
CRT .8592 CR8 -.9997 CST -.8574
LSA 114.3 MSA 18.3 SSA 1.1
EL1 67.9 EL2 16.6 ALF 59.66

LAUNCH DATE AUG 14 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 151.53 LAL	-0.00 LOL 321.07 VL	32.889 GAL	2.39 AZL	86.14 HCA	154.04 SMA	198.09 ECC	.23852 INC	3.8576 V1	29.402
RP 243.24 LAP	1.69 LOP 115.16 VP	20.324 GAP	4.14 AZP	93.47 TAL	12.48 TAP	166.52 RCA	150.84 APO	245.34 V2	22.560
RC 261.736 GL	30.32 GP	-35.73 ZAL	67.39 ZAP	90.33 ETS	182.34 ZAE	117.07 ETE	204.57 ZAC	51.97 ETC	287.72 LVI

DISTANCE 520.300

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.182 VHL	4.380 DLA	37.31 RAL	9.34 RAD	6642.5 VEL	11.798 PTH	6.82 VHP	2.584 DPA	-23.63 RAP	38.42 ECC	1.3157
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 30 16	3934.88	-44.68	168.97	260.95	71.57	8 35 50	2934.9	-47.07	134.15
60.00	6 50 44	4040.78	-33.22	172.69	254.81	65.74	7 58 5	3040.8	-39.93	143.78
64.58	5 29 4	4277.21	-21.65	185.34	247.98	58.84	6 40 21	3277.2	-32.52	161.20
64.58	5 29 4	4277.21	-21.65	185.34	247.98	58.84	6 40 21	3277.2	-32.52	161.20
64.58	5 29 4	4277.21	-21.65	185.34	247.98	58.84	6 40 21	3277.2	-32.52	161.20
64.58	5 29 4	4277.21	-21.65	185.34	247.98	58.84	6 40 21	3277.2	-32.52	161.20

DIFFERENTIAL CORRECTIONS

TDE .5087 TRA - .9821 TC3-2.8393 BAU 1.2134  
 RDE .9620 RRA - .3689 RC3-3.7849 FAU .41206  
 FDE 6.3383 FRA -2.3923 FC-18.5975 BSP 7869  
 BDE 1.0882 BRA 1.0491 BC3 4.7315 FSP 2800

MID-COURSE EXECUTION ACCURACY

SGT 3039.3 SGR 3597.7 SG3 1615.5  
 RRT .9203 RRF .9935 RTF .9219  
 SGB 4709.7 R23 .1446 R13 .9831  
 SG1 4617.7 SG2 926.5 THA 50.22

ORBIT DETERMINATION ACCURACY

ST 41.3 SR 63.8 SS 93.7  
 CRT .8851 CR8 -.9998 CST -.8834  
 LSA 119.2 MSA 18.4 SSA 1.0  
 EL1 74.2 EL2 16.5 ALF 58.41

LAUNCH DATE AUG 14 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

RL 151.53 LAL	-0.00 LOL 321.07 VL	32.890 GAL	2.38 AZL	85.98 HCA	154.96 SMA	198.12 ECC	.23851 INC	4.0169 V1	29.402
RP 243.50 LAP	1.70 LOP 116.08 VP	20.499 GAP	3.92 AZP	93.64 TAL	12.32 TAP	187.28 RCA	150.86 APO	245.37 V2	22.535
RC 264.483 GL	31.41 GP	-36.60 ZAL	67.83 ZAP	89.14 ETS	181.48 ZAE	115.47 ETE	203.87 ZAC	51.26 ETC	287.93 LVI

DISTANCE 524.082

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.506 VHL	4.417 DLA	39.37 RAL	8.90 RAD	6642.6 VEL	11.812 PTH	6.83 VHP	2.614 DPA	-24.62 RAP	38.37 ECC	1.3210
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
30.00	7 19 44	3968.71	-43.91	171.86	260.94	69.45	8 25 52	2968.7	-47.34	137.38
60.00	6 29 0	4104.87	-31.34	177.08	254.02	63.25	7 37 25	3104.9	-39.34	149.13
62.91	5 18 56	4305.52	-22.05	187.93	248.15	57.77	6 30 41	3305.5	-33.31	163.86
62.91	5 18 56	4305.52	-22.05	187.93	248.15	57.77	6 30 41	3305.5	-33.31	163.86
62.91	5 18 56	4305.52	-22.05	187.93	248.15	57.77	6 30 41	3305.5	-33.31	163.86
62.91	5 18 56	4305.52	-22.05	187.93	248.15	57.77	6 30 41	3305.5	-33.31	163.86

DIFFERENTIAL CORRECTIONS

TDE .5863 TRA -1.0155 TC3-2.9556 BAU 1.2588  
 RDE 1.0419 RRA - .3970 RC3-3.8186 FAU .40160  
 FDE 6.3987 FRA -2.3931 FC-17.8240 BSP 8171  
 BDE 1.1955 BRA 1.0903 BC3 4.8272 FSP 2727

MID-COURSE EXECUTION ACCURACY

SGT 3196.5 SGR 3691.0 SG3 1575.3  
 RRT .9267 RRF .9940 RTF .9278  
 SGB 4882.8 R23 .1445 R13 .9836  
 SG1 4794.3 SG2 925.0 THA 49.43

ORBIT DETERMINATION ACCURACY

ST 45.8 SR 68.5 SS 94.8  
 CRT .9031 CR8 -.9998 CST -.9036  
 LSA 124.2 MSA 18.4 SSA 1.0  
 EL1 80.7 EL2 16.5 ALF 57.87

LAUNCH DATE AUG 14 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 151.53 LAL	-0.00 LOL 321.07 VL	32.891 GAL	2.35 AZL	85.81 HCA	155.87 SMA	198.14 ECC	.23853 INC	4.1672 V1	29.402
RP 243.74 LAP	1.71 LOP 116.99 VP	20.474 GAP	3.69 AZP	93.82 TAL	12.16 TAP	168.03 RCA	150.86 APO	245.40 V2	22.511
RC 267.212 GL	32.37 GP	-37.50 ZAL	68.28 ZAP	88.00 ETS	180.60 ZAE	113.89 ETE	202.79 ZAC	50.51 ETC	288.16 LVI

DISTANCE 527.862

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.873 VHL	4.458 DLA	39.47 RAL	8.41 RAD	6642.8 VEL	11.827 PTH	6.85 VHP	2.648 DPA	-23.61 RAP	38.37 ECC	1.3271
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 7 57	4005.64	-42.98	174.92	261.21	67.24	8 14 42	3005.6	-47.92	140.93
60.00	5 58 27	4192.81	-28.50	182.80	252.44	60.21	7 8 20	3192.8	-38.10	156.27
61.23	5 8 58	4332.95	-22.44	190.50	248.32	56.64	6 21 11	3333.0	-34.11	166.51
61.23	5 8 58	4332.95	-22.44	190.50	248.32	56.64	6 21 11	3333.0	-34.11	166.51
61.23	5 8 58	4332.95	-22.44	190.50	248.32	56.64	6 21 11	3333.0	-34.11	166.51
61.23	5 8 58	4332.95	-22.44	190.50	248.32	56.64	6 21 11	3333.0	-34.11	166.51

DIFFERENTIAL CORRECTIONS

TDE .6692 TRA -1.0507 TC3-3.0619 BAU 1.3051  
 RDE 1.1267 RRA -.4265 RC3-3.8413 FAU .39031  
 FDE 6.4398 FRA -2.3910 FC-17.0028 BSP 8481  
 BDE 1.3105 BRA 1.1340 BC3 4.9123 FSP 2649

MID-COURSE EXECUTION ACCURACY

SGT 3354.5 SGR 3789.6 SG3 1531.4  
 RRT .9322 RRF .9945 RTF .9279  
 SGB 5058.0 R23 .1444 R13 .9841  
 SG1 4972.8 SG2 924.6 THA 48.70

ORBIT DETERMINATION ACCURACY

ST 50.5 SR 73.4 SS 98.8  
 CRT .9207 CR8 -.9999 CST -.9193  
 LSA 129.5 MSA 18.5 SSA .9  
 EL1 87.5 EL2 16.5 ALF 56.25

LAUNCH DATE AUG 14 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 151.53 LAL	-0.00 LOL 321.07 VL	32.893 GAL	2.30 AZL	85.63 HCA	156.78 SMA	198.17 ECC	.23856 INC	4.3697 V1	29.402
RP 243.98 LAP	1.72 LOP 117.90 VP	20.450 GAP	3.47 AZP	94.02 TAL	11.99 TAP	168.77 RCA	150.90 APO	245.45 V2	22.487
RC 269.924 GL	33.77 GP	-38.43 ZAL	68.77 ZAP	86.91 ETS	179.70 ZAE	112.35 ETE	201.92 ZAC	49.73 ETC	288.41 LVI

DISTANCE 531.641

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.290 VHL	4.504 DLA	40.62 RAL	7.87 RAD	6643.0 VEL	11.845 PTH	6.86 VHP	2.687 DPA	-26.62 RAP	38.42 ECC	1.3339
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	6 54 37	4046.32	-41.86	178.18	261.30	64.93	8 2 4	3046.3	-47.58	144.87
59.53	4 59 3	4359.78	-22.83	193.05	248.50	55.44	6 11 43	3359.8	-34.93	169.18
59.53	4 59 3	4359.78	-22.83	193.05	248.50	55.44	6 11 43	3359.8	-34.93	169.18
59.53	4 59 3	4359.78	-22.83	193.05	248.50	55.44	6 11 43	3359.8	-34.93	169.18
59.53	4 59 3	4359.78	-22.83	193.05	248.50	55.44	6 11 43	3359.8	-34.93	169.18

DIFFERENTIAL CORRECTIONS

TDE .7576 TRA -1.0877 TC3-3.1558 BAU 1.3509  
 RDE 1.2175 RRA -.4586 RC3-3.8528 FAU .37761  
 FDE 6.4686 FRA -2.3849 FC-16.1122 BSP 8798  
 BDE 1.4340 BRA 1.1805 BC3 4.9803 FSP 2566

MID-COURSE EXECUTION ACCURACY

SGT 3511.9 SGR 3877.6 SG3 1482.4  
 RRT .9371 RRF .9950 RTF .9374  
 SGB 5231.6 R23 .1443 R13 .9846  
 SG1 5149.5 SG2 923.4 THA 48.02

ORBIT DETERMINATION ACCURACY

ST 55.6 SR 78.5 SS 96.7  
 CRT .9332 CR8 -.9999 CST -.9318  
 LSA 135.1 MSA 18.5 SSA .8  
 EL1 94.7 EL2 16.5 ALF 55.33

LAUNCH DATE AUG 14 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

DISTANCE 535.419

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.895 GAL 2.27 AZL 85.43 HCA 157.68 SMA 198.21 ECC .23860 INC 4.5856 V1 29.402
RP 244.22 LAP 1.73 LOP 118.81 VP 20.427 GAP 3.25 AZP 94.22 TAL 11.82 TAP 169.50 RCA 150.91 APO 245.50 V2 22.464
RC 272.818 GL 35.04 GP -39.38 ZAL 69.27 ZAP 85.88 ETS 178.79 ZAE 110.84 ETE 201.06 ZAC 48.92 ETC 288.67 LVI 17.23

PLANETOCENTRIC CONIC

C3 20.763 VHL 4.557 DLA 41.82 RAL 7.27 RAD 6643.2 VEL 11.865 PTH 6.88 VHP 2.731 DPA -27.63 RAP 38.51 ECC 1.3417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 39 19 4091.69 -40.49 181.67 281.14 62.50 7 47 31 3091.7 -47.47 149.25
57.81 4 49 8 4386.11 -23.19 195.60 248.68 54.17 6 2 15 3386.1 -35.75 171.88
57.81 4 49 8 4386.11 -23.19 195.60 248.68 54.17 6 2 15 3386.1 -35.75 171.88
57.81 4 49 8 4386.11 -23.19 195.60 248.68 54.17 6 2 15 3386.1 -35.75 171.88
57.81 4 49 8 4386.11 -23.19 195.60 248.68 54.17 6 2 15 3386.1 -35.75 171.88
57.81 4 49 8 4386.11 -23.19 195.60 248.68 54.17 6 2 15 3386.1 -35.75 171.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8503 TRA-1.1276 TC3-3.2387 BAU 1.3984 SGT 3670.7 SGR 3972.3 SG3 1430.1 ST 60.8 SR 83.6 SS 97.1
RDE 1.3116 RRA -.4935 RC3-3.8587 FAU .36443 RRT .9414 RRF .9954 RTF .9413 CRT .9430 CRS -.9999 CST -.9415
FDE 6.4684 FRA-2.3755 FC-15.1953 BSP 9100 SGB 5408.7 R23 .1440 R13 .9850 LSA 140.6 MSA 18.6 SSA .8
BDE 1.5631 BRA 1.2308 BC3 5.0378 FSP 2471 SG1 5329.3 SG2 922.8 THA 47.40 EL1 102.0 EL2 16.6 ALF 54.48

LAUNCH DATE AUG 14 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

DISTANCE 539.196

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.897 GAL 2.24 AZL 85.22 HCA 158.59 SMA 198.25 ECC .23866 INC 4.7770 V1 29.402
RP 244.45 LAP 1.74 LOP 119.72 VP 20.405 GAP 3.03 AZP 94.45 TAL 11.64 TAP 170.23 RCA 150.93 APO 245.56 V2 22.441
RC 275.293 GL 36.38 GP -40.36 ZAL 69.80 ZAP 84.91 ETS 177.86 ZAE 109.37 ETE 200.21 ZAC 48.08 ETC 288.94 LVI 18.14

PLANETOCENTRIC CONIC

C3 21.303 VHL 4.616 DLA 43.07 RAL 6.60 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 2.781 DPA -28.67 RAP 38.66 ECC 1.3506
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 21 21 4143.28 -38.80 185.45 260.63 59.95 7 30 24 3143.3 -47.12 154.19
56.05 4 39 9 4412.13 -23.53 198.17 248.85 52.82 5 52 41 3412.1 -36.58 174.63
56.05 4 39 9 4412.13 -23.53 198.17 248.85 52.82 5 52 41 3412.1 -36.58 174.63
56.05 4 39 9 4412.13 -23.53 198.17 248.85 52.82 5 52 41 3412.1 -36.58 174.63
56.05 4 39 9 4412.13 -23.53 198.17 248.85 52.82 5 52 41 3412.1 -36.58 174.63
56.05 4 39 9 4412.13 -23.53 198.17 248.85 52.82 5 52 41 3412.1 -36.58 174.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9499 TRA-1.1694 TC3-3.3060 BAU 1.4450 SGT 3827.9 SGR 4064.7 SG3 1373.2 ST 66.2 SR 89.0 SS 97.5
RDE 1.4149 RRA -.5306 RC3-3.8489 FAU .34983 RRT .9452 RRF .9957 RTF .9446 CRT .9509 CRS -.9999 CST -.9494
FDE 6.4605 FRA-2.3583 FC-14.2167 BSP 9430 SGB 5583.4 R23 .1441 R13 .9853 LSA 146.5 MSA 18.6 SSA .7
BDE 1.7042 BRA 1.2842 BC3 5.0739 FSP 2379 SG1 5506.6 SG2 922.8 THA 46.82 EL1 109.7 EL2 16.6 ALF 53.78

LAUNCH DATE AUG 14 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

DISTANCE 542.971

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.899 GAL 2.20 AZL 84.99 HCA 159.49 SMA 198.29 ECC .23874 INC 5.0058 V1 29.402
RP 244.68 LAP 1.75 LOP 120.83 VP 20.385 GAP 2.81 AZP 94.69 TAL 11.46 TAP 170.95 RCA 150.95 APO 245.63 V2 22.418
RC 277.948 GL 37.78 GP -41.38 ZAL 70.35 ZAP 84.00 ETS 176.92 ZAE 107.94 ETE 199.37 ZAC 47.20 ETC 289.24 LVI 19.08

PLANETOCENTRIC CONIC

C3 21.921 VHL 4.682 DLA 44.37 RAL 5.84 RAD 6643.7 VEL 11.913 PTH 6.92 VHP 2.836 DPA -29.72 RAP 38.87 ECC 1.3608
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 39 31 4203.79 -36.65 189.65 259.61 57.23 7 9 34 3203.8 -46.43 159.86
54.26 4 29 3 4437.91 -23.84 200.75 249.01 51.40 5 43 1 3437.9 -37.41 177.43
54.26 4 29 3 4437.91 -23.84 200.75 249.01 51.40 5 43 1 3437.9 -37.41 177.43
54.26 4 29 3 4437.91 -23.84 200.75 249.01 51.40 5 43 1 3437.9 -37.41 177.43
54.26 4 29 3 4437.91 -23.84 200.75 249.01 51.40 5 43 1 3437.9 -37.41 177.43
54.26 4 29 3 4437.91 -23.84 200.75 249.01 51.40 5 43 1 3437.9 -37.41 177.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0538 TRA-1.2147 TC3-3.3599 BAU 1.4937 SGT 3985.8 SGR 4160.7 SG3 1313.6 ST 71.8 SR 94.5 SS 97.5
RDE 1.5225 RRA -.5728 RC3-3.8385 FAU .33484 RRT .9467 RRF .9961 RTF .577 CRT .9572 CRS -.9999 CST -.9557
FDE 6.4198 FRA-2.3420 FC-13.2242 BSP 9731 SGB 5781.8 R23 .1438 R13 .9857 LSA 152.4 MSA 18.7 SSA .7
BDE 1.8516 BRA 1.3429 BC3 5.0968 FSP 2271 SG1 5687.8 SG2 922.3 THA 46.30 EL1 117.5 EL2 16.7 ALF 53.10

LAUNCH DATE AUG 14 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

DISTANCE 548.745

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.801 GAL 2.17 AZL 84.75 HCA 160.38 SMA 198.34 ECC .23883 INC 5.2539 V1 29.402
RP 244.90 LAP 1.76 LOP 121.53 VP 20.364 GAP 2.59 AZP 94.95 TAL 11.20 TAP 171.87 RCA 150.97 APO 245.71 V2 22.397
RC 280.584 GL 39.26 GP -42.45 ZAL 70.92 ZAP 83.16 ETS 175.97 ZAE 106.54 ETE 198.54 ZAC 46.27 ETC 289.87 LVI 20.07

PLANETOCENTRIC CONIC

C3 22.631 VHL 4.757 DLA 45.73 RAL 4.99 RAD 6644.0 VEL 11.942 PTH 6.95 VHP 2.899 DPA -30.78 RAP 39.13 ECC 1.3724
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 31 8 4279.46 -33.75 194.54 257.70 54.22 8 42 27 3279.5 -45.15 166.71
52.43 4 18 44 4463.60 -24.11 203.36 249.14 49.88 5 33 8 3463.6 -38.23 180.32
52.43 4 18 44 4463.60 -24.11 203.36 249.14 49.88 5 33 8 3463.6 -38.23 180.32
52.43 4 18 44 4463.60 -24.11 203.36 249.14 49.88 5 33 8 3463.6 -38.23 180.32
52.43 4 18 44 4463.60 -24.11 203.36 249.14 49.88 5 33 8 3463.6 -38.23 180.32
52.43 4 18 44 4463.60 -24.11 203.36 249.14 49.88 5 33 8 3463.6 -38.23 180.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1637 TRA-1.2626 TC3-3.3950 BAU 1.5417 SGT 4140.7 SGR 4254.4 SG3 1249.4 ST 77.5 SR 100.1 SS 97.1
RDE 1.6379 RRA -.6178 RC3-3.8000 FAU .31866 RRT .9518 RRF .9964 RTF .9504 CRT .9623 CRS -.9999 CST -.9608
FDE 6.3562 FRA-2.3177 FC-12.1903 BSP 10063 SGB 5936.7 R23 .1437 R13 .9860 LSA 158.4 MSA 18.7 SSA .6
BDE 2.0092 BRA 1.4057 BC3 5.0957 FSP 2166 SG1 5864.7 SG2 921.7 THA 45.82 EL1 125.4 EL2 16.8 ALF 52.52

LAUNCH DATE AUG 14 1973

FLIGHT TIME 850.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

DISTANCE 550.518

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.904 GAL 2.13 AZL 84.48 HCA 161.29 SMA 198.39 ECC .23894 INC 5.5245 V1 29.402  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.345 GAP 2.38 AZP 95.23 TAL 11.09 TAP 172.38 RCA 150.99 APO 245.79 V2 22.375  
 RC 283.198 GL 40.82 GP -43.53 ZAL 71.52 ZAP 82.39 ETS 175.00 ZAE 105.19 ZET 197.72 ZAC 45.30 ETC 289.92 LVI 21.11

PLANETOCENTRIC CONIC

C3 23.451 VHL 4.843 DLA 47.18 RAL 4.02 RAD 6644.3 VEL 11.976 PTH 6.97 VHP 2.969 DPA -31.87 RAP 39.47 ECC 1.3859  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 45 23 4396.32 -28.87 201.42 253.60 50.39 5 58 39 3396.3 -42.35 176.54  
 50.55 4 8 6 4489.42 -24.33 206.01 249.24 48.27 5 22 56 3489.4 -39.03 183.31  
 50.55 4 8 6 4489.42 -24.33 206.01 249.24 48.27 5 22 56 3489.4 -39.03 183.31  
 50.55 4 8 6 4489.42 -24.33 206.01 249.24 48.27 5 22 56 3489.4 -39.03 183.31  
 50.55 4 8 6 4489.42 -24.33 206.01 249.24 48.27 5 22 56 3489.4 -39.03 183.31  
 50.55 4 8 6 4489.42 -24.33 206.01 249.24 48.27 5 22 56 3489.4 -39.03 183.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2779 TRA-1.3150 TC3-3.4138 BAU 1.5916 SGT 4295.6 SGR 4351.4 SG3 1182.7 ST 83.2 SR 105.8 SS 96.4  
 RDE 1.7609 RRA -.6684 RC3-3.7572 FAU .30196 RRT .9545 RRF .9966 RTF .9527 CRT .9664 CRS -.9999 CST -.9647  
 FDE 6.2651 FRA-2.2902 FC-11.1472 BSP 10378 SGB 6114.5 R23 .1437 R13 .9862 LSA 164.4 MSA 18.8 SSA .6  
 BDE 2.1758 BRA 1.4751 BC3 5.0765 FSP 2052 SGI 6044.6 SG2 921.8 THA 45.39 EL1 133.5 EL2 16.9 ALF 52.05

LAUNCH DATE AUG 14 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

DISTANCE 554.288

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.907 GAL 2.10 AZL 84.18 HCA 162.19 SMA 198.45 ECC .23905 INC 5.8209 V1 29.402  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.327 GAP 2.16 AZP 95.54 TAL 10.90 TAP 173.08 RCA 151.01 APO 245.89 V2 22.354  
 RC 285.791 GL 42.47 GP -44.66 ZAL 72.15 ZAP 81.69 ETS 174.04 ZAE 103.89 ETE 196.91 ZAC 44.29 ETC 290.31 LVI 22.19

PLANETOCENTRIC CONIC

C3 24.403 VHL 4.940 DLA 48.63 RAL 2.91 RAD 6644.7 VEL 12.016 PTH 7.01 VHP 3.048 DPA -32.97 RAP 39.87 ECC 1.4016  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41  
 48.64 3 57 5 4515.44 -24.49 208.70 249.27 46.57 5 12 21 3515.4 -39.79 186.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3964 TRA-1.3716 TC3-3.4123 BAU 1.6420 SGT 4447.8 SGR 4449.4 SG3 1112.8 ST 88.8 SR 111.5 SS 95.2  
 RDE 1.8918 RRA -.7260 RC3-3.6994 FAU .28443 RRT .9572 RRF .9968 RTF .9548 CRT .9697 CRS -.9999 CST -.9679  
 FDE 6.1424 FRA-2.2810 FC-10.0903 BSP 10687 SGB 6291.2 R23 .1435 R13 .9865 LSA 170.4 MSA 18.9 SSA .5  
 BDE 2.3514 BRA 1.5519 BC3 5.0329 FSP 1930 SGI 6223.6 SG2 920.3 THA 45.01 EL1 141.5 EL2 17.1 ALF 51.66

LAUNCH DATE AUG 14 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

DISTANCE 558.057

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.910 GAL 2.06 AZL 83.85 HCA 163.08 SMA 198.50 ECC .23919 INC 6.1473 V1 29.402  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.309 GAP 1.95 AZP 95.88 TAL 10.70 TAP 173.78 RCA 151.03 APO 245.98 V2 22.334  
 RC 288.361 GL 44.20 GP -45.84 ZAL 72.81 ZAP 81.07 ETS 173.07 ZAE 102.64 ETE 196.11 ZAC 45.23 ETC 290.73 LVI 23.32

PLANETOCENTRIC CONIC

C3 25.516 VHL 5.051 DLA 50.16 RAL 1.63 RAD 6645.2 VEL 12.062 PTH 7.04 VHP 3.137 DPA -34.09 RAP 40.36 ECC 1.4199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64  
 46.67 3 45 34 4541.84 -24.56 211.44 249.23 44.78 5 1 16 3541.8 -40.51 189.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5201 TRA-1.4314 TC3-3.3875 BAU 1.6928 SGT 4394.4 SGR 4547.9 SG3 1039.8 ST 94.4 SR 117.3 SS 93.5  
 RDE 2.0327 RRA -.7890 RC3-3.6258 FAU .28611 RRT .9572 RRF .9970 RTF .9567 CRT .9724 CRS -.9999 CST -.9705  
 FDE 5.9898 FRA-2.2210 FC3-9.0291 BSP 11014 SGB 6464.6 R23 .1433 R13 .9867 LSA 176.2 MSA 19.0 SSA .5  
 BDE 2.5382 BRA 1.6344 BC3 4.9619 FSP 1805 SGI 6399.1 SG2 918.5 THA 44.70 EL1 149.6 EL2 17.3 ALF 51.38

LAUNCH DATE AUG 14 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 561.828

EARTH TO MARS

RL 151.53 LAL -.00 LOL 321.07 VL 32.913 GAL 2.02 AZL 83.49 HCA 163.97 SMA 198.57 ECC .23933 INC 6.5081 V1 29.402  
 RP 245.73 LAP 1.79 LOP 129.14 VP 20.293 GAP 1.73 AZP 96.26 TAL 10.50 TAP 174.48 RCA 151.04 APO 246.09 V2 22.314  
 RC 290.907 GL 48.04 GP -47.06 ZAL 73.49 ZAP 80.52 ETS 172.10 ZAE 101.44 ETE 195.33 ZAC 42.11 ETC 291.20 LVI 24.60

PLANETOCENTRIC CONIC

C3 28.825 VHL 5.179 DLA 51.75 RAL .18 RAD 6645.7 VEL 12.115 PTH 7.09 VHP 3.238 DPA -35.23 RAP 40.92 ECC 1.4415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01  
 44.67 3 33 24 4568.80 -24.55 214.22 249.07 42.89 4 49 33 3568.8 -41.16 193.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6381 TRA-1.5018 TC3-3.3472 BAU 1.7529 SGT 4744.1 SGR 4670.1 SG3 968.7 ST 99.3 SR 122.2 SS 90.7  
 RDE 2.1655 RRA -.8771 RC3-3.5621 FAU .24926 RRT .9632 RRF .9972 RTF .9601 CRT .9750 CRS -.9999 CST -.9728  
 FDE 5.7573 FRA-2.2178 FC3-8.0445 BSP 11161 SGB 6657.1 R23 .1390 R13 .9875 LSA 180.7 MSA 18.9 SSA .5  
 BDE 2.7153 BRA 1.7392 BC3 4.8880 FSP 1634 SGI 6595.6 SG2 902.9 THA 44.53 EL1 156.5 EL2 17.2 ALF 51.05

LAUNCH DATE AUG 14 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.916 GAL 1.98 AZL 83.09 MCA 164.86 SMA 198.63 ECC .23949 INC 6.9009 V1 29.402  
 RP 245.93 LAP 1.80 LOP 126.04 VP 20.277 GAP 1.52 AZP 96.67 TAL 10.30 TAP 175.16 RCA 151.06 APO 246.20 V2 22.298  
 RC 293.430 GL 47.96 GP -48.34 ZAL 74.20 ZAP 80.07 ETS 171.14 ZAE 100.30 ETE 194.56 ZAC 40.94 ETC 291.73 LVI 25.73

PLANETOCENTRIC CONIC

C3 28.375 VHL 5.327 DLA 53.39 RAL 358.44 RAD 6646.4 VEL 12.179 PTH 7.14 VHP 3.353 DPA -36.39 RAP 41.50 ECC 1.4670  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53  
 42.62 3 20 25 4596.55 -24.41 217.04 248.76 40.91 4 37 1 3596.6 -41.71 196.53

DIFFERENTIAL CORRECTIONS

TDE 1.7580 TRA-1.5762 TC3-3.2000 BAU 1.8067  
 RDE 2.3235 RRA -.9574 RC3-3.4530 FAU .22940  
 FDE 5.3307 FRA-2.1569 FC3-6.9989 BSP 11487  
 BDE 2.9136 BRA 1.8442 BC3 4.7626 FSP 1510

MID-COURSE EXECUTION ACCURACY

SGT 4885.7 SGR 4771.0 SG3 890.1  
 RRT .9649 RRF .9973 RTF .9610  
 SGB 6828.8 R23 .1404 R13 .9874  
 SG1 6768.6 SG2 904.5 THA 44.20

ORBIT DETERMINATION ACCURACY

ST 103.8 SR 127.7 SS 87.9  
 CRT .9761 CR8 -.9999 CST -.9736  
 LSA 185.6 MSA 19.2 SSA .4  
 EL1 163.7 EL2 17.6 ALF 51.03

LAUNCH DATE AUG 14 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.920 GAL 1.95 AZL 82.64 MCA 165.75 SMA 198.70 ECC .23966 INC 7.3594 V1 29.402  
 RP 246.12 LAP 1.81 LOP 126.93 VP 20.262 GAP 1.31 AZP 97.14 TAL 10.09 TAP 175.85 RCA 151.08 APO 246.32 V2 22.276  
 RC 295.928 GL 50.04 GP -49.66 ZAL 74.94 ZAP 79.70 ETS 170.20 ZAE 99.23 ETE 193.83 ZAC 39.72 ETC 292.31 LVI 27.02

PLANETOCENTRIC CONIC

C3 30.230 VHL 5.498 DLA 55.09 RAL 356.43 RAD 6647.1 VEL 12.254 PTH 7.20 VHP 3.484 DPA -37.57 RAP 42.33 ECC 1.4978  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21  
 40.53 3 6 24 4625.30 -24.13 219.90 248.23 38.84 4 23 30 3625.3 -42.14 200.21

DIFFERENTIAL CORRECTIONS

TDE 1.8735 TRA-1.6565 TC3-3.1859 BAU 1.8613  
 RDE 2.4915 RRA-1.0489 RC3-3.3258 FAU .20899  
 FDE 5.2634 FRA-2.0855 FC3-5.9850 BSP 11849  
 BDE 3.1173 BRA 1.9606 BC3 4.6055 FSP 1385

MID-COURSE EXECUTION ACCURACY

SGT 5018.1 SGR 4874.8 SG3 809.7  
 RRT .9664 RRF .9974 RTF .9618  
 SGB 6996.0 R23 .1420 R13 .9872  
 SG1 6937.2 SG2 905.8 THA 44.14

ORBIT DETERMINATION ACCURACY

ST 107.7 SR 133.1 SS 84.4  
 CRT .9766 CR8 -.9999 CST -.9738  
 LSA 189.9 MSA 19.6 SSA .4  
 EL1 170.2 EL2 18.1 ALF 51.15

LAUNCH DATE AUG 14 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.923 GAL 1.91 AZL 82.13 MCA 166.84 SMA 198.77 ECC .23984 INC 7.8660 V1 29.402  
 RP 246.30 LAP 1.81 LOP 127.83 VP 20.248 GAP 1.09 AZP 97.66 TAL 9.89 TAP 176.53 RCA 151.10 APO 246.44 V2 22.258  
 RC 298.401 GL 52.22 GP -51.03 ZAL 75.71 ZAP 79.43 ETS 169.30 ZAE 98.23 ETE 193.12 ZAC 38.44 ETC 292.98 LVI 28.37

PLANETOCENTRIC CONIC

C3 32.470 VHL 5.698 DLA 56.82 RAL 354.06 RAD 6648.0 VEL 12.345 PTH 7.27 VHP 3.636 DPA -38.76 RAP 43.19 ECC 1.5344  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04  
 38.42 2 51 9 4655.23 -23.68 222.78 247.41 36.70 4 8 44 3655.2 -42.40 204.04

DIFFERENTIAL CORRECTIONS

TDE 1.9733 TRA-1.7455 TC3-3.0671 BAU 1.9192  
 RDE 2.6612 RRA-1.1569 RC3-3.1842 FAU .18039  
 FDE 4.9397 FRA-2.0079 FC3-5.0231 BSP 12184  
 BDE 3.3129 BRA 2.0941 BC3 4.4211 FSP 1250

MID-COURSE EXECUTION ACCURACY

SGT 5141.9 SGR 4984.8 SG3 728.3  
 RRT .9680 RRF .9974 RTF .9620  
 SGB 7161.4 R23 .1437 R13 .9871  
 SG1 7103.9 SG2 905.8 THA 44.08

ORBIT DETERMINATION ACCURACY

ST 110.4 SR 137.6 SS 80.0  
 CRT .9764 CR8 -.9999 CST -.9731  
 LSA 192.7 MSA 20.0 SSA .4  
 EL1 175.4 EL2 18.7 ALF 51.42

LAUNCH DATE AUG 14 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 151.53 LAL -.00 LOL 321.07 VL 32.927 GAL 1.87 AZL 81.56 MCA 167.52 SMA 198.84 ECC .24003 INC 8.4439 V1 29.402  
 RP 246.48 LAP 1.82 LOP 128.72 VP 20.235 GAP .88 AZP 98.25 TAL 9.68 TAP 177.20 RCA 151.12 APO 246.57 V2 22.241  
 RC 300.850 GL 54.53 GP -52.45 ZAL 76.51 ZAP 79.26 ETS 188.43 ZAE 97.30 ETE 192.45 ZAC 37.10 ETC 293.70 LVI 28.77

PLANETOCENTRIC CONIC

C3 38.207 VHL 5.934 DLA 58.87 RAL 351.25 RAD 6649.0 VEL 12.454 PTH 7.35 VHP 3.811 DPA -39.97 RAP 44.17 ECC 1.8794  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98  
 36.30 2 34 18 4686.70 -23.03 225.67 246.20 34.51 3 52 24 3686.7 -42.46 207.98

DIFFERENTIAL CORRECTIONS

TDE 2.0419 TRA-1.8495 TC3-2.9280 BAU 1.9835  
 RDE 2.8269 RRA-1.2886 RC3-3.0308 FAU .16783  
 FDE 4.5569 FRA-1.9256 FC3-4.1270 BSP 12469  
 BDE 3.4872 BRA 2.2541 BC3 4.2142 FSP 1110

MID-COURSE EXECUTION ACCURACY

SGT 5262.3 SGR 5107.1 SG3 846.9  
 RRT .9694 RRF .9973 RTF .9621  
 SGB 7333.1 R23 .1462 R13 .9867  
 SG1 7276.9 SG2 906.5 THA 44.12

ORBIT DETERMINATION ACCURACY

ST 111.3 SR 141.2 SS 74.6  
 CRT .9750 CR8 -.9998 CST -.9708  
 LSA 193.5 MSA 20.8 SSA .3  
 EL1 178.7 EL2 19.5 ALF 51.92



LAUNCH DATE AUG 14 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 32.931 GAL 1.83 AZL 80.89 HCA 188.40 SMA 198.92 ECC .24023 INC 9.1064 V1 29.402  
 RP 246.85 LAP 1.82 LOP 129.81 VP 20.223 GAP .67 AZP 98.92 TAL 9.46 TAP 177.87 RCA 151.13 APO 246.71 V2 22.224  
 RC 303.274 GL 56.99 GP -53.91 ZAL 77.34 ZAP 79.19 ETS 167.64 ZAE 96.45 ETE 191.84 ZAC 35.70 ETC 294.53 LVI 31.23

PLANETOCENTRIC CONIC  
 C3 38.595 VHL 6.212 DLA 80.33 RAL 347.87 RAD 6850.2 VEL 12.589 PTH 7.45 VHP 4.016 DPA -41.17 RAP 45.26 ECC 1.6352  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01  
 34.20 2 15 29 4719.96 -22.14 228.53 244.48 32.31 3 34 9 3720.0 -42.26 212.01

DIFFERENTIAL CORRECTIONS  
 TDE 2.0663 TRA-1.9648 TC3-2.7624 BAU 2.0516  
 RDE 2.9830 RRA-1.4436 RC3-2.8599 FAU .14699  
 FDE 4.1179 FRA-1.8269 FC3-3.2971 BSP 12773  
 BDE 3.6288 BRA 2.4379 BC3 3.9762 FSP 969

MID-COURSE EXECUTION ACCURACY  
 SGT 5367.4 SGR 5237.3 SG3 965.2  
 RRT .9708 RRF .9971 RTF .9614  
 SGB 7499.2 R23 .1500 R13 .9861  
 SGI 7443.9 SGI 909.4 THA 44.28

ORBIT DETERMINATION ACCURACY  
 ST 110.1 SR 143.4 SS 66.3  
 CRT .9719 CR8 -.9997 CST -.9663  
 LSA 192.0 MSA 21.8 S8A .3  
 EL1 179.6 EL2 20.7 ALF 52.70

LAUNCH DATE AUG 14 1973

FLIGHT TIME 318.00

ARRIVAL DATE JUN 28 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.060 GAL .39 AZL 99.01 HCA 191.57 SMA 201.49 ECC .24803 INC 9.0134 V1 29.402  
 RP 249.18 LAP 1.80 LOP 152.50 VP 20.163 GAP -4.38 AZP 81.17 TAL 1.99 TAP 193.56 RCA 151.52 APO 251.47 V2 21.977  
 RC 356.296 GL -57.54 GP 50.08 ZAL 84.97 ZAP 66.77 ETS 213.44 ZAE 78.70 ETE 195.45 ZAC 135.56 ETC 290.28 LVI -69.14

PLANETOCENTRIC CONIC  
 C3 37.681 VHL 6.138 DLA -39.21 RAL 58.83 RAD 6649.9 VEL 12.552 PTH 7.42 VHP 4.215 DPA 52.66 RAP 353.24 ECC 1.6201  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 56 7 2425.48 -3.67 63.27 290.40 137.47 17 36 32 1425.5 14.64 47.35  
 60.00 19 19 11 2042.97 8.94 40.90 302.30 129.46 19 53 14 1043.0 23.96 21.24  
 61.62 20 29 51 1842.45 16.15 29.76 308.03 126.23 21 0 33 842.5 29.47 7.96  
 61.62 20 29 51 1842.45 16.15 29.76 308.03 126.23 21 0 33 842.5 29.47 7.96  
 61.62 20 29 51 1842.45 16.15 29.76 308.03 126.23 21 0 33 842.5 29.47 7.96  
 61.62 20 29 51 1842.45 16.15 29.76 308.03 126.23 21 0 33 842.5 29.47 7.96  
 61.62 20 29 51 1842.45 16.15 29.76 308.03 126.23 21 0 33 842.5 29.47 7.96

DIFFERENTIAL CORRECTIONS  
 TDE-6.8604 TRA 2.2797 TC3-5.0085 BAU 2.7577  
 RDE 2.8550 RRA-1.7510 RC3 2.2098 FAU .13011  
 FDE-3.1208 FRA 2.4569 FC3-2.9893 B8P 18014  
 BDE 7.4308 BRA 2.8746 BC3 5.4743 FSP 780

MID-COURSE EXECUTION ACCURACY  
 SGT 9292.7 SGR 4348.6 SG3 478.8  
 RRT -.9784 RRF -.9943 RTF .9582  
 SGB10259.9 R23 .2392 R13 -.9677  
 SGI10227.3 SGI 818.5 THA 135.23

ORBIT DETERMINATION ACCURACY  
 ST 322.9 SR 137.0 SS 55.5  
 CRT -.9945 CR8 .9980 CST -.9859  
 LSA 354.8 MSA 15.8 S8A .3  
 EL1 350.6 EL2 13.2 ALF 157.00

LAUNCH DATE AUG 14 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUN 30 1974

HELIOCENTRIC CONIC  
 RL 151.53 LAL -.00 LOL 321.07 VL 33.066 GAL .34 AZL 98.36 HCA 192.44 SMA 201.61 ECC .24843 INC 8.3614 V1 29.402  
 RP 249.20 LAP 1.79 LOP 153.37 VP 20.171 GAP -4.57 AZP 81.83 TAL 1.70 TAP 194.13 RCA 151.52 APO 251.69 V2 21.975  
 RC 357.905 GL -55.12 GP 46.18 ZAL 85.05 ZAP 65.21 ETS 213.55 ZAE 77.37 ETE 196.05 ZAC 133.78 ETC 289.65 LVI -67.53

PLANETOCENTRIC CONIC  
 C3 34.351 VHL 5.861 DLA -36.82 RAL 58.16 RAD 6646.7 VEL 12.420 PTH 7.33 VHP 4.042 DPA 51.12 RAP 355.04 ECC 1.5653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 33 19 2470.17 -5.91 65.16 286.76 137.30 17 14 29 1470.2 12.45 49.34  
 60.00 18 27 54 2164.73 3.63 48.80 295.85 130.17 19 3 59 1164.7 19.23 28.05  
 65.37 20 45 50 1764.84 16.17 23.39 305.35 123.54 21 15 15 764.8 28.47 1.03  
 65.37 20 45 50 1764.84 16.17 23.39 305.35 123.54 21 15 15 764.8 28.47 1.03  
 65.37 20 45 50 1764.84 16.17 23.39 305.35 123.54 21 15 15 764.8 28.47 1.03  
 65.37 20 45 50 1764.84 16.17 23.39 305.35 123.54 21 15 15 764.8 28.47 1.03  
 65.37 20 45 50 1764.84 16.17 23.39 305.35 123.54 21 15 15 764.8 28.47 1.03

DIFFERENTIAL CORRECTIONS  
 TDE-6.5004 TRA 2.2071 TC3-5.5264 BAU 2.7462  
 RDE 2.5345 RRA-1.6341 RC3 2.2840 FAU .14419  
 FDE-3.2413 FRA 2.6748 FC3-3.6340 B8P 18139  
 BDE 6.9770 BRA 2.7462 BC3 5.9797 FSP 880

MID-COURSE EXECUTION ACCURACY  
 SGT 9466.3 SGR 4150.0 SG3 538.6  
 RRT -.9773 RRF -.9944 RTF .5181  
 SGB10339.2 R23 .2414 R13 -.9668  
 SGI10307.5 SGI 809.3 THA 156.62

ORBIT DETERMINATION ACCURACY  
 ST 320.4 SR 127.5 SS 56.0  
 CRT -.9939 CR8 .9980 CST -.9850  
 LSA 349.4 MSA 15.9 S8A .3  
 EL1 344.6 EL2 13.1 ALF 158.39

LAUNCH DATE AUG 15 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 21 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 35.536 GAL 1.76 AZL 90.00 HCA 84.99 SNA 271.31 ECC .44243 INC .0737 V1 29.407  
 RP 219.45 LAP -.08 LOP 47.02 VP 26.840 GAP 23.99 AZP 90.01 TAL 5.74 TAP 90.73 RCA 151.27 APO 391.35 V2 25.046  
 RC 80.245 GL -.43 GP -5.17 ZAL 77.03 ZAP 174.07 ETS 242.46 ZAE 160.52 ETE 345.34 ZAC 77.95 ETC 282.63 LVI -11.50

PLANETOCENTRIC CONIC

C3 39.355 VHL 6.273 DLA 14.11 RAL 36.80 RAD 6650.4 VEL 12.619 PTH 7.47 VHP 8.812 DPA 11.03 RAP 43.43 ECC 1.6477  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 19 0 3385.12 -47.22 136.10 284.55 96.61 12 18 45 2585.1 -39.21 104.54  
 60.00 11 42 47 3521.82 -40.22 131.19 285.34 92.73 12 41 29 2521.8 -34.74 101.53  
 70.00 12 17 2 3421.00 -34.15 123.19 285.50 89.75 13 14 3 2421.0 -30.69 95.01  
 80.00 13 8 29 3259.80 -29.78 110.85 285.39 87.73 14 2 49 2259.8 -27.69 83.62  
 90.00 14 22 24 3021.25 -28.13 93.23 285.30 86.99 15 12 45 2021.3 -26.54 66.34  
 100.00 15 51 21 2734.28 -29.70 72.22 285.39 87.73 16 36 55 1734.3 -27.69 44.99  
 110.00 17 18 29 2467.82 -34.15 52.11 285.50 89.75 17 57 36 1467.8 -30.69 23.92

DIFFERENTIAL CORRECTIONS

TDE -.3100 TRA -.9039 TC3 .2916 BAV .1580  
 RDE -.6285 RRA .2313 RC3 -.0779 FAU .05248  
 FDE .1851 FRA .3178 FC3-1.1544 BSP 1310  
 BDE .7008 BRA .9331 BC3 .3019 FSP 153

MID-COURSE EXECUTION ACCURACY

SGT 968.9 SGR 621.7 SG3 126.6  
 RRT -.0974 RRF .1186 RTF -.5773  
 SGB 1151.2 R23 -.0241 R13 .5802  
 SG1 972.0 SG2 616.7 THA 174.00

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 28.9 SS 7.5  
 CRT .6616 CRS .6028 CBT .9519  
 LSA 32.9 MSA 13.1 SSA 1.4  
 EL1 32.1 EL2 12.9 ALF 61.43

LAUNCH DATE AUG 15 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 23 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 35.380 GAL 1.81 AZL 90.04 HCA 86.12 SNA 265.34 ECC .42995 INC .0363 V1 29.407  
 RP 219.82 LAP -.04 LOP 48.14 VP 26.596 GAP 23.59 AZP 90.00 TAL 6.02 TAP 92.14 RCA 151.26 APO 379.42 V2 25.005  
 RC 81.938 GL -.23 GP -5.29 ZAL 76.46 ZAP 173.53 ETS 236.68 ZAE 160.08 ETE 345.07 ZAC 77.76 ETC 282.60 LVI -11.28

PLANETOCENTRIC CONIC

C3 37.543 VHL 6.127 DLA 14.12 RAL 36.18 RAD 6649.8 VEL 12.547 PTH 7.42 VHP 8.538 DPA 11.01 RAP 43.77 ECC 1.6179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 16 29 3573.42 -47.13 134.98 282.75 97.47 12 16 2 2573.4 -38.82 103.70  
 60.00 11 40 15 3510.14 -40.18 130.20 283.66 93.40 12 38 45 2510.1 -34.44 100.69  
 70.00 12 14 30 3409.36 -34.15 122.28 283.91 90.29 13 11 19 2409.4 -30.47 94.17  
 80.00 13 5 55 3248.22 -29.81 109.99 283.84 88.18 14 0 4 2248.2 -27.53 82.80  
 90.00 14 19 50 3009.69 -28.17 92.39 283.77 87.41 15 9 59 2009.7 -26.40 65.52  
 100.00 15 48 47 2722.69 -29.81 71.36 283.84 88.18 16 34 10 1722.7 -27.53 44.17  
 110.00 17 13 56 2456.18 -34.15 51.20 283.91 90.29 17 54 52 1456.2 -30.47 23.09

DIFFERENTIAL CORRECTIONS

TDE -.3103 TRA -.8928 TC3 .3207 BAV .1668  
 RDE -.6174 RRA .2296 RC3 -.0867 FAU .05483  
 FDE .1940 FRA .3176 FC3-1.2644 BSP 1354  
 BDE .6910 BRA .9219 BC3 .3322 FSP 168

MID-COURSE EXECUTION ACCURACY

SGT 989.9 SGR 627.4 SG3 137.4  
 RRT -.1045 RRF .1280 RTF -.5880  
 SGB 1171.9 R23 -.0267 R13 .5912  
 SG1 993.4 SG2 621.7 THA 173.76

ORBIT DETERMINATION ACCURACY

ST 19.4 SR 29.1 SS 7.7  
 CRT .6656 CRS .8125 CBT .9488  
 LSA 33.2 MSA 13.3 SSA 1.5  
 EL1 32.5 EL2 13.0 ALF 60.92

LAUNCH DATE AUG 15 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 25 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 35.234 GAL 1.86 AZL 90.00 HCA 87.24 SNA 259.96 ECC .41823 INC .0000 V1 29.407  
 RP 220.19 LAP -.00 LOP 49.26 VP 26.361 GAP 23.20 AZP 90.00 TAL 6.31 TAP 93.55 RCA 151.24 APO 360.68 V2 24.964  
 RC 83.701 GL -.02 GP -5.42 ZAL 75.88 ZAP 172.93 ETS 231.83 ZAE 159.66 ETE 344.77 ZAC 77.58 ETC 282.57 LVI -11.07

PLANETOCENTRIC CONIC

C3 35.884 VHL 5.990 DLA 14.13 RAL 35.55 RAD 6649.2 VEL 12.481 PTH 7.37 VHP 8.274 DPA 10.98 RAP 44.10 ECC 1.5906  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 13 54 3582.23 -47.02 133.92 281.00 98.28 12 13 17 2582.2 -38.43 102.91  
 60.00 11 37 40 3498.99 -40.13 129.26 282.02 94.04 12 35 59 2499.0 -34.15 99.80  
 70.00 12 11 53 3398.26 -34.15 121.41 282.34 90.80 13 8 32 2398.3 -30.29 93.36  
 80.00 13 3 18 3237.17 -29.83 109.17 282.32 88.62 13 57 15 2237.2 -27.37 82.02  
 90.00 14 17 12 2998.67 -28.20 91.59 282.28 87.82 15 7 10 1998.7 -26.26 64.74  
 100.00 15 46 10 2711.84 -29.83 70.54 282.32 86.62 16 31 22 1711.8 -27.37 43.39  
 110.00 17 11 20 2445.08 -34.15 50.33 282.34 90.80 17 52 5 1445.1 -30.29 22.30

DIFFERENTIAL CORRECTIONS

TDE -.3108 TRA -.8825 TC3 .3523 BAV .1753  
 RDE -.6065 RRA .2280 RC3 -.0962 FAU .05729  
 FDE .2042 FRA .3162 FC3-1.3822 BSP 1401  
 BDE .6815 BRA .9115 BC3 .3654 FSP 179

MID-COURSE EXECUTION ACCURACY

SGT 1012.1 SGR 632.8 SG3 146.6  
 RRT -.1124 RRF .1376 RTF -.5592  
 SGB 1193.7 R23 -.0286 R13 .6027  
 SG1 1016.2 SG2 626.3 THA 173.51

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 29.2 SS 7.8  
 CRT .6695 CRS .8232 CBT .9450  
 LSA 33.6 MSA 13.4 SSA 1.5  
 EL1 32.8 EL2 13.1 ALF 60.39

LAUNCH DATE AUG 15 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 27 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 35.095 GAL 1.91 AZL 89.97 HCA 88.35 SNA 255.10 ECC .40723 INC .0321 V1 29.407  
 RP 220.57 LAP .03 LOP 50.38 VP 26.137 GAP 22.81 AZP 90.00 TAL 6.61 TAP 94.87 RCA 151.22 APO 358.98 V2 24.923  
 RC 85.536 GL .20 GP -9.58 ZAL 75.89 ZAP 172.28 ETS 227.75 ZAE 159.31 ETE 344.43 ZAC 77.39 ETC 282.54 LVI -10.85

PLANETOCENTRIC CONIC

C3 34.385 VHL 5.862 DLA 14.15 RAL 34.90 RAD 6648.7 VEL 12.421 PTH 7.33 VHP 8.021 DPA 10.94 RAP 44.42 ECC 1.5658  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 11 17 3351.57 -46.91 132.91 279.29 99.05 12 10 29 2551.6 -38.06 102.16  
 60.00 11 35 1 3488.38 -40.08 128.36 280.42 94.65 12 33 10 2488.4 -33.87 99.13  
 70.00 12 9 14 3387.71 -34.13 120.59 280.81 91.28 13 5 41 2387.7 -30.05 92.63  
 80.00 13 0 37 3226.87 -29.84 108.39 280.82 89.02 13 54 24 2226.7 -27.21 81.28  
 90.00 14 14 31 2988.20 -28.23 90.82 280.78 88.20 15 4 19 1988.2 -26.13 64.01  
 100.00 15 43 29 2701.15 -29.84 89.76 280.82 89.02 16 28 30 1701.1 -27.21 42.65  
 110.00 17 8 40 2434.53 -34.13 49.51 280.81 91.28 17 49 15 1434.5 -30.05 21.54

DIFFERENTIAL CORRECTIONS

TDE -.3114 TRA -.8720 TC3 .3852 BAV .1836  
 RDE -.5961 RRA .2263 RC3 -.1064 FAU .05989  
 FDE .2145 FRA .3132 FC3-1.5087 BSP 1447  
 BDE .6725 BRA .9009 BC3 .3996 FSP 194

MID-COURSE EXECUTION ACCURACY

SGT 1034.0 SGR 638.0 SG3 156.3  
 RRT -.1206 RRF .1478 RTF -.6095  
 SGB 1215.0 R23 -.0310 R13 .6133  
 SG1 1038.6 SG2 630.5 THA 173.25

ORBIT DETERMINATION ACCURACY

ST 20.1 SR 29.3 SS 8.2  
 CRT .6737 CRS .8337 CBT .9409  
 LSA 33.9 MSA 13.5 SSA 1.6  
 EL1 33.0 EL2 13.2 ALF 59.85

LAUNCH DATE AUG 15 1973

FLIGHT TIME 106.00

ARRIVAL DATE NOV 29 1973

HELIOCENTRIC CONIC

RL 151.91 LAL -.00 LOL 322.03 VL 34.965 GAL 1.96 AZL 89.93 HCA 89.48 SMA 250.69 ECC .39689 INC .0674 V1 29.407  
 RP 220.95 LAP .07 LOP 51.49 VP 25.922 GAP 22.42 AZP 90.00 TAL 6.92 TAP 96.38 RCA 151.19 APO 350.19 V2 24.862  
 RC 87.440 GL .42 GP -3.70 ZAL 74.70 ZAP 171.59 ETS 224.32 ZAE 159.03 ETE 344.04 ZAC 77.20 ETC 282.51 LVI -10.63

DISTANCE 287.841

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.972 VHL 5.742 DLA 14.16 RAL 34.25 RAD 6648.1 VEL 12.365 PTH 7.28 VHP 7.776 DPA 10.89 RAP 44.74 ECC 1.5426  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 8 37 3541.45 -46.80 131.96 277.63 99.77 12 7 39 2541.5 -37.70 101.45  
 60.00 11 32 20 3478.31 -40.02 127.51 278.86 95.22 12 30 19 2478.3 -33.60 98.41  
 70.00 12 6 31 3377.71 -34.11 119.81 279.31 91.75 13 2 49 2377.7 -29.84 91.92  
 80.00 12 57 54 3216.74 -29.85 107.65 279.38 89.41 13 51 30 2216.7 -27.06 80.58  
 90.00 14 11 46 2978.30 -28.25 90.10 279.32 88.56 15 1 25 1978.3 -25.99 63.32  
 100.00 15 40 46 2691.22 -29.85 69.02 279.36 89.41 16 25 37 1691.2 -27.06 41.95  
 110.00 17 5 58 2424.52 -34.11 48.73 279.31 91.75 17 46 22 1424.5 -29.84 20.84

DIFFERENTIAL CORRECTIONS

TDE -.3123 TRA -.8613 TC3 .4192 BAU .1919  
 RDE -.5859 RRA .2247 RC3 -.1175 FAU .06264  
 FDE .2260 FRA .3096 FC3-1.6446 BSP 1493  
 BDE .6639 BRA .8901 BC3 .4354 FSP 209

MID-COURSE EXECUTION ACCURACY

SGT 1055.7 SGR 643.0 SG3 166.6  
 RRT -.1293 RRF .1586 RTF -.6198  
 SGB 1236.1 R23 -.0334 R13 .6240  
 SG1 1060.8 SG2 634.5 THA 172.97

ORBIT DETERMINATION ACCURACY

ST 20.5 SR 29.4 SS 8.4  
 CRT .6782 CRS .8444 CST .9365  
 LSA 34.2 MSA 13.5 SSA 1.7  
 EL1 33.3 EL2 13.3 ALF 59.31

LAUNCH DATE AUG 15 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 1 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 34.842 GAL 2.01 AZL 89.90 HCA 90.57 SMA 248.68 ECC .38718 INC .1040 V1 29.407  
 RP 221.33 LAP .10 LOP 52.60 VP 25.715 GAP 22.04 AZP 90.00 TAL 7.22 TAP 97.80 RCA 151.17 APO 342.19 V2 24.840  
 RC 89.407 GL .65 GP -5.85 ZAL 74.10 ZAP 170.86 ETS 221.41 ZAE 158.80 ETE 343.61 ZAC 77.01 ETC 282.49 LVI -10.41

DISTANCE 290.607

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.695 VHL 5.630 DLA 14.18 RAL 33.59 RAD 6647.7 VEL 12.313 PTH 7.25 VHP 7.541 DPA 10.84 RAP 45.05 ECC 1.5216  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 5 55 3531.87 -46.69 131.07 276.01 100.45 12 4 47 2531.9 -37.36 100.79  
 60.00 11 29 37 3468.79 -39.96 126.71 277.33 95.76 12 27 26 2468.8 -33.33 97.74  
 70.00 12 3 46 3368.27 -34.09 119.07 277.84 92.18 12 59 55 2368.3 -29.65 91.25  
 80.00 12 55 7 3207.39 -29.86 106.96 277.93 89.78 13 48 34 2207.4 -26.91 79.82  
 90.00 14 8 59 2968.99 -28.26 89.42 277.91 88.90 14 58 28 1969.0 -25.87 62.66  
 100.00 15 37 59 2681.86 -29.86 68.33 277.93 89.78 16 22 41 1681.9 -26.91 41.29  
 110.00 17 3 13 2415.08 -34.09 47.99 277.84 92.18 17 43 28 1415.1 -29.65 20.17

DIFFERENTIAL CORRECTIONS

TDE -.3133 TRA -.8504 TC3 .4540 BAU .2000  
 RDE -.5760 RRA .2231 RC3 -.1294 FAU .06552  
 FDE .2383 FRA .3053 FC3-1.7898 BSP 1540  
 BDE .6557 BRA .8792 BC3 .4721 FSP 226

MID-COURSE EXECUTION ACCURACY

SGT 1077.0 SGR 647.8 SG3 177.5  
 RRT -.1384 RRF .1701 RTF -.6297  
 SGB 1256.8 R23 -.0360 R13 .6342  
 SG1 1082.7 SG2 638.2 THA 172.69

ORBIT DETERMINATION ACCURACY

ST 20.8 SR 29.5 SS 8.7  
 CRT .6830 CRS .8547 CST .9321  
 LSA 34.8 MSA 13.6 SSA 1.7  
 EL1 33.6 EL2 13.4 ALF 58.75

LAUNCH DATE AUG 15 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 3 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 34.725 GAL 2.07 AZL 89.88 HCA 91.68 SMA 243.02 ECC .37805 INC .1399 V1 29.407  
 RP 221.71 LAP .14 LOP 53.70 VP 25.517 GAP 21.66 AZP 90.00 TAL 7.54 TAP 99.21 RCA 151.15 APO 334.90 V2 24.799  
 RC 91.438 GL .88 GP -6.00 ZAL 73.51 ZAP 170.10 ETS 218.93 ZAE 158.64 ETE 343.13 ZAC 76.81 ETC 282.46 LVI -10.19

DISTANCE 293.470

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.523 VHL 5.523 DLA 14.20 RAL 32.93 RAD 6647.2 VEL 12.266 PTH 7.21 VHP 7.314 DPA 10.77 RAP 45.34 ECC 1.5023  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 3 11 3522.83 -46.57 130.22 274.45 101.09 12 1 54 2522.8 -37.03 100.18  
 60.00 11 26 51 3459.82 -39.89 125.95 275.85 96.27 12 24 31 2459.8 -33.08 97.11  
 70.00 12 0 59 3359.39 -34.07 118.38 276.41 92.59 12 56 58 2359.4 -29.46 90.63  
 80.00 12 52 18 3198.81 -29.86 106.31 276.53 90.12 13 45 36 2198.6 -26.77 79.31  
 90.00 14 6 9 2960.26 -28.27 88.78 276.52 89.22 14 55 29 1960.3 -25.74 62.05  
 100.00 15 35 10 2673.08 -29.86 67.67 276.53 90.12 16 19 43 1673.1 -26.77 40.68  
 110.00 17 0 25 2406.21 -34.07 47.30 276.41 92.59 17 40 32 1406.2 -29.46 19.55

DIFFERENTIAL CORRECTIONS

TDE -.3141 TRA -.8398 TC3 .4898 BAU .2081  
 RDE -.5664 RRA .2215 RC3 -.1422 FAU .06861  
 FDE .2508 FRA .2998 FC3-1.9459 BSP 1588  
 BDE .6477 BRA .8685 BC3 .5100 FSP 245

MID-COURSE EXECUTION ACCURACY

SGT 1098.2 SGR 652.6 SG3 189.2  
 RRT -.1487 RRF .1827 RTF -.6300  
 SGB 1277.5 R23 -.0388 R13 .6440  
 SG1 1104.7 SG2 641.8 THA 172.36

ORBIT DETERMINATION ACCURACY

ST 21.2 SR 29.6 SS 9.0  
 CRT .6875 CRS .8645 CST .9272  
 LSA 34.9 MSA 13.6 SSA 1.8  
 EL1 33.8 EL2 13.5 ALF 58.22

LAUNCH DATE AUG 15 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 5 1973

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 34.815 GAL 2.12 AZL 89.82 HCA 92.78 SMA 239.67 ECC .36946 INC .1756 V1 29.407  
 RP 222.09 LAP .18 LOP 54.80 VP 25.326 GAP 21.29 AZP 90.01 TAL 7.85 TAP 100.63 RCA 151.12 APO 328.23 V2 24.757  
 RC 93.923 GL 1.12 GP -6.16 ZAL 72.91 ZAP 169.32 ETS 216.80 ZAE 158.52 ETE 342.60 ZAC 76.61 ETC 282.44 LVI -9.96

DISTANCE 296.421

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.446 VHL 5.426 DLA 14.22 RAL 32.26 RAD 6646.8 VEL 12.222 PTH 7.17 VHP 7.095 DPA 10.70 RAP 45.63 ECC 1.4846  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 11 0 26 3514.34 -46.46 129.43 272.93 101.69 11 59 0 2514.3 -36.72 99.60  
 60.00 11 24 4 3451.41 -39.83 125.24 274.41 96.74 12 21 36 2451.4 -32.84 96.53  
 70.00 11 58 10 3351.09 -34.04 117.73 275.02 92.87 12 54 1 2351.1 -29.29 90.05  
 80.00 12 49 26 3190.42 -29.85 105.70 275.17 90.44 13 42 37 2190.4 -26.64 78.74  
 90.00 14 3 16 2952.13 -28.28 88.18 275.17 89.52 14 52 28 1952.1 -25.62 61.49  
 100.00 15 32 18 2664.90 -29.85 67.07 275.17 90.44 16 16 43 1664.9 -26.64 40.10  
 110.00 16 57 36 2397.91 -34.04 46.65 275.02 92.97 17 37 34 1397.9 -29.29 18.96

DIFFERENTIAL CORRECTIONS

TDE -.3155 TRA -.8287 TC3 .5260 BAU .2160  
 RDE -.5571 RRA .2198 RC3 -.1559 FAU .07182  
 FDE .2644 FRA .2926 FC3-2.1115 BSP 1628  
 BDE .6402 BRA .8573 BC3 .5486 FSP 263

MID-COURSE EXECUTION ACCURACY

SGT 1118.8 SGR 657.2 SG3 201.3  
 RRT -.1567 RRF .1957 RTF -.6477  
 SGB 1297.5 R23 -.0421 R13 .6532  
 SG1 1126.0 SG2 644.7 THA 172.05

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 29.6 SS 9.3  
 CRT .6929 CRS .8744 CST .9223  
 LSA 35.2 MSA 13.6 SSA 1.8  
 EL1 34.0 EL2 13.5 ALF 57.64

LAUNCH DATE AUG 15 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 34,511 GAL 2.17 AZL 89.79 HCA 93.87 SMA 236.81 ECC .36139 INC .2111 V1 29.407  
 RP 222.48 LAP .21 LOP 55.90 VP 25,143 GAP 20.92 AZP 90.01 TAL 8.17 TAP 102.04 RCA 151.10 APO 322.11 V2 24.715  
 RC 95.665 GL 1.37 GP -6.33 ZAL 72.31 ZAP 168.52 ETS 214.96 ZAE 158.47 ETE 342.01 ZAC 76.40 ETC 282.42 LVI -9.73

PLANETOCENTRIC CONIC  
 C3 28.456 VHL 5.334 DLA 14.25 RAL 31.60 RAD 6846.4 VEL 12.182 PTH 7.14 VHP 6.884 DPA 10.61 RAP 45.91 ECC 1.4683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 57 39 3506.38 -46.34 128.70 271.47 102.25 11 56 6 2506.4 -36.43 99.07  
 60.00 11 21 16 3443.55 -39.76 124.59 273.01 97.19 12 18 39 2443.6 -32.62 95.98  
 70.00 11 35 18 3343.36 -34.01 117.13 273.67 93.35 12 51 2 2343.4 -29.12 89.51  
 80.00 12 46 32 3182.83 -29.85 105.13 273.85 90.74 13 39 35 2182.8 -26.51 78.21  
 90.00 14 0 21 2944.60 -28.28 87.63 273.86 89.79 14 49 25 1944.6 -25.51 80.96  
 100.00 15 29 24 2657.30 -29.85 66.50 273.85 90.74 16 13 41 1657.3 -26.51 39.58  
 110.00 16 54 45 2390.17 -34.01 46.05 273.67 93.35 17 34 35 1390.2 -29.12 18.43

DIFFERENTIAL CORRECTIONS  
 TDE -.3165 TRA -.8176 TC3 .5625 BAW .2236  
 RDE -.5480 RRA .2181 RC3 -.1706 FAU .07526  
 FDE .2789 FRA .2843 FC3 -2.2896 B8P 1677  
 BDE .6329 BRA .8462 BC3 .5878 F8P 284

MID-COURSE EXECUTION ACCURACY  
 SGT 1138.7 SGR 861.8 S63 214.4  
 RRT -.1700 RRF .2097 RTF -.6580  
 SGB 1317.1 R23 -.0454 R13 .6619  
 S61 1146.9 S62 647.6 THA 171.69

ORBIT DETERMINATION ACCURACY  
 ST 21.8 SR 29.7 S8 9.6  
 CRT .6978 CR8 .8838 CST .9170  
 L8A 35.4 M8A 13.6 S8A 1.9  
 EL1 34.2 EL2 13.5 ALF 57.10

LAUNCH DATE AUG 15 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 34,413 GAL 2.21 AZL 89.75 HCA 94.97 SMA 233.78 ECC .35379 INC .2466 V1 29.407  
 RP 222.86 LAP .25 LOP 56.99 VP 24,966 GAP 20.55 AZP 90.02 TAL 8.48 TAP 103.45 RCA 151.07 APO 316.49 V2 24.673  
 RC 97.860 GL 1.62 GP -6.50 ZAL 71.72 ZAP 167.69 ETS 213.35 ZAE 158.46 ETE 341.37 ZAC 76.19 ETC 282.40 LVI -9.50

PLANETOCENTRIC CONIC  
 C3 27.546 VHL 5.248 DLA 14.29 RAL 30.93 RAD 6846.0 VEL 12.145 PTH 7.11 VHP 6.681 DPA 10.52 RAP 46.18 ECC 1.4533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 54 52 3498.94 -46.23 128.01 270.05 102.76 11 53 11 2498.9 -36.15 98.57  
 60.00 11 18 25 3436.22 -39.70 123.97 271.66 97.60 12 15 42 2436.2 -32.41 95.48  
 70.00 11 52 25 3336.17 -33.98 116.57 272.36 93.66 12 48 1 2336.2 -28.96 89.01  
 80.00 12 43 36 3175.79 -29.84 104.61 272.56 91.01 13 36 32 2175.8 -26.39 77.72  
 90.00 13 57 23 2937.64 -28.28 87.13 272.58 90.05 14 46 21 1937.6 -25.41 80.48  
 100.00 15 26 28 2650.27 -29.84 65.98 272.56 91.01 16 10 38 1650.3 -26.39 39.09  
 110.00 16 51 51 2382.99 -33.98 45.49 272.36 93.66 17 31 34 1383.0 -28.96 17.93

DIFFERENTIAL CORRECTIONS  
 TDE -.3090 TRA -.7974 TC3 .6128 BAW .2358  
 RDE -.5389 RRA .2168 RC3 -.1859 FAU .07873  
 FDE .2981 FRA .2777 FC3 -2.4742 B8P 1607  
 BDE .6212 BRA .8263 BC3 .6403 F8P 309

MID-COURSE EXECUTION ACCURACY  
 SGT 1155.2 SGR 666.2 S63 227.8  
 RRT -.1901 RRF .2231 RTF -.6769  
 SGB 1333.5 R23 -.0357 R13 .6828  
 S61 1165.3 S62 648.4 THA 170.91

ORBIT DETERMINATION ACCURACY  
 ST 21.6 SR 29.6 S8 10.0  
 CRT .6970 CR8 .8936 CST .9093  
 L8A 35.5 M8A 13.6 S8A 2.0  
 EL1 34.1 EL2 13.5 ALF 57.38

LAUNCH DATE AUG 15 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 34,320 GAL 2.26 AZL 89.72 HCA 96.06 SMA 231.19 ECC .34664 INC .2821 V1 29.407  
 RP 223.25 LAP .28 LOP 58.08 VP 24,797 GAP 20.19 AZP 90.03 TAL 8.80 TAP 104.86 RCA 151.05 APO 311.33 V2 24.631  
 RC 100.104 GL 1.88 GP -6.88 ZAL 71.13 ZAP 166.85 ETS 211.95 ZAE 158.50 ETE 340.86 ZAC 75.98 ETC 282.38 LVI -9.27

PLANETOCENTRIC CONIC  
 C3 26.709 VHL 5.168 DLA 14.32 RAL 30.27 RAD 6645.7 VEL 12.111 PTH 7.08 VHP 6.485 DPA 10.41 RAP 46.43 ECC 1.4396  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 52 4 3492.06 -46.13 127.38 268.70 103.24 11 50 16 2492.1 -35.89 98.12  
 60.00 11 15 35 3429.47 -39.64 123.41 270.35 97.98 12 12 44 2429.5 -32.21 95.02  
 70.00 11 49 31 3329.59 -33.95 116.06 271.10 93.96 12 45 1 2329.6 -28.81 88.55  
 80.00 12 40 39 3169.40 -29.83 104.14 271.32 91.26 13 33 26 2169.4 -26.28 77.27  
 90.00 13 54 24 2931.33 -28.28 86.66 271.34 90.28 14 43 15 1931.3 -25.31 80.05  
 100.00 15 23 30 2643.87 -29.83 65.50 271.32 91.26 16 7 34 1643.9 -26.28 38.64  
 110.00 16 48 57 2376.41 -33.95 44.98 271.10 93.96 17 28 34 1376.4 -28.81 17.47

DIFFERENTIAL CORRECTIONS  
 TDE -.3134 TRA -.7896 TC3 .6458 BAW .2417  
 RDE -.5304 RRA .2147 RC3 -.2028 FAU .08281  
 FDE .3127 FRA .2847 FC3 -2.6777 B8P 1690  
 BDE .6161 BRA .8183 BC3 .6769 F8P 330

MID-COURSE EXECUTION ACCURACY  
 SGT 1175.8 SGR 870.9 S63 242.4  
 RRT -.1898 RRF .2394 RTF -.6194  
 SGB 1353.8 R23 -.0444 R13 .6862  
 S61 1186.8 S62 681.3 THA 170.88

ORBIT DETERMINATION ACCURACY  
 ST 22.1 SR 29.8 S8 10.3  
 CRT .7048 CR8 .9018 CST .9042  
 L8A 35.8 M8A 13.6 S8A 2.0  
 EL1 34.4 EL2 13.5 ALF 58.52

LAUNCH DATE AUG 15 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 34,233 GAL 2.31 AZL 89.68 HCA 97.14 SMA 228.79 ECC .33982 INC .3177 V1 29.407  
 RP 223.64 LAP .32 LOP 59.17 VP 24,634 GAP 20.83 AZP 90.04 TAL 9.11 TAP 106.28 RCA 151.02 APO 306.56 V2 24.590  
 RC 102.397 GL 2.14 GP -6.87 ZAL 70.55 ZAP 165.99 ETS 210.71 ZAE 158.59 ETE 339.89 ZAC 75.76 ETC 282.37 LVI -9.03

PLANETOCENTRIC CONIC  
 C3 25.939 VHL 5.093 DLA 14.37 RAL 29.61 RAD 6645.4 VEL 12.079 PTH 7.06 VHP 6.298 DPA 10.29 RAP 46.67 ECC 1.4289  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 49 16 3485.71 -46.03 126.81 267.39 103.68 11 47 22 2485.7 -35.65 97.70  
 60.00 11 12 43 3423.27 -39.58 122.89 269.10 98.32 12 9 47 2423.3 -32.02 94.59  
 70.00 11 46 36 3323.58 -33.92 115.60 269.87 94.23 12 41 59 2323.6 -28.68 88.14  
 80.00 12 37 39 3163.60 -29.82 103.70 270.11 91.49 13 30 23 2163.6 -26.18 76.87  
 90.00 13 51 23 2925.63 -28.28 86.25 270.14 90.49 14 40 9 1925.6 -25.22 80.85  
 100.00 15 20 31 2638.07 -29.82 65.07 270.11 91.49 16 4 29 1638.1 -26.18 38.24  
 110.00 16 46 2 2370.47 -33.92 44.51 269.87 94.23 17 25 32 1370.4 -28.68 17.05

DIFFERENTIAL CORRECTIONS  
 TDE -.3170 TRA -.7805 TC3 .6800 BAW .2479  
 RDE -.5220 RRA .2128 RC3 -.2207 FAU .08868  
 FDE .3296 FRA .2515 FC3 -2.8931 B8P 1760  
 BDE .6108 BRA .8090 BC3 .7150 F8P 354

MID-COURSE EXECUTION ACCURACY  
 SGT 1195.2 SGR 875.7 S63 257.9  
 RRT -.2109 RRF .2564 RTF -.6836  
 SGB 1373.0 R23 -.0516 R13 .6912  
 S61 1207.3 S62 653.9 THA 170.34

ORBIT DETERMINATION ACCURACY  
 ST 22.4 SR 29.6 S8 10.6  
 CRT .7117 CR8 .9098 CST .8992  
 L8A 36.1 M8A 13.5 S8A 2.1  
 EL1 34.6 EL2 13.5 ALF 55.74

LAUNCH DATE AUG 15 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 15 1973

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 34.150 GAL 2.35 AZL 89.65 HCA 98.22 SMA 226.58 ECC .33359 INC .35333 V1 29.407  
 RP 224.03 LAP .35 LOP 60.25 VP 24.476 GAP 19.48 AZP 90.05 TAL 9.43 YAP 107.65 RCA 150.99 APO 302.17 V2 24.548  
 RC 104.735 GL 2.40 GP -7.06 ZAL 69.98 ZAP 163.10 ETS 209.62 ZAE 158.73 ETE 339.04 ZAC 75.53 ETC 282.35 LVI -8.79

Distance 312.196

Planetocentric Conic: C3 25.229 VHL 5.023 DLA 14.42 RAL 28.98 RAD 6645.1 VEL 12.050 PTH 7.04 VHP 6.113 DPA 10.16 RAP 46.91 ECC 1.4152  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 46 28 3479.88 -45.93 126.27 266.13 104.08 11 44 28 2479.9 -35.43 97.32  
 60.00 11 9 52 3417.61 -39.52 122.42 267.88 98.64 12 6 49 2417.6 -31.85 94.21  
 70.00 11 43 39 3318.14 -33.89 115.17 268.69 94.48 12 38 57 2318.1 -28.56 87.76  
 80.00 12 34 38 3158.39 -29.81 103.32 268.95 91.69 13 27 17 2158.4 -26.09 76.51  
 90.00 13 48 20 2920.54 -28.27 85.87 268.98 90.67 14 37 0 1920.5 -25.14 59.30  
 100.00 15 17 30 2632.86 -29.81 64.69 268.95 91.69 16 1 23 1632.9 -26.09 37.88  
 110.00 16 43 8 2364.96 -33.89 44.09 268.69 94.48 17 22 31 1365.0 -28.56 18.68

Differential Corrections: TDE -.3199 TRA -.7707 TC3 .7143 BAU .2541 SGT 1213.3 SGR 680.5 SG3 274.0 ST 22.8 SR 29.5 SS 11.0  
 RDE -.5138 RRA .2108 RC3 -.2397 FAU .09092 RRT -.2233 RRF .2738 RTF -.6878 CRT .7182 CRS .9176 CST .8936  
 FDE .3482 FRA .2364 FC3-3.1200 BSP 1818 SGB 1391.1 R23 -.0580 R13 .6964 LSA 36.4 MSA 13.5 SSA 2.2  
 BDE .6032 BRA .7991 BC3 .7535 FSP 360 SG1 1226.7 SG2 656.1 THA 169.96 EL1 34.8 EL2 13.5 ALF 55.03

Orbit Determination Accuracy: ST 23.1 SR 29.5 SS 11.4 CRT .7245 CRS .9250 CST .8878 LSA 36.7 MSA 13.4 SSA 2.3 EL1 34.9 EL2 13.4 ALF 54.38

LAUNCH DATE AUG 15 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 17 1973

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 34.072 GAL 2.40 AZL 89.61 HCA 99.30 SMA 224.53 ECC .32764 INC .3890 V1 29.407  
 RP 224.42 LAP .38 LOP 61.33 VP 24.325 GAP 19.13 AZP 90.06 TAL 9.74 TAP 109.04 RCA 150.97 APO 298.10 V2 24.506  
 RC 107.119 GL 2.67 GP -7.27 ZAL 69.42 ZAP 164.20 ETS 208.64 ZAE 158.90 ETE 338.12 ZAC 75.31 ETC 282.34 LVI -8.55

Distance 315.511

Planetocentric Conic: C3 24.576 VHL 4.957 DLA 14.47 RAL 28.31 RAD 6644.8 VEL 12.023 PTH 7.01 VHP 5.937 DPA 10.01 RAP 47.12 ECC 1.4045  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 43 40 3474.58 -45.84 125.79 264.92 104.44 11 41 35 2474.6 -35.23 98.98  
 60.00 11 8 59 3412.48 -39.47 122.00 266.72 98.92 12 3 52 2412.5 -31.70 93.86  
 70.00 11 40 42 3313.26 -33.87 114.79 267.55 94.70 12 35 55 2313.3 -28.44 87.43  
 80.00 12 31 36 3153.77 -29.80 102.98 267.82 91.87 13 24 10 2153.8 -26.01 76.20  
 90.00 13 45 15 2916.05 -28.27 85.55 267.87 90.84 14 33 52 1916.0 -25.07 58.99  
 100.00 15 14 28 2628.24 -29.80 64.34 267.82 91.87 15 58 16 1628.2 -26.01 37.86  
 110.00 16 40 9 2360.08 -33.87 43.71 267.55 94.70 17 19 29 1360.1 -28.44 16.34

Differential Corrections: TDE -.3223 TRA -.7600 TC3 .7493 BAU .2606 SGT 1230.3 SGR 685.5 SG3 291.1 ST 23.1 SR 29.5 SS 11.4  
 RDE -.5056 RRA .2087 RC3 -.2398 FAU .09539 RRT -.2368 RRF .2922 RTF -.6927 CRT .7245 CRS .9250 CST .8878  
 FDE .3680 FRA .2191 FC3-3.3803 BSP 1868 SGB 1408.4 R23 -.0640 R13 .7022 LSA 36.7 MSA 13.4 SSA 2.3  
 BDE .5996 BRA .7881 BC3 .7931 FSP 407 SG1 1245.2 SG2 658.1 THA 169.53 EL1 34.9 EL2 13.4 ALF 54.38

Orbit Determination Accuracy: ST 23.4 SR 29.4 SS 11.0 CRT .7306 CRS .9318 CST .8821 LSA 36.9 MSA 13.4 SSA 2.4 EL1 35.1 EL2 13.4 ALF 53.73

LAUNCH DATE AUG 15 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 19 1973

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.998 GAL 2.44 AZL 89.58 HCA 100.38 SMA 222.84 ECC .32203 INC .4246 V1 29.407  
 RP 224.81 LAP .42 LOP 62.40 VP 24.179 GAP 18.78 AZP 90.08 TAL 10.04 TAP 110.42 RCA 150.94 APO 294.33 V2 24.464  
 RC 109.544 GL 2.95 GP -7.48 ZAL 68.87 ZAP 163.28 ETS 207.77 ZAE 159.12 ETE 337.10 ZAC 75.07 ETC 282.33 LVI -8.30

Distance 318.868

Planetocentric Conic: C3 23.973 VHL 4.898 DLA 14.54 RAL 27.67 RAD 6644.6 VEL 11.998 PTH 6.99 VHP 5.767 DPA 9.86 RAP 47.33 ECC 1.3945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 40 53 3469.75 -45.76 125.36 263.77 104.76 11 38 42 2469.8 -35.04 96.67  
 60.00 11 4 7 3407.88 -39.42 121.62 265.60 99.18 12 0 55 2407.9 -31.56 93.55  
 70.00 11 37 44 3308.94 -33.84 114.46 266.45 94.90 12 32 53 2308.9 -28.34 87.13  
 80.00 12 28 33 3149.75 -29.80 102.68 266.74 92.03 13 21 2 2149.7 -25.94 75.92  
 90.00 13 42 9 2912.17 -28.26 85.26 266.79 90.98 14 30 41 1912.2 -25.01 58.72  
 100.00 15 11 24 2624.22 -29.80 64.04 266.74 92.03 15 55 9 1624.2 -25.94 37.29  
 110.00 16 37 11 2355.76 -33.84 43.38 266.45 94.90 17 16 26 1355.8 -28.34 16.05

Differential Corrections: TDE -.3245 TRA -.7494 TC3 .7840 BAU .2669 SGT 1246.7 SGR 690.8 SG3 309.1 ST 23.4 SR 29.4 SS 11.0  
 RDE -.4978 RRA .2066 RC3 -.2812 FAU .10011 RRT -.2515 RRF .3116 RTF -.5.75 CRT .7306 CRS .9318 CST .8821  
 FDE .3886 FRA .2012 FC3-3.6151 BSP 1918 SGB 1425.3 R23 -.0689 R13 .7082 LSA 36.9 MSA 13.4 SSA 2.4  
 BDE .5940 BRA .7774 BC3 .8329 FSP 437 SG1 1263.4 SG2 659.8 THA 169.05 EL1 35.1 EL2 13.4 ALF 53.73

Orbit Determination Accuracy: ST 23.6 SR 29.2 SS 12.3 CRT .7365 CRS .9376 CST .8765 LSA 37.2 MSA 13.3 SSA 2.5 EL1 35.2 EL2 13.3 ALF 53.09

LAUNCH DATE AUG 15 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 21 1973

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.928 GAL 2.48 AZL 89.54 HCA 101.45 SMA 220.88 ECC .31675 INC .4606 V1 29.407  
 RP 225.20 LAP .45 LOP 63.47 VP 24.038 GAP 18.43 AZP 90.09 TAL 10.35 TAP 111.79 RCA 150.91 APO 290.84 V2 24.422  
 RC 112.011 GL 3.23 GP -7.69 ZAL 68.33 ZAP 162.34 ETS 206.98 ZAE 159.38 ETE 335.98 ZAC 74.83 ETC 282.33 LVI -8.06

Distance 322.264

Planetocentric Conic: C3 23.418 VHL 4.839 DLA 14.61 RAL 27.05 RAD 6644.3 VEL 11.975 PTH 6.97 VHP 5.603 DPA 9.69 RAP 47.52 ECC 1.3854  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 38 6 3465.44 -45.69 124.97 262.67 105.05 11 35 51 2465.4 -34.88 96.39  
 60.00 11 1 15 3403.80 -39.37 121.28 264.52 99.40 11 57 59 2403.8 -31.44 93.28  
 70.00 11 34 46 3305.17 -33.82 114.17 265.40 95.07 12 29 51 2305.2 -28.26 86.87  
 80.00 12 25 28 3146.31 -29.79 102.42 265.70 92.16 13 17 54 2146.3 -25.87 75.68  
 90.00 13 39 1 2908.89 -28.26 85.02 265.75 91.10 14 27 30 1908.9 -24.96 58.50  
 100.00 15 8 20 2620.78 -29.79 63.79 265.70 92.16 15 52 0 1620.8 -25.87 37.05  
 110.00 16 34 12 2351.99 -33.82 43.09 265.40 95.07 17 13 24 1352.0 -28.26 15.79

Differential Corrections: TDE -.3265 TRA -.7388 TC3 .8180 BAU .2732 SGT 1262.3 SGR 696.4 SG3 328.1 ST 23.6 SR 29.2 SS 12.3  
 RDE -.4896 RRA .2043 RC3 -.3039 FAU .10506 RRT -.2670 RRF .3318 RTF -.7023 CRT .7365 CRS .9376 CST .8765  
 FDE .4132 FRA .1816 FC3-3.8841 BSP 1956 SGB 1441.7 R23 -.0758 R13 .7140 LSA 37.2 MSA 13.3 SSA 2.5  
 BDE .5885 BRA .7665 BC3 .8727 FSP 467 SG1 1281.1 SG2 661.3 THA 168.52 EL1 35.2 EL2 13.3 ALF 53.09

Orbit Determination Accuracy: ST 23.6 SR 29.2 SS 12.3 CRT .7365 CRS .9376 CST .8765 LSA 37.2 MSA 13.3 SSA 2.5 EL1 35.2 EL2 13.3 ALF 53.09

LAUNCH DATE AUG 15 1973      FLIGHT TIME 130.00      ARRIVAL DATE DEC 25 1973

DISTANCE 325.694      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 131.51 LAL -.00 LOL 322.03 VL 33.862 GAL 2.52 AZL 89.50 MCA 102.51 SMA 219.24 ECC .31178 INC .4983 V1 29.407  
 RP 225.59 LAP .48 LOP 84.94 VP 23.902 GAP 18.09 AZP 90.11 TAL 10.64 TAP 113.15 RCA 150.89 APO 287.60 V2 24.380  
 RC 114.516 GL 3.51 GP -7.92 ZAL 67.80 ZAP 181.39 ETS 206.27 ZAE 159.67 ETE 334.76 ZAC 74.59 ETC 282.33 LVI -7.81

PLANETOCENTRIC CONIC  
 C3 22.906 VHL 4.786 DLA 14.68 RAL 28.43 RAD 6644.1 VEL 11.954 PTH 6.95 VHP 5.445 DPA 9.50 RAP 47.69 ECC 1.3770  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 35 20 3461.62 -45.62 124.63 261.61 105.31 11 33 1 2461.6 -34.73 96.15  
 60.00 10 58 23 3400.24 -39.33 120.98 263.50 99.60 11 55 3 2400.2 -31.33 93.04  
 70.00 11 31 47 3301.95 -33.80 113.92 264.39 95.22 12 26 49 2302.0 -28.18 88.65  
 80.00 12 22 22 3143.46 -29.78 102.21 264.70 92.27 13 14 45 2143.5 -25.82 75.49  
 90.00 13 35 52 2906.22 -28.26 84.83 264.75 91.20 14 24 18 1906.2 -24.92 58.31  
 100.00 15 5 14 2617.93 -29.78 63.58 264.70 92.27 15 48 52 1617.9 -25.82 38.85  
 110.00 16 31 13 2348.77 -33.80 42.84 264.39 95.22 17 10 22 1348.8 -28.18 15.37

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 1276.2 SGR 702.5 SG3 348.1      ST 23.9 SR 29.1 88 12.7  
 RRT -.2832 RRF .3530 RTF -.7065      CRT .7423 CRS .9432 CST .8707  
 SGB 1456.8 R23 -.0820 R13 .7198      LSA 37.4 MSA 13.2 88A 2.6  
 SG1 1297.3 SG2 662.8 THA 167.95      EL1 35.2 EL2 13.2 ALF 52.47

DIFFERENTIAL CORRECTIONS  
 TDE -.3284 TRA -.7277 TC3 .8507 BAV .2792  
 RDE -.4817 RRA .2019 RC3 -.3279 FAU .11028  
 FDE .4381 FRA .1592 FC3-4.1680 BSP 1993  
 BDE .5830 BRA .7552 BC3 .9117 FSP 500

LAUNCH DATE AUG 15 1973      FLIGHT TIME 132.00      ARRIVAL DATE DEC 25 1973

DISTANCE 329.157      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 33.799 GAL 2.56 AZL 89.47 MCA 103.58 SMA 217.72 ECC .30710 INC .5326 V1 29.407  
 RP 225.98 LAP .32 LOP 65.60 VP 23.770 GAP 17.76 AZP 90.12 TAL 10.93 TAP 114.51 RCA 150.86 APO 284.58 V2 24.338  
 RC 117.057 GL 3.60 GP -8.18 ZAL 67.30 ZAP 180.41 ETS 205.62 ZAE 180.00 ETE 333.41 ZAC 74.34 ETC 282.33 LVI -7.55

PLANETOCENTRIC CONIC  
 C3 22.433 VHL 4.736 DLA 14.77 RAL 25.82 RAD 6643.9 VEL 11.934 PTH 6.94 VHP 5.292 DPA 9.31 RAP 47.86 ECC 1.3692  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 32 34 3458.29 -45.56 124.33 260.61 105.53 11 30 13 2458.3 -34.60 95.93  
 60.00 10 55 32 3397.19 -39.30 120.73 262.51 99.76 11 52 9 2397.2 -31.23 92.84  
 70.00 11 28 47 3299.28 -33.78 113.71 263.42 95.34 12 23 47 2299.3 -28.12 86.47  
 80.00 12 19 15 3141.19 -29.77 102.04 263.74 92.36 13 11 36 2141.2 -25.78 73.33  
 90.00 13 32 41 2904.15 -28.25 84.68 263.80 91.27 14 21 5 1904.2 -24.88 58.17  
 100.00 15 2 6 2615.67 -29.77 63.41 263.74 92.36 15 45 42 1615.7 -25.78 36.70  
 110.00 16 28 14 2346.10 -33.78 42.63 263.42 95.34 17 7 20 1346.1 -28.12 15.39

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 1289.4 SGR 709.0 SG3 369.1      ST 24.1 SR 28.9 88 13.2  
 RRT -.3001 RRF .3750 RTF -.7103      CRT .7481 CRS .9483 CST .8651  
 SGB 1471.5 R23 -.0884 R13 .7249      LSA 37.6 MSA 13.1 88A 2.7  
 SG1 1313.1 SG2 664.1 THA 167.34      EL1 35.3 EL2 13.1 ALF 51.84

DIFFERENTIAL CORRECTIONS  
 TDE -.3302 TRA -.7170 TC3 .8823 BAV .2850  
 RDE -.4738 RRA .1993 RC3 -.3533 FAU .11574  
 FDE .4650 FRA .1351 FC3-4.4666 BSP 2028  
 BDE .5775 BRA .7442 BC3 .9504 FSP 535

LAUNCH DATE AUG 15 1973      FLIGHT TIME 134.00      ARRIVAL DATE DEC 27 1973

DISTANCE 332.648      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 33.740 GAL 2.60 AZL 89.43 MCA 104.63 SMA 216.31 ECC .30269 INC .5689 V1 29.407  
 RP 226.37 LAP .55 LOP 66.66 VP 23.644 GAP 17.42 AZP 90.14 TAL 11.22 TAP 115.85 RCA 150.83 APO 281.78 V2 24.297  
 RC 119.633 GL 4.09 GP -8.40 ZAL 66.80 ZAP 159.42 ETS 205.04 ZAE 180.35 ETE 331.93 ZAC 74.09 ETC 282.33 LVI -7.30

PLANETOCENTRIC CONIC  
 C3 21.997 VHL 4.690 DLA 14.86 RAL 25.23 RAD 6643.7 VEL 11.916 PTH 6.92 VHP 5.145 DPA 9.10 RAP 48.00 ECC 1.3620  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 29 50 3453.42 -45.51 124.07 259.66 105.73 11 27 26 2453.4 -34.49 95.75  
 60.00 10 52 40 3394.64 -39.27 120.52 261.58 99.90 11 49 15 2394.6 -31.16 92.67  
 70.00 11 25 48 3297.15 -33.77 113.55 262.50 95.43 12 20 45 2297.1 -28.07 86.32  
 80.00 12 16 6 3139.51 -29.77 101.92 262.82 92.43 13 8 26 2139.5 -25.73 73.21  
 90.00 13 29 29 2902.68 -28.25 84.37 262.88 91.33 14 17 51 1902.7 -24.86 58.07  
 100.00 14 58 58 2613.98 -29.77 63.26 262.82 92.43 15 42 32 1614.0 -25.73 36.58  
 110.00 16 25 14 2343.97 -33.77 42.46 262.50 95.43 17 4 18 1344.0 -28.07 15.24

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 1300.7 SGR 716.1 SG3 391.1      ST 24.3 SR 28.7 88 13.8  
 RRT -.3173 RRF .3979 RTF -.7135      CRT .7538 CRS .9527 CST .8598  
 SGB 1484.8 R23 -.0955 R13 .7298      LSA 37.8 MSA 13.0 88A 2.7  
 SG1 1327.4 SG2 665.5 THA 166.69      EL1 35.3 EL2 13.0 ALF 51.20

DIFFERENTIAL CORRECTIONS  
 TDE -.3321 TRA -.7082 TC3 .9113 BAV .2904  
 RDE -.4859 RRA .1965 RC3 -.3802 FAU .12147  
 FDE .4938 FRA .1091 FC3-4.7808 BSP 2061  
 BDE .5722 BRA .7330 BC3 .9874 FSP 572

LAUNCH DATE AUG 15 1973      FLIGHT TIME 136.00      ARRIVAL DATE DEC 29 1973

DISTANCE 336.188      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 33.684 GAL 2.64 AZL 89.39 MCA 105.69 SMA 214.99 ECC .29854 INC .6055 V1 29.407  
 RP 226.76 LAP .58 LOP 67.72 VP 23.521 GAP 17.09 AZP 90.16 TAL 11.49 TAP 117.19 RCA 150.81 APO 279.17 V2 24.285  
 RC 122.240 GL 4.39 GP -8.66 ZAL 66.33 ZAP 158.41 ETS 204.50 ZAE 180.73 ETE 330.30 ZAC 73.83 ETC 282.34 LVI -7.04

PLANETOCENTRIC CONIC  
 C3 21.595 VHL 4.647 DLA 14.96 RAL 24.85 RAD 6643.8 VEL 11.899 PTH 6.91 VHP 5.003 DPA 8.87 RAP 48.13 ECC 1.3554  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 27 7 3453.03 -45.46 123.86 258.75 105.88 11 24 40 2453.0 -34.39 95.60  
 60.00 10 49 49 3392.58 -39.24 120.35 260.69 100.02 11 46 22 2392.6 -31.09 92.33  
 70.00 11 22 40 3295.55 -33.76 113.42 261.61 95.91 12 17 43 2295.6 -28.03 86.21  
 80.00 12 12 57 3138.40 -29.76 101.83 261.94 92.47 13 5 15 2138.4 -25.73 73.14  
 90.00 13 26 15 2901.81 -28.25 84.51 262.00 91.36 14 14 37 1901.8 -24.84 58.01  
 100.00 14 55 49 2612.87 -29.76 63.20 261.94 92.47 15 39 21 1612.9 -25.73 36.51  
 110.00 16 22 14 2342.37 -33.76 42.34 261.61 95.91 17 1 16 1342.4 -28.03 15.13

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 1311.5 SGR 723.9 SG3 414.4      ST 24.6 SR 28.5 88 14.4  
 RRT -.3351 RRF .4215 RTF -.7164      CRT .7598 CRS .9568 CST .8547  
 SGB 1498.0 R23 -.1030 R13 .7346      LSA 38.0 MSA 12.9 88A 2.8  
 SG1 1341.4 SG2 666.8 THA 165.99      EL1 35.3 EL2 13.0 ALF 50.52

DIFFERENTIAL CORRECTIONS  
 TDE -.3342 TRA -.6955 TC3 .9394 BAV .2958  
 RDE -.4579 RRA .1936 RC3 -.4086 FAU .12752  
 FDE .5235 FRA .0802 FC3-5.1122 BSP 2091  
 BDE .5669 BRA .7219 BC3 1.0244 FSP 611

LAUNCH DATE AUG 15 1973

FLIGHT TIME 138.00

ARRIVAL DATE DEC 31 1973

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.632 GAL 2.67 AZL 89.38 HCA 106.74 SMA 213.78 ECC .29463 INC .6423 V1 29.407  
 RP 227.15 LAP .62 LOP 68.77 VP 23.403 GAP 16.77 AZP 90.18 TAL 11.76 TAP 118.51 RCA 150.78 APO 276.75 V2 24.214  
 RC 124.878 GL 4.69 GP -8.92 ZAL 65.87 ZAP 157.38 ETS 204.00 ZAE 161.13 ETE 328.50 ZAC 73.56 ETC 282.35 LVI -6.78

Planeto-centric Conic: C3 21.225 VHL 4.607 DLA 15.07 RAL 24.08 RAD 6643.4 VEL 11.884 PTH 6.90 VHP 4.866 DPA 6.63 RAP 48.24 ECC 1.3493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 24 25 3451.09 -45.42 123.69 257.89 106.01 11 21 56 2451.1 -34.32 95.48  
 60.00 10 46 59 3391.02 -39.22 120.22 259.84 100.10 11 43 30 2391.0 -31.04 92.42  
 70.00 11 19 47 3294.48 -33.75 113.34 260.77 95.55 12 14 42 2294.5 -28.01 86.14  
 80.00 12 9 46 3137.86 -29.76 101.79 261.10 92.49 13 2 4 2137.9 -25.72 75.10  
 90.00 13 22 59 2901.54 -28.25 84.49 261.16 91.37 14 11 21 1901.5 -24.84 57.99  
 100.00 14 52 38 2612.33 -29.76 63.16 261.10 92.49 15 36 10 1612.3 -25.72 36.47  
 110.00 16 19 13 2341.30 -33.75 42.26 260.77 95.55 16 58 15 1341.3 -28.01 15.06

Differential Corrections: TDE -.3361 TRA -.6850 TC3 .9655 BAU .3009 SGT 1320.8 SGR 732.7 SG3 438.9 ST 24.8 SR 28.2 SS 14.9  
 RDE -.4500 RRA .1905 RC3 -.4387 FAU .13388 RRT -.3535 RRF .4462 RTF -.7187 CRT .7655 CRS .9602 CST .8498  
 FDE .5584 FRA .0492 FC3-5.4614 BSP 2121 SGB 1510.4 R23 -.1110 R13 .7392 LSA 38.2 MSA 12.8 SSA 2.9  
 BDE .5617 BRA .7110 BC3 1.0605 FSP 652 SG1 1354.5 SG2 668.3 THA 165.24 EL1 35.3 EL2 12.7 ALF 49.8

LAUNCH DATE AUG 15 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 2 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.582 GAL 2.70 AZL 89.32 HCA 107.79 SMA 212.62 ECC .29095 INC .6794 V1 29.407  
 RP 227.94 LAP .65 LOP 69.82 VP 23.288 GAP 16.44 AZP 90.21 TAL 12.03 TAP 119.82 RCA 150.76 APO 274.48 V2 24.172  
 RC 127.544 GL 4.99 GP -9.19 ZAL 65.43 ZAP 156.33 ETS 203.54 ZAE 161.54 ETE 326.53 ZAC 73.29 ETC 282.37 LVI -6.51

Planeto-centric Conic: C3 20.880 VHL 4.569 DLA 15.19 RAL 23.53 RAD 6643.2 VEL 11.869 PTH 6.88 VHP 4.733 DPA 6.37 RAP 48.34 ECC 1.3436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 21 45 3449.60 -45.40 123.55 257.08 106.11 11 19 14 2449.6 -34.26 95.38  
 60.00 10 44 9 3389.93 -39.21 120.13 259.03 100.16 11 40 39 2389.9 -31.01 92.35  
 70.00 11 18 46 3293.94 -33.75 113.30 259.97 95.58 12 11 40 2293.9 -27.99 86.10  
 80.00 12 6 34 3137.90 -29.76 101.80 260.30 92.49 12 58 52 2137.9 -25.72 75.10  
 90.00 13 19 42 2901.86 -28.25 84.51 260.36 91.36 14 8 4 1901.9 -24.84 58.01  
 100.00 14 49 28 2612.37 -29.76 63.17 260.30 92.49 15 32 58 1612.4 -25.72 36.47  
 110.00 16 16 13 2340.75 -33.75 42.22 259.97 95.58 16 55 13 1340.8 -27.99 15.02

Differential Corrections: TDE -.3375 TRA -.6745 TC3 .9884 BAU .3055 SGT 1327.8 SGR 742.2 SG3 464.4 ST 24.9 SR 28.0 SS 15.6  
 RDE -.4419 RRA .1871 RC3 -.4702 FAU .14047 RRT -.3721 RRF .4711 RTF -.7204 CRT .7708 CRS .9633 CST .8490  
 FDE .5942 FRA .0198 FC3-5.8244 BSP 2148 SGB 1821.1 R23 -.1192 R13 .7434 LSA 38.4 MSA 12.7 SSA 3.0  
 BDE .5581 BRA .6899 BC3 1.0948 FSP 698 SG1 1368.7 SG2 689.8 THA 164.4 EL1 35.3 EL2 12.6 ALF 49.21

LAUNCH DATE AUG 15 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 4 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.538 GAL 2.73 AZL 89.28 HCA 108.84 SMA 211.85 ECC .28749 INC .7168 V1 29.407  
 RP 227.93 LAP .68 LOP 70.8 VP 23.177 GAP 16.12 AZP 90.23 TAL 12.28 TAP 121.11 RCA 150.73 APO 272.37 V2 24.131  
 RC 130.237 GL 5.30 GP -9.48 ZAL 65.01 ZAP 155.25 ETS 203.11 ZAE 161.96 ETE 324.39 ZAC 73.01 ETC 282.38 LVI -6.25

Planeto-centric Conic: C3 20.562 VHL 4.535 DLA 15.32 RAL 23.00 RAD 6643.1 VEL 11.856 PTH 6.87 VHP 4.608 DPA 6.10 RAP 48.41 ECC 1.3384  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 19 5 3448.55 -45.38 123.46 256.32 106.18 11 18 34 2448.5 -34.22 95.32  
 60.00 10 41 20 3389.32 -39.20 120.08 258.27 100.20 11 37 49 2389.3 -30.99 92.31  
 70.00 11 13 45 3293.91 -33.75 113.30 259.21 95.58 12 8 39 2293.9 -27.99 86.10  
 80.00 12 3 21 3138.50 -29.77 101.84 259.54 92.47 12 55 39 2138.5 -25.73 75.13  
 90.00 13 16 23 2902.77 -28.25 84.58 259.60 91.32 14 4 45 1902.8 -24.86 58.08  
 100.00 14 46 12 2612.98 -29.77 63.21 259.54 92.47 15 29 45 1613.0 -25.73 36.51  
 110.00 16 13 11 2340.75 -33.75 42.21 259.21 95.58 16 52 12 1340.7 -27.99 15.02

Differential Corrections: TDE -.3395 TRA -.6645 TC3 1.0092 BAU .3101 SGT 1334.0 SGR 752.9 SG3 491.3 ST 25.1 SR 27.6 SS 16.3  
 RDE -.4337 RRA .1836 RC3 -.5037 FAU .14744 RRT -.3907 RRF .4988 RTF -.7215 CRT .7762 CRS .9638 CST .8407  
 FDE .6331 FRA -.0198 FC3-6.2074 BSP 2171 SGB 1931.8 R23 -.1283 R13 .7474 LSA 38.6 MSA 12.6 SSA 3.1  
 BDE .5908 BRA .6894 BC3 1.1279 FSP 741 SG1 1376.7 SG2 671.5 THA 163.55 EL1 35.2 EL2 12.4 ALF 48.48

LAUNCH DATE AUG 15 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 6 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 33.491 GAL 2.76 AZL 89.25 HCA 109.88 SMA 210.55 ECC .28423 INC .7546 V1 29.407  
 RP 228.32 LAP .71 LOP 71.90 VP 23.070 GAP 15.81 AZP 90.26 TAL 12.52 TAP 122.40 RCA 150.71 APO 270.40 V2 24.090  
 RC 132.954 GL 5.62 GP -9.77 ZAL 64.60 ZAP 154.16 ETS 202.72 ZAE 162.39 ETE 321.95 ZAC 72.73 ETC 282.41 LVI -5.97

Planeto-centric Conic: C3 20.270 VHL 4.502 DLA 15.45 RAL 22.47 RAD 6643.0 VEL 11.844 PTH 6.86 VHP 4.483 DPA 7.80 RAP 48.47 ECC 1.3336  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 16 27 3447.93 -45.37 123.41 255.60 106.22 11 13 55 2447.9 -34.19 95.28  
 60.00 10 38 31 3389.18 -39.20 120.07 257.56 100.20 11 35 0 2389.2 -30.99 92.30  
 70.00 11 10 43 3294.40 -33.75 113.33 258.49 95.56 12 5 38 2294.4 -28.00 86.14  
 80.00 12 0 6 3139.67 -29.77 101.93 258.82 92.42 12 52 25 2139.7 -25.75 75.23  
 90.00 13 13 1 2904.28 -28.25 84.69 258.88 91.27 14 1 26 1904.3 -24.88 58.18  
 100.00 14 42 58 2614.15 -29.77 63.30 258.82 92.42 15 26 32 1614.1 -25.75 36.59  
 110.00 16 10 10 2341.22 -33.75 42.25 258.49 95.56 16 49 11 1341.2 -28.00 15.05

Differential Corrections: TDE -.3414 TRA -.6547 TC3 1.0262 BAU .3141 SGT 1337.8 SGR 764.7 SG3 519.3 ST 25.3 SR 27.3 SS 17.0  
 RDE -.4254 RRA .1797 RC3 -.5388 FAU .15466 RRT -.4088 RRF .5228 RTF -.7216 CRT .7816 CRS .9680 CST .8367  
 FDE .6740 FRA -.0587 FC3-6.6056 BSP 2197 SGB 1941.0 R23 -.1382 R13 .7509 LSA 38.8 MSA 12.6 SSA 3.2  
 BDE .5455 BRA .6789 BC3 1.1591 FSP 790 SG1 1385.9 SG2 673.7 THA 162.62 EL1 35.2 EL2 12.3 ALF 47.75

LAUNCH DATE AUG 15 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC

DISTANCE 354.079

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.449 GAL 2.79 AZL 89.21 HCA 110.91 SMA 209.62 ECC .28116 INC .7927 V1 29.407
RP 228.70 LAP .74 LOP 72.94 VP 22.967 GAP 15.49 AZP 90.28 TAL 12.76 TAP 123.67 RCA 150.89 APO 268.56 V2 24.049
RC 135.694 GL 5.93 GP -10.08 ZAL 64.22 ZAP 133.05 ETS 202.34 ZAE 162.80 ETE 319.32 ZAC 72.44 ETC 282.43 LVI -8.70

PLANETOCENTRIC CONIC

C3 19.999 VHL 4.472 DLA 15.60 RAL 21.97 RAD 6642.8 VEL 11.833 PTH 6.85 VHP 4.365 DPA 7.50 RAP 48.52 ECC 1.3291
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 13 50 3447.75 -45.36 123.39 254.93 106.24 11 11 18 2447.7 -34.18 95.27
60.00 10 35 43 3389.50 -39.21 120.10 256.88 100.19 11 32 12 2389.5 -31.00 92.32
70.00 11 7 41 3295.40 -33.76 113.41 257.81 95.51 12 2 36 2295.4 -28.03 86.20
80.00 11 56 49 3141.41 -29.77 102.06 258.14 92.35 12 49 11 2141.4 -25.78 75.34
90.00 13 9 38 2906.38 -28.26 84.84 258.19 91.19 13 58 5 1906.4 -24.92 58.32
100.00 14 39 41 2615.88 -29.77 63.43 258.14 92.35 15 23 17 1615.9 -25.78 36.71
110.00 16 7 7 2342.21 -33.76 42.33 257.81 95.51 16 46 9 1342.2 -28.03 15.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3432 TRA -.6453 TC3 1.0408 BAW .3180 SGT 1340.3 SGR 777.9 SG3 548.6 ST 25.5 SR 26.9 88 17.7
RDE -.4169 RRA .1757 RC3 -.5758 FAW .18222 RRT -.4269 RRF .5491 RTF -.7211 CRT .7867 CRS .9699 CST .8329
FDE .7187 FRA -.1001 FC3 -7.0222 B8P 2212 SGB 1549.7 R23 -.1486 R13 .7543 LSA 39.0 MSA 12.5 88A 3.3
BDE .5400 BRA .6688 BC3 1.1893 F8P 839 SG1 1394.4 SG2 676.2 THA 161.61 EL1 35.1 EL2 12.1 ALF 46.98

LAUNCH DATE AUG 15 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC

DISTANCE 357.716

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.409 GAL 2.82 AZL 89.17 HCA 111.95 SMA 208.75 ECC .27826 INC .8312 V1 29.407
RP 229.09 LAP .77 LOP 73.98 VP 22.868 GAP 15.18 AZP 90.31 TAL 12.99 TAP 124.93 RCA 150.86 APO 268.84 V2 24.008
RC 138.457 GL 6.25 GP -10.40 ZAL 63.85 ZAP 131.91 ETS 201.99 ZAE 163.21 ETE 316.42 ZAC 72.14 ETC 282.46 LVI -5.42

PLANETOCENTRIC CONIC

C3 19.749 VHL 4.444 DLA 15.75 RAL 21.47 RAD 6642.7 VEL 11.822 PTH 6.84 VHP 4.250 DPA 7.17 RAP 48.54 ECC 1.3290
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 11 14 3447.96 -45.37 123.41 254.30 106.22 11 8 42 2448.0 -34.19 95.28
60.00 10 32 54 3390.25 -39.22 120.16 256.24 100.14 11 29 24 2390.2 -31.02 92.37
70.00 11 4 38 3296.87 -33.77 113.53 257.17 95.45 11 59 34 2296.9 -28.06 86.30
80.00 11 53 31 3143.68 -29.78 102.23 257.48 92.27 12 45 55 2143.7 -25.83 75.50
90.00 13 6 12 2909.04 -28.26 85.03 257.54 91.10 13 54 41 1909.0 -24.98 58.51
100.00 14 36 23 2618.15 -29.78 63.59 257.48 92.27 15 20 1 1618.1 -25.83 36.87
110.00 16 4 4 2343.69 -33.77 42.44 257.17 95.45 16 43 8 1343.7 -28.06 15.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3346 TRA -.6258 TC3 1.0724 BAW .3268 SGT 1340.7 SGR 793.2 SG3 579.6 ST 25.0 SR 26.6 88 16.4
RDE -.4085 RRA .1710 RC3 -.6155 FAW .17032 RRT -.4573 RRF .5783 RTF -.7314 CRT .7881 CRS .9712 CST .8251
FDE .7813 FRA -.1492 FC3 -7.4661 B8P 2109 SGB 1557.7 R23 -.1430 R13 .7671 LSA 38.8 MSA 12.3 88A 3.4
BDE .9280 BRA .6488 BC3 1.2365 F8P 887 SG1 1404.7 SG2 673.2 THA 160.11 EL1 34.5 EL2 11.9 ALF 47.20

LAUNCH DATE AUG 15 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC

DISTANCE 361.368

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.372 GAL 2.84 AZL 89.13 HCA 112.98 SMA 207.94 ECC .27555 INC .8701 V1 29.407
RP 229.48 LAP .80 LOP 75.01 VP 22.769 GAP 14.88 AZP 90.34 TAL 13.20 TAP 126.18 RCA 150.64 APO 265.24 V2 23.967
RC 141.241 GL 6.58 GP -10.73 ZAL 63.51 ZAP 130.75 ETS 201.65 ZAE 163.60 ETE 313.25 ZAC 71.83 ETC 282.50 LVI -5.14

PLANETOCENTRIC CONIC

C3 19.518 VHL 4.418 DLA 15.92 RAL 21.00 RAD 6642.6 VEL 11.812 PTH 6.83 VHP 4.141 DPA 6.83 RAP 48.54 ECC 1.3212
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 8 39 3448.61 -45.38 123.48 253.71 106.18 11 8 8 2448.6 -34.22 95.32
60.00 10 30 6 3391.48 -39.23 120.26 255.65 100.08 11 28 38 2391.5 -31.06 92.46
70.00 11 1 34 3298.09 -33.78 113.68 256.57 95.39 11 58 33 2298.9 -28.11 86.44
80.00 11 50 11 3148.58 -29.79 102.44 256.87 92.15 12 42 37 2148.6 -25.88 75.70
90.00 13 2 44 2912.34 -28.26 85.28 256.92 90.97 13 51 17 1912.3 -25.01 58.73
100.00 14 33 2 2621.03 -29.79 63.81 256.87 92.15 15 16 43 1621.0 -25.88 37.07
110.00 16 1 0 2345.71 -33.78 42.60 256.57 95.39 16 40 6 1345.7 -28.11 15.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3404 TRA -.6217 TC3 1.0717 BAW .3279 SGT 1339.6 SGR 809.4 SG3 611.6 ST 25.4 SR 26.1 88 19.3
RDE -.3994 RRA .1668 RC3 -.6364 FAW .17847 RRT -.4694 RRF .6024 RTF -.7146 CRT .7941 CRS .9724 CST .8237
FDE .8141 FRA -.1928 FC3 -7.9160 B8P 2174 SGB 1565.1 R23 -.1612 R13 .7664 LSA 39.2 MSA 12.3 88A 3.5
BDE .9247 BRA .6437 BC3 1.2567 F8P 944 SG1 1410.2 SG2 678.9 THA 160.11 EL1 34.5 EL2 11.7 ALF 45.98

LAUNCH DATE AUG 15 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC

DISTANCE 365.029

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.337 GAL 2.86 AZL 89.09 HCA 114.01 SMA 207.18 ECC .27299 INC .9095 V1 29.407
RP 229.86 LAP .83 LOP 76.04 VP 22.675 GAP 14.57 AZP 90.37 TAL 13.40 TAP 127.41 RCA 150.62 APO 263.74 V2 23.927
RC 144.046 GL 6.91 GP -11.07 ZAL 63.19 ZAP 149.57 ETS 201.34 ZAE 163.95 ETE 309.79 ZAC 71.52 ETC 282.54 LVI -4.85

PLANETOCENTRIC CONIC

C3 19.305 VHL 4.394 DLA 16.10 RAL 20.54 RAD 6642.5 VEL 11.803 PTH 6.83 VHP 4.035 DPA 6.47 RAP 48.53 ECC 1.3177
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 6 5 3449.66 -45.40 123.56 253.17 106.11 11 3 35 2449.7 -34.26 95.39
60.00 10 27 19 3393.18 -39.25 120.40 255.09 99.99 11 23 52 2393.2 -31.11 92.57
70.00 10 58 29 3301.41 -33.80 113.88 256.00 95.24 11 53 30 2301.4 -28.17 86.61
80.00 11 46 48 3149.99 -29.80 102.69 256.30 92.02 12 39 18 2150.0 -25.94 75.93
90.00 12 59 13 2916.24 -28.27 85.56 256.34 90.83 13 47 50 1916.2 -25.08 59.00
100.00 14 29 40 2624.46 -29.80 64.06 256.30 92.02 15 13 24 1624.5 -25.94 37.30
110.00 15 57 55 2348.23 -33.80 42.79 256.00 95.24 16 37 4 1348.2 -28.17 15.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3445 TRA -.6157 TC3 1.0699 BAW .3299 SGT 1335.7 SGR 827.4 SG3 644.6 ST 25.8 SR 25.7 88 20.2
RDE -.3900 RRA .1617 RC3 -.6993 FAW .18695 RRT -.4821 RRF .6283 RTF -.7186 CRT .7997 CRS .9733 CST .8218
FDE .8700 FRA -.2420 FC3 -8.3837 B8P 2216 SGB 1571.2 R23 -.1774 R13 .7671 LSA 39.6 MSA 12.3 88A 3.6
BDE .5203 BRA .6366 BC3 1.2782 F8P 1003 SG1 1414.2 SG2 684.6 THA 157.95 EL1 34.5 EL2 11.5 ALF 44.86



LAUNCH DATE AUG 15 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC

DISTANCE 368.705

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.304 GAL 2.88 AZL 89.05 HCA 115.03 SMA 206.47 ECC .27059 INC .9494 V1 29.407
RP 230.25 LAP .86 LOP 77.06 VP 22.584 GAP 14.27 AZP 90.40 TAL 13.60 TAP 128.63 RCA 150.60 APO 262.34 V2 23.687
RC 148.870 GL 7.24 GP -11.42 ZAL 62.88 ZAP 148.37 ETS 201.03 ZAE 164.25 ETE 306.04 ZAC 71.20 ETC 282.58 LVI -4.56

PLANETOCENTRIC CONIC

C3 19.108 VHL 4.371 DLA 16.29 RAL 20.09 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 3.934 DPA 6.08 RAP 48.49 ECC 1.3145
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 3 33 3451.12 -45.43 123.69 252.66 106.01 11 1 4 2451.1 -34.32 95.48
60.00 10 24 31 3395.28 -39.28 120.57 254.50 99.87 11 21 7 2395.3 -31.18 92.71
70.00 10 55 23 3304.42 -33.82 114.11 255.47 95.10 11 50 28 2304.4 -28.24 86.82
80.00 11 43 23 3153.99 -29.80 102.99 255.76 91.86 12 35 57 2154.0 -26.01 76.21
90.00 12 55 39 2920.73 -28.27 85.89 255.79 90.67 13 44 20 1920.7 -25.15 59.31
100.00 14 26 15 2628.47 -29.80 64.36 255.76 91.86 15 10 4 1628.5 -26.01 37.58
110.00 15 54 49 2351.24 -33.82 43.03 255.47 95.10 16 34 1 1351.2 -28.24 15.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3477 TRA -.6096 TC3 1.0661 BAW .3322 SGT 1330.1 SGR 847.2 SG3 679.1 ST 26.0 SR 25.1 SS 21.2
RDE -.3802 RRA .1566 RC3 -.7445 FAU .19576 RRT -.4947 RRF .6538 RTF -.7126 CRT .8046 CRS .9741 CST .8201
FDE .9308 FRA -.2932 FC3-8.8692 B8P 2247 SGB 1577.0 R23 -.1926 R13 .7687 LSA 39.9 MSA 12.3 SSA 3.6
BDE .5153 BRA .6294 BC3 1.3003 F8P 1065 SG1 1417.7 SG2 690.8 THA 156.66 EL1 34.4 EL2 11.3 ALF 43.78

LAUNCH DATE AUG 15 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC

DISTANCE 372.392

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.273 GAL 2.90 AZL 89.01 HCA 116.05 SMA 205.81 ECC .26832 INC .9898 V1 29.407
RP 230.63 LAP .89 LOP 78.08 VP 22.496 GAP 13.97 AZP 90.43 TAL 13.78 TAP 129.83 RCA 150.58 APO 261.03 V2 23.847
RC 149.713 GL 7.58 GP -11.79 ZAL 62.60 ZAP 147.14 ETS 200.73 ZAE 164.50 ETE 302.00 ZAC 70.88 ETC 282.63 LVI -4.27

PLANETOCENTRIC CONIC

C3 18.927 VHL 4.350 DLA 16.48 RAL 19.66 RAD 6642.4 VEL 11.788 PTH 6.81 VHP 3.836 DPA 5.68 RAP 48.44 ECC 1.3115
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 1 1 3452.97 -45.46 123.85 252.20 105.89 10 58 34 2453.0 -34.39 95.60
60.00 10 21 44 3397.83 -39.30 120.79 254.10 99.73 11 18 21 2397.8 -31.25 92.88
70.00 10 52 16 3307.94 -33.84 114.38 254.97 94.94 11 47 24 2307.9 -28.32 87.06
80.00 11 39 56 3158.56 -29.81 103.33 255.25 91.69 12 32 34 2158.6 -26.09 76.53
90.00 12 52 2 2925.83 -28.28 86.26 255.28 90.48 13 40 48 1925.8 -25.23 59.67
100.00 14 22 48 2633.03 -29.81 64.70 255.25 91.69 15 6 41 1633.0 -26.09 37.89
110.00 15 51 42 2354.76 -33.84 43.30 254.97 94.94 16 30 57 1354.8 -28.32 15.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3495 TRA -.6032 TC3 1.0598 BAW .3348 SGT 1322.3 SGR 869.4 SG3 714.9 ST 26.2 SR 24.6 SS 22.2
RDE -.3703 RRA .1512 RC3 -.7921 FAU .20493 RRT -.5072 RRF .6790 RTF -.7063 CRT .8085 CRS .9744 CST .8177
FDE .9933 FRA -.3471 FC3-9.3739 B8P 2268 SGB 1582.5 R23 -.2067 R13 .7712 LSA 40.2 MSA 12.3 SSA 3.7
BDE .5092 BRA .6219 BC3 1.3231 F8P 1129 SG1 1420.6 SG2 697.5 THA 155.20 EL1 34.2 EL2 11.1 ALF 42.78

LAUNCH DATE AUG 15 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC

DISTANCE 376.089

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.244 GAL 2.92 AZL 88.97 HCA 117.07 SMA 205.19 ECC .26619 INC 1.0309 V1 29.407
RP 231.01 LAP .92 LOP 79.10 VP 22.410 GAP 13.68 AZP 90.47 TAL 13.96 TAP 131.02 RCA 150.57 APO 259.81 V2 23.807
RC 152.572 GL 7.93 GP -12.16 ZAL 62.34 ZAP 145.89 ETS 200.45 ZAE 164.68 ETE 297.69 ZAC 70.54 ETC 282.68 LVI -3.97

PLANETOCENTRIC CONIC

C3 18.759 VHL 4.331 DLA 16.69 RAL 19.25 RAD 6642.3 VEL 11.780 PTH 6.81 VHP 3.742 DPA 5.27 RAP 48.36 ECC 1.3087
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 50 30 3455.21 -45.50 124.05 251.78 105.74 10 56 5 2455.2 -34.48 95.74
60.00 10 18 56 3400.82 -39.34 121.03 253.65 99.56 11 15 36 2400.8 -31.35 93.08
70.00 10 49 7 3311.95 -33.86 114.69 254.51 94.76 11 44 19 2311.9 -28.41 87.34
80.00 11 38 25 3163.70 -29.82 103.71 254.77 91.48 12 29 9 2163.7 -26.18 76.88
90.00 12 48 21 2931.54 -28.28 86.68 254.80 90.27 13 37 12 1931.5 -25.32 60.06
100.00 14 19 17 2638.18 -29.82 65.08 254.77 91.48 15 3 15 1638.2 -26.18 38.25
110.00 15 48 33 2358.77 -33.86 43.61 254.51 94.76 16 27 32 1358.8 -28.41 16.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3514 TRA -.5970 TC3 1.0495 BAW .3374 SGT 1312.4 SGR 893.6 SG3 751.9 ST 26.4 SR 24.0 SS 23.3
RDE -.3597 RRA .1454 RC3 -.8418 FAU .21437 RRT -.5178 RRF .7032 RTF -.6781 CRT .8128 CRS .9747 CST .8158
FDE 1.0824 FRA -.4045 FC3-9.8930 B8P 2281 SGB 1587.7 R23 -.2205 R13 .7741 LSA 40.6 MSA 12.4 SSA 3.8
BDE .5029 BRA .6144 BC3 1.3454 F8P 1195 SG1 1422.5 SG2 705.3 THA 193.63 EL1 34.0 EL2 10.9 ALF 41.71

LAUNCH DATE AUG 15 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC

DISTANCE 379.795

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 33.216 GAL 2.94 AZL 88.93 HCA 118.08 SMA 204.61 ECC .26419 INC 1.0725 V1 29.407
RP 231.39 LAP .95 LOP 80.11 VP 22.327 GAP 13.38 AZP 90.50 TAL 14.12 TAP 132.20 RCA 150.55 APO 258.66 V2 23.767
RC 155.447 GL 8.28 GP -12.55 ZAL 62.09 ZAP 144.61 ETS 200.16 ZAE 164.78 ETE 293.13 ZAC 70.20 ETC 282.74 LVI -3.66

PLANETOCENTRIC CONIC

C3 18.605 VHL 4.313 DLA 16.81 RAL 18.85 RAD 6642.2 VEL 11.774 PTH 6.80 VHP 3.652 DPA 4.83 RAP 48.27 ECC 1.3082
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 56 0 3457.84 -45.55 124.29 251.40 105.56 10 53 37 2457.8 -34.58 95.91
60.00 10 16 7 3404.25 -39.38 121.32 253.25 99.38 11 12 51 2404.2 -31.45 93.31
70.00 10 45 57 3316.46 -33.89 115.04 254.08 94.56 11 41 13 2316.5 -28.52 87.65
80.00 11 32 52 3169.42 -29.83 104.14 254.33 91.26 12 25 41 2169.4 -26.28 77.28
90.00 12 44 36 2937.87 -28.28 87.14 254.35 90.04 13 33 34 1937.9 -25.41 60.50
100.00 14 15 43 2643.90 -29.83 65.51 254.33 91.26 14 59 47 1643.9 -26.28 38.64
110.00 15 45 23 2363.28 -33.89 43.96 254.08 94.56 16 24 46 1363.3 -28.52 16.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3523 TRA -.5911 TC3 1.0348 BAW .3401 SGT 1299.8 SGR 920.3 SG3 790.1 ST 26.5 SR 23.4 SS 24.3
RDE -.3489 RRA .1392 RC3 -.8940 FAU .22413 RRT -.5269 RRF .7267 RTF -.6904 CRT .8158 CRS .9747 CST .8136
FDE 1.1336 FRA -.4647 FC3-10.4296 B8P 2291 SGB 1592.6 R23 -.2337 R13 .7775 LSA 40.9 MSA 12.4 SSA 3.8
BDE .4958 BRA .6073 BC3 1.3675 F8P 1264 SG1 1423.5 SG2 714.2 THA 151.88 EL1 33.7 EL2 10.6 ALF 40.66

LAUNCH DATE AUG 15 1973 FLIGHT TIME 162.00 ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 363.510 EARTH TO MARS
RL 151.51 LAL -.00 LOL 322.03 VL 33.190 GAL 2.95 AZL 88.89 HCA 119.09 SMA 204.06 ECC .26231 INC 1.1148 V1 29.407
RP 231.77 LAP .97 LOP 81.12 VP 22.246 GAP 13.09 AZP 90.54 TAL 14.27 TAP 133.38 RCA 150.54 APO 257.59 V2 25.728
RC 158.336 GL 8.63 GP -12.96 ZAL 61.87 ZAP 143.32 ETS 199.89 ZAE 164.79 ETE 288.37 ZAC 69.85 ETC 282.80 LVI -3.38
PLANETOCENTRIC CONIC
C3 18.463 VHL 4.297 DLA 17.15 RAL 18.46 RAD 6642.1 VEL 11.768 PTH 6.79 VHP 3.566 DPA 4.37 RAP 48.16 ECC 1.3039
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 53 29 3460.85 -45.60 124.56 251.05 105.36 10 51 10 2460.9 -34.70 96.10
60.00 10 13 18 3408.11 -39.42 121.64 252.88 99.16 11 10 6 2408.1 -31.57 93.57
70.00 10 42 44 3321.47 -33.91 115.43 253.69 94.33 11 38 5 2321.5 -28.63 87.99
80.00 11 29 14 3175.73 -29.84 104.61 253.91 91.02 12 22 10 2175.7 -26.39 77.71
90.00 12 40 46 2944.84 -28.28 87.65 253.92 89.78 13 29 51 1944.8 -25.52 60.98
100.00 14 12 6 2650.20 -29.84 65.97 253.91 91.02 14 56 16 1650.2 -26.39 39.08
110.00 15 42 10 2368.29 -33.91 44.35 253.69 94.33 16 21 39 1368.3 -28.63 16.91
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3533 TRA -.5857 TC3 1.0163 BAU .3432 SGT 1285.6 SGR 949.5 SG3 829.9 ST 26.6 SR 22.7 SS 25.5
RDE -.3374 RRA -.1326 RC3 -.9488 FAU .23425 RRT -.5338 RRF .7493 RTF -.6805 CRT .8189 CRS .9745 CST .8117
FDE 1.2124 FRA -.5264 FC-10.9841 B8P 2295 SGB 1598.2 R23 -.2461 R13 .7816 LSA 41.2 MSA 12.5 SSA 3.8
BDE .4885 BRA .6005 BC3 1.3904 F8P 1333 SG1 1424.5 SG2 724.6 THA 149.98 EL1 33.4 EL2 10.4 ALF 39.51

LAUNCH DATE AUG 15 1973 FLIGHT TIME 164.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 387.253 EARTH TO MARS
RL 151.51 LAL -.00 LOL 322.03 VL 33.166 GAL 2.96 AZL 88.84 HCA 120.10 SMA 203.58 ECC .26055 INC 1.1578 V1 29.407
RP 232.14 LAP 1.00 LOP 82.13 VP 22.168 GAP 12.81 AZP 90.58 TAL 14.41 TAP 134.51 RCA 150.52 APO 256.60 V2 23.689
RC 161.238 GL 8.99 GP -13.37 ZAL 61.67 ZAP 141.99 ETS 199.61 ZAE 164.69 ETE 283.48 ZAC 69.49 ETC 282.87 LVI -3.04
PLANETOCENTRIC CONIC
C3 18.332 VHL 4.282 DLA 17.39 RAL 18.09 RAD 6642.1 VEL 11.762 PTH 6.79 VHP 3.484 DPA 3.89 RAP 48.02 ECC 1.3017
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 51 0 3464.26 -45.67 124.86 250.75 105.13 10 48 44 2464.3 -34.83 96.32
60.00 10 10 28 3412.40 -39.47 121.99 252.54 98.93 11 7 21 2412.4 -31.70 93.86
70.00 10 39 29 3326.99 -33.94 115.86 253.33 94.08 11 34 58 2327.0 -28.76 88.37
80.00 11 25 33 3182.63 -29.85 105.12 253.53 90.75 12 18 35 2182.6 -26.51 78.19
90.00 12 36 51 2952.44 -28.28 88.21 253.53 89.51 13 26 4 1952.4 -25.63 61.51
100.00 14 8 25 2657.10 -29.85 66.49 253.53 90.75 14 52 42 1657.1 -26.51 39.56
110.00 15 38 55 2373.81 -33.94 44.78 253.33 94.08 16 18 29 1373.8 -28.76 17.29
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3536 TRA -.5808 TC3 .9924 BAU .3463 SGT 1268.6 SGR 981.2 SG3 870.4 ST 26.7 SR 22.0 SS 26.7
RDE -.3254 RRA .1257 RC3 -1.0059 FAU .24455 RRT -.5380 RRF .7706 RTF -.6687 CRT .8215 CRS .9741 CST .8096
FDE 1.2943 FRA -.5937 FC-11.5490 B8P 2299 SGB 1603.8 R23 -.2573 R13 .7865 LSA 41.6 MSA 12.6 SSA 3.8
BDE .4805 BRA .5943 BC3 1.4131 F8P 1406 SG1 1424.6 SG2 736.5 THA 147.89 EL1 33.0 EL2 10.1 ALF 38.34

LAUNCH DATE AUG 15 1973 FLIGHT TIME 166.00 ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC DISTANCE 390.983 EARTH TO MARS
RL 151.51 LAL -.00 LOL 322.03 VL 33.143 GAL 2.98 AZL 88.80 HCA 121.10 SMA 203.09 ECC .25889 INC 1.2015 V1 29.407
RP 232.51 LAP 1.03 LOP 83.13 VP 22.092 GAP 12.92 AZP 90.62 TAL 14.54 TAP 135.64 RCA 150.51 APO 255.66 V2 23.650
RC 164.150 GL 9.36 GP -13.80 ZAL 61.48 ZAP 140.85 ETS 199.34 ZAE 164.47 ETE 278.53 ZAC 69.13 ETC 282.94 LVI -2.72
PLANETOCENTRIC CONIC
C3 18.213 VHL 4.268 DLA 17.65 RAL 17.74 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 3.405 DPA 3.39 RAP 47.67 ECC 1.2997
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 48 30 3468.04 -45.73 125.20 250.48 104.88 10 48 18 2468.0 -34.98 96.56
60.00 10 7 37 3417.13 -39.51 122.38 252.24 98.66 11 4 34 2417.1 -31.84 94.18
70.00 10 36 11 3333.03 -33.97 116.33 252.99 93.80 11 31 45 2333.0 -28.89 88.79
80.00 11 21 47 3190.14 -29.85 105.68 253.17 90.45 12 14 57 2190.1 -26.63 78.72
90.00 12 32 51 2980.71 -28.27 88.81 253.17 89.20 13 22 12 1980.7 -25.75 62.09
100.00 14 4 39 2664.81 -29.85 67.04 253.17 90.45 14 49 3 1664.6 -26.63 40.08
110.00 15 35 38 2379.84 -33.97 45.25 252.99 93.80 16 15 18 1379.8 -28.89 17.71
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3534 TRA -.5785 TC3 .9830 BAU .3497 SGT 1249.1 SGR 1015.6 SG3 912.1 ST 26.7 SR 21.2 SS 28.0
RDE -.3129 RRA .1183 RC3 -1.0655 FAU .25512 RRT -.5389 RRF .7908 RTF -.6643 CRT .8237 CRS .9735 CST .8071
FDE 1.3816 FRA -.6635 FC-12.1272 B8P 2307 SGB 1609.9 R23 -.2871 R13 .7921 LSA 42.0 MSA 12.8 SSA 3.8
BDE .4720 BRA .5885 BC3 1.4362 F8P 1482 SG1 1424.4 SG2 750.2 THA 145.58 EL1 32.6 EL2 9.8 ALF 37.11

LAUNCH DATE AUG 15 1973 FLIGHT TIME 168.00 ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC DISTANCE 394.699 EARTH TO MARS
RL 151.51 LAL -.00 LOL 322.03 VL 33.121 GAL 2.99 AZL 88.78 HCA 122.10 SMA 202.64 ECC .25733 INC 1.2461 V1 29.407
RP 232.89 LAP 1.06 LOP 84.14 VP 22.019 GAP 12.24 AZP 90.66 TAL 14.68 TAP 136.78 RCA 150.50 APO 254.79 V2 23.612
RC 167.073 GL 9.73 GP -14.24 ZAL 61.32 ZAP 139.28 ETS 199.06 ZAE 164.14 ETE 273.59 ZAC 68.78 ETC 283.02 LVI -2.40
PLANETOCENTRIC CONIC
C3 18.103 VHL 4.255 DLA 17.91 RAL 17.39 RAD 6642.0 VEL 11.753 PTH 6.78 VHP 3.329 DPA 2.87 RAP 47.69 ECC 1.2979
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 46 0 3472.21 -45.80 125.58 250.25 104.60 10 43 53 2472.2 -35.14 96.83
60.00 10 4 45 3422.30 -39.57 122.81 251.97 98.38 11 1 47 2422.3 -31.99 94.53
70.00 10 32 51 3339.58 -34.00 116.84 252.69 93.50 11 28 31 2339.6 -29.04 89.24
80.00 11 17 56 3198.27 -29.86 106.20 252.85 90.13 12 11 14 2198.3 -26.77 79.28
90.00 12 28 48 2989.65 -28.28 89.47 252.83 88.88 13 18 15 1989.7 -25.87 62.71
100.00 14 0 48 2672.74 -29.86 67.65 252.85 90.13 14 45 21 1672.7 -26.77 40.65
110.00 15 32 17 2386.39 -34.00 45.78 252.69 93.50 16 12 4 1386.4 -29.04 18.16
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3530 TRA -.5732 TC3 .9287 BAU .3536 SGT 1228.2 SGR 1052.9 SG3 955.0 ST 26.7 SR 20.4 SS 29.3
RDE -.2996 RRA .1107 RC3 -1.1279 FAU .26596 RRT -.5365 RRF .8098 RTF -.6375 CRT .8254 CRS .9727 CST .8047
FDE 1.4751 FRA -.7336 FC-12.7190 B8P 2314 SGB 1617.8 R23 -.2749 R13 .7988 LSA 42.5 MSA 12.9 SSA 3.8
BDE .4630 BRA .5838 BC3 1.4610 F8P 1560 SG1 1425.0 SG2 765.8 THA 143.04 EL1 32.2 EL2 9.5 ALF 35.77

LAUNCH DATE AUG 15 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.101 GAL 2.99 AZL 88.71 MCA 123.10 SMA 202.23 ECC .25587 INC 1.2913 V1 29.407
RP 233.25 LAP 1.00 LOP 85.13 VP 21.947 GAP 11.96 AZP 90.71 TAL 14.77 TAP 137.87 RCA 150.49 APO 253.98 V2 23.573
RC 170.003 GL 10.11 GP -14.70 ZAL 61.18 ZAP 137.89 ETS 198.78 ZAE 163.89 ETE 266.74 ZAC 66.38 ETC 283.10 LVI -2.07

PLANETOCENTRIC CONIC

C3 18.003 VHL 4.243 DLA 18.19 RAL 17.06 RAD 6641.9 VEL 11.749 PTH 6.78 VHP 3.257 DPA 2.32 RAP 47.50 ECC 1.2963
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 43 30 3476.76 -45.88 125.99 250.05 104.29 10 41 27 2476.8 -35.31 97.12
60.00 10 1 51 3427.69 -39.62 123.28 251.73 98.06 10 58 59 2427.9 -32.16 94.91
70.00 10 29 27 3346.64 -34.02 117.39 252.42 93.18 11 25 14 2346.6 -29.19 89.74
80.00 11 14 0 3207.01 -29.86 106.93 252.55 89.79 12 7 27 2207.0 -26.91 79.90
90.00 12 24 33 2979.27 -28.24 90.17 252.52 88.52 13 14 12 1979.3 -26.01 63.38
100.00 13 56 52 2681.48 -29.86 68.30 252.55 89.79 14 41 33 1681.5 -26.91 41.26
110.00 15 28 54 2393.45 -34.02 46.31 252.42 93.18 16 8 47 1393.5 -29.19 18.65

DIFFERENTIAL CORRECTIONS

TDE -.3457 TRA -.5643 TC3 .9022 BAV .3603
RDE -.2867 RRA .1017 RC3-1.1946 FAU .27744
FDE 1.5611 FRA -.8187 FC-13.3415 BSP 2250
BDE .4491 BRA .5734 BC3 1.4970 FSP 1624

MID-COURSE EXECUTION ACCURACY

SGT 1203.1 SGR 1094.7 SG3 1000.1
RRT -.5401 RRF .8281 RTF -.6261
SGB 1626.6 R23 -.2703 R13 .8110
SG1 1430.D S62 775.1 THA 139.97

ORBIT DETERMINATION ACCURACY

ST 26.3 SR 19.5 SS 30.4
CRT .8256 CRS .9710 CST .7982
LSA 42.6 MSA 13.0 SSA 3.8
EL1 31.4 EL2 9.2 ALF 34.99

LAUNCH DATE AUG 15 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.082 GAL 3.00 AZL 88.66 HCA 124.09 SMA 201.85 ECC .25450 INC 1.3376 V1 29.407
RP 233.62 LAP 1.11 LOP 86.13 VP 21.878 GAP 11.88 AZP 90.75 TAL 14.87 TAP 138.96 RCA 150.48 APO 253.22 V2 23.536
RC 172.941 GL 10.50 GP -15.17 ZAL 61.05 ZAP 136.47 ETS 198.49 ZAE 163.11 ETE 264.06 ZAC 67.99 ETC 283.19 LVI -1.73

PLANETOCENTRIC CONIC

C3 17.912 VHL 4.232 DLA 18.49 RAL 16.75 RAD 6641.9 VEL 11.745 PTH 6.77 VHP 3.188 DPA 1.76 RAP 47.29 ECC 1.2948
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 41 0 3481.71 -45.96 126.44 249.89 103.95 10 39 1 2481.7 -35.50 97.44
60.00 9 58 56 3433.96 -39.68 123.78 251.53 97.73 10 56 10 2434.0 -32.34 95.32
70.00 10 26 0 3354.26 -34.05 117.98 252.18 92.83 11 21 54 2354.3 -29.35 90.27
80.00 11 9 58 3216.45 -29.85 107.63 252.28 89.42 12 3 34 2216.4 -27.05 80.56
90.00 12 20 13 2989.66 -28.22 90.93 252.24 88.14 13 10 3 1989.7 -26.15 64.11
100.00 13 52 50 2690.92 -29.85 69.00 252.28 89.42 14 37 41 1690.9 -27.05 41.93
110.00 15 25 26 2401.08 -34.05 46.90 252.18 92.83 16 5 27 1401.1 -29.35 19.19

DIFFERENTIAL CORRECTIONS

TDE -.3496 TRA -.5677 TC3 .8444 BAV .3633
RDE -.2712 RRA .0940 RC3-1.2602 FAU .28813
FDE 1.6761 FRA -.8835 FC-13.9266 BSP 2314
BDE .4424 BRA .5755 BC3 1.5170 FSP 1714

MID-COURSE EXECUTION ACCURACY

SGT 1179.7 SGR 1136.1 SG3 1042.9
RRT -.5204 RRF .8439 RTF -.5934
SGB 1637.8 R23 -.2791 R13 .8171
SG1 1428.4 S62 801.2 THA 137.07

ORBIT DETERMINATION ACCURACY

ST 26.6 SR 18.5 SS 32.1
CRT .8271 CRS .9700 CST .7984
LSA 43.5 MSA 13.3 SSA 3.7
EL1 31.2 EL2 8.9 ALF 32.85

LAUNCH DATE AUG 15 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.065 GAL 3.01 AZL 88.62 HCA 125.09 SMA 201.49 ECC .25322 INC 1.3848 V1 29.407
RP 233.99 LAP 1.13 LOP 87.12 VP 21.811 GAP 11.41 AZP 90.80 TAL 14.95 TAP 140.04 RCA 150.47 APO 252.51 V2 23.498
RC 175.886 GL 10.89 GP -15.65 ZAL 60.95 ZAP 135.03 ETS 198.20 ZAE 162.42 ETE 259.58 ZAC 67.60 ETC 283.28 LVI -1.39

PLANETOCENTRIC CONIC

C3 17.829 VHL 4.222 DLA 18.80 RAL 16.44 RAD 6641.9 VEL 11.741 PTH 6.77 VHP 3.123 DPA 1.18 RAP 47.08 ECC 1.2934
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 38 28 3487.04 -46.05 126.93 249.77 103.59 10 36 35 2487.0 -35.70 97.79
60.00 9 55 58 3440.47 -39.74 124.33 251.36 97.36 10 53 18 2440.5 -32.53 95.77
70.00 10 22 26 3362.43 -34.08 118.62 251.97 92.45 11 18 31 2362.4 -29.93 90.84
80.00 11 5 49 3226.55 -29.84 108.38 252.03 89.03 11 59 36 2226.5 -27.21 81.27
90.00 12 15 45 3000.78 -28.20 91.74 251.98 87.74 13 5 46 2000.8 -26.29 64.89
100.00 13 48 41 2701.02 -29.84 69.75 252.03 89.03 14 33 42 1701.0 -27.21 42.64
110.00 15 21 54 2409.25 -34.08 47.54 251.97 92.45 16 2 4 1409.2 -29.93 19.76

DIFFERENTIAL CORRECTIONS

TDE -.3483 TRA -.5677 TC3 .7904 BAV .3688
RDE -.2596 RRA .0891 RC3-1.3300 FAU .29936
FDE 1.7874 FRA -.9598 FC-14.5362 BSP 2342
BDE .4320 BRA .5740 BC3 1.5471 FSP 1800

MID-COURSE EXECUTION ACCURACY

SGT 1153.7 SGR 1181.8 SG3 1087.6
RRT -.5025 RRF .8589 RTF -.5660
SGB 1651.6 R23 -.2765 R13 .8279
SG1 1431.7 S62 823.4 THA 133.63

ORBIT DETERMINATION ACCURACY

ST 26.6 SR 17.5 SS 33.6
CRT .8273 CRS .9682 CST .7951
LSA 44.1 MSA 13.5 SSA 3.7
EL1 30.7 EL2 8.5 ALF 31.25

LAUNCH DATE AUG 15 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.048 GAL 3.01 AZL 88.57 HCA 126.07 SMA 201.18 ECC .25202 INC 1.4330 V1 29.407
RP 234.35 LAP 1.16 LOP 88.11 VP 21.746 GAP 11.14 AZP 90.84 TAL 15.03 TAP 141.10 RCA 150.46 APO 251.86 V2 23.461
RC 178.838 GL 11.30 GP -16.14 ZAL 60.86 ZAP 133.57 ETS 197.91 ZAE 161.61 ETE 255.35 ZAC 67.20 ETC 283.38 LVI -1.04

PLANETOCENTRIC CONIC

C3 17.755 VHL 4.214 DLA 19.11 RAL 16.15 RAD 6641.8 VEL 11.738 PTH 6.77 VHP 3.061 DPA .58 RAP 46.81 ECC 1.2922
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 35 56 3492.76 -46.14 127.45 249.68 103.19 10 34 9 2492.8 -35.92 98.17
60.00 9 52 57 3447.43 -39.80 124.91 251.22 96.97 10 50 25 2447.4 -32.73 96.25
70.00 10 18 52 3371.15 -34.10 119.30 251.78 92.05 11 15 3 2371.1 -29.71 91.45
80.00 11 1 33 3237.33 -29.83 109.18 251.81 88.61 11 55 31 2237.3 -27.37 82.03
90.00 12 11 9 3012.67 -28.16 92.61 251.74 87.31 13 1 22 2012.7 -26.44 65.73
100.00 13 44 25 2711.81 -29.83 70.55 251.81 88.61 14 29 37 1711.8 -27.37 43.40
110.00 15 18 18 2417.96 -34.10 48.21 251.78 92.05 15 58 36 1418.0 -29.71 20.37

DIFFERENTIAL CORRECTIONS

TDE -.3437 TRA -.5655 TC3 .7367 BAV .3762
RDE -.2396 RRA .0752 RC3-1.4032 FAU .31090
FDE 1.8993 FRA -1.0458 FC-15.1598 BSP 2341
BDE .4190 BRA .5704 BC3 1.5849 FSP 1876

MID-COURSE EXECUTION ACCURACY

SGT 1125.2 SGR 1231.4 SG3 1133.6
RRT -.4836 RRF .8729 RTF -.5361
SGB 1668.0 R23 -.2645 R13 .8420
SG1 1439.7 S62 842.4 THA 129.71

ORBIT DETERMINATION ACCURACY

ST 26.4 SR 16.5 SS 35.0
CRT .8269 CRS .9655 CST .7897
LSA 44.6 MSA 13.7 SSA 3.6
EL1 30.0 EL2 8.1 ALF 29.70

LAUNCH DATE AUG 15 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC

RL 151.81 LAL -.00 LOL 322.03 VL 33.033 GAL 3.01 AZL 88.52 HCA 127.06 SMA 200.85 ECC .25089 INC 1.4823 V1 29.407
RP 234.71 LAP 1.18 LOP 89.09 VP 21.683 GAP 10.87 AZP 90.89 TAL 15.10 TAP 142.15 RCA 150.46 APO 251.24 V2 23.424
RC 181.791 GL 11.71 GP -16.65 ZAL 60.79 ZAP 132.09 ETS 197.60 ZAE 160.69 ETE 251.40 ZAC 66.79 ETC 283.48 LVI -.68

PLANETOCENTRIC CONIC

C3 17.688 VHL 4.206 DLA 19.45 RAL 15.87 RAD 6641.8 VEL 11.735 PTH 6.77 VHP 3.002 DPA -.05 RAP 46.95 ECC 1.2911
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 33 22 3498.89 -46.23 128.01 249.62 102.77 10 31 41 2498.9 -36.15 98.57
60.00 9 49 54 3454.87 -39.85 125.53 251.11 96.55 10 47 29 2454.9 -32.94 96.77
70.00 10 15 11 3380.45 -34.12 120.02 251.62 91.62 11 11 31 2380.5 -29.90 92.11
80.00 10 57 9 3248.86 -29.81 110.04 251.61 88.16 11 51 18 2248.9 -27.53 82.85
90.00 12 6 23 3025.40 -28.12 93.54 251.52 86.84 12 56 48 2025.4 -26.59 66.63
100.00 13 40 1 2723.34 -29.81 71.41 251.61 88.16 14 25 24 1723.3 -27.53 44.21
110.00 15 14 37 2427.27 -34.12 48.94 251.62 91.62 15 55 4 1427.3 -29.90 21.03

DIFFERENTIAL CORRECTIONS

TDE -.3421 TRA -.5680 TC3 .6683 BAW .3834
RDE -.2219 RRA .0657 RC3-1.4773 FAU .32207
FDE 2.0256 FRA-1.1227 FC-15.7635 BSP 2384
BDE .4078 BRA .5718 BC3 1.6214 FSP 1964

MID-COURSE EXECUTION ACCURACY

SGT 1098.4 SGR 1282.4 SG3 1178.5
RRT -.4511 RRF .8854 RTF -.4945
SGB 1688.5 R23 -.2500 R13 .8560
SG1 1448.4 SG2 868.0 THA 125.49

ORBIT DETERMINATION ACCURACY

ST 26.4 SR 15.3 SS 36.7
CRT .8260 CR8 .9624 CST .7859
LSA 45.5 MSA 14.0 S8A 3.6
EL1 29.5 EL2 7.7 ALF 27.66

LAUNCH DATE AUG 15 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.019 GAL 3.01 AZL 88.47 HCA 128.04 SMA 200.96 ECC .24984 INC 1.5326 V1 29.407
RP 235.06 LAP 1.21 LOP 90.08 VP 21.621 GAP 10.80 AZP 90.94 TAL 15.13 TAP 143.19 RCA 150.45 APO 250.67 V2 23.387
RC 164.790 GL 12.13 GP -17.17 ZAL 60.75 ZAP 130.99 ETS 197.28 ZAE 159.68 ETE 247.71 ZAC 66.38 ETC 283.59 LVI -.32

PLANETOCENTRIC CONIC

C3 17.629 VHL 4.199 DLA 19.79 RAL 15.60 RAD 6641.8 VEL 11.733 PTH 6.76 VHP 2.947 DPA -.69 RAP 46.26 ECC 1.2901
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 30 47 3505.41 -46.33 128.61 249.60 102.31 10 29 12 2505.4 -36.39 99.00
60.00 9 46 48 3462.77 -39.91 126.20 251.02 96.10 10 44 30 2462.8 -33.17 97.32
70.00 10 11 24 3390.34 -34.14 120.79 251.48 91.16 11 7 54 2390.3 -30.10 92.81
80.00 10 52 36 3261.15 -29.78 110.95 251.43 87.68 11 46 57 2261.1 -27.71 83.72
90.00 12 1 25 3036.98 -28.06 94.53 251.33 86.35 12 52 4 2039.0 -26.75 67.59
100.00 13 35 28 2735.62 -29.78 72.32 251.43 87.68 14 21 4 1735.6 -27.71 45.09
110.00 15 10 50 2437.16 -34.14 49.71 251.48 91.16 15 51 27 1437.2 -30.10 21.73

DIFFERENTIAL CORRECTIONS

TDE -.3361 TRA -.5682 TC3 .6030 BAW .3933
RDE -.2041 RRA .0552 RC3-1.5561 FAU .33378
FDE 2.1485 FRA-1.2078 FC-16.3912 BSP 2402
BDE .3932 BRA .5709 BC3 1.6689 FSP 2042

MID-COURSE EXECUTION ACCURACY

SGT 1070.5 SGR 1338.5 SG3 1225.3
RRT -.4187 RRF .8971 RTF -.4526
SGB 1713.9 R23 -.2253 R13 .8725
SG1 1466.3 SG2 887.4 THA 120.86

ORBIT DETERMINATION ACCURACY

ST 26.1 SR 14.1 SS 36.3
CRT .8237 CR8 .9578 CST .7790
LSA 46.1 MSA 14.2 S8A 3.5
EL1 28.7 EL2 7.3 ALF 25.81

LAUNCH DATE AUG 15 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 33.005 GAL 3.01 AZL 88.42 HCA 129.02 SMA 200.30 ECC .24886 INC 1.5843 V1 29.407
RP 235.42 LAP 1.23 LOP 91.08 VP 21.561 GAP 10.33 AZP 91.00 TAL 15.20 TAP 144.22 RCA 150.45 APO 250.14 V2 23.351
RC 187.714 GL 12.55 GP -17.71 ZAL 60.71 ZAP 129.07 ETS 196.95 ZAE 158.57 ETE 244.30 ZAC 65.95 ETC 283.70 LVI .05

PLANETOCENTRIC CONIC

C3 17.577 VHL 4.193 DLA 20.16 RAL 15.33 RAD 6641.7 VEL 11.731 PTH 6.76 VHP 2.895 DPA -1.36 RAP 45.96 ECC 1.2893
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 28 9 3512.34 -46.43 129.25 249.61 101.83 10 26 42 2512.3 -36.65 99.47
60.00 9 43 37 3471.15 -39.97 126.90 250.97 95.63 10 41 29 2471.1 -33.40 97.91
70.00 10 7 30 3400.83 -34.15 121.61 251.37 90.68 11 4 11 2400.8 -30.30 93.56
80.00 10 47 54 3274.20 -29.74 111.92 251.27 87.17 11 42 28 2274.2 -27.68 84.65
90.00 11 56 16 3053.46 -28.00 95.58 251.15 85.83 12 47 10 2053.5 -26.91 68.62
100.00 13 30 45 2748.68 -29.74 73.29 251.27 87.17 14 16 34 1748.7 -27.88 46.02
110.00 15 6 57 2447.65 -34.15 50.53 251.37 90.68 15 47 44 1447.6 -30.30 22.48

DIFFERENTIAL CORRECTIONS

TDE -.3230 TRA -.5631 TC3 .5450 BAW .4082
RDE -.1869 RRA .0425 RC3-1.6405 FAU .34614
FDE 2.2591 FRA-1.3134 FC-17.0484 BSP 2382
BDE .3732 BRA .5647 BC3 1.7286 FSP 2103

MID-COURSE EXECUTION ACCURACY

SGT 1037.1 SGR 1400.4 SG3 1274.3
RRT -.3901 RRF .9081 RTF -.4.37
SGB 1742.6 R23 -.1921 R13 .8899
SG1 1495.8 SG2 894.0 THA 116.00

ORBIT DETERMINATION ACCURACY

ST 25.3 SR 13.0 SS 39.6
CRT .8207 CR8 .9506 CST .7663
LSA 46.5 MSA 14.4 S8A 3.4
EL1 27.6 EL2 6.8 ALF 24.41

LAUNCH DATE AUG 15 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 322.03 VL 32.993 GAL 3.01 AZL 88.36 HCA 130.00 SMA 200.05 ECC .24794 INC 1.6372 V1 29.407
RP 235.77 LAP 1.23 LOP 92.03 VP 21.503 GAP 10.07 AZP 91.05 TAL 15.23 TAP 145.23 RCA 150.45 APO 249.65 V2 23.315
RC 190.680 GL 12.99 GP -18.25 ZAL 60.70 ZAP 127.54 ETS 196.61 ZAE 157.37 ETE 241.16 ZAC 65.53 ETC 283.81 LVI .43

PLANETOCENTRIC CONIC

C3 17.532 VHL 4.187 DLA 20.53 RAL 15.09 RAD 6641.7 VEL 11.729 PTH 6.76 VHP 2.846 DPA -2.04 RAP 45.65 ECC 1.2885
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 25 30 3519.72 -46.53 129.93 249.66 101.31 10 24 10 2519.7 -36.92 99.96
60.00 9 40 23 3480.07 -40.03 127.66 250.95 95.12 10 38 23 2480.1 -33.64 98.54
70.00 10 3 30 3412.01 -34.15 122.49 251.29 90.16 11 0 22 2412.0 -30.52 94.36
80.00 10 43 0 3286.18 -29.68 112.96 251.14 86.63 11 37 48 2286.2 -28.06 85.65
90.00 11 50 53 3069.00 -27.91 96.71 251.00 85.27 12 42 2 2069.0 -27.07 69.73
100.00 13 25 52 2762.65 -29.68 74.32 251.14 86.63 14 11 54 1762.7 -28.06 47.02
110.00 15 2 56 2456.83 -34.15 51.40 251.29 90.16 15 43 55 1456.8 -30.52 23.28

DIFFERENTIAL CORRECTIONS

TDE -.3265 TRA -.5767 TC3 .4394 BAW .4154
RDE -.1640 RRA .0340 RC3-1.7169 FAU .35599
FDE 2.4264 FRA-1.3671 FC-17.5788 BSP 2519
BDE .3654 BRA .5777 BC3 1.7722 FSP 2216

MID-COURSE EXECUTION ACCURACY

SGT 1022.3 SGR 1456.0 SG3 1315.2
RRT -.3161 RRF .9168 RTF -.3353
SGB 1779.1 R23 -.1598 R13 .9041
SG1 1515.5 SG2 931.8 THA 110.60

ORBIT DETERMINATION ACCURACY

ST 25.7 SR 11.5 SS 41.8
CRT .8167 CR8 .9432 CST .7652
LSA 48.1 MSA 14.8 S8A 3.3
EL1 27.4 EL2 6.2 ALF 21.15

LAUNCH DATE AUG 15 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.981 GAL 3.01 AZL 88.31 HCA 130.97 SMA 199.82 ECC .24709 INC 1.6915 V1 29.407  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.447 GAP 9.81 AZP 91.11 TAL 15.26 TAP 146.22 RCA 150.45 APO 249.20 V2 23.279  
 RC 193.649 GL 13.44 GP -18.81 ZAL 60.71 ZAP 125.98 ETS 196.26 ZAE 156.10 ETE 238.26 ZAC 65.09 ETC 283.93 LVI .82

PLANETOCENTRIC CONIC

C3 17.495 VHL 4.103 DLA 20.92 RAL 14.84 RAD 6641.7 VEL 11.727 PTH 6.76 VHP 2.799 DPA -2.74 RAP 45.33 ECC 1.2879  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 22 48 3527.51 -46.63 130.66 249.74 100.76 10 21 36 2527.5 -37.20 100.49  
 60.00 9 37 4 3489.49 -40.08 128.45 250.95 94.58 10 35 14 2489.5 -33.90 99.20  
 70.00 9 59 22 3423.84 -34.15 123.41 251.22 89.62 10 56 26 2423.8 -30.74 95.21  
 80.00 10 37 54 3303.02 -29.62 114.05 251.02 86.06 11 32 57 2303.0 -28.24 86.71  
 90.00 11 45 16 3085.55 -27.81 97.91 250.86 84.67 12 36 41 2085.5 -27.23 70.92  
 100.00 13 20 46 2777.49 -29.62 75.42 251.02 86.06 14 7 3 1777.5 -28.24 48.08  
 110.00 14 58 48 2470.66 -34.15 52.33 251.22 89.62 15 39 59 1470.7 -30.74 24.13

DIFFERENTIAL CORRECTIONS

TDE -.3194 TRA -.5814 TC3 .3506 BAV .4292  
 RDE -.1424 RRA .0223 RC3-1.8011 FAU .38701  
 FDE 2.5721 FRA-1.4515 FC-18.1617 BSP 2586  
 BDE .3497 BRA .5819 BC3 1.8349 FSP 2299

MID-COURSE EXECUTION ACCURACY

SGT 1002.2 SGR 1519.6 SG3 1360.0  
 RRT -.2524 RRF .9253 RTF -.2651  
 SGB 1820.4 R23 -.1198 R13 .9161  
 SG1 1553.7 SG2 948.5 THA 105.26

ORBIT DETERMINATION ACCURACY

ST 25.3 SR 10.0 SS 43.7  
 CRT .8112 CRS .9300 CST .7554  
 LSA 49.1 MSA 15.0 SSA 3.2  
 EL1 26.7 EL2 5.6 ALF 18.63

LAUNCH DATE AUG 15 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.971 GAL 3.00 AZL 88.25 HCA 131.94 SMA 199.61 ECC .24629 INC 1.7472 V1 29.407  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.392 GAP 9.55 AZP 91.17 TAL 15.27 TAP 147.21 RCA 150.45 APO 248.77 V2 23.244  
 RC 196.619 GL 13.90 GP -19.38 ZAL 60.73 ZAP 124.42 ETS 195.88 ZAE 154.76 ETE 235.59 ZAC 64.65 ETC 284.05 LVI 1.21

PLANETOCENTRIC CONIC

C3 17.464 VHL 4.179 DLA 21.33 RAL 14.61 RAD 6641.7 VEL 11.726 PTH 6.76 VHP 2.756 DPA -3.46 RAP 44.99 ECC 1.2874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 3 3535.74 -46.73 131.43 249.85 100.18 10 18 59 2535.7 -37.50 101.06  
 60.00 9 33 40 3499.45 -40.13 129.29 250.98 94.01 10 32 0 2499.5 -34.16 99.92  
 70.00 9 58 6 3436.36 -34.14 124.39 251.18 89.04 10 52 22 2436.4 -30.97 96.12  
 80.00 10 32 35 3318.82 -29.54 115.22 250.92 85.45 11 27 54 2318.8 -28.43 87.85  
 90.00 11 39 21 3103.25 -27.70 99.19 250.73 84.04 12 31 4 2103.2 -27.39 72.19  
 100.00 13 15 27 2793.29 -29.54 76.59 250.92 85.45 14 2 0 1793.3 -28.43 49.22  
 110.00 14 54 32 2483.18 -34.14 53.31 251.18 89.04 15 35 55 1483.2 -30.97 25.03

DIFFERENTIAL CORRECTIONS

TDE -.3108 TRA -.5872 TC3 .2563 BAV .4447  
 RDE -.1197 RRA .0104 RC3-1.8875 FAU .37780  
 FDE 2.7216 FRA-1.5342 FC-18.7291 BSP 2665  
 BDE .3330 BRA .5873 BC3 1.9048 FSP 2380

MID-COURSE EXECUTION ACCURACY

SGT 987.1 SGR 1586.2 SG3 1404.0  
 RRT -.1796 RRF .9330 RTF -.1865  
 SGB 1868.2 R23 -.0793 R13 .9298  
 SG1 1601.7 SG2 961.6 THA 100.02

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 8.5 SS 45.5  
 CRT .8030 CRS .9086 CST .7435  
 LSA 50.2 MSA 15.3 SSA 3.1  
 EL1 25.9 EL2 4.9 ALF 15.97

LAUNCH DATE AUG 15 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.961 GAL 2.99 AZL 88.20 HCA 132.91 SMA 199.42 ECC .24555 INC 1.8048 V1 29.407  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.339 GAP 9.29 AZP 91.23 TAL 15.28 TAP 148.18 RCA 150.45 APO 248.39 V2 23.209  
 RC 199.589 GL 14.37 GP -19.95 ZAL 60.77 ZAP 122.84 ETS 195.50 ZAE 153.36 ETE 233.12 ZAC 64.21 ETC 284.18 LVI 1.61

PLANETOCENTRIC CONIC

C3 17.439 VHL 4.176 DLA 21.75 RAL 14.38 RAD 6641.7 VEL 11.725 PTH 6.76 VHP 2.717 DPA -4.20 RAP 44.64 ECC 1.2870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 14 3544.43 -46.83 132.24 250.00 99.56 10 16 19 2544.4 -37.81 101.66  
 60.00 9 30 11 3509.96 -40.18 130.18 251.04 93.41 10 28 40 2510.0 -34.44 100.87  
 70.00 9 50 40 3449.62 -34.12 125.42 251.16 88.43 10 48 9 2449.6 -31.20 97.08  
 80.00 10 27 0 3335.66 -29.44 116.46 250.84 84.80 11 22 36 2335.7 -28.61 89.07  
 90.00 11 33 7 3122.19 -27.55 100.56 250.61 83.37 12 25 10 2122.2 -27.55 73.55  
 100.00 13 9 52 2810.13 -29.44 77.83 250.84 84.80 13 56 42 1810.1 -28.61 50.44  
 110.00 14 50 6 2496.44 -34.12 54.34 251.16 88.43 15 31 42 1496.4 -31.20 26.00

DIFFERENTIAL CORRECTIONS

TDE -.3010 TRA -.5941 TC3 .1547 BAV .4618  
 RDE -.0955 RRA -.0019 RC3-1.9748 FAU .38810  
 FDE 2.8780 FRA-1.6153 FC-19.2663 BSP 2759  
 BDE .3158 BRA .5941 BC3 1.9809 FSP 2460

MID-COURSE EXECUTION ACCURACY

SGT 978.5 SGR 1654.6 SG3 1446.3  
 RRT -.0967 RRF .9398 RTF -.087  
 SGB 1922.3 R23 -.0401 R13 .9390  
 SG1 1658.7 SG2 971.5 THA 94.99

ORBIT DETERMINATION ACCURACY

ST 24.5 SR 7.0 SS 47.4  
 CRT .7893 CRS .8707 CST .7295  
 LSA 51.4 MSA 15.6 SSA 3.0  
 EL1 25.1 EL2 4.2 ALF 13.10

LAUNCH DATE AUG 15 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.952 GAL 2.99 AZL 88.14 HCA 133.87 SMA 199.24 ECC .24486 INC 1.8635 V1 29.407  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.288 GAP 9.03 AZP 91.29 TAL 15.28 TAP 149.15 RCA 150.45 APO 248.03 V2 23.174  
 RC 202.557 GL 14.86 GP -20.55 ZAL 60.83 ZAP 121.24 ETS 195.09 ZAE 151.89 ETE 230.84 ZAC 63.76 ETC 284.31 LVI 2.02

PLANETOCENTRIC CONIC

C3 17.422 VHL 4.174 DLA 22.19 RAL 14.18 RAD 6641.7 VEL 11.724 PTH 6.76 VHP 2.680 DPA -4.95 RAP 44.28 ECC 1.2867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 14 22 3553.58 -46.93 133.10 250.18 98.90 10 13 35 2553.6 -38.13 102.30  
 60.00 9 26 34 3521.05 -40.22 131.13 251.12 92.77 10 25 15 2521.1 -34.72 101.48  
 70.00 9 46 3 3463.66 -34.09 126.52 251.16 87.78 10 43 47 2463.7 -31.44 98.11  
 80.00 10 21 9 3353.62 -29.32 117.78 250.76 84.12 11 17 2 2353.6 -28.79 90.37  
 90.00 11 26 32 3142.51 -27.39 102.02 250.51 82.66 12 18 54 2142.5 -27.70 75.02  
 100.00 13 4 1 2828.09 -29.32 79.15 250.76 84.12 13 51 9 1828.1 -28.79 51.74  
 110.00 14 45 30 2510.08 -34.09 55.44 251.16 87.78 15 27 20 1510.5 -31.44 27.02

DIFFERENTIAL CORRECTIONS

TDE -.2890 TRA -.6012 TC3 .0496 BAV .4811  
 RDE -.0706 RRA -.0153 RC3-2.0650 FAU .39828  
 FDE 3.0331 FRA-1.7023 FC-19.7914 BSP 2859  
 BDE .2975 BRA .6014 BC3 2.0656 FSP 2531

MID-COURSE EXECUTION ACCURACY

SGT 976.5 SGR 1726.7 SG3 1488.2  
 RRT -.0076 RRF .9460 RTF -.0052  
 SGB 1983.7 R23 -.0053 R13 .9460  
 SG1 1726.8 SG2 976.4 THA 90.36

ORBIT DETERMINATION ACCURACY

ST 23.9 SR 5.5 SS 49.3  
 CRT .7635 CRS .7949 CST .7114  
 LSA 52.7 MSA 15.8 SSA 2.9  
 EL1 24.3 EL2 3.5 ALF 10.18

LAUNCH DATE AUG 15 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 32.944 GAL 2.98 AZL 88.08 HCA 134.83 SMA 199.08 ECC .24423 INC 1.9242 V1 29.407  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.238 GAP 8.78 AZP 91.36 TAL 15.26 TAP 150.09 RCA 150.46 APO 247.70 V2 23.140  
 RC 205.523 GL 15.35 GP -21.15 ZAL 80.91 ZAP 119.64 ETS 194.67 ZAE 150.38 ETE 228.73 ZAC 63.30 ETC 284.44 LVI 2.44

DISTANCE 443.662 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.412 VHL 4.173 DLA 22.83 RAL 13.95 RAD 6641.7 VEL 11.724 PTH 6.75 VHP 2.646 DPA -5.72 RAP 43.91 ECC 1.2866  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 25 3563.22 -47.03 134.01 250.39 98.20 10 10 48 2563.2 -38.47 102.98  
 60.00 9 22 51 3532.75 -40.26 132.12 251.23 92.10 10 21 44 2532.7 -35.02 102.33  
 70.00 9 41 15 3478.53 -34.05 127.68 251.18 87.10 10 39 14 2478.5 -31.68 99.20  
 80.00 10 14 58 3372.80 -29.10 119.19 250.70 83.39 11 11 11 2372.8 -28.97 91.77  
 90.00 11 19 31 3164.37 -27.19 103.59 250.41 81.90 12 12 16 2164.4 -27.84 76.60  
 100.00 12 57 50 2847.27 -29.18 80.56 250.70 83.39 13 45 17 1847.3 -28.97 53.14  
 110.00 14 40 42 2525.35 -34.05 56.59 251.18 87.10 15 22 47 1525.3 -31.68 28.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2748 TRA -.8088 TC3 -.0593 BAU .5024 SGT 982.5 SGR 1802.2 SG3 1529.0 ST 23.2 SR 4.1 SS 51.2  
 RDE -.0448 RRA -.0291 RC3-2.1576 FAU .40824 RRT .0856 RRF .9516 RTF .0918 CRT .6958 CRS .6233 CBT .6885  
 FDE 3.1872 FRA-1.7882 FC-20.2981 BSP 2975 SGB 2032.6 R23 .0236 R13 .9513 LSA 53.9 MSA 16.1 SSA 2.8  
 BDE .2784 BRA .6095 BC3 2.1585 FSP 2599 SG1 1805.0 SG2 977.3 THA 86.22 EL1 23.4 EL2 3.0 ALF 7.18

LAUNCH DATE AUG 15 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 32.936 GAL 2.97 AZL 88.01 HCA 135.79 SMA 198.93 ECC .24363 INC 1.9868 V1 29.407  
 RP 237.81 LAP 1.39 LOP 97.83 VP 21.189 GAP 8.53 AZP 91.42 TAL 15.24 TAP 151.03 RCA 150.46 APO 247.39 V2 23.106  
 RC 208.485 GL 15.86 GP -21.76 ZAL 61.00 ZAP 118.03 ETS 194.23 ZAE 148.82 ETE 226.77 ZAC 62.84 ETC 284.57 LVI 2.87

DISTANCE 447.446 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.408 VHL 4.172 DLA 23.12 RAL 13.74 RAD 6641.7 VEL 11.723 PTH 6.75 VHP 2.614 DPA -6.51 RAP 43.54 ECC 1.2865  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 8 23 3573.37 -47.13 134.98 250.63 97.47 10 7 56 2573.4 -38.82 103.70  
 60.00 9 19 0 3545.07 -40.28 133.17 251.37 91.39 10 18 5 2545.1 -35.32 103.23  
 70.00 9 36 14 3494.27 -33.98 128.90 251.21 86.37 10 34 29 2494.3 -31.92 100.36  
 80.00 10 8 26 3393.31 -29.01 120.69 250.65 82.62 11 4 59 2393.3 -29.15 93.27  
 90.00 11 12 2 3187.94 -26.95 105.27 250.32 81.09 12 5 10 2187.9 -27.98 78.31  
 100.00 12 51 18 2867.78 -29.01 82.06 250.65 82.62 13 39 5 1867.8 -29.15 54.64  
 110.00 14 35 41 2541.09 -33.98 57.82 251.21 86.37 15 18 2 1541.1 -31.92 29.28

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2563 TRA -.6146 TC3 -.1678 BAU .5261 SGT 992.8 SGR 1882.4 SG3 1569.8 ST 22.3 SR 3.3 SS 52.9  
 RDE -.0187 RRA -.0448 RC3-2.2542 FAU .41824 RRT .1786 RRF .9566 RTF .1887 CRT .5080 CRS .2327 CBT .6575  
 FDE 3.3334 FRA-1.8668 FC-20.7993 BSP 3084 SGB 2128.2 R23 .0447 R13 .9558 LSA 55.1 MSA 16.2 SSA 2.8  
 BDE .2570 BRA .6163 BC3 2.2603 FSP 2641 SG1 1893.8 SG2 971.0 THA 82.69 EL1 22.4 EL2 2.8 ALF 4.30

LAUNCH DATE AUG 15 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 32.929 GAL 2.96 AZL 87.95 HCA 136.75 SMA 198.79 ECC .24309 INC 2.0514 V1 29.407  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.142 GAP 8.28 AZP 91.49 TAL 15.21 TAP 151.96 RCA 150.47 APO 247.12 V2 23.073  
 RC 211.443 GL 16.39 GP -22.38 ZAL 61.11 ZAP 116.43 ETS 193.77 ZAE 147.23 ETE 224.95 ZAC 62.37 ETC 284.71 LVI 3.30

DISTANCE 451.230 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.412 VHL 4.173 DLA 23.61 RAL 13.54 RAD 6641.7 VEL 11.724 PTH 6.75 VHP 2.586 DPA -7.30 RAP 43.16 ECC 1.2866  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 15 3584.06 -47.22 136.00 250.91 98.69 10 4 59 2584.1 -39.18 104.47  
 60.00 9 15 0 3558.10 -40.30 134.27 251.53 90.64 10 14 18 2558.1 -35.63 104.20  
 70.00 9 30 59 3511.00 -33.90 130.20 251.26 85.61 10 29 30 2511.0 -32.17 101.60  
 80.00 10 1 28 3415.40 -28.81 122.30 250.61 81.80 10 58 23 2415.4 -29.31 94.89  
 90.00 11 3 58 3213.58 -26.67 107.09 250.22 80.22 11 57 31 2213.6 -28.09 80.18  
 100.00 12 44 20 2889.87 -28.81 83.67 250.61 81.80 13 32 29 1889.9 -29.31 56.26  
 110.00 14 30 25 2557.82 -33.90 59.12 251.26 85.61 15 13 3 1557.8 -32.17 30.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2472 TRA -.6329 TC3 -.3083 BAU .5491 SGT 1039.8 SGR 1933.8 SG3 1600.1 ST 22.2 SR 3.3 SS 55.5  
 RDE .0147 RRA -.0955 RC3-2.3386 FAU .42500 RRT .2827 RRF .9607 RTF .2222 CRT .0232 CRS -.4550 CBT .6361  
 FDE 3.5401 FRA-1.9278 FC-21.1316 BSP 3284 SGB 2213.0 R23 .0739 R13 .9581 LSA 57.4 MSA 16.6 SSA 2.8  
 BDE .2477 BRA .6354 BC3 2.3389 FSP 2749 SG1 1982.9 SG2 982.6 THA 78.61 EL1 22.2 EL2 3.3 ALF .20

LAUNCH DATE AUG 15 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC  
 RL 151.51 LAL -.00 LOL 322.03 VL 32.923 GAL 2.94 AZL 87.88 HCA 137.70 SMA 198.67 ECC .24259 INC 2.1181 V1 29.407  
 RP 238.47 LAP 1.43 LOP 99.75 VP 21.097 GAP 8.03 AZP 91.57 TAL 15.17 TAP 152.87 RCA 150.48 APO 246.87 V2 23.040  
 RC 214.394 GL 16.93 GP -23.01 ZAL 61.24 ZAP 114.81 ETS 193.29 ZAE 145.60 ETE 223.24 ZAC 61.90 ETC 284.85 LVI 3.75

DISTANCE 455.016 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 17.423 VHL 4.174 DLA 24.12 RAL 13.34 RAD 6641.7 VEL 11.724 PTH 6.76 VHP 2.561 DPA -8.12 RAP 42.78 ECC 1.2867  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 2 3595.30 -47.30 137.07 251.22 95.87 10 1 57 2595.3 -39.55 105.28  
 60.00 9 10 51 3571.81 -40.30 135.44 251.71 89.85 10 10 22 2571.8 -35.95 105.22  
 70.00 9 25 28 3528.74 -33.80 131.58 251.33 84.80 10 24 18 2528.7 -32.41 102.92  
 80.00 9 54 1 3439.14 -28.57 124.02 250.56 80.92 10 51 20 2439.1 -29.47 96.64  
 90.00 10 55 13 3241.50 -26.33 109.07 250.12 78.28 11 49 15 2241.5 -28.18 82.21  
 100.00 12 38 53 2913.61 -28.57 85.39 250.56 80.92 13 25 26 1913.6 -29.47 58.00  
 110.00 14 24 54 2575.55 -33.80 60.49 251.33 84.80 15 7 49 1575.6 -32.41 31.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2295 TRA -.6453 TC3 -.4389 BAU .5755 SGT 1083.6 SGR 2033.9 SG3 1633.4 ST 21.5 SR 4.7 SS 57.6  
 RDE .0460 RRA -.0701 RC3-2.4320 FAU .43283 RRT .3734 RRF .9646 RTF .3840 CRT -.2502 CRS -.7895 CBT .5985  
 FDE 3.7120 FRA-2.0019 FC-21.5074 BSP 3448 SGB 2304.6 R23 .0912 R13 .9806 LSA 59.2 MSA 16.8 SSA 2.5  
 BDE .2341 BRA .6491 BC3 2.4709 FSP 2807 SG1 2085.7 SG2 980.3 THA 75.47 EL1 21.5 EL2 4.5 ALF 176.74

LAUNCH DATE AUG 15 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

DISTANCE 458.803

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.917 GAL 2.93 AZL 87.81 HCA 138.65 SMA 198.56 ECC .24213 INC 2.1872 V1 29.407
RP 236.79 LAP 1.44 LOP 100.70 VP .21052 GAP 7.78 AZP 91.64 TAL 15.12 TAP 153.78 RCA 150.48 APO 246.64 V2 23.008
RC 217.340 GL 17.48 GP -23.64 ZAL 61.38 ZAP 113.20 ETS 192.79 ZAE 143.94 ETE 221.64 ZAC 61.42 ETC 285.00 LVI 4.20

PLANETOCENTRIC CONIC

C3 17.441 VHL 4.176 DLA 24.65 RAL 13.14 RAD 6641.7 VEL 11.725 PTH 6.76 VHP 2.539 DPA -8.94 RAP 42.40 ECC 1.2870
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 58 41 3607.11 -47.38 138.20 251.57 95.00 9 58 48 2607.1 -39.94 106.15
60.00 9 6 30 3586.26 -40.29 136.67 251.91 89.01 10 6 17 2586.3 -36.27 106.31
70.00 9 19 38 3547.58 -33.68 133.03 251.40 83.95 10 18 45 2547.6 -32.66 104.34
80.00 9 46 0 3464.83 -28.28 125.88 250.51 79.99 10 43 45 2464.8 -29.61 98.53
90.00 10 45 39 3272.20 -25.92 111.22 250.01 78.28 11 40 11 2272.2 -28.25 84.46
100.00 12 28 52 2939.30 -28.28 87.25 250.51 79.99 13 17 51 1939.3 -29.61 59.90
110.00 14 19 4 2594.40 -33.68 61.95 251.40 83.95 15 2 19 1594.4 -32.66 33.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2095 TRA -.6587 TC3 -.5702 BAU .6036 SGT 1139.3 SGR 2115.9 SG3 1663.8 ST 20.7 SR 6.6 S5 59.7
RDE .0790 RRA -.0849 RC3-2.5253 FAU .43989 RRT .4566 RRF .9681 RTF .4677 CRT -.3452 CR8 -.9080 CST .5521
FDE 3.8863 FRA-2.0709 FC-21.8352 B8P 3631 SGB 2403.2 R23 .1047 R13 .9629 LSA 61.1 MSA 17.0 S8A 2.4
BDE .2239 BRA .6642 BC3 2.5889 F8P 2864 SGI 2195.7 SG2 976.8 THA 72.65 EL1 20.9 EL2 6.1 ALF 173.17

LAUNCH DATE AUG 15 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

DISTANCE 462.590

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.912 GAL 2.92 AZL 87.74 HCA 139.60 SMA 198.46 ECC .24171 INC 2.2587 V1 29.407
RP 239.10 LAP 1.46 LOP 101.65 VP 21.009 GAP 7.54 AZP 91.72 TAL 15.07 TAP 154.67 RCA 150.49 APO 246.43 V2 22.975
RC 220.278 GL 18.06 GP -24.29 ZAL 61.54 ZAP 111.59 ETS 192.27 ZAE 142.25 ETE 220.13 ZAC 60.94 ETC 285.14 LVI 4.67

PLANETOCENTRIC CONIC

C3 17.468 VHL 4.179 DLA 25.20 RAL 12.94 RAD 6641.7 VEL 11.726 PTH 6.76 VHP 2.519 DPA -9.78 RAP 42.02 ECC 1.2875
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 55 13 3619.52 -47.44 139.39 251.94 94.08 9 55 32 2619.5 -40.33 107.07
60.00 9 1 58 3601.52 -40.26 137.97 252.14 88.13 10 2 0 2601.5 -36.60 107.47
70.00 9 13 28 3567.65 -33.52 134.58 251.49 83.05 10 12 55 2567.7 -32.90 105.86
80.00 9 37 19 3492.78 -27.93 127.88 250.46 78.99 10 35 32 2492.8 -29.72 100.60
90.00 10 35 2 3306.35 -25.43 113.60 249.87 77.18 11 30 9 2306.4 -28.28 86.95
100.00 12 20 11 2967.25 -27.93 89.25 250.46 78.99 13 9 38 1967.2 -29.72 61.97
110.00 14 12 54 2614.47 -33.52 63.50 251.49 83.05 14 56 28 1614.5 -32.90 34.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1876 TRA -.6735 TC3 -.7083 BAU .6334 SGT 1207.4 SGR 2199.4 SG3 1691.0 ST 20.0 SR 8.7 S8 61.8
RDE .1134 RRA -.1001 RC3-2.6183 FAU .44614 RRT .5312 RRF .9712 RTF .5423 CRT -.3557 CR8 -.9532 CST .4948
FDE 4.0589 FRA-2.1373 FC-22.1120 B8P 3826 SGB 2509.0 R23 .1156 R13 .9648 LSA 63.2 MSA 17.2 S8A 2.3
BDE .2192 BRA .6809 BC3 2.7124 F8P 2915 SGI 2312.7 SG2 972.8 THA 70.07 EL1 20.3 EL2 8.1 ALF 169.50

LAUNCH DATE AUG 15 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

DISTANCE 466.378

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.908 GAL 2.90 AZL 87.67 HCA 140.55 SMA 198.37 ECC .24132 INC 2.3328 V1 29.407
RP 239.42 LAP 1.48 LOP 102.60 VP 20.968 GAP 7.29 AZP 91.80 TAL 15.00 TAP 155.55 RCA 150.50 APO 246.25 V2 22.944
RC 223.209 GL 18.65 GP -24.95 ZAL 61.72 ZAP 109.99 ETS 191.72 ZAE 140.55 ETE 218.71 ZAC 60.45 ETC 285.29 LVI 5.15

PLANETOCENTRIC CONIC

C3 17.502 VHL 4.184 DLA 25.77 RAL 12.75 RAD 6641.7 VEL 11.727 PTH 6.76 VHP 2.502 DPA -10.82 RAP 41.84 ECC 1.2880
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 51 36 3632.58 -47.50 140.65 252.35 93.11 9 52 9 2632.6 -40.74 108.06
60.00 8 57 13 3617.63 -40.22 139.34 252.38 87.21 9 57 30 2617.6 -36.94 108.71
70.00 9 6 54 3589.06 -33.33 136.22 251.57 82.09 10 6 43 2589.1 -33.13 107.48
80.00 9 27 49 3523.41 -27.51 130.06 250.38 77.91 10 26 32 2523.4 -29.81 102.87
90.00 10 23 4 3344.94 -24.82 116.26 249.69 75.99 11 18 49 2344.9 -28.25 89.77
100.00 12 10 41 2997.88 -27.51 91.43 250.38 77.91 13 0 39 1997.9 -29.81 64.24
110.00 14 6 20 2635.88 -33.33 65.14 251.57 82.09 14 50 16 1635.9 -33.13 36.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1630 TRA -.6887 TC3 -.8494 BAU .6648 SGT 1285.3 SGR 2284.6 SG3 1715.3 ST 19.3 SR 11.1 S8 63.8
RDE .1489 RRA -.1163 RC3-2.7113 FAU .45164 RRT .5967 RRF .9740 RTF .5776 CRT -.3203 CR8 -.9733 CST .4230
FDE 4.2260 FRA-2.2049 FC-22.3396 B8P 4030 SGB 2621.3 R23 .1236 R13 .9667 LSA 65.2 MSA 17.4 S8A 2.2
BDE .2207 BRA .6985 BC3 2.8412 F8P 2954 SGI 2436.4 SG2 967.1 THA 67.76 EL1 19.7 EL2 10.2 ALF 165.65

LAUNCH DATE AUG 15 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

DISTANCE 470.187

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.904 GAL 2.88 AZL 87.59 HCA 141.49 SMA 198.30 ECC .24097 INC 2.4098 V1 29.407
RP 239.73 LAP 1.50 LOP 103.54 VP 20.927 GAP 7.05 AZP 91.89 TAL 14.93 TAP 156.42 RCA 150.51 APO 246.08 V2 22.912
RC 226.132 GL 19.26 GP -25.61 ZAL 61.91 ZAP 108.39 ETS 191.16 ZAE 138.83 ETE 217.35 ZAC 59.95 ETC 285.43 LVI 5.63

PLANETOCENTRIC CONIC

C3 17.546 VHL 4.189 DLA 26.36 RAL 12.55 RAD 6641.7 VEL 11.729 PTH 6.76 VHP 2.488 DPA -11.48 RAP 41.27 ECC 1.2888
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 47 50 3646.31 -47.54 141.98 252.79 92.09 9 48 36 2646.3 -41.16 109.11
60.00 8 52 13 3634.64 -40.15 140.78 252.64 86.23 9 52 47 2634.6 -37.28 110.03
70.00 8 59 54 3611.97 -33.11 137.97 251.66 81.08 10 0 6 2612.0 -33.36 109.23
80.00 9 17 18 3557.33 -27.00 132.46 250.28 76.75 10 16 35 2557.3 -29.85 105.39
90.00 10 9 13 3389.61 -24.05 119.31 249.45 74.65 11 5 43 2389.6 -28.13 93.04
100.00 12 0 10 3031.80 -27.00 93.82 250.28 76.75 12 50 42 2031.8 -29.85 66.76
110.00 13 59 20 2658.79 -33.11 66.89 251.66 81.08 14 43 39 1658.8 -33.36 38.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1343 TRA -.7034 TC3 -.9890 BAU .6982 SGT 1368.6 SGR 2374.2 SG3 1738.2 ST 18.6 SR 13.5 S8 65.7
RDE .1854 RRA -.1341 RC3-2.8071 FAU .45690 RRT .6530 RRF .9766 RTF .6639 CRT -.2494 CR8 -.9633 CST .3309
FDE 4.3853 FRA-2.2780 FC-22.5433 B8P 4235 SGB 2740.4 R23 .1276 R13 .9688 LSA 67.4 MSA 17.5 S8A 2.2
BDE .2289 BRA .7160 BC3 2.9762 F8P 2973 SGI 2567.3 SG2 958.6 THA 65.78 EL1 19.1 EL2 12.7 ALF 161.21

LAUNCH DATE AUG 15 1973      FLIGHT TIME 210.00      ARRIVAL DATE MAR 13 1974

Heliocentric Conic      DISTANCE 473.955      EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.900 GAL 2.87 AZL 87.51 HCA 142.43 SMA 198.23 ECC .24065 INC 2.4898 V1 29.407  
 RP 240.03 LAP 1.32 LOP 104.48 VP 20.888 GAP 6.81 AZP 91.97 TAL 14.85 TAP 157.28 RCA 150.52 APO 245.93 V2 22.882  
 RC 229.048 GL 19.89 GP -26.28 ZAL 62.12 ZAP 106.81 ETS 190.57 ZAE 137.10 ETE 216.07 ZAC 59.45 ETC 285.58 LVI 6.14

PLANETOCENTRIC CONIC

C3 17.599 VHL 4.193 DLA 26.97 RAL 12.35 RAD 6641.7 VEL 11.732 PTH 6.76 VHP 2.477 DPA -12.34 RAP 40.91 ECC 1.2896  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 53 3660.78 -47.57 143.38 253.26 91.02 9 44 54 2660.8 -41.59 110.23  
 60.00 8 46 56 3652.67 -40.06 142.30 252.91 85.20 9 47 49 2652.7 -37.62 111.44  
 70.00 8 52 23 3636.59 -32.83 139.84 251.75 80.01 9 53 0 2636.6 -33.57 111.12  
 80.00 9 5 28 3595.52 -26.38 135.12 230.14 75.48 10 5 23 2595.5 -29.84 108.23  
 90.00 9 52 27 3443.68 -23.02 122.94 249.10 73.11 10 49 50 2443.7 -27.87 96.97  
 100.00 11 48 19 3069.99 -26.38 96.49 250.14 75.48 12 39 29 2070.0 -29.84 69.60  
 110.00 13 51 49 2683.41 -32.83 68.76 251.75 80.01 14 36 33 1683.4 -33.57 40.04

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.1082 TRA -.7243 TC3-1.1446 BAU .7316      SGT 1475.2 SGR 2456.1 SCS 1731.8      ST 18.3 SR 16.4 SS 88.2  
 RDE .2281 RRA -.1481 RC3-2.8910 FAU .45933      RRT .6997 RRF .9787 RTF .7092      CRT -.1781 CRS -.9898 CBT .2383  
 FDE 4.5803 FRA-2.3104 FC-22.5951 B8P 4483      SGB 2865.1 R23 .1362 R13 .9698      LSA 70.2 MSA 17.8 SSA 2.1  
 BDE .2525 BRA .7393 BC3 3.1094 F8P 3027      SGI 2699.9 SG2 958.7 THA 63.63      EL1 19.1 EL2 15.4 ALF 181.00

LAUNCH DATE AUG 15 1973      FLIGHT TIME 212.00      ARRIVAL DATE MAR 15 1974

Heliocentric Conic      DISTANCE 477.743      EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.897 GAL 2.85 AZL 87.43 HCA 143.37 SMA 198.17 ECC .24037 INC 2.3731 V1 29.407  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.850 GAP 6.57 AZP 92.07 TAL 14.77 TAP 158.14 RCA 150.54 APO 245.81 V2 22.851  
 RC 231.955 GL 20.55 GP -26.96 ZAL 62.35 ZAP 105.24 ETS 189.96 ZAE 135.36 ETE 214.84 ZAC 58.94 ETC 285.74 LVI 6.65

PLANETOCENTRIC CONIC

C3 17.863 VHL 4.203 DLA 27.61 RAL 12.15 RAD 6641.8 VEL 11.734 PTH 6.76 VHP 2.469 DPA -13.21 RAP 40.55 ECC 1.2907  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 45 3676.01 -47.58 144.85 253.76 89.88 9 41 1 2876.0 -42.04 111.42  
 60.00 8 41 21 3671.75 -39.94 143.91 253.20 84.11 9 42 32 2671.8 -37.96 112.94  
 70.00 8 44 16 3663.13 -32.50 141.84 251.82 78.87 9 45 19 2663.1 -33.76 113.17  
 80.00 8 51 50 3639.36 -25.60 138.14 249.93 74.08 9 52 29 2639.4 -29.74 111.49  
 90.00 9 30 13 3515.25 -21.53 127.65 248.54 71.21 10 28 48 2515.3 -27.34 102.14  
 100.00 11 34 42 3113.83 -25.60 99.51 249.93 74.08 12 26 36 2113.8 -29.74 72.65  
 110.00 13 43 42 2709.95 -32.50 70.75 251.82 78.87 14 28 52 1710.0 -33.76 42.09

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.0766 TRA -.7434 TC3-1.2951 BAU .7669      SGT 1582.4 SGR 2542.9 SCS 1764.1      ST 18.0 SR 19.2 SS 70.3  
 RDE .2703 RRA -.1645 RC3-2.9782 FAU .46167      RRT -.0721 CRS -.9933 CBT .1197      CRT -.0721 CRS -.9933 CBT .1197  
 FDE 4.7512 FRA-2.3562 FC-22.6287 B8P 4728      SGB 2995.0 R23 .1402 R13 .9712      LSA 72.9 MSA 17.9 SSA 2.0  
 BDE .2809 BRA .7614 BC3 3.2476 F8P 3053      SGI 2839.0 SG2 954.0 THA 61.83      EL1 19.5 EL2 17.7 ALF 114.55

LAUNCH DATE AUG 15 1973      FLIGHT TIME 214.00      ARRIVAL DATE MAR 17 1974

Heliocentric Conic      DISTANCE 481.533      EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.895 GAL 2.83 AZL 87.34 HCA 144.31 SMA 198.12 ECC .24011 INC 2.6599 V1 29.407  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.813 GAP 6.33 AZP 92.16 TAL 14.68 TAP 158.98 RCA 150.55 APO 245.69 V2 22.821  
 RC 234.852 GL 21.23 GP -27.65 ZAL 62.59 ZAP 103.69 ETS 189.33 ZAE 133.61 ETE 213.68 ZAC 58.43 ETC 285.89 LVI 7.17

PLANETOCENTRIC CONIC

C3 17.737 VHL 4.212 DLA 28.27 RAL 11.95 RAD 6641.8 VEL 11.737 PTH 6.77 VHP 2.463 DPA -14.09 RAP 40.20 ECC 1.2919  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 35 23 3692.03 -47.56 146.40 254.28 88.69 9 36 55 2692.0 -42.48 112.70  
 60.00 8 35 24 3691.98 -39.79 145.61 253.50 82.97 9 36 56 2692.0 -38.30 114.56  
 70.00 8 35 27 3691.86 -32.10 143.98 251.88 77.66 9 36 59 2691.9 -33.93 115.40  
 80.00 8 35 33 3691.52 -24.58 141.68 249.60 72.49 9 37 3 2691.5 -29.51 115.34  
 90.00 8 41 22 3672.66 -17.75 137.64 246.95 67.62 9 42 35 2672.7 -25.44 113.26  
 100.00 11 18 25 3165.99 -24.58 103.05 249.60 72.49 12 11 11 2166.0 -29.51 76.71  
 110.00 13 34 53 2736.68 -32.10 72.90 251.88 77.66 14 20 32 1738.7 -33.93 44.31

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.0362 TRA -.7573 TC3-1.4318 BAU .8056      SGT 1680.9 SGR 2644.7 SCS 1781.3      ST 17.8 SR 21.7 SS 71.6  
 RDE .3071 RRA -.1880 RC3-3.0809 FAU .46594      RRT .7396 RRF .9827 RTF .1555      CRT .0840 CRS -.9949 CBT -.0387  
 FDE 4.8590 FRA-2.4593 FC-22.7418 B8P 4930      SGB 3133.7 R23 .1357 R13 .9739      LSA 74.8 MSA 17.8 SSA 1.9  
 BDE .3092 BRA .7806 BC3 3.3974 F8P 3007      SGI 2990.2 SG2 937.3 THA 60.97      EL1 21.8 EL2 17.6 ALF 78.53

LAUNCH DATE AUG 19 1973      FLIGHT TIME 216.00      ARRIVAL DATE MAR 19 1974

Heliocentric Conic      DISTANCE 485.320      EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.893 GAL 2.80 AZL 87.25 HCA 145.24 SMA 198.08 ECC .23989 INC 2.7506 V1 29.407  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.777 GAP 6.10 AZP 92.26 TAL 14.57 TAP 159.81 RCA 150.56 APO 245.60 V2 22.792  
 RC 237.730 GL 21.93 GP -28.33 ZAL 62.89 ZAP 102.16 ETS 188.68 ZAE 131.87 ETE 212.52 ZAC 57.90 ETC 286.04 LVI 7.71

PLANETOCENTRIC CONIC

C3 17.823 VHL 4.222 DLA 28.98 RAL 11.74 RAD 6641.8 VEL 11.741 PTH 6.77 VHP 2.461 DPA -14.98 RAP 39.88 ECC 1.2933  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 47 3708.98 -47.52 148.04 254.84 87.43 9 32 36 2709.0 -42.94 114.07  
 60.00 8 29 5 3713.55 -39.59 147.41 253.80 81.78 9 30 58 2713.6 -38.63 116.29  
 70.00 8 25 45 3723.35 -31.62 146.31 251.91 76.36 9 27 49 2723.3 -34.06 117.85  
 80.00 8 14 32 3758.70 -23.13 146.14 249.07 70.57 9 17 10 2758.7 -29.03 120.28  
 83.48 7 40 29 3888.18 -17.61 131.91 246.77 66.63 8 44 57 2888.2 -25.72 127.66  
 100.00 10 57 23 3233.17 -23.13 107.51 249.07 70.57 11 51 17 2233.2 -29.03 81.65  
 110.00 13 25 12 2770.17 -31.62 75.23 251.91 76.36 14 11 22 1770.2 -34.06 46.76

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.0047 TRA -.7848 TC3-1.5998 BAU .8415      SGT 1818.1 SGR 2720.9 SCS 1778.2      ST 18.4 SR 25.2 SS 74.5  
 RDE .3601 RRA -.1999 RC3-3.1487 FAU .46377      RRT .8015 RRF .9841 RTF .8086      CRT .1839 CRS -.9987 CBT -.1531  
 FDE 5.0752 FRA-2.4435 FC-22.5270 B8P 5236      SGB 3272.4 R23 .1449 R13 .9740      LSA 78.6 MSA 18.1 SSA 1.8  
 BDE .3602 BRA .8097 BC3 3.5317 F8P 3074      SGI 3133.3 SG2 944.1 THA 58.66      EL1 25.6 EL2 17.7 ALF 75.10



LAUNCH DATE AUG 15 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.891 GAL 2.78 AZL 87.15 HCA 146.17 SMA 198.05 ECC .23969 INC 2.8453 V1 29.407  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.743 GAP 5.88 AZP 92.36 TAL 14.48 TAP 160.64 RCA 150.58 APO 245.52 V2 22.763  
 RC 240.815 GL 22.66 GP -29.06 ZAL 63.13 ZAP 100.65 ETS 188.01 ZAE 130.13 ETE 211.43 ZAC 57.37 ETC 286.20 LVI 8.27

PLANETOCENTRIC CONIC

C3 17.922 VHL 4.233 DLA 29.68 RAL 11.52 RAD 6641.9 VEL 11.745 PTH 6.77 VHP 2.461 DPA -15.87 RAP 39.56 ECC 1.2950  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 35 3726.85 -47.45 149.76 255.41 86.11 9 28 2 2728.9 -43.40 115.54  
 60.00 8 22 18 3736.52 -39.35 149.32 254.10 80.49 9 24 34 2736.5 -38.95 118.16  
 70.00 8 15 1 3758.01 -31.04 148.84 251.89 74.97 9 17 39 2758.0 -34.14 120.55  
 80.00 7 39 53 3868.91 -20.45 153.23 247.94 67.76 8 44 22 2868.9 -27.81 128.24  
 80.61 7 16 57 3942.21 -17.98 157.56 246.82 65.99 8 22 39 2942.2 -26.32 133.30  
 100.00 10 22 44 3543.38 -20.45 114.60 247.94 67.76 11 18 28 2343.4 -27.81 89.60  
 110.00 13 14 27 2804.83 -31.04 77.76 251.89 74.97 14 1 12 1804.8 -34.14 49.47

DIFFERENTIAL CORRECTIONS

TDE .0355 TRA -.8072 TC3-1.7535 BAU .8904  
 RDE .4085 RRA -.2180 RC3-3.2289 FAU .46308  
 FDE 5.2311 FRA-2.4777 FC-22.3695 BSP 5510  
 BDE .4100 BRA .8362 BC3 3.6743 FSP 3081

MID-COURSE EXECUTION ACCURACY

SGT 1946.2 SGR 2809.8 SG3 1778.6  
 RRT .8252 RRF .9856 RTF .8315  
 SGB 3418.0 R23 .1467 R13 .9751  
 SG1 3286.2 SG2 940.0 THA 57.23

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 28.4 SS 76.8  
 CRT .3155 CRS -.9976 CST -.2910  
 LSA 81.8 MSA 18.3 SSA 1.7  
 EL1 29.4 EL2 17.5 ALF 71.04

LAUNCH DATE AUG 15 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.890 GAL 2.76 AZL 87.06 HCA 147.10 SMA 198.02 ECC .23952 INC 2.9446 V1 29.407  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.710 GAP 5.63 AZP 92.47 TAL 14.35 TAP 161.45 RCA 150.59 APO 245.45 V2 22.734  
 RC 243.479 GL 23.41 GP -29.78 ZAL 63.42 ZAP 99.17 ETS 187.32 ZAE 126.39 ETE 210.36 ZAC 56.82 ETC 286.36 LVI 8.84

PLANETOCENTRIC CONIC

C3 18.035 VHL 4.247 DLA 30.42 RAL 11.29 RAD 6641.9 VEL 11.750 PTH 6.78 VHP 2.464 DPA -16.77 RAP 39.27 ECC 1.2968  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 45 3745.75 -47.35 151.57 256.01 84.71 9 23 10 2745.7 -43.87 117.11  
 60.00 8 15 0 3761.07 -39.05 151.34 254.40 79.15 9 17 41 2761.1 -39.26 120.18  
 70.00 8 2 55 3796.74 -30.32 151.63 251.81 73.46 9 6 12 2796.7 -34.15 123.57  
 78.30 6 58 35 3999.31 -18.36 161.99 246.89 65.31 8 5 15 2999.3 -26.94 137.73  
 78.30 6 58 35 3999.31 -18.36 161.99 246.89 65.31 8 5 15 2999.3 -26.94 137.73  
 78.30 6 58 35 3999.31 -18.36 161.99 246.89 65.31 8 5 15 2999.3 -26.94 137.73  
 110.00 13 2 22 2843.56 -30.32 80.55 251.81 73.46 13 49 45 1843.6 -34.15 52.49

DIFFERENTIAL CORRECTIONS

TDE .0790 TRA -.8309 TC3-1.9068 BAU .9200  
 RDE .4598 RRA -.2365 RC3-3.3050 FAU .46121  
 FDE 5.3847 FRA-2.5050 FC-22.1390 BSP 5785  
 BDE .4865 BRA .8639 BC3 3.8156 FSP 3074

MID-COURSE EXECUTION ACCURACY

SGT 2079.5 SGR 2898.5 SG3 1774.3  
 RRT .8450 RRF .9868 RTF .8506  
 SGB 3567.3 R23 .1480 R13 .9762  
 SG1 3442.3 SG2 936.3 THA 55.91

ORBIT DETERMINATION ACCURACY

ST 20.4 SR 31.8 SS 78.8  
 CRT .4385 CRS -.9983 CST -.4194  
 LSA 85.2 MSA 18.4 SSA 1.6  
 EL1 33.5 EL2 17.3 ALF 68.20

LAUNCH DATE AUG 15 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.889 GAL 2.73 AZL 86.95 HCA 148.03 SMA 198.01 ECC .23937 INC 3.0488 V1 29.407  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.677 GAP 5.40 AZP 92.59 TAL 14.23 TAP 162.26 RCA 150.61 APO 245.40 V2 22.706  
 RC 246.330 GL 24.20 GP -30.51 ZAL 63.74 ZAP 97.72 ETS 186.61 ZAE 126.67 ETE 209.34 ZAC 56.26 ETC 286.52 LVI 9.43

PLANETOCENTRIC CONIC

C3 18.164 VHL 4.262 DLA 31.19 RAL 11.05 RAD 6642.0 VEL 11.755 PTH 6.78 VHP 2.469 DPA -17.67 RAP 39.00 ECC 1.2989  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 14 3765.75 -47.21 153.49 256.62 83.24 9 18 0 2765.7 -44.34 118.81  
 60.00 8 7 7 3787.42 -38.69 153.48 254.68 77.73 9 10 14 2787.4 -39.55 122.36  
 70.00 7 49 2 3840.86 -29.42 154.75 251.63 71.82 8 53 3 2840.9 -34.06 127.01  
 76.26 6 42 55 4047.53 -18.75 165.80 246.97 64.60 7 50 22 3047.5 -27.58 141.54  
 76.26 6 42 55 4047.53 -18.75 165.80 246.97 64.60 7 50 22 3047.5 -27.58 141.54  
 76.26 6 42 55 4047.53 -18.75 165.80 246.97 64.60 7 50 22 3047.5 -27.58 141.54  
 110.00 12 48 28 2887.68 -29.42 83.87 251.63 71.82 13 36 36 1887.7 -34.06 55.93

DIFFERENTIAL CORRECTIONS

TDE .1257 TRA -.8557 TC3-2.0593 BAU .9608  
 RDE .5128 RRA -.2561 RC3-3.3787 FAU .45845  
 FDE 5.5258 FRA-2.5316 FC-21.8509 BSP 6066  
 BDE .5280 BRA .8933 BC3 3.9568 FSP 3060

MID-COURSE EXECUTION ACCURACY

SGT 2217.7 SGR 2988.5 SG3 1766.3  
 RRT .8620 RRF .9880 RTF .8668  
 SGB 3721.5 R23 .1488 R13 .9772  
 SG1 3602.8 SG2 932.6 THA 54.68

ORBIT DETERMINATION ACCURACY

ST 22.0 SR 35.3 SS 80.5  
 CRT .5463 CRS -.9987 CST -.5313  
 LSA 86.7 MSA 18.5 SSA 1.5  
 EL1 37.9 EL2 17.2 ALF 65.89

LAUNCH DATE AUG 15 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.888 GAL 2.71 AZL 86.84 HCA 148.95 SMA 197.99 ECC .23925 INC 3.1580 V1 29.407  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.646 GAP 5.17 AZP 92.71 TAL 14.10 TAP 163.05 RCA 150.63 APO 245.36 V2 22.679  
 RC 249.167 GL 25.02 GP -31.25 ZAL 64.07 ZAP 96.29 ETS 185.87 ZAE 124.95 ETE 208.33 ZAC 55.69 ETC 286.69 LVI 10.03

PLANETOCENTRIC CONIC

C3 18.310 VHL 4.279 DLA 32.00 RAL 10.79 RAD 6642.1 VEL 11.762 PTH 6.79 VHP 2.478 DPA -18.58 RAP 38.75 ECC 1.3013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 20 3786.96 -47.02 155.50 257.25 81.70 9 12 27 2787.0 -44.80 120.64  
 60.00 7 58 31 3815.82 -38.26 155.77 254.93 76.23 9 2 7 2815.8 -39.80 124.73  
 70.00 7 32 31 3892.73 -28.27 158.34 251.31 69.98 8 37 24 2892.7 -33.82 131.04  
 74.37 6 28 54 4090.17 -19.14 169.23 247.06 63.86 7 37 4 3090.2 -28.23 144.97  
 74.37 6 28 54 4090.17 -19.14 169.23 247.06 63.86 7 37 4 3090.2 -28.23 144.97  
 74.37 6 28 54 4090.17 -19.14 169.23 247.06 63.86 7 37 4 3090.2 -28.23 144.97  
 110.00 12 31 58 2939.55 -28.27 87.26 251.31 69.98 13 20 57 1939.6 -33.82 59.96

DIFFERENTIAL CORRECTIONS

TDE .1762 TRA -.8817 TC3-2.2087 BAU 1.0020  
 RDE .5687 RRA -.2758 RC3-3.4465 FAU .45437  
 FDE 5.6606 FRA-2.5486 FC-21.4839 BSP 6355  
 BDE .5954 BRA .9238 BC3 4.0935 FSP 3039

MID-COURSE EXECUTION ACCURACY

SGT 2359.3 SGR 3077.2 SG3 1753.1  
 RRT .8762 RRF .9891 RTF .8804  
 SGB 3877.6 R23 .1495 R13 .9781  
 SG1 3764.5 SG2 929.6 THA 53.53

ORBIT DETERMINATION ACCURACY

ST 24.1 SR 38.9 SS 82.4  
 CRT .6369 CRS -.9990 CST -.6252  
 LSA 92.4 MSA 18.5 SSA 1.4  
 EL1 42.5 EL2 17.0 ALF 63.92

LAUNCH DATE AUG 18 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 29 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 32.888 GAL 2.68 AZL 86.73 HCA 149.87 SMA 197.99 ECC .23914 INC 3.2731 V1 29.407  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.616 GAP 4.94 AZP 92.83 TAL 13.97 TAP 183.84 RCA 150.84 APO 245.34 V2 22.652  
 RC 251.989 GL 25.87 GP -32.00 ZAL 64.41 ZAP 94.90 ETS 185.12 ZAE 123.25 ETE 207.36 ZAC 55.10 ETC 266.86 LVI 10.66

Distance 504.255 Earth to Mars

Planetocentric Conic: C3 18.475 VHL 4.296 DLA 32.83 RAL 10.52 RAD 6642.1 VEL 11.768 PTH 6.79 VHP 2.490 DPA -19.49 RAP 38.55 ECC 1.3041  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 0 3809.51 -46.78 157.63 257.88 80.08 9 6 29 2809.5 -45.26 122.62  
 60.00 7 49 6 3846.59 -37.73 158.22 255.14 74.65 8 53 13 2846.6 -40.03 127.32  
 70.00 7 11 41 3957.44 -26.68 162.71 250.72 67.84 8 17 39 2957.4 -33.32 136.03  
 72.58 6 16 3 4128.86 -19.54 172.40 247.17 63.07 7 24 52 3128.9 -28.91 148.15  
 72.58 6 16 3 4128.86 -19.54 172.40 247.17 63.07 7 24 52 3128.9 -28.91 148.15  
 72.58 6 16 3 4128.86 -19.54 172.40 247.17 63.07 7 24 52 3128.9 -28.91 148.15  
 110.00 12 11 8 3004.26 -26.68 91.62 250.72 67.84 13 1 12 2004.3 -33.32 64.95

Differential Corrections: TDE .2299 TRA -.9089 TC3-2.3580 BAU 1.0443 SGT 2505.0 SGR 3167.1 SG3 1736.1 ST 26.7 SR 42.7 SS 84.2  
 RDE .6277 RRA -.2968 RC3-3.5108 FAU .44937 RRT .8884 RRF .9900 RTF .8919 CRT .7094 CRS -.9993 CST -.7002  
 FDE 5.7882 FRA -2.5651 FC-21.0573 BSP 6647 SGB 4038.0 R23 .1499 R13 .9790 LSA 96.3 MSA 18.6 SSA 1.4  
 BDE .6685 BRA .9562 BC3 4.2280 FSP 3009 SG1 3930.2 SG2 926.8 THA 52.46 EL1 47.4 EL2 16.9 ALF 62.23

LAUNCH DATE AUG 15 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 31 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 32.888 GAL 2.66 AZL 86.61 HCA 150.79 SMA 197.99 ECC .23906 INC 3.3946 V1 29.407  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.587 GAP 4.71 AZP 92.96 TAL 13.83 TAP 184.62 RCA 150.66 APO 245.33 V2 22.625  
 RC 254.795 GL 26.76 GP -32.77 ZAL 64.78 ZAP 93.55 ETS 184.34 ZAE 121.57 ETE 206.40 ZAC 54.49 ETC 287.03 LVI 11.30

Distance 508.040 Earth to Mars

Planetocentric Conic: C3 18.661 VHL 4.320 DLA 33.70 RAL 10.23 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 2.505 DPA -20.42 RAP 38.33 ECC 1.3071  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 56 10 3833.51 -46.47 159.86 258.50 78.38 9 0 3 2833.5 -45.70 124.77  
 60.00 7 38 42 3880.18 -37.10 160.84 255.30 72.97 8 43 22 2880.2 -40.19 130.16  
 70.00 8 40 46 4052.31 -24.09 168.86 249.52 65.03 7 48 18 3052.3 -32.20 143.20  
 70.85 6 4 2 4164.67 -19.94 175.38 247.30 62.25 7 13 26 3164.7 -29.61 151.16  
 70.85 6 4 2 4164.67 -19.94 175.38 247.30 62.25 7 13 26 3164.7 -29.61 151.16  
 70.85 6 4 2 4164.67 -19.94 175.38 247.30 62.25 7 13 26 3164.7 -29.61 151.16  
 110.00 11 40 12 3099.13 -24.09 97.78 249.52 65.03 12 31 51 2099.1 -32.20 72.11

Differential Corrections: TDE .2881 TRA -.9371 TC3-2.4985 BAU 1.0871 SGT 2652.8 SGR 3256.5 SG3 1714.5 ST 29.6 SR 46.6 SS 85.9  
 RDE .6890 RRA -.3180 RC3-3.5699 FAU .44328 RRT .8988 RRF .9909 RTF .9018 CRT .7674 CRS -.9994 CST -.7601  
 FDE 5.9019 FRA -2.5727 FC-20.5649 BSP 6946 SGB 4200.3 R23 .1501 R13 .9798 LSA 100.4 MSA 18.7 SSA 1.3  
 BDE .7468 BRA .9896 BC3 4.3573 FSP 2972 SG1 4097.3 SG2 924.4 THA 51.47 EL1 52.6 EL2 16.8 ALF 60.68

LAUNCH DATE AUG 15 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 2 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 32.889 GAL 2.63 AZL 86.46 HCA 151.71 SMA 198.00 ECC .23901 INC 3.5227 V1 29.407  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.559 GAP 4.48 AZP 93.10 TAL 13.68 TAP 185.40 RCA 150.60 APO 245.32 V2 22.599  
 RC 257.584 GL 27.69 GP -33.56 ZAL 65.16 ZAP 92.24 ETS 183.55 ZAE 119.90 ETE 205.47 ZAC 53.87 ETC 287.21 LVI 11.97

Distance 511.825 Earth to Mars

Planetocentric Conic: C3 18.871 VHL 4.344 DLA 34.61 RAL 9.92 RAD 6642.3 VEL 11.785 PTH 6.81 VHP 2.523 DPA -21.35 RAP 38.17 ECC 1.3106  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 45 3859.15 -46.09 162.22 259.11 76.60 8 53 4 2859.1 -46.13 127.09  
 60.00 7 27 3 3917.14 -36.32 163.67 255.37 71.18 8 32 21 2917.1 -40.29 133.30  
 69.16 5 52 37 4198.25 -20.35 178.24 247.43 61.38 7 2 35 3198.2 -30.33 154.04  
 69.16 5 52 37 4198.25 -20.35 178.24 247.43 61.38 7 2 35 3198.2 -30.33 154.04  
 69.16 5 52 37 4198.25 -20.35 178.24 247.43 61.38 7 2 35 3198.2 -30.33 154.04  
 69.16 5 52 37 4198.25 -20.35 178.24 247.43 61.38 7 2 35 3198.2 -30.33 154.04  
 69.16 5 52 37 4198.25 -20.35 178.24 247.43 61.38 7 2 35 3198.2 -30.33 154.04

Differential Corrections: TDE .3493 TRA -.9674 TC3-2.6378 BAU 1.1307 SGT 2804.8 SGR 3346.2 SG3 1688.7 ST 32.9 SR 50.6 SS 87.6  
 RDE .7538 RRA -.3411 RC3-3.6232 FAU .43810 RRT .9077 RRF .9917 RTF .9101 CRT .8118 CRS -.9998 CST -.8059  
 FDE 6.0068 FRA -2.5806 FC-20.0065 BSP 7238 SGB 4366.2 R23 .1504 R13 .9805 LSA 104.7 MSA 18.8 SSA 1.2  
 BDE .8309 BRA 1.0237 BC3 4.4816 FSP 2925 SG1 4267.6 SG2 922.7 THA 50.53 EL1 58.0 EL2 16.8 ALF 59.33

LAUNCH DATE AUG 15 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 4 1974

Heliocentric Conic: RL 151.51 LAL -.00 LOL 322.03 VL 32.889 GAL 2.60 AZL 86.34 HCA 152.63 SMA 198.01 ECC .23897 INC 3.6586 V1 29.407  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.532 GAP 4.26 AZP 93.25 TAL 13.53 TAP 186.18 RCA 150.70 APO 245.33 V2 22.573  
 RC 260.356 GL 28.66 GP -34.36 ZAL 65.57 ZAP 90.97 ETS 182.73 ZAE 118.26 ETE 204.56 ZAC 53.25 ETC 287.40 LVI 12.66

Distance 515.608 Earth to Mars

Planetocentric Conic: C3 19.108 VHL 4.371 DLA 35.55 RAL 9.58 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.544 DPA -22.28 RAP 38.05 ECC 1.3145  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 40 41 3886.61 -45.63 164.71 259.69 74.73 8 45 28 2886.6 -46.53 129.62  
 60.00 7 13 51 3958.59 -35.37 166.78 255.32 69.27 8 19 49 2958.4 -40.28 136.81  
 67.49 5 41 43 4229.94 -20.75 180.98 247.58 60.46 6 52 13 3229.9 -31.06 156.82  
 67.49 5 41 43 4229.94 -20.75 180.98 247.58 60.46 6 52 13 3229.9 -31.06 156.82  
 67.49 5 41 43 4229.94 -20.75 180.98 247.58 60.46 6 52 13 3229.9 -31.06 156.82  
 67.49 5 41 43 4229.94 -20.75 180.98 247.58 60.46 6 52 13 3229.9 -31.06 156.82  
 67.49 5 41 43 4229.94 -20.75 180.98 247.58 60.46 6 52 13 3229.9 -31.06 156.82

Differential Corrections: TDE .4155 TRA -.9985 TC3-2.7697 BAU 1.1743 SGT 2957.7 SGR 3434.5 SG3 1657.9 ST 36.6 SR 54.6 SS 89.2  
 RDE .8227 RRA -.3645 RC3-3.6688 FAU .42787 RRT .9154 RRF .9924 RTF .9173 CRT .8468 CRS -.9997 CST -.8420  
 FDE 6.1030 FRA -2.5798 FC-19.3762 BSP 7546 SGB 4532.5 R23 .1506 R13 .9811 LSA 109.3 MSA 18.8 SSA 1.1  
 BDE .9216 BRA 1.0630 BC3 4.5969 FSP 2875 SG1 4437.8 SG2 921.4 THA 49.65 EL1 63.8 EL2 16.7 ALF 58.10

LAUNCH DATE AUG 15 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

DISTANCE 519.391

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.890 GAL 2.37 AZL 86.20 HCA 153.54 SMA 198.03 ECC .23895 INC 3.8029 V1 29.407
RP 243.37 LAP 1.69 LOP 115.62 VP 20.306 GAP 4.03 AZP 93.41 TAL 13.38 TAP 166.92 RCA 150.71 APO 245.35 V2 22.548
RC 263.112 GL 29.68 GP -35.18 ZAL 65.99 ZAP 89.74 ETS 181.90 ZAE 116.65 ETE 203.66 ZAC 52.56 ETC 287.59 LVI 13.38

PLANETOCENTRIC CONIC

C3 19.378 VHL 4.402 DLA 36.54 RAL 9.21 RAD 6642.6 VEL 11.806 PTH 6.83 VHP 2.569 DPA -23.22 RAP 37.95 ECC 1.3189
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 31 52 3916.12 -45.07 167.33 260.22 72.78 8 37 8 2916.1 -46.88 132.38
60.00 6 58 33 4005.28 -34.19 170.17 255.09 67.21 8 5 18 3005.3 -40.14 140.79
65.83 5 31 10 4260.26 -21.16 183.66 247.73 59.49 6 42 10 3260.3 -31.82 159.54
65.83 5 31 10 4260.26 -21.16 183.66 247.73 59.49 6 42 10 3260.3 -31.82 159.54
65.83 5 31 10 4260.26 -21.16 183.66 247.73 59.49 6 42 10 3260.3 -31.82 159.54
65.83 5 31 10 4260.26 -21.16 183.66 247.73 59.49 6 42 10 3260.3 -31.82 159.54
65.83 5 31 10 4260.26 -21.16 183.66 247.73 59.49 6 42 10 3260.3 -31.82 159.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4860 TRA-1.0309 TC3-2.8944 BAU 1.2187 SGT 3111.6 SGR 3523.6 SG3 1623.3 ST 40.5 SR 59.2 S8 90.5
RDE .8942 RRA -.3894 RC3-3.7092 FAU .41840 RRT .9222 RRF .9936 RTF .9236 CRT .8743 CR3 -.9997 CST -.8703
FDE 6.1804 FRA-2.5753 FC-18.6948 BSP 7853 SGB 4700.9 R23 .1505 R13 .9817 LSA 113.9 MSA 18.9 SSA 1.1
BDE 1.0178 BRA 1.1020 BC3 4.7049 FSP 2815 SG1 4609.9 S62 920.0 THA 48.85 EL1 69.7 EL2 16.7 ALF 56.95

LAUNCH DATE AUG 15 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

DISTANCE 523.172

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.892 GAL 2.54 AZL 86.04 HCA 154.43 SMA 198.06 ECC .23895 INC 3.9563 V1 29.407
RP 243.62 LAP 1.71 LOP 116.53 VP 20.480 GAP 3.81 AZP 93.57 TAL 13.22 TAP 167.67 RCA 150.73 APO 245.38 V2 22.523
RC 265.850 GL 30.74 GP -36.03 ZAL 66.43 ZAP 88.56 ETS 181.05 ZAE 115.06 ETE 202.77 ZAC 51.87 ETC 287.80 LVI 14.12

PLANETOCENTRIC CONIC

C3 19.678 VHL 4.436 DLA 37.57 RAL 8.80 RAD 6642.7 VEL 11.819 PTH 6.84 VHP 2.598 DPA -24.18 RAP 37.90 ECC 1.3238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 22 7 3948.00 -44.39 170.10 260.68 70.74 8 27 55 2948.0 -47.19 135.40
60.00 6 40 14 4060.25 -32.67 174.04 254.60 64.96 7 47 55 3060.2 -39.78 145.42
64.17 5 20 54 4289.35 -21.56 186.28 247.90 58.46 6 32 23 3289.4 -32.59 162.22
64.17 5 20 54 4289.35 -21.56 186.28 247.90 58.46 6 32 23 3289.4 -32.59 162.22
64.17 5 20 54 4289.35 -21.56 186.28 247.90 58.46 6 32 23 3289.4 -32.59 162.22
64.17 5 20 54 4289.35 -21.56 186.28 247.90 58.46 6 32 23 3289.4 -32.59 162.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5611 TRA-1.0652 TC3-3.0117 BAU 1.2641 SGT 3267.6 SGR 3614.6 SG3 1585.3 ST 44.8 SR 63.7 S8 91.8
RDE .9700 RRA -.4167 RC3-3.7442 FAU .40835 RRT .9281 RRF .9936 RTF .9291 CRT .8959 CR3 -.9998 CST -.8924
FDE 6.2450 FRA-2.5717 FC-17.9653 BSP 8159 SGB 4872.6 R23 .1502 R13 .9823 LSA 118.8 MSA 18.9 SSA 1.0
BDE 1.1205 BRA 1.1438 BC3 4.8051 FSP 2746 SG1 4785.2 S62 918.7 THA 48.11 EL1 76.0 EL2 16.7 ALF 55.91

LAUNCH DATE AUG 15 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

DISTANCE 526.953

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.893 GAL 2.51 AZL 85.88 HCA 155.38 SMA 198.09 ECC .23896 INC 4.1201 V1 29.407
RP 243.88 LAP 1.72 LOP 117.45 VP 20.456 GAP 3.59 AZP 93.75 TAL 13.05 TAP 168.41 RCA 150.75 APO 245.42 V2 22.499
RC 268.570 GL 31.85 GP -36.89 ZAL 66.90 ZAP 87.43 ETS 180.18 ZAE 113.50 ETE 201.90 ZAC 51.15 ETC 288.01 LVI 14.90

PLANETOCENTRIC CONIC

C3 20.019 VHL 4.474 DLA 38.64 RAL 8.35 RAD 6642.8 VEL 11.833 PTH 6.85 VHP 2.631 DPA -25.14 RAP 37.89 ECC 1.3295
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 11 18 3982.62 -43.57 173.02 261.04 68.61 8 17 40 2982.6 -47.42 138.72
60.00 6 16 58 4128.56 -30.60 178.65 253.66 62.39 7 25 46 3128.6 -39.05 131.08
62.50 5 10 49 4317.45 -21.96 188.86 248.08 57.38 6 22 47 3317.4 -33.38 164.88
62.50 5 10 49 4317.45 -21.96 188.86 248.08 57.38 6 22 47 3317.4 -33.38 164.88
62.50 5 10 49 4317.45 -21.96 188.86 248.08 57.38 6 22 47 3317.4 -33.38 164.88
62.50 5 10 49 4317.45 -21.96 188.86 248.08 57.38 6 22 47 3317.4 -33.38 164.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6413 TRA-1.1007 TC3-3.1184 BAU 1.3092 SGT 3423.1 SGR 3703.2 SG3 1542.2 ST 49.4 SR 68.3 S8 92.9
RDE 1.0505 RRA -.4448 RC3-3.7688 FAU .39897 RRT .9333 RRF .9941 RTF .5339 CRT .9129 CR3 -.9998 CST -.9099
FDE 6.2965 FRA-2.5590 FC-17.1667 BSP 8474 SGB 5043.0 R23 .1501 R13 .9829 LSA 124.0 MSA 18.9 SSA .9
BDE 1.2307 BRA 1.1872 BC3 4.8915 FSP 2674 SG1 4958.7 S62 918.0 THA 47.41 EL1 82.6 EL2 16.7 ALF 54.97

LAUNCH DATE AUG 15 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

DISTANCE 530.732

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.895 GAL 2.47 AZL 85.70 HCA 156.27 SMA 198.12 ECC .23899 INC 4.2951 V1 29.407
RP 244.10 LAP 1.73 LOP 118.36 VP 20.433 GAP 3.36 AZP 93.93 TAL 12.88 TAP 169.15 RCA 150.77 APO 245.47 V2 22.475
RC 271.273 GL 33.02 GP -37.79 ZAL 67.39 ZAP 86.35 ETS 179.30 ZAE 111.97 ETE 201.04 ZAC 50.40 ETC 288.24 LVI 15.70

PLANETOCENTRIC CONIC

C3 20.408 VHL 4.517 DLA 39.75 RAL 7.86 RAD 6643.0 VEL 11.850 PTH 6.87 VHP 2.668 DPA -26.12 RAP 37.93 ECC 1.3358
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 59 9 4020.50 -42.58 176.13 261.26 66.38 8 6 10 3020.5 -47.56 142.37
60.00 5 42 3 4228.50 -27.27 185.02 251.69 59.10 6 52 31 3228.5 -37.46 159.09
60.81 5 0 51 4344.81 -22.35 191.42 248.25 56.23 6 13 16 3344.8 -34.19 167.55
60.81 5 0 51 4344.81 -22.35 191.42 248.25 56.23 6 13 16 3344.8 -34.19 167.55
60.81 5 0 51 4344.81 -22.35 191.42 248.25 56.23 6 13 16 3344.8 -34.19 167.55
60.81 5 0 51 4344.81 -22.35 191.42 248.25 56.23 6 13 16 3344.8 -34.19 167.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7256 TRA-1.1391 TC3-3.2162 BAU 1.3552 SGT 3580.7 SGR 3793.1 SG3 1495.5 ST 54.1 SR 73.1 S8 93.8
RDE 1.1349 RRA -.4759 RC3-3.7859 FAU .38481 RRT .9379 RRF .9946 RTF .9380 CRT .9262 CR3 -.9999 CST -.9235
FDE 6.3274 FRA-2.5467 FC-16.3254 BSP 8775 SGB 5216.2 R23 .1500 R13 .9833 LSA 129.2 MSA 19.0 SSA .9
BDE 1.3470 BRA 1.2345 BC3 4.9678 FSP 2589 SG1 5134.9 S62 917.5 THA 46.76 EL1 89.4 EL2 16.7 ALF 54.11

LAUNCH DATE AUG 18 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

DISTANCE 534.511

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.897 GAL 2.44 AZL 85.52 HCA 197.18 SMA 198.16 ECC .23904 INC 4.4829 V1 29.407
RP 244.34 LAP 1.74 LOP 119.27 VP 20.411 GAP 3.14 AZP 94.13 TAL 12.70 TAP 169.88 RCA 150.79 APO 245.53 V2 22.452
RC 273.957 GL 34.24 GP -38.71 ZAL 67.89 ZAP 85.33 ETS 178.40 ZAE 110.48 ETE 200.20 ZAC 49.61 ETC 286.48 LVI 16.54

PLANETOCENTRIC CONIC

C3 20.846 VHL 4.566 DLA 40.92 RAL 7.30 RAD 6643.2 VEL 11.868 PTH 6.88 VHP 2.709 DPA -27.10 RAP 36.01 ECC 1.3431
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 45 22 4062.35 -41.39 179.43 261.28 64.05 7 53 4 3062.4 -47.56 146.42
59.10 4 50 56 4371.60 -22.72 193.98 248.43 55.01 6 3 47 3371.6 -35.00 170.23
59.10 4 50 56 4371.60 -22.72 193.98 248.43 55.01 6 3 47 3371.6 -35.00 170.23
59.10 4 50 56 4371.60 -22.72 193.98 248.43 55.01 6 3 47 3371.6 -35.00 170.23
59.10 4 50 56 4371.60 -22.72 193.98 248.43 55.01 6 3 47 3371.6 -35.00 170.23
59.10 4 50 56 4371.60 -22.72 193.98 248.43 55.01 6 3 47 3371.6 -35.00 170.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8152 TRA-1.1790 TC3-3.3014 BAU 1.4016 SGT 3737.3 SGR 3882.9 SG3 1444.8 ST 59.2 SR 78.1 SS 94.4
RDE 1.2247 RRA -.5086 RC3-3.7939 FAU .37168 RRT .9420 RRF .9950 RTF .9417 CRT .9369 CRS -.9999 CST -.9344
FDE 6.3420 FRA-2.5272 FC-15.4361 BSP 9089 SGB 5369.3 R23 .1499 R13 .9837 LSA 134.7 MSA 19.0 SSA .8
BDE 1.4712 BRA 1.2840 BC3 5.0292 FSP 2503 SG1 5310.7 SG2 917.4 THA 46.16 EL1 96.5 EL2 16.7 ALF 53.34

LAUNCH DATE AUG 15 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

DISTANCE 538.288

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.899 GAL 2.41 AZL 85.32 HCA 158.08 SMA 198.20 ECC .23911 INC 4.8849 V1 29.407
RP 244.56 LAP 1.73 LOP 120.17 VP 20.389 GAP 2.92 AZP 94.35 TAL 12.52 TAP 170.61 RCA 150.81 APO 245.59 V2 22.430
RC 276.623 GL 35.53 GP -39.66 ZAL 68.43 ZAP 84.36 ETS 177.48 ZAE 109.02 ETE 199.36 ZAC 48.80 ETC 288.74 LVI 17.42

PLANETOCENTRIC CONIC

C3 21.346 VHL 4.620 DLA 42.13 RAL 6.69 RAD 6643.4 VEL 11.889 PTH 6.90 VHP 2.756 DPA -28.11 RAP 38.15 ECC 1.3513
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 29 26 4109.23 -39.93 182.98 261.03 61.61 7 37 55 3109.2 -47.37 150.93
57.37 4 41 0 4397.86 -23.07 196.53 248.61 53.72 5 54 18 3397.9 -35.82 172.94
57.37 4 41 0 4397.86 -23.07 196.53 248.61 53.72 5 54 18 3397.9 -35.82 172.94
57.37 4 41 0 4397.86 -23.07 196.53 248.61 53.72 5 54 18 3397.9 -35.82 172.94
57.37 4 41 0 4397.86 -23.07 196.53 248.61 53.72 5 54 18 3397.9 -35.82 172.94
57.37 4 41 0 4397.86 -23.07 196.53 248.61 53.72 5 54 18 3397.9 -35.82 172.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9105 TRA-1.2212 TC3-3.3736 BAU 1.4485 SGT 3893.9 SGR 3973.8 SG3 1390.6 ST 64.4 SR 83.2 SS 94.9
RDE 1.3210 RRA -.5442 RC3-3.7923 FAU .35769 RRT .9456 RRF .9954 RTF .9448 CRT .9456 CRS -.9999 CST -.9432
FDE 6.3408 FRA-2.5039 FC-14.5072 BSP 9405 SGB 5563.6 R23 .1498 R13 .9841 LSA 140.4 MSA 19.1 SSA .8
BDE 1.8044 BRA 1.3370 BC3 5.0737 FSP 2410 SG1 5487.4 SG2 917.6 THA 45.62 EL1 103.9 EL2 16.8 ALF 52.66

LAUNCH DATE AUG 15 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

DISTANCE 542.083

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.901 GAL 2.37 AZL 85.10 HCA 158.98 SMA 198.25 ECC .23919 INC 4.9030 V1 29.407
RP 244.79 LAP 1.76 LOP 121.08 VP 20.369 GAP 2.71 AZP 94.58 TAL 12.34 TAP 171.32 RCA 150.83 APO 245.67 V2 22.407
RC 279.268 GL 36.88 GP -40.64 ZAL 68.98 ZAP 83.45 ETS 176.55 ZAE 107.60 ETE 198.53 ZAC 47.94 ETC 289.02 LVI 18.34

PLANETOCENTRIC CONIC

C3 21.917 VHL 4.682 DLA 43.40 RAL 5.99 RAD 6643.7 VEL 11.913 PTH 6.92 VHP 2.809 DPA -29.12 RAP 38.34 ECC 1.3607
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 10 36 4162.87 -38.12 188.84 260.39 59.04 7 19 59 3162.9 -46.93 156.04
55.60 4 30 58 4423.89 -23.40 199.10 248.77 52.35 5 44 42 3423.9 -36.64 175.71
55.60 4 30 58 4423.89 -23.40 199.10 248.77 52.35 5 44 42 3423.9 -36.64 175.71
55.60 4 30 58 4423.89 -23.40 199.10 248.77 52.35 5 44 42 3423.9 -36.64 175.71
55.60 4 30 58 4423.89 -23.40 199.10 248.77 52.35 5 44 42 3423.9 -36.64 175.71
55.60 4 30 58 4423.89 -23.40 199.10 248.77 52.35 5 44 42 3423.9 -36.64 175.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0099 TRA-1.2668 TC3-3.4319 BAU 1.4965 SGT 4050.4 SGR 4068.3 SG3 1333.1 ST 69.8 SR 86.4 SS 95.0
RDE 1.4210 RRA -.5846 RC3-3.7822 FAU .34304 RRT .9490 RRF .9950 RTF .5-78 CRT .9526 CRS -.9999 CST -.9502
FDE 6.3085 FRA-2.4833 FC-13.5502 BSP 9704 SGB 5739.4 R23 .1494 R13 .9845 LSA 146.1 MSA 19.1 SSA .7
BDE 1.7434 BRA 1.3952 BC3 5.1071 FSP 2306 SG1 5685.8 SG2 916.7 THA 45.12 EL1 111.3 EL2 16.8 ALF 52.03

LAUNCH DATE AUG 15 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 545.838

EARTH TO MARS

RL 151.51 LAL -.00 LOL 322.03 VL 32.904 GAL 2.34 AZL 84.86 HCA 159.88 SMA 198.30 ECC .23928 INC 5.1393 V1 29.407
RP 245.01 LAP 1.77 LOP 121.89 VP 20.349 GAP 2.49 AZP 94.83 TAL 12.15 TAP 172.03 RCA 150.85 APO 245.75 V2 22.386
RC 281.893 GL 38.31 GP -41.66 ZAL 69.56 ZAP 82.81 ETS 175.61 ZAE 106.22 ETE 197.71 ZAC 47.05 ETC 289.32 LVI 19.29

PLANETOCENTRIC CONIC

C3 22.573 VHL 4.751 DLA 44.72 RAL 5.21 RAD 6644.0 VEL 11.940 PTH 6.94 VHP 2.867 DPA -30.16 RAP 38.59 ECC 1.3715
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 47 24 4226.57 -35.80 191.16 259.16 56.28 6 57 50 3226.6 -46.09 161.86
53.79 4 20 48 4449.69 -23.69 201.69 248.92 50.89 5 34 58 3449.7 -37.47 178.54
53.79 4 20 48 4449.69 -23.69 201.69 248.92 50.89 5 34 58 3449.7 -37.47 178.54
53.79 4 20 48 4449.69 -23.69 201.69 248.92 50.89 5 34 58 3449.7 -37.47 178.54
53.79 4 20 48 4449.69 -23.69 201.69 248.92 50.89 5 34 58 3449.7 -37.47 178.54
53.79 4 20 48 4449.69 -23.69 201.69 248.92 50.89 5 34 58 3449.7 -37.47 178.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1150 TRA-1.3145 TC3-3.4737 BAU 1.5445 SGT 4204.8 SGR 4157.7 SG3 1271.5 ST 75.3 SR 93.7 SS 94.9
RDE 1.5289 RRA -.6265 RC3-3.7588 FAU .32737 RRT .9518 RRF .9961 RTF .9502 CRT .9582 CRS -.9999 CST -.9559
FDE 6.2582 FRA-2.4489 FC-12.5558 BSP 10022 SGB 5913.3 R23 .1494 R13 .9848 LSA 151.9 MSA 19.2 SSA .7
BDE 1.8923 BRA 1.4562 BC3 5.1181 FSP 2202 SG1 5841.7 SG2 917.5 THA 44.66 EL1 119.0 EL2 17.0 ALF 51.49

LAUNCH DATE AUG 15 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.907 GAL 2.30 AZL 84.60 HCA 160.78 SMA 198.36 ECC .23939 INC 5.3964 V1 29.407  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.331 GAP 2.27 AZP 95.10 TAL 11.96 TAP 172.74 RCA 150.87 APO 245.84 V2 22.365  
 RC 284.497 GL 39.81 GP -42.72 ZAL 70.17 ZAP 81.84 ETS 174.85 ZAE 104.88 ETE 196.90 ZAC 46.11 ETC 289.65 LVI 20.29

DISTANCE 549.610

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.327 VHL 4.830 DLA 46.10 RAL 4.32 RAD 6644.3 VEL 11.971 PTH 6.97 VHP 2.933 DPA -31.21 RAP 38.91 ECC 1.3839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 16 18 4308.58 -32.57 196.33 256.88 53.18 6 28 7 3308.6 -44.54 169.24  
 51.95 4 10 23 4475.49 -23.94 204.32 249.04 49.35 5 24 58 3475.5 -38.27 181.46  
 51.95 4 10 23 4475.49 -23.94 204.32 249.04 49.35 5 24 58 3475.5 -38.27 181.46  
 51.95 4 10 23 4475.49 -23.94 204.32 249.04 49.35 5 24 58 3475.5 -38.27 181.46  
 51.95 4 10 23 4475.49 -23.94 204.32 249.04 49.35 5 24 58 3475.5 -38.27 181.46  
 51.95 4 10 23 4475.49 -23.94 204.32 249.04 49.35 5 24 58 3475.5 -38.27 181.46

DIFFERENTIAL CORRECTIONS

TDE 1.2285 TRA-1.3652 TC3-3.4969 BAU 1.5929  
 RDE 1.6456 RRA -.6736 RC3-3.7228 FAU .31089  
 FDE 6.1884 FRA-2.4133 FC-11.5379 BSP 10344  
 BDE 2.0524 BRA 1.5224 BC3 5.1076 FSP 2092

MID-COURSE EXECUTION ACCURACY

SGT 4356.8 SGR 4251.0 SG3 1207.0  
 RRT .9545 RRF .9963 RTF .9525  
 SGB 6087.1 R23 .1493 R13 .9851  
 SG1 6017.5 SG2 917.4 THA 44.26

ORBIT DETERMINATION ACCURACY

ST 80.9 SR 99.3 SS 94.4  
 CRT .9629 CRS -.9999 CST -.9606  
 LSA 158.0 MSA 19.2 SSA .6  
 EL1 126.9 EL2 17.1 ALF 51.04

LAUNCH DATE AUG 15 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.910 GAL 2.26 AZL 84.32 HCA 161.68 SMA 198.41 ECC .23951 INC 5.6771 V1 29.407  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.313 GAP 2.06 AZP 95.39 TAL 11.76 TAP 173.44 RCA 150.89 APO 245.93 V2 22.344  
 RC 287.079 GL 41.40 GP -43.82 ZAL 70.81 ZAP 81.14 ETS 173.69 ZAE 103.59 ETE 196.10 ZAC 45.12 ETC 290.01 LVI 21.34

DISTANCE 553.382

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.201 VHL 4.919 DLA 47.53 RAL 3.31 RAD 6644.7 VEL 12.007 PTH 7.00 VHP 3.007 DPA -32.28 RAP 39.29 ECC 1.3983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 12 9 4470.28 -25.60 205.41 250.56 48.42 5 26 40 3470.3 -40.13 182.24  
 50.06 3 59 37 4501.44 -24.14 206.98 249.11 47.72 5 14 38 3501.4 -39.05 184.49  
 50.06 3 59 37 4501.44 -24.14 206.98 249.11 47.72 5 14 38 3501.4 -39.05 184.49  
 50.06 3 59 37 4501.44 -24.14 206.98 249.11 47.72 5 14 38 3501.4 -39.05 184.49  
 50.06 3 59 37 4501.44 -24.14 206.98 249.11 47.72 5 14 38 3501.4 -39.05 184.49  
 50.06 3 59 37 4501.44 -24.14 206.98 249.11 47.72 5 14 38 3501.4 -39.05 184.49

DIFFERENTIAL CORRECTIONS

TDE 1.3398 TRA-1.4212 TC3-3.5039 BAU 1.6433  
 RDE 1.7670 RRA -.7274 RC3-3.6769 FAU .29393  
 FDE 6.0808 FRA-2.3774 FC-10.5146 BSP 10631  
 BDE 2.2175 BRA 1.5966 BC3 5.0791 FSP 1971

MID-COURSE EXECUTION ACCURACY

SGT 4508.9 SGR 4347.1 SG3 1139.7  
 RRT .9571 RRF .9966 RTF .9545  
 SGB 6263.2 R23 .1491 R13 .9854  
 SG1 6195.7 SG2 917.0 THA 43.91

ORBIT DETERMINATION ACCURACY

ST 86.4 SR 104.7 SS 93.5  
 CRT .9666 CRS -.9999 CST -.9641  
 LSA 163.7 MSA 19.3 SSA .6  
 EL1 134.7 EL2 17.2 ALF 50.66

LAUNCH DATE AUG 15 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.913 GAL 2.23 AZL 84.01 HCA 162.57 SMA 198.47 ECC .23964 INC 5.9851 V1 29.407  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.296 GAP 1.84 AZP 95.71 TAL 11.56 TAP 174.13 RCA 150.91 APO 246.04 V2 22.324  
 RC 289.637 GL 43.07 GP -44.97 ZAL 71.47 ZAP 80.51 ETS 172.73 ZAE 102.35 ETE 195.32 ZAC 44.08 ETC 290.40 LVI 22.44

DISTANCE 557.151

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.218 VHL 5.022 DLA 49.02 RAL 2.15 RAD 6645.1 VEL 12.049 PTH 7.03 VHP 3.090 DPA -33.37 RAP 39.75 ECC 1.4150  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62  
 48.13 3 48 26 4527.62 -24.26 209.68 249.12 45.99 5 3 54 3527.6 -39.80 187.62

DIFFERENTIAL CORRECTIONS

TDE 1.4583 TRA-1.4808 TC3-3.4883 BAU 1.8932  
 RDE 1.8982 RRA -.7866 RC3-3.6133 FAU .27593  
 FDE 5.9478 FRA-2.3332 FC3-9.4728 BSP 10958  
 BDE 2.3937 BRA 1.6765 BC3 5.0223 FSP 1853

MID-COURSE EXECUTION ACCURACY

SGT 4636.0 SGR 4442.2 SG3 1068.9  
 RRT .9594 RRF .9968 RTF .562  
 SGB 6435.2 R23 .1491 R13 .9856  
 SG1 6369.7 SG2 916.0 THA 43.60

ORBIT DETERMINATION ACCURACY

ST 91.9 SR 110.4 SS 92.1  
 CRT .9696 CRS -.9999 CST -.9670  
 LSA 169.5 MSA 19.4 SSA .5  
 EL1 142.5 EL2 17.4 ALF 50.58

LAUNCH DATE AUG 15 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.916 GAL 2.19 AZL 83.68 HCA 163.47 SMA 198.54 ECC .23978 INC 6.3248 V1 29.407  
 RP 245.83 LAP 1.80 LOP 125.59 VP 20.280 GAP 1.83 AZP 96.07 TAL 11.36 TAP 174.82 RCA 150.93 APO 246.15 V2 22.305  
 RC 292.172 GL 44.84 GP -46.16 ZAL 72.16 ZAP 79.96 ETS 171.76 ZAE 101.16 ETE 194.54 ZAC 43.00 ETC 290.64 LVI 23.59

DISTANCE 560.921

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.409 VHL 5.139 DLA 50.57 RAL .81 RAD 6645.6 VEL 12.098 PTH 7.07 VHP 3.184 DPA -34.49 RAP 40.28 ECC 1.4346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89  
 46.15 3 36 42 4554.26 -24.31 212.42 249.03 44.18 4 52 36 3554.3 -40.49 190.89

DIFFERENTIAL CORRECTIONS

TDE 1.5746 TRA-1.5477 TC3-3.4546 BAU 1.7510  
 RDE 2.0233 RRA -.8675 RC3-3.5582 FAU .25924  
 FDE 5.7416 FRA-2.3221 FC3-8.4982 BSP 11126  
 BDE 2.5658 BRA 1.7742 BC3 4.9593 FSP 1687

MID-COURSE EXECUTION ACCURACY

SGT 4803.3 SGR 4558.8 SG3 999.7  
 RRT .9628 RRF .9970 RTF .9595  
 SGB 6622.3 R23 .1448 R13 .9864  
 SG1 6560.6 SG2 901.5 THA 43.45

ORBIT DETERMINATION ACCURACY

ST 96.9 SR 115.2 SS 89.7  
 CRT .9726 CRS -.9999 CST -.9699  
 LSA 174.2 MSA 19.2 SSA .5  
 EL1 149.6 EL2 17.4 ALF 50.06

LAUNCH DATE AUG 15 1973

FLIGHT TIME 298.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.920 GAL 2.15 AZL 63.30 HCA 164.36 SMA 196.61 ECC .23994 INC 6.7013 V1 29.407
RP 246.02 LAP 1.80 LOP 126.48 VP 20.265 GAP 1.42 AZP 96.46 TAL 11.15 TAP 173.51 RCA 150.95 APO 246.26 V2 22.206
RC 294.682 GL 46.71 GP -47.40 ZAL 72.88 ZAP 79.50 ETS 170.81 ZAE 100.03 ETE 193.70 ZAC 41.86 ETC 291.33 LVI 24.79

DISTANCE 564.686

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.815 VHL 5.274 DLA 52.18 RAL 359.26 RAD 6646.1 VEL 12.156 PTH 7.12 VHP 3.291 DPA -35.62 RAP 40.91 ECC 1.4578
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31
44.13 3 24 14 4581.57 -24.24 215.21 248.81 42.26 4 40 36 3581.6 -41.10 194.31

DIFFERENTIAL CORRECTIONS

TDE 1.6931 TRA-1.6199 TC3-3.3979 BAU 1.8041
RDE 2.1738 RRA -.9416 RC3-3.4631 FAU .23981
FDE 5.5472 FRA-2.2568 FC3-7.4642 BSP 11456
BDE 2.7553 BRA 1.8737 BC3 4.8516 FSP 1569

MID-COURSE EXECUTION ACCURACY

SGT 4946.3 SGR 4658.7 SG3 923.7
RRR .9644 RRF .9971 RTF .9603
SGB 6794.8 R23 .1463 R13 .9863
SG1 6734.3 SG2 904.5 THA 43.22

ORBIT DETERMINATION ACCURACY

ST 101.7 SR 120.8 SS 87.4
CRT .9739 CRS -.9999 CST -.9710
LSA 179.4 MSA 19.3 SBA .4
EL1 156.9 EL2 17.8 ALF 80.04

LAUNCH DATE AUG 15 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.923 GAL 2.11 AZL 82.88 HCA 165.24 SMA 198.68 ECC .24011 INC 7.1215 V1 29.407
RP 246.21 LAP 1.81 LOP 127.38 VP 20.250 GAP 1.20 AZP 96.89 TAL 10.94 TAP 176.19 RCA 150.97 APO 246.38 V2 22.267
RC 297.167 GL 48.69 GP -48.69 ZAL 73.63 ZAP 79.12 ETS 169.87 ZAE 98.96 ETE 193.04 ZAC 40.66 ETC 291.87 LVI 26.05

DISTANCE 568.449

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.486 VHL 5.430 DLA 53.84 RAL 357.45 RAD 6646.8 VEL 12.224 PTH 7.18 VHP 3.412 DPA -36.77 RAP 41.63 ECC 1.4853
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88
42.07 3 10 56 4609.66 -24.06 218.04 248.42 40.25 4 27 45 3609.7 -41.61 197.88

DIFFERENTIAL CORRECTIONS

TDE 1.8071 TRA-1.6983 TC3-3.3157 BAU 1.8584
RDE 2.3307 RRA-1.0282 RC3-3.3511 FAU .21982
FDE 5.3075 FRA-2.1836 FC3-6.4541 BSP 11768
BDE 2.9492 BRA 1.9843 BC3 4.7142 FSP 1442

MID-COURSE EXECUTION ACCURACY

SGT 5081.9 SGR 4760.3 SG3 845.4
RRR .9659 RRF .9972 RTF .9608
SGB 6983.2 R23 .1480 R13 .9862
SG1 6904.0 SG2 906.7 THA 43.06

ORBIT DETERMINATION ACCURACY

ST 105.8 SR 126.1 SS 84.4
CRT .9747 CRS -.9999 CST -.9714
LSA 183.9 MSA 19.9 SBA .4
EL1 163.6 EL2 18.2 ALF 80.14

LAUNCH DATE AUG 15 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.927 GAL 2.07 AZL 82.41 HCA 166.13 SMA 198.75 ECC .24029 INC 7.5936 V1 29.407
RP 246.39 LAP 1.82 LOP 128.27 VP 20.237 GAP .99 AZP 97.37 TAL 10.73 TAP 176.86 RCA 150.99 APO 246.51 V2 22.249
RC 299.628 GL 50.79 GP -50.03 ZAL 74.41 ZAP 78.83 ETS 168.95 ZAE 97.95 ETE 192.33 ZAC 39.41 ETC 292.47 LVI 27.37

DISTANCE 572.210

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.493 VHL 5.612 DLA 55.54 RAL 355.33 RAD 6647.6 VEL 12.305 PTH 7.24 VHP 3.551 DPA -37.95 RAP 42.45 ECC 1.5183
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59
39.98 2 56 30 4638.85 -23.72 220.91 247.79 38.17 4 13 49 3638.9 -41.97 201.59

DIFFERENTIAL CORRECTIONS

TDE 1.9130 TRA-1.7826 TC3-3.2081 BAU 1.9143
RDE 2.4938 RRA-1.1255 RC3-3.2239 FAU .19953
FDE 5.0206 FRA-2.1031 FC3-5.4649 BSP 12121
BDE 3.1430 BRA 2.1082 BC3 4.5467 FSP 1313

MID-COURSE EXECUTION ACCURACY

SGT 5206.9 SGR 4868.3 SG3 766.0
RRR .9876 RRF .9972 RTF .5615
SGB 7126.3 R23 .1491 R13 .9861
SG1 7070.5 SG2 905.4 THA 43.01

ORBIT DETERMINATION ACCURACY

ST 109.1 SR 131.0 SS 80.6
CRT .9750 CRS -.9999 CST -.9712
LSA 187.5 MSA 20.3 SBA .4
EL1 169.4 EL2 16.7 ALF 80.36

LAUNCH DATE AUG 15 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

RL 151.51 LAL -.00 LOL 322.03 VL 32.931 GAL 2.03 AZL 81.87 HCA 167.01 SMA 198.83 ECC .24048 INC 8.1276 V1 29.407
RP 246.57 LAP 1.82 LOP 129.17 VP 20.224 GAP .78 AZP 97.92 TAL 10.51 TAP 177.53 RCA 151.01 APO 246.64 V2 22.232
RC 302.065 GL 53.02 GP -51.42 ZAL 75.23 ZAP 78.65 ETS 168.08 ZAE 97.02 ETE 191.65 ZAC 38.09 ETC 293.15 LVI 28.74

DISTANCE 575.968

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.928 VHL 5.825 DLA 57.28 RAL 352.81 RAD 6648.5 VEL 12.403 PTH 7.31 VHP 3.712 DPA -39.13 RAP 43.38 ECC 1.5584
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45
37.86 2 40 44 4669.32 -23.21 223.78 246.84 36.02 3 58 33 3669.3 -42.17 205.45

DIFFERENTIAL CORRECTIONS

TDE 1.8941 TRA-1.8803 TC3-3.0765 BAU 1.9758
RDE 2.6566 RRA-1.2432 RC3-3.0631 FAU .17907
FDE 4.6795 FRA-2.0186 FC3-4.5692 BSP 12405
BDE 3.3217 BRA 2.2541 BC3 4.3555 FSP 1175

MID-COURSE EXECUTION ACCURACY

SGT 5329.4 SGR 4984.7 SG3 685.9
RRR .9889 RRF .9972 RTF .9615
SGB 7297.2 R23 .1515 R13 .9858
SG1 7240.6 SG2 907.4 THA 43.03

ORBIT DETERMINATION ACCURACY

ST 110.8 SR 135.1 SS 75.9
CRT .9741 CRS -.9999 CST -.9806
LSA 189.4 MSA 20.9 SBA .3
EL1 173.7 EL2 19.5 ALF 80.78

LAUNCH DATE AUG 15 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 151.51 LAL	-0.00	LOL 322.03	VL 32.935	GAL	1.99	AZL 81.26	HCA 167.90	BMA 198.91	ECC .24068	INC 8.7375	V1 29.407
RP 246.74 LAP	1.83	LOP 130.06	VP 20.212	GAP	.57	AZP 98.55	TAL 10.30	TAP 178.19	RCA 151.03	APO 246.78	V2 22.215
RC 304.476 GL	55.38	GP -52.86	ZAL 76.08	ZAP	76.56	ETS 167.25	ZAE 96.17	ETE 191.02	ZAC 36.72	ETC 293.92	LVI 30.17

DISTANCE 579.723

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.919	VHL 6.076	DLA 59.04	RAL 349.81	RAD 6649.6	VEL 12.522	PTH 7.40	VHP 3.899	DPA -40.33	RAP 44.42	ECC 1.6076
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41
35.75	2 23 13	4701.44	-22.47	226.65	245.46	33.83	3 41 34	3701.4	-42.13	209.41

DIFFERENTIAL CORRECTIONS

TDE 2.0433	TRA-1.9862	TC3-2.9187	BAU 2.0389
RDE 2.8171	RAA-1.3789	RC3-2.9235	FAU .15820
FDE 4.2869	FRA-1.9150	FC3-3.7098	BSP 12743
BDE 3.4801	BRA 2.4180	BC3 4.1310	FSP 1040

MID-COURSE EXECUTION ACCURACY

SGT 5435.5	SGR 5105.4	SG3 604.7
RRT .9700	RRF .9970	RTF .9609
SGB 7457.2	R23 .1551	R13 .9852
SG1 7401.4	SG2 910.8	THA 43.15

ORBIT DETERMINATION ACCURACY

ST 110.9	SR 138.2	SS 70.4
CRT .9719	CRS -.9997	CST -.9661
LSA 189.4	MSA 21.8	SSA .3
EL1 176.0	EL2 20.5	ALF 51.44

LAUNCH DATE AUG 15 1973

FLIGHT TIME 318.00

ARRIVAL DATE JUN 29 1974

HELIOCENTRIC CONIC

RL 151.51 LAL	-0.00	LOL 322.03	VL 33.086	GAL	.55	AZL 99.42	HCA 191.06	BMA 201.52	ECC .24835	INC 9.4159	V1 29.407
RP 249.19 LAP	1.80	LOP 152.94	VP 20.165	GAP	-4.47	AZP 80.76	TAL 2.75	TAP 193.81	RCA 151.47	APO 251.57	V2 21.976
RC 357.105 GL	-58.81	GP 51.04	ZAL 84.25	ZAP	67.33	ETS 213.75	ZAE 78.87	ETE 195.75	ZAC 136.38	ETC 290.57	LVI -69.79

DISTANCE 678.034

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 39.987	VHL 6.324	DLA -40.54	RAL 58.99	RAD 6650.7	VEL 12.643	PTH 7.49	VHP 4.346	DPA 53.62	RAP 352.64	ECC 1.6581
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	17 5 32	2399.51	-2.36	62.19	292.56	137.53	17 45 32	1399.5	15.91	46.18
59.65	20 17 26	1883.15	15.99	33.07	309.39	127.76	20 48 49	883.2	29.90	11.66
59.65	20 17 26	1883.15	15.99	33.07	309.39	127.76	20 48 49	883.2	29.90	11.66
59.65	20 17 26	1883.15	15.99	33.07	309.39	127.76	20 48 49	883.2	29.90	11.66
59.65	20 17 26	1883.15	15.99	33.07	309.39	127.76	20 48 49	883.2	29.90	11.66
59.65	20 17 26	1883.15	15.99	33.07	309.39	127.76	20 48 49	883.2	29.90	11.66

DIFFERENTIAL CORRECTIONS

TDE-7.2140	TRA 2.2132	TC3-4.7692	BAU 2.7955
RDE 3.0719	RAA-1.7815	RC3 2.1444	FAU .11985
FDE-2.9986	FRA 2.2497	FC3-2.5905	BSP 18132
BDE 7.8407	BRA 2.8286	BC3 5.2291	FSP 706

MID-COURSE EXECUTION ACCURACY

SGT 9277.3	SGR 4417.1	SG3 434.7
RRT -.9783	RRF -.9936	RTF .9555
SGB10275.2	R23 .2473	R13 -.9656
SG110241.7	SG2 828.6	THA 154.85

ORBIT DETERMINATION ACCURACY

ST 329.3	SR 142.7	SS 53.2
CRT -.9948	CRS .9979	CST -.9860
LSA 362.5	MSA 15.5	SSA .3
EL1 358.7	EL2 13.4	ALF 156.64

LAUNCH DATE AUG 15 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUL 1 1974

HELIOCENTRIC CONIC

RL 151.51 LAL	-0.00	LOL 322.03	VL 33.072	GAL	.49	AZL 98.71	HCA 191.92	BMA 201.63	ECC .24874	INC 8.7050	V1 29.407
RP 249.20 LAP	1.79	LOP 153.81	VP 20.172	GAP	-4.65	AZP 81.48	TAL 2.48	TAP 194.38	RCA 151.48	APO 251.79	V2 21.975
RC 358.697 GL	-56.30	GP 49.11	ZAL 84.27	ZAP	65.73	ETS 213.92	ZAE 77.50	ETE 196.40	ZAC 134.57	ETC 289.90	LVI -68.19

DISTANCE 681.768

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.196	VHL 6.016	DLA -38.06	RAL 58.23	RAD 6649.3	VEL 12.494	PTH 7.38	VHP 4.152	DPA 52.05	RAP 354.52	ECC 1.5957
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	16 39 45	2448.76	-4.84	64.25	288.36	137.39	17 20 34	1448.8	13.50	48.39
60.00	18 45 58	2111.94	5.94	44.26	298.60	129.93	19 21 10	1111.9	21.32	25.15
63.39	20 32 4	1807.72	16.14	26.87	306.54	124.95	21 2 12	807.7	28.98	4.79
63.39	20 32 4	1807.72	16.14	26.87	306.54	124.95	21 2 12	807.7	28.98	4.79
63.39	20 32 4	1807.72	16.14	26.87	306.54	124.95	21 2 12	807.7	28.98	4.79
63.39	20 32 4	1807.72	16.14	26.87	306.54	124.95	21 2 12	807.7	28.98	4.79

DIFFERENTIAL CORRECTIONS

TDE-6.8223	TRA 2.1266	TC3-5.2952	BAU 2.7797
RDE 2.7171	RAA-1.6359	RC3 2.2267	FAU .13415
FDE-3.1539	FRA 2.4681	FC3-3.2085	BSP 18147
BDE 7.3435	BRA 2.6832	BC3 5.7443	FSP 798

MID-COURSE EXECUTION ACCURACY

SGT 9456.6	SGR 4217.7	SG3 495.1
RRT -.9771	RRF -.9939	RTF .5557
SGB10354.6	R23 .2488	R13 -.9650
SG110321.9	SG2 821.7	THA 156.29

ORBIT DETERMINATION ACCURACY

ST 327.3	SR 132.8	SS 56.3
CRT -.9943	CRS .9979	CST -.9853
LSA 357.3	MSA 15.8	SSA .3
EL1 353.0	EL2 13.2	ALF 158.00

LAUNCH DATE AUG 16 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 22 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 35.486 GAL 2.04 AZL 90.08 HCA 84.60 SMA 269.19 ECC .45845 INC .0560 V1 29.413
RP 219.63 LAP -.06 LOP 47.58 VP 26.749 GAP 23.88 AZP 90.01 TAL 6.71 TAP 91.30 RCA 151.16 APO 387.21 V2 25.028
RC 81.081 GL -.32 GP -5.20 ZAL 75.29 ZAP 173.69 ETS 240.10 ZAE 160.20 ETE 345.37 ZAC 77.86 ETC 282.60 LVI -11.39

PLANETOCENTRIC CONIC

C3 39.153 VHL 6.257 DLA 13.96 RAL 36.01 RAD 6650.4 VEL 12.611 PTH 7.47 VHP 8.728 DPA 11.08 RAP 43.69 ECC 1.6444
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 12 31 3580.74 -47.19 135.68 263.47 96.93 12 12 12 2580.7 -39.07 104.23
60.00 11 36 29 3516.93 -40.21 130.78 284.31 93.01 12 35 6 2516.9 -34.62 101.18
70.00 12 10 58 3415.45 -34.15 122.75 284.51 90.00 13 7 53 2415.4 -30.58 94.61
80.00 13 2 38 3253.56 -29.80 110.39 284.42 87.98 13 56 52 2253.6 -27.60 83.18
90.00 14 16 39 3014.67 -28.18 92.75 284.34 87.23 15 6 54 2014.7 -26.46 65.87
100.00 15 45 30 2728.03 -29.80 71.76 284.42 87.98 16 30 58 1728.0 -27.60 44.55
110.00 17 10 24 2462.27 -34.15 51.67 284.51 90.00 17 51 27 1462.3 -30.58 23.53

DIFFERENTIAL CORRECTIONS

TDE -.3079 TRA -.8869 TC3 .3024 BAU .1638
RDE -.6277 RRA .2513 RC3 -.0801 FAU .05325
FDE .1796 FRA .2879 FC3-1.1774 BSP 1292
BDE .6992 BRA .9166 BC3 .3129 FSP 156

MID-COURSE EXECUTION ACCURACY

SGT 960.7 SGR 623.0 SG3 130.2
RRY -.0979 RRF -.1198 RTF -.5741
SGB 1345.0 R23 -.0241 R13 .5772
SG1 964.0 SG2 617.9 THA 173.82

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 28.9 SS 7.1
CRT .6663 CRS .8154 CST .9442
LSA 32.8 MSA 12.9 SSA 1.5
EL1 32.1 EL2 12.7 ALF 61.71

LAUNCH DATE AUG 16 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 24 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 35.333 GAL 2.09 AZL 90.02 HCA 85.72 SMA 263.40 ECC .42618 INC .0156 V1 29.413
RP 220.00 LAP -.02 LOP 48.70 VP 26.507 GAP 23.48 AZP 90.00 TAL 7.00 TAP 92.72 RCA 151.14 APO 375.65 V2 24.985
RC 82.809 GL -.12 GP -5.33 ZAL 74.71 ZAP 173.32 ETS 234.64 ZAE 159.77 ETE 345.08 ZAC 77.68 ETC 282.57 LVI -11.18

PLANETOCENTRIC CONIC

C3 37.387 VHL 6.115 DLA 13.96 RAL 35.37 RAD 6649.7 VEL 12.541 PTH 7.42 VHP 8.455 DPA 11.05 RAP 44.02 ECC 1.6153
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 9 57 3569.17 -47.09 134.58 281.68 97.77 12 9 26 2569.2 -38.67 103.40
60.00 11 33 55 3505.38 -40.16 129.80 282.64 93.67 12 32 20 2505.4 -34.32 100.34
70.00 12 8 24 3403.91 -34.15 121.85 282.92 90.54 13 5 8 2403.9 -30.36 93.78
80.00 13 0 3 3242.04 -29.82 109.53 282.87 88.42 13 54 5 2242.0 -27.44 82.36
90.00 14 14 4 3003.16 -28.19 91.91 282.81 87.65 15 4 7 2003.2 -26.32 65.06
100.00 15 42 55 2716.51 -29.82 70.90 282.87 88.42 16 28 12 1716.5 -27.44 43.73
110.00 17 7 50 2450.73 -34.15 50.77 282.92 90.54 17 48 41 1450.7 -30.36 22.70

DIFFERENTIAL CORRECTIONS

TDE -.3087 TRA -.8769 TC3 .3323 BAU .1720
RDE -.6170 RRA .2296 RC3 -.0891 FAU .05567
FDE .1882 FRA .2850 FC3-1.2890 BSP 1339
BDE .6899 BRA .9064 BC3 .3441 FSP 168

MID-COURSE EXECUTION ACCURACY

SGT 982.7 SGR 628.7 SG3 139.1
RRY -.1047 RRF .1292 RTF -.5845
SGB 1186.6 R23 -.0269 R13 .5878
SG1 986.4 SG2 622.9 THA 173.61

ORBIT DETERMINATION ACCURACY

ST 19.3 SR 29.1 SS 7.3
CRT .6706 CRS .8260 CST .9402
LSA 33.2 MSA 13.0 SSA 1.5
EL1 32.5 EL2 12.8 ALF 61.17

LAUNCH DATE AUG 16 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 35.188 GAL 2.14 AZL 89.98 HCA 86.83 SMA 258.18 ECC .41487 INC .0000 V1 29.413
RP 220.38 LAP .02 LOP 49.82 VP 26.275 GAP 23.09 AZP 90.00 TAL 7.30 TAP 94.14 RCA 151.12 APO 365.23 V2 24.944
RC 84.610 GL .09 GP -5.46 ZAL 74.11 ZAP 172.69 ETS 230.07 ZAE 159.40 ETE 344.76 ZAC 77.50 ETC 282.54 LVI -10.98

PLANETOCENTRIC CONIC

C3 35.772 VHL 5.981 DLA 13.97 RAL 34.73 RAD 6649.2 VEL 12.477 PTH 7.37 VHP 8.193 DPA 11.02 RAP 44.34 ECC 1.5887
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 7 21 3558.13 -48.98 133.53 279.93 98.57 12 6 39 2558.1 -38.29 102.62
60.00 11 31 18 3494.36 -40.11 128.86 281.00 94.30 12 29 32 2494.4 -34.03 99.55
70.00 12 5 48 3392.92 -34.14 121.00 281.35 91.04 13 2 19 2392.9 -30.15 93.00
80.00 12 57 25 3231.07 -29.84 108.72 281.35 88.85 13 51 16 2231.1 -27.28 81.59
90.00 14 11 26 2992.21 -28.22 91.11 281.30 88.05 15 1 18 1992.2 -26.18 64.29
100.00 15 40 17 2705.55 -29.84 70.09 281.35 88.85 16 25 23 1705.5 -27.28 42.96
110.00 17 5 12 2439.74 -34.14 49.91 281.35 91.04 17 45 52 1439.7 -30.15 21.91

DIFFERENTIAL CORRECTIONS

TDE -.3091 TRA -.8867 TC3 .3841 BAU .1804
RDE -.6069 RRA .2279 RC3 -.0987 FAU .05819
FDE .1980 FRA .2815 FC3-1.4082 BSP 1387
BDE .6808 BRA .8962 BC3 .3772 FSP 182

MID-COURSE EXECUTION ACCURACY

SGT 1004.7 SGR 634.1 SG3 148.4
RRY -.1127 RRF .1388 RYF -.5534
SGB 1188.1 R23 -.0288 R13 .5991
SG1 1008.9 SG2 627.5 THA 173.35

ORBIT DETERMINATION ACCURACY

ST 19.6 SR 29.2 SS 7.8
CRT .6745 CRS .8369 CST .9355
LSA 33.5 MSA 13.1 SSA 1.6
EL1 32.8 EL2 12.9 ALF 60.67

LAUNCH DATE AUG 16 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 28 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 35.052 GAL 2.19 AZL 89.95 HCA 87.95 SMA 253.48 ECC .40386 INC .0490 V1 29.413
RP 220.76 LAP .05 LOP 50.94 VP 26.053 GAP 22.70 AZP 90.00 TAL 7.61 TAP 95.56 RCA 151.10 APO 355.81 V2 24.902
RC 86.480 GL .31 GP -5.60 ZAL 73.51 ZAP 172.02 ETS 226.23 ZAE 159.09 ETE 344.40 ZAC 77.31 ETC 282.51 LVI -10.75

PLANETOCENTRIC CONIC

C3 34.293 VHL 5.856 DLA 13.98 RAL 34.07 RAD 6648.6 VEL 12.418 PTH 7.33 VHP 7.942 DPA 10.98 RAP 44.66 ECC 1.5644
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 11 4 41 3547.63 -46.87 132.54 278.24 99.33 12 3 49 2547.6 -37.92 101.88
60.00 11 28 38 3483.88 -40.05 127.98 279.41 94.90 12 26 42 2483.9 -33.75 98.81
70.00 12 3 6 3382.48 -34.12 120.18 279.82 91.53 12 59 28 2382.5 -29.94 92.26
80.00 12 54 44 3220.67 -29.85 107.95 279.86 89.26 13 48 25 2220.7 -27.12 80.85
90.00 14 8 44 2981.82 -28.24 90.35 279.82 88.43 14 58 26 1981.8 -26.04 63.56
100.00 15 37 36 2695.14 -29.85 69.31 279.86 89.26 16 22 31 1695.1 -27.12 42.22
110.00 17 2 32 2429.29 -34.12 49.10 279.82 91.53 17 43 1 1429.3 -29.94 21.17

DIFFERENTIAL CORRECTIONS

TDE -.3101 TRA -.8558 TC3 .3966 BAU .1866
RDE -.5964 RRA .2262 RC3 -.1090 FAU .06085
FDE .2085 FRA .2775 FC3-1.5361 BSP 1430
BDE .6722 BRA .8852 BC3 .4113 FSP 197

MID-COURSE EXECUTION ACCURACY

SGT 1025.9 SGR 639.4 SG3 158.3
RRY -.1206 RRF .1490 RTF -.6060
SGB 1208.8 R23 -.0314 R13 .6100
SG1 1030.5 SG2 631.9 THA 173.09

ORBIT DETERMINATION ACCURACY

ST 20.0 SR 29.4 SS 7.8
CRT .6793 CRS .8475 CST .9310
LSA 33.8 MSA 13.2 SSA 1.6
EL1 33.0 EL2 13.0 ALF 60.14



LAUNCH DATE AUG 16 1973

FLIGHT TIME 106.00

ARRIVAL DATE NOV 30 1973

HELIOCENTRIC CONIC											DISTANCE 286.458											EARTH TO MARS																																																																																		
RL	151.48	LAL	-.00	LOL	322.99	VL	34.923	GAL	2.24	AZL	89.91	HCA	80.06	SMA	249.17	ECC	.39371	INC	.0057	V1	29.413	RP	221.14	LAP	.09	LOP	52.05	VP	25.839	GAP	22.32	AZP	90.00	TAL	7.93	TAP	96.99	RCA	151.07	APO	347.27	V2	24.861	RC	88.416	GL	.53	GP	-5.74	ZAL	72.91	ZAP	171.31	ETS	222.99	ZAE	156.84	ETE	343.99	ZAC	77.12	ETC	282.49	LVI	-10.53																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	32.938	VHL	5.739	DLA	13.99	RAL	33.41	RAD	6648.1	VEL	12.363	PTH	7.28	VHP	7.699	DPA	10.93	RAP	44.96	ECC	1.5421	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	11	2	0	3537.66	-46.76	131.61	276.58	100.04	12	0	58	2537.7	-37.57	101.19	60.00	11	25	56	3473.95	-39.99	127.14	277.85	95.47	12	23	50	2474.0	-33.48	98.10	70.00	12	0	23	3372.59	-34.10	119.41	278.33	91.98	12	56	35	2372.6	-29.74	91.56	80.00	12	52	0	3210.83	-29.86	107.21	278.40	89.64	13	43	31	2210.8	-26.97	80.16	90.00	14	6	0	2972.00	-28.26	89.64	278.38	88.79	14	53	32	1972.0	-25.91	62.87	100.00	15	34	52	2685.30	-29.86	68.58	278.40	89.64	16	19	37	1685.3	-26.97	41.53	110.00	16	59	49	2419.41	-34.10	48.33	278.33	91.98	17	40	8	1419.4	-29.74	20.47
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
TDE	-.3108	TRA	-.8452	TC3	.4305	BAU	.1968	SGT	1047.2	SGR	644.5	SG3	168.8	ST	20.3	SR	29.5	SS	8.0	RDE	-.5866	RRA	.2245	RC3	-.1202	FAU	.06366	RRT	-.1294	RRF	.1598	RTF	-.6159	CRT	.6838	CRS	.8584	CST	.9256	FDE	.2194	FRA	.2713	FC3	-1.6733	BSP	1476	SGB	1229.6	R23	-.0338	R13	.6203	LSA	34.2	MSA	13.3	SSA	1.7	BDE	.6639	BRA	.8745	BC3	.4469	FSP	213	SG1	1052.4	SG2	635.9	THA	172.81	EL1	33.3	EL2	13.1	ALF	59.63																									

LAUNCH DATE AUG 16 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 2 1973

HELIOCENTRIC CONIC											DISTANCE 289.263											EARTH TO MARS																																																																																		
RL	151.48	LAL	-.00	LOL	322.99	VL	34.802	GAL	2.29	AZL	89.88	HCA	90.17	SMA	245.27	ECC	.38417	INC	.1217	V1	29.413	RP	221.52	LAP	.12	LOP	53.15	VP	25.635	GAP	21.93	AZP	90.00	TAL	8.24	TAP	98.41	RCA	151.05	APO	339.50	V2	24.819	RC	90.414	GL	.78	GP	-5.89	ZAL	72.30	ZAP	170.57	ETS	220.25	ZAE	156.65	ETE	343.53	ZAC	76.93	ETC	282.46	LVI	-10.31																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	31.695	VHL	5.630	DLA	14.00	RAL	32.74	RAD	6647.7	VEL	12.313	PTH	7.25	VHP	7.466	DPA	10.87	RAP	45.26	ECC	1.5216	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	59	17	3528.25	-46.64	130.73	274.98	100.71	11	58	5	2528.2	-37.23	100.54	60.00	11	23	12	3464.58	-39.93	126.35	276.34	96.00	12	20	57	2464.6	-33.22	97.45	70.00	11	57	37	3363.27	-34.08	118.68	276.87	92.41	12	53	41	2363.3	-29.55	90.90	80.00	12	49	14	3201.57	-29.86	106.93	276.98	90.01	13	42	35	2201.6	-26.82	79.51	90.00	14	3	13	2982.77	-28.27	88.96	276.97	89.13	14	52	36	1962.8	-25.78	62.23	100.00	15	32	6	2676.04	-29.86	67.89	276.98	90.01	16	16	42	1676.0	-26.82	40.88	110.00	16	57	4	2410.09	-34.08	47.60	276.87	92.41	17	37	14	1410.1	-29.55	19.82
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
TDE	-.3116	TRA	-.8343	TC3	.4652	BAU	.2049	SGT	1068.0	SGR	649.5	SG3	179.9	ST	20.6	SR	29.6	SS	8.3	RDE	-.5771	RRA	.2229	RC3	-.1322	FAU	.06665	RRT	-.1388	RRF	.1715	RTF	-.6257	CRT	.6885	CRS	.8684	CST	.9202	FDE	.2311	FRA	.2649	FC3	-1.8206	BSP	1521	SGB	1250.0	R23	-.0363	R13	.6305	LSA	34.5	MSA	13.3	SSA	1.8	BDE	.6559	BRA	.8636	BC3	.4836	FSP	231	SG1	1073.9	SG2	639.6	THA	172.90	EL1	33.6	EL2	13.2	ALF	59.12																									

LAUNCH DATE AUG 16 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 4 1973

HELIOCENTRIC CONIC											DISTANCE 292.163											EARTH TO MARS																																																																																		
RL	151.48	LAL	-.00	LOL	322.99	VL	34.687	GAL	2.33	AZL	89.84	HCA	91.27	SMA	241.71	ECC	.37521	INC	.1576	V1	29.413	RP	221.90	LAP	.16	LOP	54.25	VP	25.438	GAP	21.55	AZP	90.00	TAL	8.56	TAP	99.83	RCA	151.02	APO	332.41	V2	24.778	RC	92.473	GL	.99	GP	-6.04	ZAL	71.70	ZAP	169.80	ETS	217.90	ZAE	158.51	ETE	343.03	ZAC	76.73	ETC	282.44	LVI	-10.09																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	30.555	VHL	5.528	DLA	14.02	RAL	32.06	RAD	6647.2	VEL	12.267	PTH	7.21	VHP	7.241	DPA	10.80	RAP	45.55	ECC	1.5029	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	56	32	3519.37	-46.53	129.90	273.43	101.34	11	55	12	2519.4	-36.91	99.94	60.00	11	20	26	3495.76	-39.86	125.61	274.87	96.50	12	18	2	2455.8	-32.97	96.83	70.00	11	54	50	3354.53	-34.05	118.00	275.46	92.81	12	50	44	2354.5	-29.36	90.29	80.00	12	46	25	3192.90	-29.86	105.88	275.59	90.34	13	39	38	2192.9	-26.68	78.91	90.00	14	0	23	2954.14	-28.27	88.33	275.59	89.44	14	49	38	1954.1	-25.65	61.63	100.00	15	29	17	2687.37	-29.86	67.25	275.59	90.34	16	13	44	1667.4	-26.68	40.28	110.00	16	54	16	2401.34	-34.05	46.92	275.46	92.81	17	34	18	1401.3	-29.36	19.21
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
TDE	-.3128	TRA	-.8237	TC3	.5005	BAU	.2129	SGT	1088.8	SGR	654.3	SG3	191.7	ST	20.9	SR	29.6	SS	8.5	RDE	-.5679	RRA	.2212	RC3	-.1451	FAU	.06981	RRT	-.1488	RRF	.1841	RTF	-.6348	CRT	.6935	CRS	.8782	CST	.9147	FDE	.2433	FRA	.2569	FC3	-1.9779	BSP	1586	SGB	1270.3	R23	-.0396	R13	.6400	LSA	34.8	MSA	13.3	SSA	1.8	BDE	.6484	BRA	.8529	BC3	.3211	FSP	248	SG1	1095.5	SG2	643.1	THA	172.19	EL1	33.8	EL2	13.2	ALF	58.58																									

LAUNCH DATE AUG 16 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 6 1973

HELIOCENTRIC CONIC											DISTANCE 295.145											EARTH TO MARS																																																																																		
RL	151.48	LAL	-.00	LOL	322.99	VL	34.579	GAL	2.38	AZL	89.81	HCA	92.37	SMA	238.45	ECC	.36679	INC	.1932	V1	29.413	RP	222.28	LAP	.19	LOP	55.35	VP	25.250	GAP	21.16	AZP	90.01	TAL	8.69	TAP	101.25	RCA	150.99	APO	325.92	V2	24.736	RC	94.587	GL	1.23	GP	-6.20	ZAL	71.09	ZAP	169.01	ETS	215.88	ZAE	158.43	ETE	342.48	ZAC	76.53	ETC	282.42	LVI	-9.66																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	29.508	VHL	5.432	DLA	14.04	RAL	31.39	RAD	6646.8	VEL	12.225	PTH	7.18	VHP	7.024	DPA	10.72	RAP	45.83	ECC	1.4858	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	53	46	3511.04	-46.41	129.13	271.93	101.92	11	52	17	2511.0	-36.60	99.38	60.00	11	17	39	3447.49	-39.80	124.92	273.44	96.97	12	15	6	2447.5	-32.73	96.26	70.00	11	52	1	3346.35	-34.02	117.36	274.08	93.19	12	47	47	2346.3	-29.18	89.72	80.00	12	43	34	3184.82	-29.85	105.28	274.25	90.66	13	36	39	2184.0	-26.54	78.35	90.00	13	57	32	2946.10	-28.28	87.74	274.25	89.74	14	46	38	1946.1	-25.54	61.07	100.00	15	26	26	2659.29	-29.85	66.65	274.25	90.66	16	10	45	1659.3	-26.54	39.71	110.00	16	51	27	2393.17	-34.02	46.28	274.08	93.19	17	31	20	1393.2	-29.18	18.63
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
TDE	-.3138	TRA	-.8124	TC3	.5364	BAU	.2207	SGT	1108.8	SGR	659.1	SG3	204.1	ST	21.2	SR	29.7	SS	8.8	RDE	-.5590	RRA	.2195	RC3	-.1589	FAU	.07314	RRT	-.1590	RRF	.1972	RTF	-.6434	CRT	.6986	CRS	.8879	CST	.9085	FDE	.2563	FRA	.2470	FC3	-2.1459	BSP	1610	SGB	1289.9	R23	-.0427	R13	.6492	LSA	35.0	MSA	13.3	SSA	1.9	BDE	.6411	BRA	.8415	BC3	.5595	FSP	268	SG1	1116.3	SG2	646.3	THA	171.85	EL1	34.0	EL2	13.3	ALF	58.07																									

LAUNCH DATE AUG 16 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 8 1973

MELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 34.476 GAL 2.43 AZL 89.77 HCA 93.46 SMA 235.47 ECC .35887 INC .2289 V1 29.413
RP 222.87 LAP .23 LOP 56.45 VP 25.068 GAP 20.81 AZP 90.01 TAL 9.21 TAP 102.67 RCA 150.96 APO 319.97 V2 24.694
RC 96.756 GL 1.46 GP -6.37 ZAL 70.49 ZAP 168.19 ETS 214.13 ZAE 158.41 ETE 341.87 ZAC 76.33 ETC 282.40 LVI -9.64

DISTANCE 298.203

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.546 VHL 5.343 DLA 14.06 RAL 30.72 RAD 6646.4 VEL 12.186 PTH 7.15 VHP 6.816 DPA 10.63 RAP 46.10 ECC 1.4698
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 51 0 3503.25 -46.30 128.41 270.49 102.46 11 49 23 2503.3 -36.31 98.86
60.00 11 14 50 3439.79 -39.73 124.27 272.06 97.40 12 12 10 2439.8 -32.91 95.73
70.00 11 49 10 3338.75 -33.99 116.77 272.74 93.54 12 44 49 2338.7 -29.02 89.19
80.00 12 40 41 3177.33 -29.84 104.72 272.94 90.95 13 33 39 2177.3 -26.42 77.82
90.00 13 54 38 2938.67 -28.28 87.20 272.95 90.01 14 43 37 1938.7 -25.42 60.55
100.00 15 23 33 2651.80 -29.84 66.09 272.94 90.95 16 7 45 1651.8 -26.42 39.19
110.00 16 48 37 2385.57 -33.99 45.69 272.74 93.54 17 28 22 1385.6 -29.02 16.10

DIFFERENTIAL CORRECTIONS

TDE -.3149 TRA -.8013 TC3 .5724 BAW .2283
RDE -.5503 RRA .2177 RC3 -.1735 FAU .07661
FDE .2703 FRA .2380 FC3 -2.3235 BSP 1693
BDE .6340 BRA .8303 BC3 .5981 FSP 289

MID-COURSE EXECUTION ACCURACY

SGT 1128.2 SGR 663.8 SG3 217.1
RRT -.1700 RRF -.2110 RTF -.6516
SGB 1309.0 R23 -.0459 R13 .6579
SG1 1136.6 S62 649.3 THA 171.49

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 29.7 SS 9.1
CRT .7038 CR8 .6971 C8T .9023
LSA 35.3 MSA 13.3 S8A 2.0
EL1 34.2 EL2 13.3 ALF 57.55

LAUNCH DATE AUG 16 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 10 1973

MELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 34.380 GAL 2.48 AZL 89.74 HCA 94.55 SMA 232.72 ECC .35142 INC .2639 V1 29.413
RP 223.06 LAP .26 LOP 57.54 VP 24.894 GAP 20.44 AZP 90.02 TAL 9.54 TAP 104.08 RCA 150.94 APO 314.50 V2 24.652
RC 98.976 GL 1.73 GP -6.54 ZAL 69.89 ZAP 167.35 ETS 212.60 ZAE 158.43 ETE 341.20 ZAC 76.12 ETC 282.38 LVI -9.41

DISTANCE 301.328

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.662 VHL 5.259 DLA 14.09 RAL 30.05 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 6.614 DPA 10.53 RAP 46.35 ECC 1.4552
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 48 12 3495.98 -46.19 127.74 269.09 102.97 11 46 28 2496.0 -36.04 98.38
60.00 11 12 1 3432.61 -39.67 123.67 270.72 97.80 12 9 14 2432.6 -32.30 95.23
70.00 11 46 18 3331.69 -33.96 116.22 271.45 93.86 12 41 50 2331.7 -28.86 88.70
80.00 12 37 47 3170.40 -29.84 104.21 271.66 91.22 13 30 37 2170.4 -26.30 77.34
90.00 13 51 42 2931.80 -28.28 86.70 271.69 90.26 14 40 34 1931.8 -25.32 60.08
100.00 15 20 39 2644.87 -29.84 65.58 271.66 91.22 16 4 44 1644.9 -26.30 38.71
110.00 16 45 45 2378.51 -33.96 45.14 271.45 93.86 17 25 23 1378.5 -28.86 17.62

DIFFERENTIAL CORRECTIONS

TDE -.3079 TRA -.7820 TC3 .6206 BAW .2399
RDE -.5417 RRA .2160 RC3 -.1890 FAU .08021
FDE .2872 FRA .2259 FC3 -2.5103 BSP 1595
BDE .6231 BRA .8113 BC3 .6488 FSP 313

MID-COURSE EXECUTION ACCURACY

SGT 1144.6 SGR 668.3 SG3 230.8
RRT -.1895 RRF -.0379 RTF -.6710
SGB 1325.5 R23 -.0379 R13 .6773
SG1 1154.9 S62 650.4 THA 170.72

ORBIT DETERMINATION ACCURACY

ST 21.3 SR 29.7 SS 9.5
CRT .7036 CR8 .9059 C8T .6938
LSA 35.3 MSA 13.3 S8A 2.0
EL1 34.1 EL2 13.2 ALF 57.81

LAUNCH DATE AUG 16 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 12 1973

MELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 34.288 GAL 2.52 AZL 89.70 HCA 95.84 SMA 230.18 ECC .34442 INC .2994 V1 29.413
RP 223.44 LAP .30 LOP 58.63 VP 24.726 GAP 20.08 AZP 90.03 TAL 9.86 TAP 105.50 RCA 150.91 APO 309.47 V2 24.611
RC 101.244 GL 1.98 GP -6.72 ZAL 69.30 ZAP 166.50 ETS 211.28 ZAE 158.50 ETE 340.47 ZAC 75.90 ETC 282.36 LVI -9.18

DISTANCE 304.513

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.849 VHL 5.182 DLA 14.12 RAL 29.39 RAD 6645.8 VEL 12.116 PTH 7.09 VHP 6.420 DPA 10.42 RAP 46.60 ECC 1.4419
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 45 25 3489.27 -46.09 127.13 267.75 103.43 11 43 35 2489.3 -35.79 97.94
60.00 11 9 11 3426.01 -39.60 123.12 269.43 98.17 12 6 17 2426.0 -32.10 94.78
70.00 11 43 25 3325.24 -33.93 115.72 270.20 94.16 12 38 51 2325.2 -28.72 88.25
80.00 12 34 51 3164.11 -29.82 103.74 270.43 91.47 13 27 35 2164.1 -26.19 76.91
90.00 13 48 45 2925.59 -28.28 86.24 270.47 90.49 14 37 31 1925.6 -25.22 59.65
100.00 15 17 43 2638.59 -29.82 65.11 270.43 91.47 16 1 41 1638.6 -26.19 38.28
110.00 16 42 52 2372.06 -33.93 44.64 270.20 94.16 17 22 24 1372.1 -28.72 17.17

DIFFERENTIAL CORRECTIONS

TDE -.3121 TRA -.7737 TC3 .6535 BAW .2459
RDE -.5335 RRA .2140 RC3 -.2059 FAU .08420
FDE .3021 FRA .2108 FC3 -2.7149 BSP 1673
BDE .6181 BRA .8027 BC3 .6652 FSP 336

MID-COURSE EXECUTION ACCURACY

SGT 1164.5 SGR 673.1 SG3 245.7
RRT -.1993 RRF .2413 RTF -.6.43
SGB 1345.0 R23 -.0459 R13 .6816
SG1 1175.7 S62 653.3 THA 170.46

ORBIT DETERMINATION ACCURACY

ST 21.8 SR 29.7 SS 9.8
CRT .7112 CR8 .9139 C8T .6879
LSA 35.7 MSA 13.3 S8A 2.1
EL1 34.4 EL2 13.2 ALF 57.00

LAUNCH DATE AUG 16 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 14 1973

MELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 34.202 GAL 2.57 AZL 89.66 HCA 96.72 SMA 227.85 ECC .33783 INC .3348 V1 29.413
RP 223.83 LAP .33 LOP 59.71 VP 24.564 GAP 19.72 AZP 90.04 TAL 10.18 TAP 106.90 RCA 150.88 APO 304.83 V2 24.569
RC 103.960 GL 2.24 GP -6.91 ZAL 68.72 ZAP 165.62 ETS 210.08 ZAE 158.62 ETE 339.67 ZAC 75.69 ETC 282.35 LVI -8.94

DISTANCE 307.753

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.101 VHL 5.109 DLA 14.16 RAL 28.73 RAD 6645.4 VEL 12.086 PTH 7.06 VHP 6.232 DPA 10.29 RAP 46.83 ECC 1.4296
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 42 38 3483.07 -45.99 126.56 266.46 103.86 11 40 41 2483.1 -35.55 97.53
60.00 11 6 21 3419.95 -39.54 122.62 268.19 98.51 12 3 21 2419.9 -31.92 94.37
70.00 11 40 32 3319.36 -33.90 115.27 268.99 94.42 12 35 51 2319.4 -28.58 87.85
80.00 12 31 54 3158.41 -29.81 103.32 269.25 91.69 13 24 32 2158.4 -26.09 76.52
90.00 13 45 46 2919.98 -28.27 85.83 269.28 90.69 14 34 26 1920.0 -25.14 59.28
100.00 15 14 46 2632.89 -29.81 64.69 269.25 91.69 15 58 38 1632.9 -26.09 37.88
110.00 16 39 58 2366.18 -33.90 44.18 268.99 94.42 17 19 24 1366.2 -28.58 16.76

DIFFERENTIAL CORRECTIONS

TDE -.3134 TRA -.7645 TC3 .6884 BAW .2519
RDE -.5255 RRA .2120 RC3 -.2238 FAU .08835
FDE .3186 FRA .1939 FC3 -2.9305 BSP 1739
BDE .6128 BRA .7933 BC3 .7220 FSP 360

MID-COURSE EXECUTION ACCURACY

SGT 1182.8 SGR 678.0 SG3 261.3
RRT -.2104 RRF .2580 RTF -.6780
SGB 1363.3 R23 -.0530 R13 .6861
SG1 1195.1 S62 656.0 THA 170.12

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 29.7 SS 10.1
CRT .7181 CR8 .9216 C8T .6814
LSA 36.0 MSA 13.2 S8A 2.2
EL1 34.6 EL2 13.2 ALF 56.28

LAUNCH DATE AUG 16 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC

RL 151.46 LAL -.00 LOL 322.99 VL 34.121 GAL 2.61 AZL 89.63 HCA 97.80 SMA 225.70 ECC .33163 INC .3702 V1 29.413
RP 224.22 LAP .37 LOP 60.79 VP 24.408 GAP 19.36 AZP 90.05 TAL 10.50 TAP 108.30 RCA 150.85 APO 300.54 V2 24.527
RC 103.921 GL 2.51 GP -7.11 ZAL 68.15 ZAP 164.73 ETS 209.03 ZAE 158.78 ETE 338.79 ZAC 75.47 ETC 282.34 LVI -8.71

DISTANCE 311.042

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.412 VHL 5.041 DLA 14.21 RAL 28.07 RAD 6645.2 VEL 12.057 PTH 7.04 VHP 6.052 DPA 10.16 RAP 47.05 ECC 1.4182
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 39 51 3477.40 -45.89 126.05 265.22 104.24 11 37 49 2477.4 -35.34 97.16
60.00 11 3 31 3414.43 -39.49 122.16 267.00 98.81 12 0 25 2414.4 -31.76 93.99
70.00 11 37 37 3314.04 -33.87 114.85 267.83 94.67 12 32 51 2314.0 -28.46 87.48
80.00 12 28 55 3153.31 -29.80 102.94 268.10 91.89 13 21 29 2153.3 -26.00 76.16
90.00 13 42 47 2914.98 -28.27 85.46 268.14 90.88 14 31 22 1915.0 -25.06 58.91
100.00 15 11 47 2627.78 -29.80 64.31 268.10 91.89 15 55 35 1627.8 -26.00 37.53
110.00 16 37 4 2360.86 -33.87 43.77 267.83 94.67 17 16 25 1360.9 -28.46 16.40

DIFFERENTIAL CORRECTIONS

TDE -.3179 TRA -.7547 TC3 .7202 BAU .2582
RDE -.5176 RRA .2099 RC3 -.2426 FAU .09269
FDE .3362 FRA .1765 FC3-3.1576 BSP 1793
BDE .6074 BRA .7833 BC3 .7600 FSP 385

MID-COURSE EXECUTION ACCURACY

SGT 1200.3 SGR 683.0 SG3 277.6
RRT -.2230 RRF .2757 RTF -.6827
SGB 1381.0 R23 -.0592 R13 .6918
SG1 1214.1 SG2 658.2 THA 169.72

ORBIT DETERMINATION ACCURACY

ST 22.4 SR 29.6 SS 10.4
CRT .7244 CRS .9284 CST .8751
LSA 36.2 MSA 13.2 SSA 2.3
EL1 34.8 EL2 13.2 ALF 55.63

LAUNCH DATE AUG 16 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 34.044 GAL 2.65 AZL 89.59 HCA 98.88 SMA 223.70 ECC .32580 INC .4056 V1 29.413
RP 224.61 LAP .40 LOP 61.87 VP 24.258 GAP 19.01 AZP 90.06 TAL 10.81 TAP 109.69 RCA 150.82 APO 296.58 V2 24.485
RC 108.326 GL 2.77 GP -7.31 ZAL 67.59 ZAP 163.81 ETS 208.09 ZAE 158.99 ETE 337.82 ZAC 75.24 ETC 282.33 LVI -8.47

DISTANCE 314.376

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.778 VHL 4.978 DLA 14.28 RAL 27.43 RAD 6644.9 VEL 12.031 PTH 7.02 VHP 5.877 DPA 10.01 RAP 47.26 ECC 1.4078
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 37 5 3472.23 -45.80 125.58 264.04 104.60 11 34 57 2472.2 -35.14 96.83
60.00 11 0 40 3409.43 -39.43 121.74 265.85 99.09 11 57 30 2409.4 -31.61 93.66
70.00 11 34 42 3309.27 -33.84 114.49 266.71 94.88 12 29 52 2309.3 -28.35 87.15
80.00 12 25 56 3148.79 -29.79 102.61 267.00 92.07 13 18 24 2148.8 -25.92 75.85
90.00 13 39 44 2910.58 -28.26 85.15 267.04 91.04 14 28 14 1910.6 -24.99 58.61
100.00 15 8 47 2623.26 -29.79 63.97 267.00 92.07 15 52 31 1623.3 -25.92 37.22
110.00 16 34 9 2356.09 -33.84 43.40 266.71 94.88 17 13 25 1356.1 -28.35 16.07

DIFFERENTIAL CORRECTIONS

TDE -.3203 TRA -.7443 TC3 .7543 BAU .2646
RDE -.5098 RRA .2076 RC3 -.2628 FAU .09730
FDE .3559 FRA .1562 FC3-3.3998 BSP 1839
BDE .6020 BRA .7727 BC3 .7988 FSP 413

MID-COURSE EXECUTION ACCURACY

SGT 1217.0 SGR 688.1 SG3 295.0
RRT -.2365 RRF .2941 RTF -.6875
SGB 1398.1 R23 -.0652 R13 .6976
SG1 1232.3 SG2 660.3 THA 169.27

ORBIT DETERMINATION ACCURACY

ST 22.7 SR 29.6 SS 10.8
CRT .7308 CRS .9351 CST .8683
LSA 36.5 MSA 13.1 SSA 2.4
EL1 34.9 EL2 13.1 ALF 55.00

LAUNCH DATE AUG 16 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.971 GAL 2.69 AZL 89.56 HCA 99.95 SMA 221.85 ECC .32031 INC .4412 V1 29.413
RP 225.00 LAP .43 LOP 62.94 VP 24.114 GAP 18.66 AZP 90.08 TAL 11.12 TAP 111.07 RCA 150.79 APO 292.91 V2 24.443
RC 110.773 GL 3.05 GP -7.52 ZAL 67.04 ZAP 162.88 ETS 207.25 ZAE 159.23 ETE 336.77 ZAC 75.01 ETC 282.32 LVI -8.23

DISTANCE 317.750

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.194 VHL 4.919 DLA 14.32 RAL 26.80 RAD 6644.7 VEL 12.007 PTH 7.00 VHP 5.709 DPA 9.85 RAP 47.45 ECC 1.3982
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 34 19 3467.57 -45.72 125.16 262.91 104.91 11 32 7 2467.6 -34.96 96.53
60.00 10 57 50 3404.97 -39.39 121.37 264.75 99.34 11 54 35 2405.0 -31.47 93.36
70.00 11 31 47 3305.07 -33.82 114.16 265.63 95.07 12 26 52 2305.1 -28.23 86.86
80.00 12 22 55 3144.85 -29.78 102.31 265.93 92.22 13 15 20 2144.9 -25.85 75.58
90.00 13 36 41 2906.77 -28.26 84.87 265.98 91.18 14 25 7 1906.8 -24.92 58.35
100.00 15 5 47 2619.32 -29.78 63.68 265.93 92.22 15 49 26 1619.3 -25.85 36.95
110.00 16 31 13 2351.88 -33.82 43.08 265.63 95.07 17 10 25 1351.9 -28.25 15.78

DIFFERENTIAL CORRECTIONS

TDE -.3225 TRA -.7335 TC3 .7871 BAU .2707
RDE -.5020 RRA .2052 RC3 -.2840 FAU .10210
FDE .3768 FRA .1338 FC3-3.6538 BSP 1888
BDE .5987 BRA .7616 BC3 .8388 FSP 443

MID-COURSE EXECUTION ACCURACY

SGT 1232.2 SGR 693.5 SG3 313.2
RRT -.2507 RRF .3132 RTF -.6619
SGB 1413.9 R23 -.0713 R13 .7032
SG1 1249.3 SG2 682.1 THA 168.78

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 29.5 SS 11.2
CRT .7371 CRS .9412 CST .8615
LSA 36.7 MSA 13.1 SSA 2.5
EL1 35.0 EL2 13.1 ALF 54.39

LAUNCH DATE AUG 16 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.902 GAL 2.73 AZL 89.52 HCA 101.02 SMA 220.13 ECC .31514 INC .4768 V1 29.413
RP 225.39 LAP .47 LOP 64.01 VP 23.974 GAP 18.32 AZP 90.09 TAL 11.43 TAP 112.45 RCA 150.76 APO 289.50 V2 24.401
RC 113.259 GL 3.32 GP -7.74 ZAL 66.51 ZAP 161.84 ETS 206.49 ZAE 159.51 ETE 335.61 ZAC 74.77 ETC 282.32 LVI -7.98

DISTANCE 321.162

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.655 VHL 4.864 DLA 14.39 RAL 26.17 RAD 6644.4 VEL 11.985 PTH 6.98 VHP 5.547 DPA 9.68 RAP 47.63 ECC 1.3893
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 31 34 3463.40 -45.65 124.79 261.83 105.19 11 29 18 2463.4 -34.80 96.26
60.00 10 55 0 3401.02 -39.34 121.05 263.70 99.55 11 51 41 2401.0 -31.35 93.09
70.00 11 28 51 3301.41 -33.80 113.88 264.60 95.24 12 23 53 2301.4 -28.17 86.61
80.00 12 19 53 3141.50 -29.77 102.06 264.91 92.35 13 12 15 2141.5 -25.79 75.35
90.00 13 33 36 2903.57 -28.25 84.63 264.97 91.30 14 22 0 1903.6 -24.87 58.13
100.00 15 2 45 2615.97 -29.77 63.43 264.91 92.35 15 46 21 1616.0 -25.79 36.72
110.00 16 28 18 2348.22 -33.80 42.79 264.60 95.24 17 7 26 1348.2 -28.17 15.53

DIFFERENTIAL CORRECTIONS

TDE -.3243 TRA -.7227 TC3 .8198 BAU .2768
RDE -.4944 RRA .2027 RC3 -.3066 FAU .10720
FDE .3989 FRA .1104 FC3-3.9233 BSP 1925
BDE .5913 BRA .7506 BC3 .8752 FSP 475

MID-COURSE EXECUTION ACCURACY

SGT 1246.7 SGR 699.3 SG3 332.4
RRT -.2661 RRF .3336 RTF -.6965
SGB 1429.5 R23 -.0773 R13 .7090
SG1 1266.0 SG2 663.8 THA 168.23

ORBIT DETERMINATION ACCURACY

ST 23.2 SR 29.4 SS 11.6
CRT .7430 CRS .9464 CST .8550
LSA 36.9 MSA 13.0 SSA 2.5
EL1 35.1 EL2 13.0 ALF 53.81

LAUNCH DATE AUG 16 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 24 1973

Heliocentric Conic: RL 151.48 LAL -0.00 LOL 322.99 VL 33.837 GAL 2.77 AZL 89.49 HCA 102.08 SMA 218.54 ECC .31028 INC .5126 V1 29.413  
 RP 225.78 LAP .30 LOP 65.07 VP 23.839 GAP 17.98 AZP 90.11 TAL 11.73 TAP 113.81 RCA 150.73 APO 286.34 V2 24.359  
 RC 115.782 GL 3.80 GP -7.97 ZAL 65.99 ZAP 160.97 ETS 205.80 ZAE 199.83 ETE 334.33 ZAC 74.53 ETC 282.32 LVI -7.74

Distance 324.607 Earth to Mars

Planetary Conic: C3 23.158 VHL 4.812 DLA 14.46 RAL 25.56 RAD 6644.2 VEL 11.964 PTH 6.96 VHP 5.390 DPA 9.49 RAP 47.79 ECC 1.3811  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 28 51 3459.71 -45.58 124.46 260.79 103.44 11 26 30 2459.7 -34.65 96.03  
 60.00 10 52 11 3397.57 -39.30 120.76 262.70 99.74 11 48 49 2397.6 -31.25 92.86  
 70.00 11 25 55 3298.29 -33.78 113.63 263.61 95.38 12 20 53 2298.3 -28.10 86.40  
 80.00 12 16 51 3138.73 -29.77 101.86 263.93 92.46 13 9 9 2138.7 -25.74 75.16  
 90.00 13 30 30 2900.97 -28.25 84.44 263.99 91.39 14 18 51 1901.0 -24.03 57.95  
 100.00 14 59 42 2613.20 -29.77 63.23 263.93 92.46 15 43 16 1613.2 -25.74 36.53  
 110.00 16 25 22 2345.11 -33.78 42.55 263.61 95.38 17 4 27 1345.1 -28.10 15.32

Differential Corrections: TDE -.3261 TRA -.7120 TC3 .8509 BAU .2826 RDE -.4868 RRA .2000 RC3 -.3305 FAU .11254 FDE .4233 FRA .0844 FC3-4.2072 BSP 1963 BDE .5860 BRA .7396 BC3 .9129 FSP 508

Mid-Course Execution Accuracy: SGT 1260.1 SGR 705.4 SG3 352.7 RRT -.2821 RRF .3547 RTF -.7005 SGB 1444.1 R23 -.0836 R13 .7145 SG1 1281.7 S2 665.4 THA 167.65

Orbit Determination Accuracy: ST 23.5 SR 29.2 SS 12.1 CRT .7489 CR8 .9511 CST .8485 LSA 37.1 MSA 12.9 S8A 2.6 EL1 35.2 EL2 12.9 ALF 53.22

LAUNCH DATE AUG 16 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 26 1973

Heliocentric Conic: RL 151.48 LAL -0.00 LOL 322.99 VL 33.776 GAL 2.81 AZL 89.45 HCA 103.15 SMA 217.05 ECC .30570 INC .5486 V1 29.413  
 RP 226.17 LAP .53 LOP 66.13 VP 23.709 GAP 17.64 AZP 90.12 TAL 12.02 TAP 115.17 RCA 150.70 APO 283.41 V2 24.318  
 RC 118.341 GL 3.89 GP -8.20 ZAL 65.48 ZAP 159.98 ETS 205.18 ZAE 160.17 ETE 332.93 ZAC 74.28 ETC 282.32 LVI -7.49

Distance 328.082 Earth to Mars

Planetary Conic: C3 22.700 VHL 4.764 DLA 14.54 RAL 24.96 RAD 6644.0 VEL 11.945 PTH 6.95 VHP 5.239 DPA 9.29 RAP 47.94 ECC 1.3736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 26 8 3456.90 -45.53 124.17 259.81 105.65 11 23 44 2456.5 -34.53 95.82  
 60.00 10 49 22 3394.64 -39.27 120.52 261.74 99.90 11 45 57 2394.6 -31.16 92.67  
 70.00 11 22 59 3295.71 -33.76 113.44 262.66 95.50 12 17 55 2295.7 -28.03 86.23  
 80.00 12 13 47 3136.54 -29.76 101.70 262.99 92.54 13 6 4 2136.5 -25.69 75.01  
 90.00 13 27 23 2898.96 -28.25 84.30 263.05 91.46 14 15 42 1899.0 -24.80 57.82  
 100.00 14 56 39 2611.01 -29.76 63.06 262.99 92.54 15 40 10 1611.0 -25.69 36.38  
 110.00 16 22 25 2342.53 -33.76 42.35 262.66 95.50 17 1 28 1342.5 -28.03 15.14

Differential Corrections: TDE -.3277 TRA -.7012 TC3 .8808 BAU .2883 RDE -.4793 RRA .1972 RC3 -.3557 FAU .11815 FDE .4492 FRA .0561 FC3-4.5060 BSP 1996 BDE .5808 BRA .7284 BC3 .9499 FSP 544

Mid-Course Execution Accuracy: SGT 1272.2 SGR 712.1 SG3 374.0 RRT -.2989 RRF .3767 RTF -.7041 SGB 1457.9 R23 -.0901 R13 .7198 SG1 1296.5 S2 666.8 THA 167.01

Orbit Determination Accuracy: ST 23.7 SR 29.1 SS 12.8 CRT .7547 CR8 .9553 CST .8420 LSA 37.3 MSA 12.8 S8A 2.7 EL1 35.2 EL2 12.8 ALF 52.64

LAUNCH DATE AUG 16 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 28 1973

Heliocentric Conic: RL 151.48 LAL -0.00 LOL 322.99 VL 35.718 GAL 2.84 AZL 89.42 HCA 104.20 SMA 215.68 ECC .30139 INC .5846 V1 29.413  
 RP 226.58 LAP .57 LOP 67.19 VP 23.584 GAP 17.31 AZP 90.14 TAL 12.31 TAP 116.51 RCA 150.67 APO 280.68 V2 24.276  
 RC 120.933 GL 4.18 GP -8.45 ZAL 65.00 ZAP 158.98 ETS 204.61 ZAE 160.55 ETE 331.36 ZAC 74.03 ETC 282.33 LVI -7.23

Distance 331.586 Earth to Mars

Planetary Conic: C3 22.278 VHL 4.720 DLA 14.63 RAL 24.38 RAD 6643.8 VEL 11.928 PTH 6.93 VHP 5.093 DPA 9.07 RAP 48.08 ECC 1.3666  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 23 26 3453.76 -45.47 123.92 258.88 105.84 11 21 0 2453.8 -34.42 95.65  
 60.00 10 46 34 3392.19 -39.24 120.32 260.82 100.04 11 43 6 2392.2 -31.08 92.50  
 70.00 11 20 3 3293.66 -33.75 113.28 261.76 95.59 12 14 56 2293.7 -27.99 86.09  
 80.00 12 10 43 3134.91 -29.75 101.38 262.09 92.61 13 2 57 2134.9 -25.66 74.90  
 90.00 13 24 15 2897.55 -28.24 84.19 262.16 91.52 14 12 33 1897.5 -24.77 57.72  
 100.00 14 53 34 2609.38 -29.75 62.94 262.09 92.61 15 37 4 1609.4 -25.66 36.27  
 110.00 16 19 29 2340.48 -33.75 42.19 261.76 95.59 16 58 29 1340.5 -27.99 15.00

Differential Corrections: TDE -.3295 TRA -.6908 TC3 .9081 BAU .2935 RDE -.4718 RRA .1942 RC3 -.3823 FAU .12400 FDE .4765 FRA .0259 FC3-4.8189 BSP 2027 BDE .5754 BRA .7175 BC3 .9853 FSP 582

Mid-Course Execution Accuracy: SGT 1282.9 SGR 719.4 SG3 396.2 RRT -.3158 RRF .3996 RTF -.7070 SGB 1470.9 R23 -.0975 R13 .7245 SG1 1310.2 S2 668.4 THA 166.34

Orbit Determination Accuracy: ST 23.9 SR 28.9 SS 13.1 CRT .7605 CR8 .9588 CST .8360 LSA 37.5 MSA 12.8 S8A 2.8 EL1 35.3 EL2 12.7 ALF 52.04

LAUNCH DATE AUG 16 1973

FLIGHT TIME 136.00

ARRIVAL DATE DEC 30 1973

Heliocentric Conic: RL 151.48 LAL -0.00 LOL 322.99 VL 35.663 GAL 2.87 AZL 89.38 HCA 105.26 SMA 214.39 ECC .29733 INC .6209 V1 29.413  
 RP 226.95 LAP .60 LOP 68.24 VP 23.463 GAP 16.98 AZP 90.16 TAL 12.59 TAP 117.84 RCA 150.65 APO 278.14 V2 24.234  
 RC 123.556 GL 4.47 GP -8.70 ZAL 64.53 ZAP 157.96 ETS 204.08 ZAE 160.94 ETE 329.69 ZAC 73.77 ETC 282.34 LVI -6.98

Distance 335.115 Earth to Mars

Planetary Conic: C3 21.887 VHL 4.678 DLA 14.73 RAL 23.81 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 4.953 DPA 8.84 RAP 48.19 ECC 1.3602  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 20 48 3451.47 -45.43 123.72 258.00 105.99 11 18 18 2451.5 -34.33 95.50  
 60.00 10 43 46 3390.24 -39.22 120.16 259.95 100.15 11 40 17 2390.2 -31.02 92.37  
 70.00 11 17 6 3292.14 -33.74 113.16 260.90 95.66 12 11 58 2292.1 -27.95 85.98  
 80.00 12 7 37 3133.86 -29.75 101.50 261.24 92.65 12 59 51 2133.9 -25.64 74.83  
 90.00 13 21 5 2896.72 -28.24 84.13 261.30 91.55 14 9 22 1896.7 -24.76 57.66  
 100.00 14 50 29 2608.33 -29.75 62.87 261.24 92.65 15 33 57 1608.3 -25.64 36.20  
 110.00 16 16 32 2338.96 -33.74 42.08 260.90 95.66 16 55 31 1339.0 -27.95 14.90

Differential Corrections: TDE -.3313 TRA -.6804 TC3 .9346 BAU .2987 RDE -.4641 RRA .1910 RC3 -.4106 FAU .13024 FDE .5067 FRA -.0071 FC3-5.1515 BSP 2056 BDE .5702 BRA .7066 BC3 1.0208 FSP 621

Mid-Course Execution Accuracy: SGT 1292.9 SGR 727.5 SG3 419.9 RRT -.3335 RRF .4234 RTF -.7097 SGB 1483.5 R23 -.1050 R13 .7293 SG1 1323.6 S2 669.9 THA 165.61

Orbit Determination Accuracy: ST 24.1 SR 28.7 SS 13.6 CRT .7662 CR8 .9618 CST .8303 LSA 37.7 MSA 12.7 S8A 2.9 EL1 35.3 EL2 12.6 ALF 51.42

LAUNCH DATE AUG 16 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC

DISTANCE 336.667

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.612 GAL 2.91 AZL 89.34 HCA 106.31 SMA 213.19 ECC .29382 INC .6575 V1 29.413
RP 227.34 LAP .63 LOP 69.29 VP 23.346 GAP 16.65 AZP 90.18 TAL 12.86 TAP 119.16 RCA 150.62 APO 275.77 V2 24.193
RC 126.208 GL 4.76 GP -0.97 ZAL 64.08 ZAP 156.91 ETS 203.60 ZAE 161.36 ETE 327.81 ZAC 73.51 ETC 282.35 LVI -6.72

PLANETOCENTRIC CONIC

C3 21.827 VHL 4.640 DLA 14.83 RAL 23.25 RAD 6643.5 VEL 11.896 PTH 6.91 VHP 4.817 DPA 8.59 RAP 48.29 ECC 1.3543
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 18 7 3449.64 -45.40 123.56 257.17 106.11 11 15 37 2449.6 -34.26 95.39
60.00 10 41 0 3388.76 -39.20 120.04 259.13 100.23 11 37 28 2388.8 -30.97 92.27
70.00 11 14 9 3291.14 -33.73 113.08 260.08 95.71 12 9 1 2291.1 -27.93 85.91
80.00 12 4 31 3133.37 -29.75 101.46 260.42 92.67 12 56 44 2133.4 -25.64 74.79
90.00 13 17 54 2896.48 -28.24 84.12 260.48 91.55 14 6 11 1896.5 -24.76 57.65
100.00 14 47 22 2607.84 -29.75 62.83 260.42 92.67 15 30 50 1607.0 -25.64 36.16
110.00 16 13 36 2337.96 -33.73 42.00 260.08 95.71 16 52 34 1338.0 -27.93 14.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3333 TRA -.6702 TC3 .9582 BAU .3035 SGT 1301.2 SGR 736.2 SG3 444.6 ST 24.3 SR 28.4 SS 14.2
RDE -.4964 RRA .1876 RC3 -.4403 FAU .13673 RRT -.3512 RRF .4477 RTF -.7116 CRT .7720 CRS .9645 CST .8251
FDE .5396 FRA -.0424 FC3-5.4986 BSP 2079 SGB 1495.0 R23 -.1133 R13 .7336 LSA 37.8 MSA 12.6 S8A 3.0
BDE .5652 BRA .6960 BC3 1.0545 F8P 662 SG1 1335.7 SG2 671.5 THA 164.84 EL1 35.3 EL2 12.4 ALF 50.76

LAUNCH DATE AUG 16 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC

DISTANCE 342.241

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.563 GAL 2.94 AZL 89.31 HCA 107.35 SMA 212.08 ECC .28992 INC .6943 V1 29.413
RP 227.73 LAP .66 LOP 70.34 VP 23.232 GAP 16.33 AZP 90.21 TAL 13.12 TAP 120.47 RCA 150.59 APO 273.56 V2 24.152
RC 128.887 GL 5.06 GP -9.24 ZAL 63.65 ZAP 155.85 ETS 203.15 ZAE 161.78 ETE 325.75 ZAC 73.24 ETC 282.37 LVI -6.46

PLANETOCENTRIC CONIC

C3 21.194 VHL 4.604 DLA 14.95 RAL 22.71 RAD 6643.4 VEL 11.883 PTH 6.89 VHP 4.686 DPA 8.33 RAP 48.37 ECC 1.3486
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 15 30 3448.24 -45.37 123.43 256.38 106.20 11 12 58 2448.2 -34.20 95.30
60.00 10 38 13 3387.75 -39.19 119.95 258.34 100.28 11 34 41 2387.8 -30.94 92.21
70.00 11 11 13 3290.65 -33.73 113.04 259.30 95.73 12 6 3 2290.7 -27.91 85.88
80.00 12 1 23 3133.44 -29.75 101.47 259.64 92.66 12 53 37 2133.4 -25.64 74.80
90.00 13 14 42 2896.82 -28.24 84.14 259.70 91.54 14 2 59 1896.8 -24.76 57.67
100.00 14 44 15 2607.91 -29.75 62.83 259.64 92.66 15 27 43 1607.9 -25.64 36.17
110.00 16 10 39 2337.47 -33.73 41.96 259.30 95.73 16 49 36 1337.5 -27.91 14.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3349 TRA -.6604 TC3 .9790 BAU .3079 SGT 1307.6 SGR 746.0 SG3 470.4 ST 24.5 SR 28.2 SS 14.8
RDE -.4487 RRA .1839 RC3 -.4716 FAU .14349 RRT -.3691 RRF .4726 RTF -.7126 CRT .7775 CRS .9666 CST .8197
FDE .5740 FRA -.0808 FC3-5.8612 BSP 2108 SGB 1505.4 R23 -.1221 R13 .7374 LSA 38.0 MSA 12.5 S8A 3.1
BDE .5599 BRA .6855 BC3 1.0866 F8P 707 SG1 1346.5 SG2 673.3 THA 164.01 EL1 35.2 EL2 12.3 ALF 50.12

LAUNCH DATE AUG 16 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC

DISTANCE 345.834

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.517 GAL 2.97 AZL 89.27 HCA 108.40 SMA 211.03 ECC .28654 INC .7313 V1 29.413
RP 228.12 LAP .69 LOP 71.38 VP 23.123 GAP 16.01 AZP 90.23 TAL 13.37 TAP 121.77 RCA 150.56 APO 271.50 V2 24.110
RC 131.992 GL 5.37 GP -9.52 ZAL 63.23 ZAP 154.77 ETS 202.73 ZAE 162.22 ETE 323.47 ZAC 72.97 ETC 282.39 LVI -6.20

PLANETOCENTRIC CONIC

C3 20.887 VHL 4.570 DLA 15.07 RAL 22.18 RAD 6643.2 VEL 11.870 PTH 6.88 VHP 4.560 DPA 8.06 RAP 48.44 ECC 1.3437
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 12 54 3447.27 -45.35 123.35 255.64 106.27 11 10 21 2447.3 -34.17 95.24
60.00 10 35 28 3387.21 -39.18 119.91 257.61 100.31 11 31 55 2387.2 -30.93 92.17
70.00 11 8 16 3290.68 -33.73 113.05 258.56 95.73 12 3 6 2290.7 -27.91 85.88
80.00 11 58 14 3134.06 -29.75 101.51 258.90 92.64 12 50 28 2134.1 -25.65 74.84
90.00 13 11 27 2897.74 -28.24 84.21 258.96 91.51 13 59 45 1897.7 -24.76 57.73
100.00 14 41 8 2608.53 -29.75 62.80 258.90 92.64 15 24 35 1608.5 -25.65 36.21
110.00 16 7 42 2337.49 -33.73 41.98 258.56 95.73 16 46 39 1337.5 -27.91 14.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3367 TRA -.6508 TC3 .9972 BAU .3121 SGT 1312.5 SGR 756.8 SG3 497.5 ST 24.7 SR 27.9 SS 15.5
RDE -.4408 RRA .1800 RC3 -.5048 FAU .15058 RRT -.3871 RRF .4981 RTF -.7132 CRT .7829 CRS .9683 CST .8151
FDE .6112 FRA -.1214 FC3-6.2415 BSP 2131 SGB 1515.0 R23 -.1315 R13 .7412 LSA 38.2 MSA 12.5 S8A 3.2
BDE .5547 BRA .6751 BC3 1.1176 F8P 752 SG1 1356.2 SG2 675.3 THA 163.11 EL1 35.2 EL2 12.2 ALF 49.45

LAUNCH DATE AUG 16 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC

DISTANCE 349.446

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.473 GAL 2.99 AZL 89.23 HCA 109.44 SMA 210.08 ECC .28336 INC .7688 V1 29.413
RP 228.51 LAP .73 LOP 72.42 VP 23.017 GAP 15.89 AZP 90.26 TAL 13.62 TAP 123.03 RCA 150.54 APO 269.58 V2 24.069
RC 134.321 GL 5.67 GP -9.82 ZAL 62.84 ZAP 153.66 ETS 202.34 ZAE 162.65 ETE 320.97 ZAC 72.68 ETC 282.41 LVI -5.93

PLANETOCENTRIC CONIC

C3 20.803 VHL 4.539 DLA 15.20 RAL 21.67 RAD 6643.1 VEL 11.858 PTH 6.87 VHP 4.439 DPA 7.76 RAP 48.48 ECC 1.3391
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 19 3446.73 -45.34 123.30 254.94 106.30 11 7 46 2446.7 -34.15 95.20
60.00 10 32 43 3387.12 -39.18 119.90 256.91 100.32 11 29 10 2387.1 -30.92 92.17
70.00 11 5 18 3291.20 -33.73 113.09 257.86 95.70 12 0 9 2291.2 -27.93 85.92
80.00 11 55 4 3135.24 -29.76 101.60 258.20 92.59 12 47 20 2135.2 -25.67 74.92
90.00 13 8 11 2899.24 -28.25 84.32 258.26 91.45 13 56 31 1899.2 -24.80 57.83
100.00 14 37 56 2609.71 -29.76 62.97 258.20 92.59 15 21 26 1609.7 -25.67 36.29
110.00 16 4 45 2338.02 -33.73 42.00 257.86 95.70 16 43 43 1338.0 -27.93 14.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3384 TRA -.6413 TC3 1.0122 BAU .3159 SGT 1315.4 SGR 768.7 SG3 525.7 ST 24.8 SR 27.5 SS 16.2
RDE -.4328 RRA .1758 RC3 -.5392 FAU .15795 RRT -.4048 RRF .5238 RTF -.7130 CRT .7882 CRS .9697 CST .8108
FDE .6517 FRA -.1649 FC3-6.6369 BSP 2150 SGB 1523.6 R23 -.1414 R13 .7446 LSA 38.4 MSA 12.4 S8A 3.3
BDE .5494 BRA .6649 BC3 1.1468 F8P 801 SG1 1364.6 SG2 677.6 THA 162.15 EL1 35.1 EL2 12.0 ALF 48.76

LAUNCH DATE AUG 16 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.432 GAL 3.02 AZL 89.19 HCA 110.47 SMA 209.15 ECC .28036 INC .8067 V1 29.413
RP 229.90 LAP .76 LOP 73.46 VP 22.914 GAP 15.38 AZP 90.28 TAL 13.85 TAP 124.32 RCA 150.51 APO 267.79 V2 24.028
RC 137.073 GL 5.98 GP -10.12 ZAL 62.47 ZAP 152.54 ETS 201.97 ZAE 163.08 ETE 318.21 ZAC 72.40 ETC 282.44 LVI -5.66

PLANETOCENTRIC CONIC

C3 20.340 VHL 4.510 DLA 15.35 RAL 21.10 RAD 6643.0 VEL 11.847 PTH 6.86 VHP 4.322 DPA 7.45 RAP 48.51 ECC 1.3348
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 7 46 3446.61 -45.34 123.29 254.29 106.31 11 5 13 2446.6 -34.14 95.20
60.00 10 29 58 3387.49 -39.18 119.93 256.25 100.30 11 26 26 2387.5 -30.93 92.19
70.00 11 2 20 3292.22 -33.74 113.17 257.20 95.66 11 57 13 2292.2 -27.95 85.99
80.00 11 51 53 3136.97 -29.76 101.73 257.54 92.53 12 44 10 2137.0 -25.70 75.04
90.00 13 4 34 2901.32 -28.25 84.47 257.60 91.38 13 53 15 1901.3 -24.84 57.98
100.00 14 34 45 2611.45 -29.76 63.10 257.54 92.53 15 18 16 1611.4 -25.70 36.41
110.00 16 1 47 2339.04 -33.74 42.08 257.20 95.66 16 40 46 1339.0 -27.95 14.91

DIFFERENTIAL CORRECTIONS

TDE -.3401 TRA -.6323 TC3 1.0249 BAU .3197
RDE -.4246 RRA .1714 RC3 -.5760 FAU .16573
FDE .6948 FRA -.2113 FC3-7.0539 B8P 2167
BDE .5440 BRA .6551 BC3 1.1757 F8P 852

MID-COURSE EXECUTION ACCURACY

SGT 1317.2 SGR 782.2 SG3 555.5
RRR -.4225 RRF .9501 RTF -.7122
SGB 1532.0 R23 -.1520 R13 .7481
SG1 1372.6 SG2 680.3 THA 161.11

ORBIT DETERMINATION ACCURACY

ST 25.0 SR 27.2 SS 16.0
CRT .7933 CRS .9707 CST .8068
LSA 38.6 MSA 12.3 SSA 3.4
EL1 35.0 EL2 11.8 ALF 48.04

LAUNCH DATE AUG 16 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.394 GAL 3.04 AZL 89.16 HCA 111.50 SMA 208.30 ECC .27754 INC .8448 V1 29.413
RP 229.28 LAP .79 LOP 74.49 VP 22.815 GAP 15.07 AZP 90.31 TAL 14.08 TAP 125.38 RCA 150.49 APO 266.12 V2 23.988
RC 139.847 GL 6.30 GP -10.44 ZAL 62.11 ZAP 151.39 ETS 201.62 ZAE 163.49 ETE 315.18 ZAC 72.10 ETC 282.47 LVI -5.39

PLANETOCENTRIC CONIC

C3 20.098 VHL 4.483 DLA 15.50 RAL 20.69 RAD 6642.9 VEL 11.837 PTH 6.85 VHP 4.209 DPA 7.12 RAP 48.52 ECC 1.3308
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 5 14 3446.87 -45.34 123.31 253.68 106.29 11 2 40 2446.9 -34.15 95.21
60.00 10 27 14 3388.28 -39.19 120.00 255.64 100.25 11 23 42 2388.3 -30.96 92.24
70.00 10 59 22 3293.71 -33.75 113.28 256.58 95.59 11 54 16 2293.7 -27.99 86.09
80.00 11 48 40 3139.23 -29.77 101.90 256.91 92.44 12 40 59 2139.2 -25.74 75.20
90.00 13 1 33 2903.95 -28.25 84.66 256.96 91.28 13 49 57 1904.0 -24.88 58.16
100.00 14 31 32 2613.70 -29.77 63.26 256.91 92.44 15 15 5 1613.7 -25.74 36.56
110.00 15 58 48 2340.53 -33.75 42.20 256.58 95.59 16 37 49 1340.5 -27.99 15.01

DIFFERENTIAL CORRECTIONS

TDE -.3323 TRA -.6145 TC3 1.0521 BAU .3275
RDE -.4165 RRA .1664 RC3 -.6151 FAU .17401
FDE .7357 FRA -.2653 FC3-7.4953 B8P 2073
BDE .5328 BRA .6366 BC3 1.2167 F8P 901

MID-COURSE EXECUTION ACCURACY

SGT 1317.0 SGR 797.6 SG3 587.1
RRR -.4512 RRF .5772 RTF -.7210
SGB 1539.7 R23 -.1482 R13 .7800
SG1 1382.3 SG2 678.2 THA 159.60

ORBIT DETERMINATION ACCURACY

ST 24.5 SR 26.8 SS 17.8
CRT .7950 CRS .9711 CST .7986
LSA 38.3 MSA 12.2 SSA 3.5
EL1 34.5 EL2 11.6 ALF 48.21

LAUNCH DATE AUG 16 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.357 GAL 3.07 AZL 89.12 HCA 112.53 SMA 207.51 ECC .27489 INC .8835 V1 29.413
RP 229.87 LAP .82 LOP 75.52 VP 22.719 GAP 14.76 AZP 90.34 TAL 14.29 TAP 126.82 RCA 150.47 APO 264.56 V2 23.947
RC 142.641 GL 6.82 GP -10.77 ZAL 61.78 ZAP 150.22 ETS 201.29 ZAE 163.87 ETE 311.87 ZAC 71.80 ETC 282.51 LVI -5.11

PLANETOCENTRIC CONIC

C3 19.874 VHL 4.458 DLA 15.66 RAL 20.23 RAD 6642.8 VEL 11.827 PTH 6.85 VHP 4.101 DPA 6.77 RAP 48.51 ECC 1.3271
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 2 43 3447.57 -45.36 123.37 253.11 106.25 11 0 11 2447.6 -34.18 95.26
60.00 10 24 31 3389.54 -39.21 120.10 255.08 100.18 11 21 0 2389.5 -31.00 92.33
70.00 10 56 23 3295.73 -33.78 113.44 255.99 95.50 11 51 19 2295.7 -28.03 86.23
80.00 11 45 25 3142.07 -29.78 102.11 256.32 92.33 12 37 47 2142.1 -25.80 75.39
90.00 12 58 11 2907.20 -28.26 84.90 256.37 91.16 13 46 36 1907.2 -24.93 58.38
100.00 14 28 17 2616.54 -29.78 63.48 256.32 92.33 15 11 54 1616.5 -25.80 36.76
110.00 15 55 49 2342.55 -33.76 42.35 255.99 95.50 16 34 52 1342.6 -28.03 15.14

DIFFERENTIAL CORRECTIONS

TDE -.3377 TRA -.6102 TC3 1.0501 BAU .3289
RDE -.4077 RRA .1614 RC3 -.6554 FAU .18234
FDE .7875 FRA -.3182 FC3-7.9430 B8P 2128
BDE .5294 BRA .6311 BC3 1.2379 F8P 958

MID-COURSE EXECUTION ACCURACY

SGT 1314.7 SGR 813.9 SG3 619.2
RRR -.4628 RRF .6030 RTF -.7140
SGB 1546.2 R23 -.1661 R13 .7594
SG1 1396.7 SG2 684.0 THA 158.55

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 26.4 SS 18.9
CRT .8012 CRS .9717 CST .7971
LSA 38.7 MSA 12.2 SSA 3.6
EL1 34.5 EL2 11.4 ALF 47.04

LAUNCH DATE AUG 16 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.323 GAL 3.09 AZL 89.08 HCA 113.56 SMA 206.77 ECC .27240 INC .9225 V1 29.413
RP 230.05 LAP .85 LOP 76.33 VP 22.626 GAP 14.46 AZP 90.37 TAL 14.49 TAP 128.05 RCA 150.45 APO 263.10 V2 23.907
RC 145.458 GL 6.94 GP -11.11 ZAL 61.47 ZAP 149.02 ETS 200.98 ZAE 164.21 ETE 308.26 ZAC 71.49 ETC 282.35 LVI -4.83

PLANETOCENTRIC CONIC

C3 19.867 VHL 4.433 DLA 15.84 RAL 19.78 RAD 6642.7 VEL 11.819 PTH 6.84 VHP 3.996 DPA 6.41 RAP 48.48 ECC 1.3237
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 0 14 3448.65 -45.38 123.47 252.59 106.18 10 57 42 2448.7 -34.22 95.32
60.00 10 21 48 3391.23 -39.23 120.24 254.53 100.09 11 18 19 2391.2 -31.05 92.44
70.00 10 53 23 3298.24 -33.78 113.63 255.45 95.38 11 48 22 2298.2 -28.09 86.40
80.00 11 42 8 3145.46 -29.78 102.36 255.76 92.20 12 34 34 2145.5 -25.86 75.62
90.00 12 54 46 2911.03 -28.26 85.18 255.81 91.02 13 43 17 1911.0 -24.99 58.64
100.00 14 25 0 2619.93 -29.78 63.73 255.76 92.20 15 8 40 1619.9 -25.86 36.99
110.00 15 52 50 2345.06 -33.78 42.55 255.45 95.38 16 31 55 1345.1 -28.09 15.32

DIFFERENTIAL CORRECTIONS

TDE -.3417 TRA -.6050 TC3 1.0460 BAU .3306
RDE -.3986 RRA .1562 RC3 -.6976 FAU .19094
FDE .8416 FRA -.3702 FC3-8.4051 B8P 2172
BDE .5250 BRA .6248 BC3 1.2572 F8P 1019

MID-COURSE EXECUTION ACCURACY

SGT 1309.8 SGR 831.9 SG3 652.3
RRR -.4745 RRF .6286 RTF -.7071
SGB 1551.6 R23 -.1826 R13 .7599
SG1 1389.7 SG2 690.1 THA 157.35

ORBIT DETERMINATION ACCURACY

ST 25.2 SR 26.0 SS 19.3
CRT .8066 CRS .9720 CST .7953
LSA 39.0 MSA 12.3 SSA 3.7
EL1 34.4 EL2 11.3 ALF 45.98

LAUNCH DATE AUG 16 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC												DISTANCE 367.725						EARTH TO MARS					
RL	151.48	LAL	-.00	LQ	322.99	VL	33.291	GAL	3.11	AZL	89.04	HCA	114.58	SMA	206.08	ECC	.27006	INC	.9620	V1	29.413		
RP	230.44	LAP	.87	LOP	77.57	VP	22.536	GAP	14.15	AZP	90.40	TAL	14.68	TAP	129.26	RCA	150.43	APO	261.73	V2	23.867		
RC	148.289	GL	7.27	GP	-11.46	ZAL	61.18	ZAP	147.81	ETS	200.67	ZAE	164.90	ETE	304.35	ZAC	71.18	ETC	282.59	LVI	-4.59		
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
C3	19.476	VHL	4.413	DLA	16.02	RAL	19.35	RAD	6642.6	VEL	11.811	PTH	6.83	VHP	3.896	DPA	6.02	RAP	48.43	ECC	1.3205		
LNCH AZMTH	LNCH TIME	L-I TIME		INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG												
50.00	9 57 45	3490.12		-45.41	123.60	252.10	106.08	10 55 15	2450.1	-34.28	95.42												
60.00	10 19 5	3393.35		-39.25	120.42	254.03	99.98	11 15 38	2393.3	-31.12	92.58												
70.00	10 50 23	3301.22		-33.80	113.86	254.94	95.25	11 45 24	2301.2	-28.16	86.60												
80.00	11 38 50	3149.40		-29.79	102.65	255.24	92.04	12 31 19	2149.4	-25.93	75.89												
90.00	12 51 18	2915.44		-28.27	85.50	255.28	90.86	13 39 54	1915.4	-25.06	58.95												
100.00	14 21 41	2623.87		-29.79	64.02	255.24	92.04	15 5 25	1623.9	-25.93	37.26												
110.00	15 49 49	2348.04		-33.80	42.78	254.94	95.25	16 28 57	1348.0	-28.16	15.52												
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
TDE	-.3445	TRA	-.5995	TC3	1.0406	BAU	.3328	SGT	1303.6	SGR	852.0	SG3	687.1	ST	25.5	SR	25.5	SS	20.3				
RDE	-.3892	RRA	.1506	RC3	-.7422	FAU	.19996	RRT	-.4866	RRF	.6541	RTF	-.7005	CRT	.8113	CRS	.9721	CST	.7935				
FDE	.9002	FRA	-.4262	FC3	-8.8887	BSP	2199	SG8	1557.3	R23	-.1976	R13	.7617	LSA	39.3	MSA	12.3	SSA	3.7				
BDE	.5197	BRA	.6181	BC3	1.2782	FSP	1081	SG1	1392.8	SG2	696.6	THA	156.00	EL1	34.3	EL2	11.1	ALF	44.98				

LAUNCH DATE AUG 16 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC												DISTANCE 371.417						EARTH TO MARS					
RL	151.48	LAL	-.00	LQ	322.99	VL	33.260	GAL	3.12	AZL	89.00	HCA	115.60	SMA	205.43	ECC	.26785	INC	1.0020	V1	29.413		
RP	230.82	LAP	.90	LOP	78.59	VP	22.448	GAP	13.86	AZP	90.43	TAL	14.87	TAP	130.46	RCA	150.41	APO	260.46	V2	23.827		
RC	151.140	GL	7.60	GP	-11.82	ZAL	60.90	ZAP	146.57	ETS	200.38	ZAE	164.73	ETE	300.14	ZAC	70.86	ETC	282.64	LVI	-4.26		
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
C3	19.299	VHL	4.393	DLA	16.21	RAL	18.93	RAD	6642.5	VEL	11.803	PTH	6.83	VHP	3.800	DPA	5.62	RAP	48.38	ECC	1.3176		
LNCH AZMTH	LNCH TIME	L-I TIME		INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG												
50.00	9 55 18	3451.98		-45.44	123.77	251.66	105.95	10 52 50	2452.0	-34.35	95.53												
60.00	10 16 22	3395.89		-39.28	120.63	253.57	99.84	11 12 58	2395.9	-31.19	92.75												
70.00	10 47 21	3304.69		-33.82	114.13	254.46	95.09	11 42 25	2304.7	-28.25	86.84												
80.00	11 35 28	3153.88		-29.80	102.98	254.75	91.87	12 28 2	2153.9	-26.01	76.20												
90.00	12 47 48	2920.43		-28.27	85.87	254.79	90.68	13 36 28	1920.4	-25.14	59.29												
100.00	14 18 20	2628.35		-29.80	64.35	254.75	91.87	15 2 8	1628.4	-26.01	37.57												
110.00	15 46 47	2351.51		-33.82	43.05	254.46	95.09	16 25 59	1351.5	-28.25	15.76												
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
TDE	-.3465	TRA	-.5935	TC3	1.0316	BAU	.3351	SGT	1294.4	SGR	874.0	SG3	723.1	ST	25.7	SR	24.9	SS	21.2				
RDE	-.3795	RRA	.1446	RC3	-.7889	FAU	.20928	RRT	-.4975	RRF	.6789	RTF	-.6931	CRT	.8156	CRS	.9720	CST	.7914				
FDE	.9618	FRA	-.4875	FC3	-9.3878	BSP	2213	SG8	1561.9	R23	-.2121	R13	.7640	LSA	39.6	MSA	12.4	SSA	3.8				
BDE	.5139	BRA	.6109	BC3	1.2986	FSP	1144	SG1	1394.3	SG2	703.9	THA	154.50	EL1	34.1	EL2	10.9	ALF	44.00				

LAUNCH DATE AUG 16 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC												DISTANCE 375.118						EARTH TO MARS					
RL	151.48	LAL	-.00	LQ	322.99	VL	33.231	GAL	3.14	AZL	88.98	HCA	116.61	SMA	204.83	ECC	.26578	INC	1.0426	V1	29.413		
RP	231.20	LAP	.93	LOP	79.61	VP	22.364	GAP	13.58	AZP	90.47	TAL	15.04	TAP	131.65	RCA	150.39	APO	259.27	V2	23.787		
RC	154.008	GL	7.93	GP	-12.20	ZAL	60.65	ZAP	145.31	ETS	200.09	ZAE	164.89	ETE	295.87	ZAC	70.53	ETC	282.70	LVI	-3.97		
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
C3	19.138	VHL	4.375	DLA	16.42	RAL	18.53	RAD	6642.5	VEL	11.796	PTH	6.82	VHP	3.707	DPA	5.20	RAP	48.27	ECC	1.3149		
LNCH AZMTH	LNCH TIME	L-I TIME		INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG												
50.00	9 52 51	3454.22		-45.48	123.96	251.26	105.81	10 50 25	2454.2	-34.44	95.68												
60.00	10 13 39	3398.86		-39.32	120.87	253.14	99.67	11 10 17	2398.9	-31.29	92.95												
70.00	10 44 17	3309.65		-33.84	114.44	254.02	94.91	11 39 26	2308.6	-28.34	87.11												
80.00	11 32 4	3158.92		-29.82	103.36	254.29	91.67	12 24 43	2158.9	-26.10	76.55												
90.00	12 44 13	2926.02		-28.28	86.28	254.32	90.47	13 32 59	1926.0	-25.23	59.68												
100.00	14 14 56	2633.40		-29.82	64.73	254.29	91.67	14 58 49	1633.4	-26.10	37.92												
110.00	15 43 44	2355.46		-33.84	43.35	254.02	94.91	16 22 59	1355.5	-28.34	16.03												
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
TDE	-.3479	TRA	-.5881	TC3	1.0194	BAU	.3378	SGT	1283.7	SGR	898.3	SG3	760.4	ST	25.8	SR	24.4	SS	22.3				
RDE	-.3693	RRA	.1383	RC3	-.8378	FAU	.21890	RRT	-.5073	RRF	.7030	RTF	-.6549	CRT	.8194	CRS	.9718	CST	.7894				
FDE	1.0285	FRA	-.5503	FC3	-9.9032	BSP	2222	SG8	1566.8	R23	-.2257	R13	.7670	LSA	39.8	MSA	12.4	SSA	3.8				
BDE	.5074	BRA	.6041	BC3	1.3195	FSP	1210	SG1	1395.6	SG2	712.0	THA	152.85	EL1	33.9	EL2	10.6	ALF	43.01				

LAUNCH DATE AUG 16 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC												DISTANCE 378.829						EARTH TO MARS					
RL	151.48	LAL	-.00	LQ	322.99	VL	33.204	GAL	3.15	AZL	88.92	HCA	117.83	SMA	204.27	ECC	.26383	INC	1.0838	V1	29.413		
RP	231.58	LAP	.96	LOP	80.62	VP	22.282	GAP	13.27	AZP	90.50	TAL	15.20	TAP	132.82	RCA	150.37	APO	258.16	V2	23.748		
RC	156.890	GL	8.28	GP	-12.59	ZAL	60.42	ZAP	144.02	ETS	199.80	ZAE	164.95	ETE	290.97	ZAC	70.19	ETC	282.76	LVI	-3.67		
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
C3	18.986	VHL	4.357	DLA	16.64	RAL	18.15	RAD	6642.4	VEL	11.790	PTH	6.81	VHP	3.619	DPA	4.76	RAP	48.16	ECC	1.3125		
LNCH AZMTH	LNCH TIME	L-I TIME		INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG												
50.00	9 50 25	3456.84		-45.53	124.20	250.89	105.63	10 48 2	2456.8	-34.54	95.84												
60.00	10 10 55	3402.24		-39.35	121.15	252.76	99.49	11 7 37	2402.2	-31.39	93.17												
70.00	10 41 13	3313.08		-33.87	114.78	253.61	94.71	11 36 26	2313.1	-28.44	87.41												
80.00	11 28 37	3164.52		-29.83	103.77	253.86	91.45	12 21 21	2164.5	-26.20	76.94												
90.00	12 40 35	2932.21		-28.28	86.73	253.89	90.25	13 29 27	1932.2	-25.33	60.11												
100.00	14 11 29	2639.00		-29.83	65.14	253.86	91.45	14 55 28	1639.0	-26.20	38.31												
110.00	15 40 39	2359.90		-33.87	43.70	253.61	94.71	16 19 59	1359.9	-28.44	16.33												
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY					
TDE	-.3491	TRA	-.5829	TC3	1.0028	BAU	.3402	SGT	1270.6	SGR	925.0	SG3	799.0	ST	25.9	SR	23.8	SS	23.3				
RDE	-.3587	RRA	.1316	RC3	-.8892	FAU	.22888	RRT	-.5149	RRF	.7263	RTF	-.6752	CRT	.8230	CRS	.9713	CST	.7875				
FDE	1.0995	FRA	-.6174	FC3	-10.4363	BSP	2235	SG8	1571.6	R23	-.2390	R13	.7706	LSA	40.1	MSA	12.5	SSA	3.8				
BDE	.5005	BRA	.5976	BC3	1.3402	FSP	1281	SG1	1396.1	SG2	721.6	THA	151.04	EL1	33.6	EL2	10.4	ALF	41.97				

LAUNCH DATE AUG 16 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.179 GAL 3.17 AZL 88.87 HCA 118.64 SMA 203.74 ECC .26200 INC 1.1256 V1 29.413
RP 231.95 LAP .99 LOP 81.63 VP 22.202 GAP 12.98 AZP 90.34 TAL 15.34 TAP 133.98 RCA 150.36 APO 257.12 V2 23.708
RC 159.785 GL 8.62 GP -12.99 ZAL 60.21 ZAP 142.71 ETS 199.92 ZAE 164.92 ETE 286.08 ZAC 69.65 ETC 282.82 LVI -3.37

PLANETOCENTRIC CONIC

C3 18.848 VHL 4.341 DLA 16.86 RAL 17.78 RAD 6642.3 VEL 11.784 PTH 6.81 VHP 3.534 DPA 4.30 RAP 48.03 ECC 1.3102
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 47 59 3459.83 -45.59 124.47 250.56 105.43 10 45 39 2459.8 -34.66 96.03
60.00 10 8 11 3408.05 -39.40 121.46 252.40 99.28 11 4 57 2406.1 -31.51 93.43
70.00 10 38 6 3318.01 -33.89 115.16 253.23 94.49 11 33 24 2318.0 -28.55 87.75
80.00 11 25 6 3170.69 -29.84 104.23 253.47 91.21 12 17 57 2170.7 -26.30 77.36
90.00 12 36 53 2939.00 -28.28 87.22 253.49 90.00 13 25 52 1939.0 -25.43 60.58
100.00 14 7 58 2645.16 -29.84 63.60 253.47 91.21 14 52 3 1645.2 -26.30 38.73
110.00 15 37 32 2364.83 -33.89 44.08 253.23 94.49 16 16 57 1364.8 -28.55 16.67

DIFFERENTIAL CORRECTIONS

TDE -.3493 TRA -.5781 TC3 .9818 BAU .3430
RDE -.3478 RRA .1243 RC3 -.9429 FAU .23911
FDE 1.1726 FRA -.6866 FC-10.9830 BSP 2235
BDE .4929 BRA .5914 BC3 1.3612 FSP 1350

MID-COURSE EXECUTION ACCURACY

SGT 1254.9 SGR 954.1 SG3 838.7
RRY -.5203 RRF .7486 RTF -.6657
SGB 1576.4 R23 -.2512 R13 .7749
SG1 1395.9 SG2 732.5 THA 149.04

ORBIT DETERMINATION ACCURACY

ST 26.0 SR 23.1 SS 24.4
CRT .8260 CRS .9705 CST .7847
LSA 40.4 MSA 12.7 S8A 3.9
EL1 33.3 EL2 10.2 ALF 40.95

LAUNCH DATE AUG 16 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.155 GAL 3.18 AZL 88.83 HCA 119.64 SMA 203.25 ECC .26029 INC 1.1681 V1 29.413
RP 232.33 LAP 1.02 LOP 82.63 VP 22.125 GAP 12.69 AZP 90.58 TAL 15.48 TAP 135.12 RCA 150.34 APO 256.15 V2 23.670
RC 162.693 GL 8.97 GP -13.40 ZAL 60.02 ZAP 141.38 ETS 199.25 ZAE 164.78 ETE 281.09 ZAC 69.50 ETC 282.89 LVI -3.06

PLANETOCENTRIC CONIC

C3 18.720 VHL 4.327 DLA 17.10 RAL 17.42 RAD 6642.3 VEL 11.779 PTH 6.80 VHP 3.452 DPA 3.82 RAP 47.88 ECC 1.3081
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 45 34 3463.19 -45.65 124.77 250.27 105.21 10 43 18 2463.2 -34.79 96.25
60.00 10 5 27 3410.28 -39.44 121.82 252.08 99.04 11 2 17 2410.3 -31.63 93.71
70.00 10 34 57 3323.42 -33.92 115.58 252.88 94.24 11 30 20 2323.4 -28.68 88.13
80.00 11 21 32 3177.43 -29.84 104.73 253.10 90.95 12 14 29 2177.4 -26.42 77.83
90.00 12 33 6 2946.41 -28.28 87.77 253.11 89.73 13 22 13 1946.4 -25.54 61.09
100.00 14 4 24 2651.91 -29.84 66.10 253.10 90.95 14 48 36 1651.9 -26.42 39.20
110.00 15 34 23 2370.24 -33.92 44.50 252.88 94.24 16 13 54 1370.2 -28.68 17.04

DIFFERENTIAL CORRECTIONS

TDE -.3500 TRA -.5745 TC3 .9554 BAU .3459
RDE -.3381 RRA .1170 RC3 -.9990 FAU .24960
FDE 1.2540 FRA -.7594 FC-11.5431 BSP 2239
BDE .4852 BRA .5863 BC3 1.3823 FSP 1424

MID-COURSE EXECUTION ACCURACY

SGT 1237.7 SGR 985.7 SG3 879.6
RRY -.5224 RRF .7898 RTF -.6300
SGB 1582.2 R23 -.2625 R13 .7799
SG1 1395.7 SG2 745.3 THA 146.86

ORBIT DETERMINATION ACCURACY

ST 26.1 SR 22.4 SS 25.8
CRT .8289 CRS .9698 CST .7831
LSA 40.8 MSA 12.8 S8A 3.9
EL1 32.9 EL2 9.9 ALF 39.79

LAUNCH DATE AUG 16 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.133 GAL 3.19 AZL 88.79 HCA 120.64 SMA 202.79 ECC .25867 INC 1.2113 V1 29.413
RP 232.70 LAP 1.04 LOP 83.84 VP 22.050 GAP 12.41 AZP 90.82 TAL 15.61 TAP 136.25 RCA 150.33 APO 255.24 V2 23.831
RC 165.610 GL 9.33 GP -13.82 ZAL 59.85 ZAP 140.02 ETS 198.97 ZAE 164.52 ETE 276.07 ZAC 69.14 ETC 282.97 LVI -2.75

PLANETOCENTRIC CONIC

C3 18.603 VHL 4.313 DLA 17.35 RAL 17.08 RAD 6642.2 VEL 11.774 PTH 6.80 VHP 3.375 DPA 3.31 RAP 47.72 ECC 1.3082
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 43 10 3488.92 -45.71 125.10 250.02 104.95 10 40 56 2466.9 -34.93 96.49
60.00 10 2 41 3414.93 -39.49 122.20 251.80 98.79 10 59 36 2414.9 -31.77 94.03
70.00 10 31 48 3329.33 -33.95 116.04 252.57 93.97 11 27 15 2329.3 -28.81 88.53
80.00 11 17 54 3184.76 -29.85 105.20 252.76 90.66 12 10 58 2184.8 -26.54 78.34
90.00 12 29 14 2954.48 -28.27 88.36 252.76 89.43 13 18 29 1954.5 -25.66 61.65
100.00 14 0 45 2659.23 -29.85 66.85 252.76 90.66 14 45 5 1659.2 -26.54 39.71
110.00 15 31 12 2378.15 -33.95 44.96 252.57 93.97 16 10 48 1378.2 -28.81 17.45

DIFFERENTIAL CORRECTIONS

TDE -.3498 TRA -.5715 TC3 .9244 BAU .3493
RDE -.3239 RRA .1091 RC3-1.0576 FAU .24037
FDE 1.3393 FRA -.8338 FC-12.1169 BSP 2243
BDE .4767 BRA .5818 BC3 1.4046 FSP 1499

MID-COURSE EXECUTION ACCURACY

SGT 1218.3 SGR 1020.0 SG3 921.5
RRY -.5217 RRF .7899 RTF -.6440
SGB 1588.9 R23 -.2717 R13 .7860
SG1 1395.6 SG2 759.7 THA 144.45

ORBIT DETERMINATION ACCURACY

ST 26.1 SR 21.7 SS 26.8
CRT .8311 CRS .9689 CST .7808
LSA 41.1 MSA 13.0 S8A 3.9
EL1 32.6 EL2 9.7 ALF 38.81

LAUNCH DATE AUG 16 1973

FLIGHT TIME 168.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 33.112 GAL 3.20 AZL 88.74 HCA 121.64 SMA 202.36 ECC .25716 INC 1.2552 V1 29.413
RP 233.07 LAP 1.07 LOP 84.63 VP 21.977 GAP 12.12 AZP 90.86 TAL 15.72 TAP 137.38 RCA 150.32 APO 254.40 V2 23.593
RC 168.937 GL 9.70 GP -14.26 ZAL 59.69 ZAP 138.64 ETS 198.69 ZAE 164.14 ETE 271.11 ZAC 68.78 ETC 283.05 LVI -2.43

PLANETOCENTRIC CONIC

C3 18.496 VHL 4.301 DLA 17.62 RAL 18.75 RAD 6642.2 VEL 11.769 PTH 6.80 VHP 3.300 DPA 2.79 RAP 47.53 ECC 1.3044
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 40 45 3471.03 -45.78 125.47 249.80 104.68 10 38 36 2471.0 -35.09 96.75
60.00 9 59 54 3420.00 -39.54 122.62 251.54 98.50 10 56 54 2420.0 -31.83 94.37
70.00 10 28 32 3335.74 -33.98 116.54 252.28 93.67 11 24 7 2335.7 -28.95 88.98
80.00 11 14 11 3192.68 -29.86 105.87 252.45 90.35 12 7 23 2192.7 -26.67 78.69
90.00 12 25 17 2963.18 -28.27 88.89 252.44 89.11 13 14 40 1963.2 -25.78 62.28
100.00 13 37 2 2667.15 -29.86 67.23 252.45 90.35 14 41 30 1667.2 -26.67 40.26
110.00 15 27 58 2382.56 -33.98 45.46 252.28 93.67 16 7 41 1382.6 -28.95 17.90

DIFFERENTIAL CORRECTIONS

TDE -.3494 TRA -.5692 TC3 .8870 BAU .3529
RDE -.3110 RRA .1008 RC3-1.1183 FAU .27125
FDE 1.4303 FRA -.9114 FC-12.8964 BSP 2250
BDE .4678 BRA .5781 BC3 1.4273 FSP 1577

MID-COURSE EXECUTION ACCURACY

SGT 1196.6 SGR 1056.7 SG3 964.1
RRY -.5164 RRF .8086 RTF -.6145
SGB 1596.4 R23 -.2788 R13 .7931
SG1 1395.0 SG2 776.2 THA 141.78

ORBIT DETERMINATION ACCURACY

ST 26.2 SR 20.9 SS 26.1
CRT .8331 CRS .9677 CST .7784
LSA 41.5 MSA 13.2 S8A 3.8
EL1 32.1 EL2 9.4 ALF 37.33



LAUNCH DATE AUG 16 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 2 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 33.093 GAL 3.20 AZL 88.70 HCA 122.64 SMA 201.96 ECC .25974 INC 1.3001 V1 29.413  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.907 GAP 11.84 AZP 90.70 TAL 15.83 TAP 138.47 RCA 150.31 APO 253.61 V2 23.554  
 RC 171.472 GL 10.07 GP -14.71 ZAL 59.56 ZAP 137.23 ETS 198.40 ZAE 163.63 ETE 266.26 ZAC 68.40 ETC 283.13 LVI -2.11

DISTANCE 397.495

EARTH TO MARS

Planetocentric Conic

C3 18.398 VHL 4.289 DLA 17.89 RAL 16.43 RAD 6642.1 VEL 11.765 PTH 6.79 VHP 3.229 DPA 2.25 RAP 47.32 ECC 1.3028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 19 3475.49 -45.86 125.88 249.82 104.37 10 36 15 2475.5 -35.26 97.04  
 60.00 9 57 6 3425.49 -39.60 123.08 251.32 98.20 10 54 12 2425.5 -32.09 94.75  
 70.00 10 25 15 3342.65 -34.01 117.08 252.02 93.36 11 20 57 2342.6 -29.10 89.46  
 80.00 11 10 22 3201.20 -29.86 106.50 252.17 90.02 12 3 44 2201.2 -26.61 79.49  
 90.00 12 21 13 2972.51 -26.26 89.67 252.15 88.77 13 10 46 1972.5 -25.91 62.91  
 100.00 13 53 14 2675.67 -29.86 67.87 252.17 90.02 14 37 50 1675.7 -26.61 40.86  
 110.00 15 24 41 2389.46 -34.01 45.99 252.02 93.36 16 4 30 1389.5 -29.10 18.38

Differential Corrections

TDE -.3437 TRA -.5620 TC3 .8557 BAU .3592  
 RDE -.2982 RRA .0913 RC3-1.1834 FAU .28285  
 FDE 1.5176 FRA-1.0001 FC-13.3102 BSP 2205  
 BDE .4551 BRA .5702 BC3 1.4604 FSP 1645

Mid-Course Execution Accuracy

SGT 1172.1 SGR 1098.1 SCS 1009.3  
 RRT -.5156 RRF .8267 RTF -.5991  
 SGB 1606.1 R23 -.2750 R13 .8053  
 SGI 1399.5 SGI 788.0 THA 138.61

Orbit Determination Accuracy

ST 25.9 SR 20.1 S8 29.3  
 CRT .8340 CRS .9656 CST .7725  
 LSA 41.7 MSA 13.3 S8A 3.8  
 EL1 31.4 EL2 9.1 ALF 36.46

LAUNCH DATE AUG 16 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 4 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 33.074 GAL 3.21 AZL 88.65 HCA 123.63 SMA 201.59 ECC .25441 INC 1.3457 V1 29.413  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.838 GAP 11.57 AZP 90.75 TAL 15.92 TAP 139.55 RCA 150.30 APO 252.87 V2 23.517  
 RC 174.413 GL 10.44 GP -15.18 ZAL 59.45 ZAP 135.81 ETS 198.11 ZAE 163.00 ETE 261.61 ZAC 68.03 ETC 283.22 LVI -1.78

DISTANCE 401.245

EARTH TO MARS

Planetocentric Conic

C3 18.308 VHL 4.279 DLA 18.18 RAL 16.13 RAD 6642.1 VEL 11.761 PTH 6.79 VHP 3.162 DPA 1.69 RAP 47.09 ECC 1.3013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 35 54 3480.35 -45.94 126.32 249.47 104.04 10 33 54 2480.4 -35.45 97.35  
 60.00 9 54 16 3431.43 -39.65 123.57 251.13 97.87 10 51 28 2431.4 -32.26 95.15  
 70.00 10 21 54 3350.09 -34.04 117.66 251.80 93.02 11 17 44 2350.1 -29.26 89.98  
 80.00 11 6 29 3210.37 -29.86 107.18 251.91 89.66 11 59 59 2210.4 -26.96 80.13  
 90.00 12 17 3 2982.58 -28.24 90.41 251.88 88.40 13 6 45 1982.6 -26.05 63.61  
 100.00 13 49 21 2684.84 -29.86 68.55 251.91 89.66 14 34 5 1684.8 -26.96 41.50  
 110.00 15 21 20 2396.91 -34.04 46.57 251.80 93.02 16 1 17 1396.9 -29.26 18.89

Differential Corrections

TDE -.3462 TRA -.5665 TC3 .7988 BAU .3627  
 RDE -.2935 RRA .0829 RC3-1.2481 FAU .29381  
 FDE 1.6257 FRA-1.0729 FC-13.8937 BSP 2258  
 BDE .4474 BRA .5726 BC3 1.4819 FSP 1734

Mid-Course Execution Accuracy

SGT 1148.8 SGR 1139.5 SCS 1052.5  
 RRT -.4946 RRF .8426 RTF -.5666  
 SGB 1618.1 R23 -.2803 R13 .8131  
 SGI 1398.8 SGI 813.4 THA 135.47

Orbit Determination Accuracy

ST 26.1 SR 19.1 S8 30.8  
 CRT .8355 CRS .9643 CST .7719  
 LSA 42.4 MSA 13.6 S8A 3.8  
 EL1 31.1 EL2 8.8 ALF 34.63

LAUNCH DATE AUG 16 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 6 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 33.057 GAL 3.21 AZL 88.61 HCA 124.62 SMA 201.24 ECC .25317 INC 1.3923 V1 29.413  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.772 GAP 11.29 AZP 90.79 TAL 16.00 TAP 140.62 RCA 150.29 APO 252.19 V2 23.479  
 RC 177.360 GL 10.83 GP -15.65 ZAL 59.35 ZAP 134.36 ETS 197.92 ZAE 162.26 ETE 257.20 ZAC 67.64 ETC 283.31 LVI -1.45

DISTANCE 405.001

EARTH TO MARS

Planetocentric Conic

C3 18.226 VHL 4.269 DLA 18.48 RAL 15.83 RAD 6642.0 VEL 11.758 PTH 6.79 VHP 3.098 DPA 1.11 RAP 46.85 ECC 1.3000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 33 28 3485.58 -46.03 126.79 249.36 103.69 10 31 33 2485.6 -35.65 97.69  
 60.00 9 51 25 3437.80 -39.71 124.11 250.97 97.51 10 48 42 2437.8 -32.45 95.59  
 70.00 10 18 30 3356.05 -34.06 118.28 251.60 92.65 11 14 28 2356.0 -29.43 90.53  
 80.00 11 2 29 3220.18 -29.85 107.91 251.68 89.28 11 56 9 2220.2 -27.11 80.82  
 90.00 12 12 45 2993.35 -28.22 91.20 251.64 88.01 13 2 38 1993.4 -26.20 64.37  
 100.00 13 45 21 2694.65 -29.85 69.28 251.68 89.28 14 30 15 1694.6 -27.11 42.19  
 110.00 15 17 56 2404.87 -34.06 47.19 251.60 92.65 15 58 1 1404.9 -29.43 19.45

Differential Corrections

TDE -.3448 TRA -.5675 TC3 .7440 BAU .3685  
 RDE -.2683 RRA .0733 RC3-1.3164 FAU .30510  
 FDE 1.7343 FRA-1.1560 FC-14.4963 BSP 2282  
 BDE .4389 BRA .5722 BC3 1.5122 FSP 1818

Mid-Course Execution Accuracy

SGT 1123.8 SGR 1184.9 SCS 1097.3  
 RRT -.4738 RRF .8578 RTF -.5545  
 SGB 1632.9 R23 -.2748 R13 .8253  
 SGI 1402.8 SGI 835.8 THA 131.80

Orbit Determination Accuracy

ST 26.1 SR 18.2 S8 32.2  
 CRT .8364 CRS .9622 CST .7685  
 LSA 42.9 MSA 13.9 S8A 3.7  
 EL1 30.6 EL2 8.9 ALF 33.03

LAUNCH DATE AUG 16 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 33.041 GAL 3.22 AZL 88.56 HCA 125.61 SMA 200.92 ECC .25200 INC 1.4398 V1 29.413  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.708 GAP 11.02 AZP 90.84 TAL 16.08 TAP 141.88 RCA 150.29 APO 251.55 V2 23.442  
 RC 180.313 GL 11.22 GP -16.14 ZAL 59.27 ZAP 132.89 ETS 197.51 ZAE 161.40 ETE 253.03 ZAC 67.25 ETC 283.41 LVI -1.11

DISTANCE 408.762

EARTH TO MARS

Planetocentric Conic

C3 18.153 VHL 4.261 DLA 18.79 RAL 15.55 RAD 6642.0 VEL 11.755 PTH 6.78 VHP 3.057 DPA .50 RAP 46.58 ECC 1.2988  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 0 3491.16 -46.12 127.30 249.27 103.30 10 29 12 2491.2 -35.86 98.06  
 60.00 9 48 30 3444.57 -39.77 124.67 250.84 97.13 10 45 55 2444.6 -32.65 96.06  
 70.00 10 15 1 3368.51 -34.09 118.94 251.42 92.26 11 11 7 2368.5 -29.61 91.13  
 80.00 10 58 22 3230.60 -29.84 108.68 251.47 88.87 11 52 13 2230.6 -27.27 81.55  
 90.00 12 8 19 3004.82 -28.19 92.04 251.41 87.59 12 58 24 2004.8 -26.34 65.18  
 100.00 13 41 14 2705.08 -29.84 70.05 251.47 88.87 14 26 19 1705.1 -27.27 42.92  
 110.00 15 14 27 2413.33 -34.09 47.85 251.42 92.26 15 54 41 1413.3 -29.61 20.05

Differential Corrections

TDE -.3300 TRA -.5565 TC3 .7110 BAU .3794  
 RDE -.2548 RRA .0609 RC3-1.3922 FAU .31794  
 FDE 1.8189 FRA-1.2700 FC-15.1630 BSP 2191  
 BDE .4170 BRA .5599 BC3 1.5633 FSP 1870

Mid-Course Execution Accuracy

SGT 1090.4 SGR 1237.9 SCS 1146.8  
 RRT -.4705 RRF .8724 RTF -.5173  
 SGB 1649.7 R23 -.2488 R13 .8449  
 SGI 1420.8 SGI 838.3 THA 127.44

Orbit Determination Accuracy

ST 25.2 SR 17.3 S8 33.3  
 CRT .8351 CRS .9573 CST .7554  
 LSA 42.8 MSA 14.0 S8A 3.7  
 EL1 29.4 EL2 8.1 ALF 32.61

LAUNCH DATE AUG 16 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

DISTANCE 412.525

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.026 GAL 3.22 AZL 88.51 HCA 126.59 SMA 200.62 ECC .25091 INC 1.4883 V1 29.413  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.845 ZAP 10.75 AZP 90.89 TAL 16.14 TAP 142.73 RCA 150.28 APO 250.96 V2 23.405  
 RC 183.270 GL 11.62 GP -16.64 ZAL 59.22 ZAP 131.40 ETS 197.20 ZAE 160.44 ETE 249.18 ZAC 66.85 ETC 283.51 LVI -.76

PLANETOCENTRIC CONIC

C3 18.086 VHL 4.253 DLA 19.12 RAL 15.29 RAD 6642.0 VEL 11.752 PTH 6.78 VHP 2.979 DPA -.12 RAP 46.30 ECC 1.2977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 28 33 3497.17 -46.21 127.85 249.23 102.89 10 26 50 2497.2 -36.09 98.46  
 60.00 9 45 34 3451.85 -39.83 125.28 250.74 96.72 10 43 5 2451.9 -32.86 96.56  
 70.00 10 11 28 3375.60 -34.11 119.64 251.27 91.84 11 7 43 2375.6 -29.80 91.77  
 80.00 10 54 8 3241.82 -29.82 109.52 251.29 88.43 11 48 10 2241.8 -27.43 82.35  
 90.00 12 3 44 3017.17 -28.15 92.94 251.21 87.14 12 54 1 2017.2 -26.50 66.05  
 100.00 13 37 0 2716.29 -29.82 70.88 251.29 88.43 14 22 16 1716.3 -27.43 43.71  
 110.00 15 10 54 2422.42 -34.11 48.56 251.27 91.84 15 31 16 1422.4 -29.80 20.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3387 TRA -.5707 TC3 .6188 BAU .3835 SGT 1071.2 SGR 1284.4 SG3 1188.2 ST 25.9 SR 16.0 SS 35.2  
 RDE -.2358 RRA .0527 RC3-1.4605 FAU .32817 RRT -.4144 RRF .8840 RTF -.4548 CRT .8364 CRS .9558 CST .7590  
 FDE 1.9658 FRA-1.3285 FC-15.7085 BSP 2328 SGB 1672.5 R23 -.2410 R13 .8560 LSA 44.1 MSA 14.4 SSA 3.6  
 BDE .4126 BRA .5731 BC3 1.5862 FSP 1982 SG1 1421.8 SG2 860.7 THA 123.11 EL1 29.5 EL2 7.7 ALF 29.62

LAUNCH DATE AUG 16 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

DISTANCE 416.293

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.012 GAL 3.22 AZL 88.46 HCA 127.57 SMA 200.34 ECC .24989 INC 1.5380 V1 29.413  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.584 GAP 10.48 AZP 90.94 TAL 16.19 TAP 143.76 RCA 150.28 APO 250.40 V2 23.369  
 RC 186.232 GL 12.03 GP -17.15 ZAL 59.18 ZAP 129.89 ETS 196.88 ZAE 159.38 ETE 245.59 ZAC 66.45 ETC 283.61 LVI -.41

PLANETOCENTRIC CONIC

C3 18.027 VHL 4.248 DLA 19.46 RAL 15.03 RAD 6641.9 VEL 11.750 PTH 6.78 VHP 2.925 DPA -.76 RAP 46.01 ECC 1.2967  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 26 3 3503.54 -46.30 128.44 249.22 102.44 10 24 26 2503.5 -36.32 98.88  
 60.00 9 42 34 3459.56 -39.89 125.93 250.27 96.28 10 40 13 2459.6 -33.08 97.10  
 70.00 10 7 49 3385.21 -34.13 120.39 251.15 91.40 11 4 14 2385.2 -30.00 92.45  
 80.00 10 49 46 3253.70 -29.80 110.40 251.12 87.97 11 44 0 2253.7 -27.60 83.19  
 90.00 11 58 59 3030.27 -28.10 93.89 251.03 86.87 12 49 29 2030.3 -26.65 66.98  
 100.00 13 32 38 2728.17 -29.80 71.77 251.12 87.97 14 18 6 1728.2 -27.60 44.56  
 110.00 15 7 13 2432.03 -34.13 49.31 251.15 91.40 15 47 47 1432.0 -30.00 21.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3322 TRA -.5719 TC3 .5520 BAU .3936 SGT 1044.4 SGR 1339.5 SG3 1234.6 ST 25.6 SR 14.9 SS 36.7  
 RDE -.2186 RRA .0414 RC3-1.5371 FAU .33991 RRT -.3775 RRF .8956 RTF -.4084 CRT .8352 CRS .9508 CST .7811  
 FDE 2.0835 FRA-1.4205 FC-16.3237 B8P 2347 SGB 1698.6 R23 -.2117 R13 .8735 LSA 44.7 MSA 14.7 SSA 3.5  
 BDE .3977 BRA .5734 BC3 1.6333 FSP 2080 SG1 1441.2 SG2 898.8 THA 118.17 EL1 28.7 EL2 7.3 ALF 27.94

LAUNCH DATE AUG 16 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

DISTANCE 420.064

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.999 GAL 3.21 AZL 88.41 HCA 128.55 SMA 200.08 ECC .24893 INC 1.5888 V1 29.413  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.525 GAP 10.22 AZP 90.99 TAL 16.23 TAP 144.78 RCA 150.28 APO 249.89 V2 23.332  
 RC 189.197 GL 12.44 GP -17.68 ZAL 59.16 ZAP 128.36 ETS 196.54 ZAE 158.23 ETE 242.27 ZAC 65.04 ETC 283.73 LVI -.05

PLANETOCENTRIC CONIC

C3 17.975 VHL 4.240 DLA 19.81 RAL 14.78 RAD 6641.9 VEL 11.747 PTH 6.78 VHP 2.874 DPA -1.42 RAP 45.69 ECC 1.2958  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 23 31 3510.30 -46.40 129.06 249.23 101.97 10 22 1 2510.3 -36.57 99.33  
 60.00 9 39 30 3467.72 -39.95 126.62 250.62 95.82 10 37 18 2467.7 -33.30 97.67  
 70.00 10 4 4 3393.39 -34.14 121.19 251.05 90.93 11 0 39 2393.4 -30.20 93.17  
 80.00 10 45 14 3266.31 -29.76 111.33 250.98 87.48 11 39 41 2266.3 -27.78 84.09  
 90.00 11 54 2 3044.22 -28.04 94.91 250.87 86.16 12 44 47 2044.2 -26.81 67.97  
 100.00 13 28 6 2740.79 -29.76 72.70 250.98 87.48 14 13 47 1740.8 -27.78 45.45  
 110.00 15 3 30 2442.21 -34.14 50.11 251.05 90.93 15 44 13 1442.2 -30.20 22.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3178 TRA -.5866 TC3 .4953 BAU .4071 SGT 1011.5 SGR 1401.4 SG3 1284.1 ST 24.7 SR 13.9 SS 37.9  
 RDE -.2026 RRA .0275 RC3-1.6201 FAU .35256 RRT -.3488 RRF .9067 RTF -.3588 CRT .8336 CRS .9425 CST .7355  
 FDE 2.1829 FRA-1.3391 FC-16.9801 B8P 2319 SGB 1728.3 R23 -.1752 R13 .8914 LSA 44.8 MSA 14.8 SSA 3.5  
 BDE .3767 BRA .5873 BC3 1.6942 FSP 2111 SG1 1474.4 SG2 901.7 THA 113.13 EL1 27.5 EL2 6.9 ALF 26.89

LAUNCH DATE AUG 16 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

DISTANCE 423.836

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.987 GAL 3.21 AZL 88.36 HCA 129.52 SMA 199.85 ECC .24805 INC 1.6409 V1 29.413  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.468 GAP 9.95 AZP 91.04 TAL 16.26 TAP 145.78 RCA 150.28 APO 249.42 V2 23.297  
 RC 192.165 GL 12.87 GP -18.21 ZAL 59.16 ZAP 126.82 ETS 196.19 ZAE 157.00 ETE 239.23 ZAC 65.62 ETC 283.84 LVI .31

PLANETOCENTRIC CONIC

C3 17.930 VHL 4.234 DLA 20.18 RAL 14.54 RAD 6641.9 VEL 11.745 PTH 6.77 VHP 2.826 DPA -2.09 RAP 45.37 ECC 1.2951  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 58 3517.50 -46.50 129.73 249.29 101.47 10 19 35 2517.5 -36.84 99.82  
 60.00 9 36 25 3476.42 -40.01 127.35 250.61 95.33 10 34 20 2476.4 -33.54 98.28  
 70.00 10 0 13 3406.25 -34.15 122.04 250.98 90.43 10 56 59 2406.2 -30.41 93.95  
 80.00 10 40 33 3279.81 -29.72 112.34 250.86 86.96 11 35 12 2279.8 -27.95 85.05  
 90.00 11 48 53 3059.17 -27.97 95.99 250.73 85.62 12 39 53 2059.2 -26.97 69.03  
 100.00 13 23 24 2754.29 -29.72 73.70 250.86 86.96 14 9 19 1754.3 -27.95 46.42  
 110.00 14 59 39 2453.07 -34.15 50.95 250.98 90.43 15 40 32 1453.1 -30.41 22.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3235 TRA -.5939 TC3 .3849 BAU .4163 SGT 1003.2 SGR 1454.9 SG3 1324.0 ST 25.3 SR 12.4 SS 40.2  
 RDE -.1797 RRA .0188 RC3-1.6936 FAU .36223 RRT -.2630 RRF .9153 RTF -.2792 CRT .8325 CRS .9366 CST .7369  
 FDE 2.3552 FRA-1.5907 FC-17.4906 B8P 2474 SGB 1767.3 R23 -.1373 R13 .9058 LSA 46.5 MSA 15.3 SSA 3.3  
 BDE .3700 BRA .5842 BC3 1.7367 FSP 2234 SG1 1495.5 SG2 941.6 THA 107.33 EL1 27.4 EL2 6.3 ALF 23.46

LAUNCH DATE AUG 16 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

DISTANCE 427.612

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.978 GAL 3.21 AZL 88.31 HCA 130.49 SMA 199.63 ECC .24722 INC 1.6843 V1 28.413
RP 236.29 LAP 1.29 LOP 93.49 VP 21.413 GAP 9.69 AZP 91.10 TAL 16.28 TAP 146.77 RCA 150.28 APO 248.98 V2 23.261
RC 195.134 GL 13.31 GP -18.78 ZAL 59.17 ZAP 125.26 ETS 195.83 ZAE 155.70 ZAE 155.70 ETE 236.43 ZAC 65.20 ETC 283.96 LVI .69

PLANETOCENTRIC CONIC

C3 17.891 VHL 4.230 DLA 20.56 RAL 14.32 RAD 6641.9 VEL 11.744 PTH 6.77 VHP 2.781 DPA -2.79 RAP 45.03 ECC 1.2944
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 18 22 3525.09 -46.80 130.43 249.38 100.93 10 17 7 2525.1 -37.12 100.33
60.00 9 33 12 3465.58 -40.06 128.12 250.62 94.81 10 31 17 2485.6 -33.79 98.93
70.00 9 56 14 3417.71 -34.15 122.93 250.92 89.90 10 53 12 2417.7 -30.63 94.77
80.00 10 35 40 3294.12 -29.66 113.39 250.75 86.40 11 30 34 2294.1 -26.13 86.07
90.00 11 43 31 3075.07 -27.68 97.15 250.60 85.05 12 34 46 2075.1 -27.13 70.17
100.00 13 18 31 2768.59 -29.66 74.76 250.75 86.40 14 4 40 1768.6 -28.13 47.44
110.00 14 55 41 2464.53 -34.15 51.85 250.92 89.90 15 36 45 1464.5 -30.63 23.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3162 TRA -.5902 TC3 .2951 BAW .4305 SGT 987.4 SGR 1517.3 SG3 1368.3 ST 25.0 SR 11.0 SS 41.9
RDE -.1589 RRA .0065 RC3-1.7754 FAU .37326 RRT -.1941 RRF .9238 RTF -.2039 CRT .8301 CR8 .9242 CST .7263
FDE 2.4954 FRA-1.6793 FC-18.0621 BSP 2543 SGB 1810.2 R23 -.0946 R13 .9193 LSA 47.4 MSA 15.6 SSA 3.3
BDE .3539 BRA .5902 BC3 1.7997 FSP 2316 SG1 1537.2 SG2 956.0 THA 101.83 EL1 26.7 EL2 5.7 ALF 21.12

LAUNCH DATE AUG 16 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 431.391

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.966 GAL 3.20 AZL 88.25 HCA 131.46 SMA 199.43 ECC .24645 INC 1.7491 V1 29.413
RP 236.63 LAP 1.31 LOP 94.46 VP 21.359 GAP 9.43 AZP 91.16 TAL 16.29 TAP 147.75 RCA 150.28 APO 248.07 V2 23.226
RC 198.104 GL 13.75 GP -19.31 ZAL 59.21 ZAP 123.69 ETS 195.45 ZAE 154.33 ZAE 154.33 ETE 233.84 ZAC 64.78 ETC 284.08 LVI 1.07

PLANETOCENTRIC CONIC

C3 17.858 VHL 4.226 DLA 20.96 RAL 14.09 RAD 6641.9 VEL 11.742 PTH 6.77 VHP 2.739 DPA -3.50 RAP 44.68 ECC 1.2939
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 15 43 3533.10 -46.70 131.18 249.49 100.37 10 14 36 2533.1 -37.41 100.88
60.00 9 29 55 3495.25 -40.11 128.94 250.66 94.25 10 28 11 2495.3 -34.05 99.62
70.00 9 52 8 3429.84 -34.15 123.88 250.89 89.34 10 49 18 2429.8 -30.85 95.64
80.00 10 30 34 3309.32 -29.59 114.52 250.66 85.81 11 25 44 2309.3 -28.32 87.17
90.00 11 37 53 3092.02 -27.77 98.38 250.49 84.44 12 29 25 2092.0 -27.29 71.38
100.00 13 13 26 2783.79 -29.59 75.89 250.66 85.81 13 59 50 1783.8 -28.32 48.53
110.00 14 51 34 2476.65 -34.15 52.80 250.89 89.34 15 32 51 1476.7 -30.85 24.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3081 TRA -.5978 TC3 .1990 BAW .4463 SGT 977.8 SGR 1582.0 SG3 1411.5 ST 24.6 SR 9.6 SS 43.7
RDE -.1369 RRA -.0060 RC3-1.8588 FAU .38397 RRT -.1158 RRF .9314 RTF -.1200 CRT .8271 CR8 .9055 CST .7141
FDE 2.6419 FRA-1.7652 FC-18.6142 BSP 2629 SGB 1859.8 R23 -.0525 R13 .9301 LSA 48.4 MSA 15.9 SSA 3.2
BDE .3371 BRA .5978 BC3 1.8695 FSP 2397 SG1 1588.5 SG2 967.3 THA 96.52 EL1 25.9 EL2 5.1 ALF 18.59

LAUNCH DATE AUG 16 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

DISTANCE 435.171

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.957 GAL 3.19 AZL 88.19 HCA 132.43 SMA 199.24 ECC .24573 INC 1.8054 V1 29.413
RP 236.98 LAP 1.33 LOP 95.43 VP 21.307 GAP 9.17 AZP 91.22 TAL 16.29 TAP 148.72 RCA 150.28 APO 248.20 V2 23.191
RC 201.073 GL 14.21 GP -19.88 ZAL 59.26 ZAP 122.10 ETS 195.06 ZAE 152.90 ZAE 152.90 ETE 231.46 ZAC 64.35 ETC 284.20 LVI 1.45

PLANETOCENTRIC CONIC

C3 17.833 VHL 4.223 DLA 21.37 RAL 13.88 RAD 6641.9 VEL 11.741 PTH 6.77 VHP 2.700 DPA -4.23 RAP 44.32 ECC 1.2935
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 13 0 3541.55 -46.80 131.97 249.64 99.76 10 12 2 2541.6 -37.71 101.46
60.00 9 26 33 3505.46 -40.16 129.80 250.72 93.67 10 24 59 2505.5 -34.32 100.33
70.00 9 47 53 3442.66 -34.13 124.88 250.88 88.75 10 45 15 2442.7 -31.08 96.57
80.00 10 25 15 3325.90 -29.50 115.71 250.59 85.19 11 20 40 2325.5 -28.50 88.33
90.00 11 31 57 3110.14 -27.65 99.69 250.39 83.80 12 23 47 2110.1 -27.45 72.68
100.00 13 8 7 2799.97 -29.50 77.08 250.59 85.19 13 54 47 1800.0 -28.50 49.70
110.00 14 47 19 2489.48 -34.13 53.80 250.88 88.75 15 28 49 1489.5 -31.08 25.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2982 TRA -.6062 TC3 .0978 BAW .4641 SGT 975.0 SGR 1649.6 SG3 1454.0 ST 24.2 SR 8.1 SS 45.3
RDE -.1138 RRA -.0191 RC3-1.9444 FAU .39445 RRT -.0300 RRF .9383 RTF -.3294 CRT .8226 CR8 .8748 CST .6987
FDE 2.7908 FRA-1.8525 FC-19.1498 BSP 2725 SGB 1916.2 R23 -.0139 R13 .9382 LSA 49.5 MSA 16.1 SSA 3.1
BDE .3192 BRA .6065 BC3 1.9468 FSP 2474 SG1 1650.0 SG2 974.3 THA 91.56 EL1 25.1 EL2 4.4 ALF 15.95

LAUNCH DATE AUG 16 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

DISTANCE 438.953

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.948 GAL 3.18 AZL 88.14 HCA 133.39 SMA 199.07 ECC .24507 INC 1.8634 V1 29.413
RP 237.31 LAP 1.33 LOP 96.39 VP 21.256 GAP 8.92 AZP 91.28 TAL 16.28 TAP 149.67 RCA 150.28 APO 247.85 V2 23.157
RC 204.040 GL 14.68 GP -20.46 ZAL 59.32 ZAP 120.51 ETS 194.65 ZAE 151.41 ZAE 151.41 ETE 229.25 ZAC 63.91 ETC 284.33 LVI 1.85

PLANETOCENTRIC CONIC

C3 17.813 VHL 4.221 DLA 21.80 RAL 13.67 RAD 6641.9 VEL 11.741 PTH 6.77 VHP 2.663 DPA -4.98 RAP 43.95 ECC 1.2932
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 10 15 3550.46 -46.80 132.81 249.82 99.13 10 9 25 2550.5 -38.02 102.08
60.00 9 23 6 3516.22 -40.20 130.71 250.81 93.05 10 21 42 2516.2 -34.60 101.12
70.00 9 43 28 3456.22 -34.11 125.94 250.89 88.12 10 41 4 2456.2 -31.31 97.56
80.00 10 19 40 3342.71 -29.40 116.98 250.53 84.53 11 15 23 2342.7 -28.68 89.58
90.00 11 25 42 3129.51 -27.50 101.08 250.30 83.11 12 17 51 2129.5 -27.61 74.08
100.00 13 2 32 2817.18 -29.40 78.35 250.53 84.53 13 49 29 1817.2 -28.68 50.95
110.00 14 42 54 2503.04 -34.11 54.86 250.89 88.12 15 24 37 1503.0 -31.31 26.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2867 TRA -.6151 TC3 -.0086 BAW .4838 SGT 980.1 SGR 1719.7 SG3 1495.1 ST 23.7 SR 6.6 SS 47.4
RDE -.0895 RRA -.0329 RC3-2.0314 FAU .40454 RRT .0610 RRF .9445 RTF .0658 CRT .8144 CR8 .8194 CST .6801
FDE 2.9446 FRA-1.9401 FC-19.6610 BSP 2831 SGB 1979.4 R23 .0194 R13 .9444 LSA 50.7 MSA 16.4 SSA 3.0
BDE .3004 BRA .6160 BC3 2.0315 FSP 2544 SG1 1721.3 SG2 977.4 THA 87.06 EL1 24.3 EL2 3.8 ALF 13.17

LAUNCH DATE AUG 16 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.940 GAL 3.17 AZL 88.08 HCA 134.35 SMA 198.91 ECC .24445 INC 1.0230 V1 29.413  
 RP 237.65 LAP 1.38 LOP 97.35 VP 21.206 GAP 8.67 AZP 91.34 TAL 16.26 TAP 130.62 RCA 150.29 APO 247.54 V2 23.123  
 RC 207.005 GL 15.18 GP -21.04 ZAL 59.41 ZAP 118.91 ETS 194.22 ZAE 149.88 ETE 227.21 ZAC 63.47 ETC 284.46 LVI 2.29

DISTANCE 442.737

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 17.800 VHL 4.219 DLA 22.25 RAL 13.47 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 2.630 DPA -5.74 RAP 43.57 ECC 1.2929  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 7 25 3559.82 -47.00 133.69 250.04 98.45 10 8 44 2559.8 -38.35 102.74  
 60.00 9 19 31 3527.55 -40.24 131.68 250.92 92.40 10 18 19 2527.6 -34.89 101.95  
 70.00 9 36 52 3470.58 -34.07 127.06 250.91 87.46 10 36 43 2470.6 -31.55 98.61  
 80.00 10 13 47 3361.06 -29.27 118.33 250.48 83.83 11 9 48 2361.1 -28.66 90.91  
 90.00 11 19 4 3150.28 -27.32 102.58 250.22 82.39 12 11 34 2150.3 -27.75 75.58  
 100.00 12 56 39 2835.53 -29.27 79.70 250.48 83.83 13 43 55 1835.5 -28.66 52.28  
 110.00 14 38 18 2517.38 -34.07 55.97 250.91 87.46 15 20 16 1517.4 -31.55 27.53

DIFFERENTIAL CORRECTIONS

TDE -.2725 TRA -.6242 TC3 -.1174 BAU .9058  
 RDE -.0646 RRA -.0476 RC3-2.1214 FAU .41451  
 FDE 3.0941 FRA-2.0323 FC-20.1598 BSP 2952  
 BDE .2001 BRA .6260 BC3 2.1246 FSP 2610

MID-COURSE EXECUTION ACCURACY

SGT 992.7 SGR 1793.5 SG3 1535.7  
 RRT .1538 RRF .9502 RTF .1621  
 SGB 2049.9 R23 .0459 R13 .9492  
 SG1 1802.7 SG2 975.9 THA 83.11

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 5.2 SS 49.2  
 CRT .7933 CR8 .7100 CST .6558  
 LSA 51.9 MSA 16.6 SBA 2.9  
 EL1 23.4 EL2 3.1 ALF 10.43

LAUNCH DATE AUG 16 1973

FLIGHT TIME 196.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.933 GAL 3.16 AZL 88.02 HCA 135.31 SMA 198.77 ECC .24388 INC 1.9843 V1 29.413  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.159 GAP 8.41 AZP 91.41 TAL 16.24 TAP 151.55 RCA 150.29 APO 247.25 V2 23.090  
 RC 209.964 GL 15.66 GP -21.64 ZAL 59.51 ZAP 117.30 ETS 193.77 ZAE 148.31 ETE 225.31 ZAC 63.03 ETC 284.58 LVI 2.67

DISTANCE 446.523

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 17.794 VHL 4.218 DLA 22.71 RAL 13.28 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 2.600 DPA -6.51 RAP 43.18 ECC 1.2929  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 30 3569.86 -47.09 134.63 250.28 97.74 10 3 59 2569.7 -38.69 103.43  
 60.00 9 15 30 3539.48 -40.27 132.69 251.06 91.71 10 14 49 2539.5 -35.18 102.82  
 70.00 9 34 4 3485.72 -34.02 126.24 250.95 86.77 10 32 10 2485.7 -31.79 99.73  
 80.00 10 7 35 3380.63 -29.12 119.77 250.44 83.09 11 3 58 2380.6 -29.04 92.34  
 90.00 11 12 1 3172.80 -27.11 104.18 250.14 81.61 12 4 53 2172.6 -27.89 77.20  
 100.00 12 50 27 2855.10 -29.12 81.13 250.44 83.09 13 38 2 1855.1 -29.04 53.71  
 110.00 14 33 31 2532.54 -34.02 57.15 250.95 86.77 15 15 43 1532.5 -31.79 28.64

DIFFERENTIAL CORRECTIONS

TDE -.2539 TRA -.6315 TC3 -.2294 BAU .5298  
 RDE -.0401 RRA -.0643 RC3-2.2157 FAU .42465  
 FDE 3.2294 FRA-2.1372 FC-20.6599 BSP 3067  
 BDE .2570 BRA .6348 BC3 2.2271 FSP 2650

MID-COURSE EXECUTION ACCURACY

SGT 1009.8 SGR 1872.5 SG3 1576.5  
 RRT .2445 RRF .9553 RTF .2566  
 SGB 2127.4 R23 .0638 R13 .9553  
 SG1 1894.6 SG2 967.7 THA 79.80

ORBIT DETERMINATION ACCURACY

ST 22.2 SR 4.2 SS 50.7  
 CRT .7325 CR8 .4865 CST .8220  
 LSA 52.8 MSA 16.8 SBA 2.8  
 EL1 22.4 EL2 2.8 ALF 7.95

LAUNCH DATE AUG 16 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.926 GAL 3.15 AZL 87.95 HCA 136.26 SMA 198.64 ECC .24336 INC 2.0477 V1 29.413  
 RP 238.30 LAP 1.42 LOP 99.27 VP 21.112 GAP 8.16 AZP 91.48 TAL 16.20 TAP 152.47 RCA 150.30 APO 246.98 V2 23.056  
 RC 212.919 GL 16.17 GP -22.24 ZAL 59.63 ZAP 115.69 ETS 193.31 ZAE 146.70 ETE 223.54 ZAC 62.58 ETC 284.73 LVI 3.09

DISTANCE 450.307

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 17.794 VHL 4.218 DLA 23.19 RAL 13.09 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 2.573 DPA -7.30 RAP 42.80 ECC 1.2929  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 30 3580.04 -47.18 135.61 250.56 96.98 10 1 10 2580.0 -39.04 104.18  
 60.00 9 12 0 3552.09 -40.29 133.76 251.22 90.99 10 11 12 2552.1 -35.49 103.75  
 70.00 9 29 3 3501.83 -33.95 129.49 251.02 86.03 10 27 25 2501.8 -32.03 100.92  
 80.00 10 1 0 3401.64 -28.94 121.30 250.42 82.31 10 57 41 2401.6 -29.21 93.88  
 90.00 11 4 27 3196.77 -26.85 105.90 250.07 80.78 11 57 43 2196.8 -28.02 78.95  
 100.00 12 43 52 2876.11 -28.94 82.67 250.42 82.31 13 31 48 1876.1 -29.21 55.25  
 110.00 14 28 30 2548.65 -33.95 58.41 251.02 86.03 15 10 58 1548.6 -32.03 29.84

DIFFERENTIAL CORRECTIONS

TDE -.2459 TRA -.6524 TC3 -.3673 BAU .5533  
 RDE -.0075 RRA -.0750 RC3-2.2965 FAU .43118  
 FDE 3.4351 FRA-2.1743 FC-20.9779 BSP 3267  
 BDE .2480 BRA .6567 BC3 2.3257 FSP 2757

MID-COURSE EXECUTION ACCURACY

SGT 1066.3 SGR 1940.7 SG3 1605.6  
 RRT .3434 RRF .9594 RTF .3345  
 SGB 2214.4 R23 .0922 R13 .9553  
 SG1 1986.5 SG2 978.4 THA 75.80

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 3.4 SS 53.3  
 CRT .4528 CR8 -.0475 CST .6016  
 LSA 53.1 MSA 17.4 SBA 2.7  
 EL1 22.1 EL2 3.0 ALF 4.08

LAUNCH DATE AUG 16 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.920 GAL 3.14 AZL 87.89 HCA 137.22 SMA 198.53 ECC .24287 INC 2.1131 V1 29.413  
 RP 238.43 LAP 1.44 LOP 100.22 VP 21.067 GAP 7.92 AZP 91.55 TAL 16.16 TAP 153.37 RCA 150.31 APO 246.74 V2 23.024  
 RC 215.868 GL 16.89 GP -22.88 ZAL 59.76 ZAP 114.08 ETS 192.82 ZAE 145.06 ETE 221.89 ZAC 62.12 ETC 284.86 LVI 3.92

DISTANCE 454.094

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 17.802 VHL 4.219 DLA 23.69 RAL 12.90 RAD 6641.8 VEL 11.740 PTH 6.77 VHP 2.548 DPA -8.10 RAP 42.41 ECC 1.2930  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 25 3590.93 -47.27 136.65 250.87 98.19 9 58 15 2590.9 -39.41 104.96  
 60.00 9 8 1 3565.34 -40.30 134.89 251.41 90.22 10 7 26 2565.3 -35.80 104.74  
 70.00 9 23 47 3518.86 -33.86 130.81 251.09 85.25 10 22 26 2518.9 -32.28 102.19  
 80.00 9 53 59 3424.15 -28.72 122.94 250.39 81.47 10 51 3 2424.2 -29.37 95.53  
 90.00 10 56 17 3222.94 -26.56 107.76 249.99 79.90 11 50 0 2222.9 -28.13 80.86  
 100.00 12 36 51 2898.62 -28.72 84.31 250.39 81.47 13 25 9 1898.6 -29.37 56.90  
 110.00 14 23 14 2565.66 -33.86 59.73 251.09 85.25 15 5 59 1565.7 -32.28 31.10

DIFFERENTIAL CORRECTIONS

TDE -.2288 TRA -.8668 TC3 -.4984 BAU .5801  
 RDE .0225 RRA -.0900 RC3-2.3862 FAU .43884  
 FDE 3.6018 FRA-2.2483 FC-21.3416 BSP 3438  
 BDE .2297 BRA .6728 BC3 2.4373 FSP 2818

MID-COURSE EXECUTION ACCURACY

SGT 1117.8 SGR 2018.3 SG3 1637.9  
 RRT .4261 RRF .9634 RTF .4399  
 SGB 2307.1 R23 .1074 R13 .9578  
 SG1 2091.0 SG2 975.1 THA 72.81

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 3.9 SS 55.3  
 CRT .0926 CR8 -.5630 CST .5632  
 LSA 56.8 MSA 17.4 SBA 2.6  
 EL1 21.5 EL2 3.9 ALF 1.01

LAUNCH DATE AUG 16 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 8 1974

Heliocentric Conic

DISTANCE 457.882

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.918 GAL 3.12 AZL 87.82 HCA 138.17 SMA 198.42 ECC .24243 INC 2.1807 V1 29.413  
 RP 238.93 LAP 1.45 LOP 101.17 VP 21.024 GAP 7.67 AZP 91.63 TAL 16.10 TAP 154.27 RCA 150.32 APO 246.53 V2 22.991  
 RC 218.810 GL 17.23 GP -23.48 ZAL 99.91 ZAP 112.47 ETS 192.31 ZAE 143.39 ETE 220.33 ZAC 61.66 ETC 285.00 LVI 3.96

Planetocentric Conic

C3 17.817 VHL 4.221 DLA 24.21 RAL 12.72 RAD 6641.8 VEL 11.741 PTH 6.77 VHP 2.526 DPA -8.90 RAP 42.02 ECC 1.2932  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 55 12 3602.36 -47.35 137.75 251.21 95.35 9 55 15 2602.4 -39.78 105.80  
 60.00 9 3 52 3579.30 -40.30 136.08 251.61 89.41 10 3 31 2579.3 -36.12 105.79  
 70.00 9 18 15 3536.93 -33.75 132.21 251.17 84.43 10 17 12 2536.9 -32.52 103.94  
 80.00 9 46 28 3448.40 -28.46 124.69 250.36 80.58 10 43 56 2448.4 -29.52 97.32  
 90.00 10 47 26 3251.52 -26.20 109.77 249.90 78.95 11 41 37 2251.5 -28.22 82.94  
 100.00 12 29 19 2922.87 -28.46 86.06 250.36 80.58 13 18 2 1922.9 -29.52 58.69  
 110.00 14 17 41 2583.75 -33.75 61.13 251.17 84.43 15 0 45 1583.7 -32.52 32.46

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2092 TRA -.6823 TC3 -.6296 BAU .6086 SGT 1180.8 SGR 2097.6 SG3 1667.7 ST 20.8 SR 5.4 SS 57.3  
 RDE .0543 RRA -.1051 RC3-2.4763 FAU .44582 RRT .5042 RRF .9669 RTF .5163 CRT -.1261 CRS -.8150 CST .5164  
 FDE 3.7721 FRA-2.3163 FC-21.6632 BSP 3627 SGB 2407.1 R23 .1193 R13 .9601 LSA 58.6 MSA 17.6 SSA 2.5  
 BDE .2162 BRA .6903 BC3 2.5551 FSP 2874 SG1 2202.5 SG2 971.1 THA 70.14 EL1 20.9 EL2 5.3 ALF 178.01

LAUNCH DATE AUG 16 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 8 1974

Heliocentric Conic

DISTANCE 461.670

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.910 GAL 3.11 AZL 87.75 HCA 139.11 SMA 198.33 ECC .24202 INC 2.2507 V1 29.413  
 RP 239.26 LAP 1.47 LOP 102.12 VP 20.981 GAP 7.42 AZP 91.70 TAL 16.04 TAP 155.16 RCA 150.33 APO 246.33 V2 22.960  
 RC 221.744 GL 17.79 GP -24.10 ZAL 60.08 ZAP 110.86 ETS 191.79 ZAE 141.70 ETE 218.87 ZAC 61.20 ETC 285.14 LVI 4.41

Planetocentric Conic

C3 17.839 VHL 4.224 DLA 24.74 RAL 12.53 RAD 6641.9 VEL 11.742 PTH 6.77 VHP 2.507 DPA -9.72 RAP 41.63 ECC 1.2936  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 53 3614.38 -47.42 138.90 251.58 94.46 9 52 8 2614.4 -40.17 106.69  
 60.00 8 59 32 3594.01 -40.28 137.33 251.84 88.57 9 59 26 2594.0 -36.44 106.90  
 70.00 9 12 23 3556.13 -33.61 133.69 251.27 83.56 10 11 39 2556.1 -32.76 104.98  
 80.00 9 38 21 3474.65 -28.16 126.58 250.33 79.63 10 36 16 2474.6 -29.65 99.26  
 90.00 10 37 42 3282.99 -25.77 111.98 249.80 77.93 11 32 25 2283.0 -28.27 85.24  
 100.00 12 21 13 2949.12 -28.16 87.95 250.33 79.63 13 10 22 1949.1 -29.65 60.63  
 110.00 14 11 49 2602.95 -33.61 62.61 251.27 83.56 14 55 12 1602.9 -32.76 33.90

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1880 TRA -.6989 TC3 -.7675 BAU .6386 SGT 1255.1 SGR 2177.7 SG3 1693.9 ST 20.2 SR 7.3 SS 59.4  
 RDE .0875 RRA -.1207 RC3-2.5654 FAU .45185 RRT .5718 RRF .9701 RTF .5836 CRT -.2048 CRS -.9120 CST .4596  
 FDE 3.9412 FRA-2.3818 FC-21.9288 BSP 3826 SGB 2513.5 R23 .1287 R13 .9621 LSA 60.5 MSA 17.8 SSA 2.4  
 BDE .2074 BRA .7093 BC3 2.6777 FSP 2924 SG1 2320.3 SG2 986.4 THA 67.69 EL1 20.3 EL2 7.1 ALF 175.19

LAUNCH DATE AUG 16 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 10 1974

Heliocentric Conic

DISTANCE 465.459

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.906 GAL 3.09 AZL 87.68 HCA 140.06 SMA 198.25 ECC .24165 INC 2.3231 V1 29.413  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.940 GAP 7.18 AZP 91.78 TAL 15.98 TAP 156.03 RCA 150.34 APO 246.15 V2 22.928  
 RC 224.672 GL 18.37 GP -24.74 ZAL 60.26 ZAP 109.26 ETS 191.24 ZAE 139.99 ETE 217.48 ZAC 60.73 ETC 285.18 LVI 4.87

Planetocentric Conic

C3 17.869 VHL 4.227 DLA 25.30 RAL 12.35 RAD 6641.9 VEL 11.743 PTH 6.77 VHP 2.491 DPA -10.55 RAP 41.24 ECC 1.2941  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 26 3627.01 -47.48 140.11 251.98 93.53 9 48 53 2627.0 -40.57 107.64  
 60.00 8 54 59 3609.53 -40.24 138.65 252.09 87.67 9 55 9 2609.5 -36.77 108.09  
 70.00 9 6 10 3576.57 -33.45 135.26 251.37 82.65 10 5 47 2576.6 -33.00 106.53  
 80.00 9 29 33 3503.23 -27.79 128.63 250.28 78.62 10 27 56 2503.2 -29.76 101.36  
 90.00 10 26 52 3318.07 -25.25 114.41 249.66 76.82 11 22 10 2318.1 -28.28 87.81  
 100.00 12 12 25 2977.70 -27.79 90.00 250.28 78.62 13 2 2 1977.7 -29.76 62.74  
 110.00 14 5 37 2623.39 -33.45 64.18 251.37 82.65 14 49 20 1623.4 -33.00 35.45

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1639 TRA -.7159 TC3 -.9072 BAU .6705 SGT 1337.8 SGR 2261.1 SG3 1718.4 ST 19.6 SR 9.4 SS 61.3  
 RDE .1214 RRA -.1375 RC3-2.6563 FAU .45749 RRT .6305 RRF .9729 RTF .6220 CRT -.2044 CRS -.9521 CST .3885  
 FDE 4.1021 FRA-2.4509 FC-22.1650 BSP 4031 SGB 2627.2 R23 .1349 R13 .9642 LSA 62.4 MSA 18.0 SSA 2.3  
 BDE .2039 BRA .7290 BC3 2.8069 FSP 2961 SG1 2445.5 SG2 960.1 THA 65.53 EL1 19.7 EL2 9.2 ALF 172.84

LAUNCH DATE AUG 16 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 12 1974

Heliocentric Conic

DISTANCE 469.248

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.902 GAL 3.07 AZL 87.60 HCA 141.00 SMA 198.18 ECC .24131 INC 2.3984 V1 29.413  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.900 GAP 6.94 AZP 91.86 TAL 15.90 TAP 156.90 RCA 150.35 APO 246.00 V2 22.897  
 RC 227.591 GL 18.98 GP -25.38 ZAL 60.46 ZAP 107.67 ETS 190.67 ZAE 138.27 ETE 216.16 ZAC 60.25 ETC 285.42 LVI 5.34

Planetocentric Conic

C3 17.908 VHL 4.232 DLA 25.87 RAL 12.17 RAD 6641.9 VEL 11.745 PTH 6.77 VHP 2.478 DPA -11.39 RAP 40.86 ECC 1.2947  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 50 3640.27 -47.52 141.39 252.41 92.54 9 43 30 2640.3 -40.98 108.64  
 60.00 8 50 13 3625.90 -40.19 140.04 252.35 86.73 9 50 39 2625.9 -37.11 109.35  
 70.00 8 59 34 3598.37 -33.25 136.93 251.47 81.68 9 59 32 2598.4 -33.23 108.19  
 80.00 9 19 53 3534.59 -27.35 130.85 250.22 77.53 10 18 48 2534.6 -29.83 103.70  
 90.00 10 14 36 3357.83 -24.60 117.14 249.49 75.60 11 10 34 2357.8 -28.22 90.72  
 100.00 12 2 45 3009.06 -27.35 92.22 250.22 77.53 12 52 54 2009.1 -29.83 65.07  
 110.00 13 59 0 2645.19 -33.25 65.85 251.47 81.68 14 43 5 1645.2 -33.23 37.11

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1357 TRA -.7321 TC3-1.0456 BAU .7042 SGT 1424.9 SGR 2348.2 SG3 1741.3 ST 19.0 SR 11.7 SS 63.1  
 RDE .1558 RRA -.1561 RC3-2.7493 FAU .46279 RRT .6811 RRF .9756 RTF .6926 CRT -.1539 CRS -.9709 CST .2977  
 FDE 4.2525 FRA-2.5279 FC-22.3733 BSP 4236 SGB 2746.8 R23 .1373 R13 .9666 LSA 64.4 MSA 18.1 SSA 2.2  
 BDE .2066 BRA .7486 BC3 2.9414 FSP 2974 SG1 2577.0 SG2 950.7 THA 63.69 EL1 19.1 EL2 11.4 ALF 171.53

LAUNCH DATE AUG 16 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 14 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 32.899 GAL 3.05 AZL 87.52 HCA 141.94 SMA 198.11 ECC .24101 INC 2.4769 V1 29.413  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.862 GAP 6.70 AZP 91.95 TAL 15.81 TAP 157.76 RCA 150.37 APO 245.86 V2 22.866  
 RC 230.502 GL 19.37 GP -26.03 ZAL 60.68 ZAP 106.10 ETS 190.09 ZAE 136.54 ETE 214.91 ZAC 59.77 ETC 285.57 LVI 5.82

Planetocentric Conic

C3 17.955 VHL 4.237 DLA 26.47 RAL 11.99 RAD 6641.9 VEL 11.747 PTH 6.78 VHP 2.467 DPA -12.23 RAP 40.49 ECC 1.2955  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 4 3654.24 -47.56 142.74 252.88 91.51 9 41 58 2654.2 -41.40 109.72  
 60.00 8 45 12 3643.22 -40.11 141.50 252.63 85.74 9 45 55 2643.2 -37.44 110.70  
 70.00 8 52 29 3621.74 -33.00 138.71 251.57 80.66 9 52 31 2621.7 -33.45 109.98  
 80.00 9 9 8 3569.46 -26.81 133.31 250.12 76.35 10 8 38 2569.5 -29.86 106.30  
 90.00 10 0 16 3404.26 -23.78 120.30 249.24 74.22 10 57 0 2404.3 -28.07 94.10  
 100.00 11 52 0 3043.94 -26.81 94.67 250.12 76.35 12 42 44 2043.9 -29.86 67.66  
 110.00 13 51 56 2688.56 -33.00 67.63 251.57 80.66 14 36 24 1668.6 -33.45 38.90

Differential Corrections

TDE -.1107 TRA -.7554 TC3-1.2013 BAU .7378  
 RDE .1968 RRA -.1697 RC3-2.8292 FAU .46496  
 FDE 4.4418 FRA-2.5526 FC-22.4185 BSP 4490  
 BDE .2256 BRA .7742 BC3 3.0737 FSP 3033

Mid-Course Execution Accuracy

SGT 1536.4 SGR 2426.0 SG3 1753.5  
 RRT .7227 RRF .9777 RTF .7325  
 SGB 2871.6 R23 .1454 R13 .9676  
 SG1 2709.6 SG2 950.8 THA 61.60

Orbit Determination Accuracy

ST 18.7 SR 14.3 SS 65.5  
 CRT -.1050 CRS -.9830 CST .2108  
 LSA 67.1 MSA 18.4 S8A 2.1  
 EL1 18.9 EL2 14.1 ALF 169.52

LAUNCH DATE AUG 16 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 16 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 32.897 GAL 3.03 AZL 87.44 HCA 142.88 SMA 198.06 ECC .24074 INC 2.5577 V1 29.413  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.824 GAP 6.46 AZP 92.04 TAL 15.72 TAP 158.60 RCA 150.38 APO 245.74 V2 22.836  
 RC 233.405 GL 20.21 GP -26.69 ZAL 60.91 ZAP 104.94 ETS 189.48 ZAE 134.80 ETE 213.71 ZAC 59.28 ETC 285.71 LVI 6.31

Planetocentric Conic

C3 18.012 VHL 4.244 DLA 27.09 RAL 11.80 RAD 6641.9 VEL 11.749 PTH 6.78 VHP 2.459 DPA -13.09 RAP 40.13 ECC 1.2964  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 7 3668.92 -47.57 144.16 253.37 90.41 9 38 16 2668.9 -41.83 110.86  
 60.00 8 39 54 3661.53 -40.01 143.05 252.92 84.69 9 40 55 2661.5 -37.78 112.14  
 70.00 8 44 53 3646.83 -32.71 140.61 251.67 79.57 9 45 40 2646.8 -33.65 111.91  
 80.00 8 57 0 3608.77 -26.15 136.04 249.98 75.05 9 57 9 2608.8 -29.82 109.22  
 90.00 9 42 43 3461.02 -22.68 124.09 248.87 72.63 10 40 24 2461.0 -27.76 98.22  
 100.00 11 39 52 3083.24 -26.13 97.41 249.98 75.05 12 31 15 2083.2 -29.82 70.58  
 110.00 13 44 19 2693.65 -32.71 69.53 251.67 79.57 14 29 13 1693.7 -33.65 40.83

Differential Corrections

TDE -.0802 TRA -.7765 TC3-1.3509 BAU .7737  
 RDE .2367 RRA -.1871 RC3-2.9151 FAU .46753  
 FDE 4.8062 FRA-2.6018 FC-22.4711 BSP 4720  
 BDE .2499 BRA .7987 BC3 3.2129 FSP 3052

Mid-Course Execution Accuracy

SGT 1647.2 SGR 2511.0 SG3 1786.6  
 RRT .7584 RRF .9798 RTF .7674  
 SGB 3003.0 R23 .1465 R13 .9692  
 SG1 2850.2 SG2 945.8 THA 59.90

Orbit Determination Accuracy

ST 18.6 SR 16.9 SS 67.5  
 CRT -.0156 CRS -.9889 CST .0997  
 LSA 69.6 MSA 18.5 S8A 2.0  
 EL1 18.6 EL2 16.9 ALF 175.14

LAUNCH DATE AUG 16 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 32.894 GAL 3.01 AZL 87.36 HCA 143.81 SMA 198.02 ECC .24049 INC 2.6424 V1 29.413  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.788 GAP 6.22 AZP 92.13 TAL 15.62 TAP 159.44 RCA 150.39 APO 245.64 V2 22.807  
 RC 236.297 GL 20.88 GP -27.36 ZAL 61.18 ZAP 102.99 ETS 188.85 ZAE 133.06 ETE 212.55 ZAC 58.79 ETC 285.86 LVI 6.82

Planetocentric Conic

C3 18.080 VHL 4.252 DLA 27.74 RAL 11.61 RAD 6642.0 VEL 11.752 PTH 6.78 VHP 2.453 DPA -13.94 RAP 39.78 ECC 1.2975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 32 58 3684.38 -47.57 145.66 253.89 89.26 9 34 23 2684.4 -42.27 112.09  
 60.00 8 34 16 3680.94 -39.87 144.68 253.22 83.59 9 35 37 2680.9 -38.11 113.68  
 70.00 8 36 39 3673.92 -32.36 142.64 251.75 78.41 9 37 53 2673.9 -33.83 114.00  
 80.00 8 42 55 3654.21 -25.32 139.15 249.75 73.62 9 43 49 2654.2 -29.69 112.59  
 90.00 9 18 37 3538.76 -21.01 129.18 248.24 70.62 10 17 36 2538.8 -27.12 103.82  
 100.00 11 25 47 3128.68 -25.32 100.52 249.75 73.62 12 17 56 2128.7 -29.69 73.95  
 110.00 13 38 5 2720.74 -32.36 71.56 251.75 78.41 14 21 26 1720.7 -33.83 42.92

Differential Corrections

TDE -.0466 TRA -.7985 TC3-1.5022 BAU .8104  
 RDE .2789 RRA -.2041 RC3-2.9974 FAU .46884  
 FDE 4.7886 FRA-2.6399 FC-22.4498 BSP 4986  
 BDE .2828 BRA .8241 BC3 3.3528 FSP 3073

Mid-Course Execution Accuracy

SGT 1764.5 SGR 2593.3 SG3 1774.8  
 RRT .7884 RRF .9816 RTF .7665  
 SGB 3138.3 R23 .1508 R13 .9706  
 SG1 2993.9 SG2 941.0 THA 58.32

Orbit Determination Accuracy

ST 18.6 SR 19.7 SS 69.6  
 CRT .0901 CRS -.9928 CST -.0231  
 LSA 72.3 MSA 18.6 S8A 1.9  
 EL1 20.2 EL2 18.1 ALF 61.63

LAUNCH DATE AUG 16 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 20 1974

Heliocentric Conic

RL 151.48 LAL -.00 LOL 322.99 VL 32.892 GAL 2.99 AZL 87.27 HCA 144.75 SMA 197.98 ECC .24028 INC 2.7308 V1 29.413  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.753 GAP 5.99 AZP 92.23 TAL 15.52 TAP 160.28 RCA 150.41 APO 245.55 V2 22.777  
 RC 239.179 GL 21.55 GP -28.04 ZAL 61.42 ZAP 101.47 ETS 188.20 ZAE 131.32 ETE 211.44 ZAC 58.28 ETC 286.01 LVI 7.34

Planetocentric Conic

C3 18.159 VHL 4.261 DLA 28.41 RAL 11.42 RAD 6642.0 VEL 11.755 PTH 6.78 VHP 2.451 DPA -14.81 RAP 39.45 ECC 1.2988  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 38 3700.67 -47.55 147.23 254.44 88.05 9 30 17 2700.7 -42.72 113.39  
 60.00 8 28 17 3701.53 -39.70 146.41 253.53 82.43 9 29 58 2701.5 -38.45 115.52  
 70.00 8 27 40 3703.32 -31.93 144.83 251.81 77.18 9 29 24 2703.3 -33.96 116.29  
 80.00 8 25 53 3708.96 -24.21 142.85 249.40 71.97 9 27 42 2709.0 -29.40 118.63  
 87.16 8 5 32 3774.72 -17.18 144.86 248.59 67.02 9 8 27 2774.7 -25.17 120.65  
 100.00 11 8 45 3183.43 -24.21 104.22 249.40 71.97 12 1 48 2183.4 -29.40 78.00  
 110.00 13 27 7 2750.14 -31.93 73.75 251.81 77.18 14 12 57 1750.1 -33.96 45.20

Differential Corrections

TDE -.0106 TRA -.8215 TC3-1.6542 BAU .8485  
 RDE .3228 RRA -.2225 RC3-3.0789 FAU .46937  
 FDE 4.9239 FRA-2.6803 FC-22.3778 BSP 5242  
 BDE .3227 BRA .8511 BC3 3.4952 FSP 3078

Mid-Course Execution Accuracy

SGT 1888.1 SGR 2681.3 SG3 1779.8  
 RRT .8139 RRF .9833 RTF .8212  
 SGB 3279.4 R23 .1522 R13 .9721  
 SG1 3143.0 SG2 935.9 THA 56.87

Orbit Determination Accuracy

ST 19.0 SR 22.6 SS 71.6  
 CRT .2075 CRS -.9948 CST -.1534  
 LSA 75.1 MSA 18.8 S8A 1.8  
 EL1 23.5 EL2 17.9 ALF 65.23

LAUNCH DATE AUG 16 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

DISTANCE 488.191

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.891 GAL 2.96 AZL 87.18 HCA 145.68 SMA 197.95 ECC .24009 INC 2.8229 V1 29.413
RP 241.36 LAP 1.59 LOP 108.70 VP 20.719 GAP 5.75 AZP 92.35 TAL 15.41 TAP 161.08 RCA 150.43 APO 245.48 V2 22.749
RC 242.049 GL 22.25 GP -28.72 ZAL 61.71 ZAP 99.97 ETS 187.93 ZAE 129.59 ETE 210.37 ZAC 57.77 ETC 286.16 LVI 7.87

PLANETOCENTRIC CONIC

C3 18.249 VHL 4.272 DLA 29.11 RAL 11.22 RAD 6642.0 VEL 11.759 PTH 6.78 VHP 2.451 DPA -15.68 RAP 39.13 ECC 1.3003
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 23 59 3717.86 -47.49 148.89 255.01 86.77 9 25 56 2717.9 -43.17 114.80
60.00 8 21 53 3723.44 -39.49 148.23 253.85 81.21 9 23 56 2723.4 -38.77 117.10
70.00 8 17 48 3735.50 -31.42 147.20 251.84 75.87 9 20 3 2735.5 -34.09 118.79
80.00 8 3 19 3781.10 -22.61 147.60 248.80 69.96 9 6 20 2781.1 -28.82 121.91
82.81 7 29 5 3891.03 -17.54 153.57 246.64 66.39 8 33 56 2891.0 -25.75 129.35
100.00 10 46 11 3255.57 -22.61 108.97 248.80 69.96 11 40 26 2255.6 -28.82 83.28
110.00 13 17 14 2762.31 -31.42 76.12 251.84 75.87 14 3 37 1762.3 -34.09 47.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0284 TRA -.8459 TC3-1.8070 BAU .8871 SGT 2017.7 SGR 2765.4 SG3 1779.3 ST 19.7 SR 25.7 SS 73.6
RDE .3691 RRA -.2402 RC3-3.1550 FAU .46841 RRT .8350 RRF .9847 RTF .8415 CRT .3244 CR8 -.9964 CST -.2816
FDE 5.0800 FRA-2.7065 FC-22.2209 BSP 5517 SGB 3423.2 R23 .1538 R13 .9733 LSA 78.1 MSA 18.9 S8A 1.7
BDE .3702 BRA .8793 BC3 3.6359 FSP 3085 SG1 3293.9 SG2 932.0 THA 55.50 EL1 27.1 EL2 17.6 ALF 64.78

LAUNCH DATE AUG 16 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

DISTANCE 491.979

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.890 GAL 2.94 AZL 87.08 HCA 146.60 SMA 197.93 ECC .23993 INC 2.9194 V1 29.413
RP 241.64 LAP 1.61 LOP 109.63 VP 20.687 GAP 5.52 AZP 92.44 TAL 15.29 TAP 161.89 RCA 150.44 APO 245.42 V2 22.720
RC 244.907 GL 22.99 GP -29.41 ZAL 62.01 ZAP 98.50 ETS 186.84 ZAE 127.86 ETE 209.33 ZAC 57.25 ETC 286.31 LVI 8.42

PLANETOCENTRIC CONIC

C3 18.354 VHL 4.284 DLA 29.83 RAL 11.01 RAD 6642.1 VEL 11.763 PTH 6.79 VHP 2.454 DPA -16.55 RAP 38.83 ECC 1.3021
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 19 4 3736.00 -47.41 150.64 255.60 85.43 9 21 20 2736.0 -43.63 116.30
60.00 8 15 1 3746.81 -39.23 150.17 254.16 79.92 9 17 28 2746.8 -39.08 119.00
70.00 8 6 48 3771.06 -30.80 149.79 251.82 74.46 9 9 39 2771.1 -34.15 121.57
80.00 7 16 59 3928.62 -18.87 156.96 247.16 66.42 8 22 27 2928.6 -26.94 132.46
80.09 7 6 59 3960.52 -17.91 158.88 246.71 65.74 8 13 0 2960.5 -26.36 134.67
100.00 9 59 50 3403.09 -18.87 118.33 247.16 66.42 10 56 33 2403.1 -26.94 93.83
110.00 13 6 15 2817.87 -30.80 78.70 251.82 74.46 13 55 13 1817.9 -34.15 50.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0703 TRA -.8714 TC3-1.9596 BAU .9270 SGT 2132.4 SGR 2851.3 SG3 1775.7 ST 20.8 SR 28.8 SS 75.5
RDE .4174 RRA -.2587 RC3-3.2301 FAU .46673 RRT .8530 RRF .9861 RTF .8586 CRT .4360 CR8 -.9974 CST -.4020
FDE 5.2267 FRA-2.7302 FC-22.0154 BSP 5789 SGB 3572.6 R23 .1547 R13 .9744 LSA 81.3 MSA 19.0 S8A 1.7
BDE .4232 BRA .9090 BC3 3.7780 FSP 3077 SG1 3449.8 SG2 926.5 THA 54.23 EL1 31.0 EL2 17.4 ALF 63.58

LAUNCH DATE AUG 16 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

DISTANCE 495.766

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.889 GAL 2.92 AZL 86.98 HCA 147.53 SMA 197.92 ECC .23979 INC 3.0204 V1 29.413
RP 241.92 LAP 1.62 LOP 110.55 VP 20.655 GAP 5.29 AZP 92.55 TAL 15.16 TAP 162.69 RCA 150.46 APO 245.38 V2 22.692
RC 247.751 GL 23.75 GP -30.12 ZAL 62.32 ZAP 97.08 ETS 186.13 ZAE 126.14 ETE 208.32 ZAC 56.71 ETC 286.46 LVI 8.98

PLANETOCENTRIC CONIC

C3 18.472 VHL 4.298 DLA 30.58 RAL 10.78 RAD 6642.1 VEL 11.768 PTH 6.79 VHP 2.460 DPA -17.43 RAP 38.56 ECC 1.3040
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 13 51 3755.19 -47.29 152.48 256.21 84.02 9 16 26 2755.2 -44.09 117.91
60.00 8 7 37 3771.81 -38.91 152.22 254.46 78.57 9 10 29 2771.8 -39.38 121.06
70.00 7 54 23 3810.93 -30.04 152.64 251.72 72.93 8 57 54 2810.9 -34.13 124.88
77.84 6 49 20 4015.43 -18.29 163.16 246.79 65.06 7 56 15 3015.4 -26.98 138.95
77.84 6 49 20 4015.43 -18.29 163.16 246.79 65.06 7 56 15 3015.4 -26.98 138.95
77.84 6 49 20 4015.43 -18.29 163.16 246.79 65.06 7 56 15 3015.4 -26.98 138.95
110.00 12 53 49 2857.75 -30.04 81.56 251.72 72.93 13 41 27 1857.7 -34.13 53.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1159 TRA -.8979 TC3-2.1107 BAU .9677 SGT 2291.0 SGR 2937.3 SG3 1767.8 ST 22.4 SR 32.1 SS 77.4
RDE .4679 RRA -.2785 RC3-3.3012 FAU .46392 RRT .8688 RRF .9873 RTF .8434 CRT .5372 CR8 -.9981 CST -.5102
FDE 5.3661 FRA-2.7542 FC-21.7420 BSP 6085 SGB 3725.1 R23 .1552 R13 .9755 LSA 84.7 MSA 19.0 S8A 1.8
BDE .4819 BRA .9401 BC3 3.9183 FSP 3060 SG1 3608.6 SG2 924.4 THA 53.06 EL1 35.2 EL2 17.3 ALF 62.24

LAUNCH DATE AUG 16 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 499.593

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.888 GAL 2.89 AZL 86.87 HCA 148.45 SMA 197.91 ECC .23967 INC 3.1266 V1 29.413
RP 242.19 LAP 1.64 LOP 111.48 VP 20.624 GAP 5.06 AZP 92.67 TAL 15.03 TAP 163.48 RCA 150.48 APO 245.34 V2 22.665
RC 250.580 GL 24.54 GP -30.83 ZAL 62.66 ZAP 95.64 ETS 185.40 ZAE 124.44 ETE 207.34 ZAC 56.16 ETC 286.62 LVI 9.57

PLANETOCENTRIC CONIC

C3 18.607 VHL 4.314 DLA 31.36 RAL 10.58 RAD 6642.2 VEL 11.774 PTH 6.80 VHP 2.468 DPA -18.31 RAP 38.30 ECC 1.3062
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 8 17 3775.51 -47.13 154.42 256.84 82.53 9 11 12 2775.5 -44.55 119.65
60.00 7 59 36 3798.66 -38.53 154.39 254.74 77.13 9 2 55 2798.7 -39.65 123.29
70.00 7 40 0 3856.61 -29.08 155.85 251.52 71.25 8 44 16 2856.6 -34.00 128.24
75.84 6 34 3 4062.40 -18.68 166.89 246.89 64.34 7 41 46 3062.4 -27.62 142.68
75.84 6 34 3 4062.40 -18.68 166.89 246.89 64.34 7 41 46 3062.4 -27.62 142.68
75.84 6 34 3 4062.40 -18.68 166.89 246.89 64.34 7 41 46 3062.4 -27.62 142.68
110.00 12 39 26 2903.43 -29.08 84.77 251.52 71.25 13 27 50 1903.4 -34.00 57.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1641 TRA -.9255 TC3-2.2598 BAU 1.0088 SGT 2433.3 SGR 3021.9 SG3 1754.8 ST 24.4 SR 35.6 SS 79.3
RDE .5209 RRA -.2978 RC3-3.3671 FAU .45984 RRT .8814 RRF .9884 RTF .8856 CRT .6232 CR8 -.9986 CST -.6020
FDE 5.4990 FRA-2.7646 FC-21.3945 BSP 6352 SGB 3879.8 R23 .1557 R13 .9765 LSA 88.2 MSA 19.1 S8A 1.5
BDE .5461 BRA .9722 BC3 4.0552 FSP 3040 SG1 3768.7 SG2 921.6 THA 51.96 EL1 39.6 EL2 17.1 ALF 60.92

LAUNCH DATE AUG 16 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.889 GAL 2.06 AZL 86.76 HCA 149.37 SMA 197.01 ECC .23958 INC 3.2381 V1 29.413
RP 242.46 LAP 1.85 LOP 112.40 VP 20.595 GAP 4.83 AZP 92.79 TAL 14.89 TAP 184.27 RCA 150.50 APO 245.33 V2 22.638
RC 253.394 GL 25.37 GP -31.56 ZAL 63.01 ZAP 94.26 ETS 184.65 ZAE 122.75 ETE 206.38 ZAC 55.60 ETC 286.78 LVI 10.17

DISTANCE 503.339

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.760 VHL 4.331 DLA 32.18 RAL 10.30 RAD 6642.3 VEL 11.781 PTH 6.81 VHP 2.479 DPA -19.20 RAP 38.08 ECC 1.3087
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 18 3797.07 -46.92 156.46 257.47 80.97 9 5 35 2797.1 -45.01 121.53
60.00 7 50 51 3827.63 -38.06 156.71 254.99 75.62 8 54 39 2827.6 -39.90 123.72
70.00 7 22 44 3910.85 -27.84 159.58 251.15 69.36 8 27 55 2910.9 -33.71 132.45
73.97 6 20 20 4104.17 -19.07 170.26 246.99 63.58 7 28 44 3104.2 -28.28 146.06
73.97 6 20 20 4104.17 -19.07 170.26 246.99 63.58 7 28 44 3104.2 -28.28 146.06
73.97 6 20 20 4104.17 -19.07 170.26 246.99 63.58 7 28 44 3104.2 -28.28 146.06
110.00 12 22 10 2957.67 -27.84 88.50 231.15 69.36 13 11 28 1957.7 -33.71 61.36

DIFFERENTIAL CORRECTIONS

TDE .2159 TRA -.9344 TC3-2.4066 BAU 1.0510
RDE .5765 RRA -.3182 RC3-3.4304 FAU .45494
FDE 5.6233 FRA-2.7733 FC-20.9939 B8P 6643
BDE .6156 BRA 1.0060 BC3 4.1903 F8P 3013

MID-COURSE EXECUTION ACCURACY

SGT 2579.2 SGR 3107.9 SG3 1738.5
RRT .8925 RRF .9894 RTF .8961
SGB 4038.8 R23 .1561 R13 .9774
SG1 3932.8 SG2 919.3 THA 50.93

ORBIT DETERMINATION ACCURACY

ST 26.7 SR 39.1 SS 81.1
CRT .6939 CRS -.9989 CST -.6771
LSA 91.9 MSA 19.2 S8A 1.4
EL1 44.2 EL2 17.0 ALF 39.67

LAUNCH DATE AUG 16 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.889 GAL 2.83 AZL 86.64 HCA 150.29 SMA 197.92 ECC .23950 INC 3.3557 V1 29.413
RP 242.73 LAP 1.66 LOP 113.32 VP 20.566 GAP 4.60 AZP 92.92 TAL 14.75 TAP 165.04 RCA 150.52 APO 245.32 V2 22.612
RC 256.191 GL 26.23 GP -32.30 ZAL 63.38 ZAP 92.92 ETS 183.89 ZAE 121.08 ETE 205.45 ZAC 55.01 ETC 286.94 LVI 10.79

DISTANCE 507.125

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.933 VHL 4.351 DLA 33.02 RAL 10.03 RAD 6642.4 VEL 11.788 PTH 6.81 VHP 2.494 DPA -20.09 RAP 37.88 ECC 1.3116
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 53 3819.98 -46.65 158.61 258.10 79.34 8 59 33 2820.0 -45.46 123.55
60.00 7 41 15 3859.07 -37.50 159.20 255.19 74.02 8 45 34 2859.1 -40.10 128.37
70.00 7 0 26 3980.00 -26.09 164.20 250.47 67.14 8 6 46 2980.0 -33.10 137.75
72.19 6 7 39 4142.37 -19.46 173.40 247.11 62.78 7 16 42 3142.4 -28.96 149.21
72.19 6 7 39 4142.37 -19.46 173.40 247.11 62.78 7 16 42 3142.4 -28.96 149.21
72.19 6 7 39 4142.37 -19.46 173.40 247.11 62.78 7 16 42 3142.4 -28.96 149.21
110.00 11 59 53 3026.82 -26.09 93.11 250.47 67.14 12 50 20 2026.8 -33.10 66.67

DIFFERENTIAL CORRECTIONS

TDE .2720 TRA -.9840 TC3-2.5487 BAU 1.0935
RDE .6352 RRA -.3394 RC3-3.4880 FAU .44886
FDE 5.7408 FRA-2.7770 FC-20.5243 B8P 6943
BDE .6910 BRA 1.0409 BC3 4.3200 F8P 2979

MID-COURSE EXECUTION ACCURACY

SGT 2726.9 SGR 3193.4 SG3 1717.6
RRT .9021 RRF .9903 RTF .9051
SGB 4199.2 R23 .1561 R13 .9783
SG1 4097.9 SG2 916.8 THA 49.98

ORBIT DETERMINATION ACCURACY

ST 29.5 SR 42.8 SS 82.8
CRT .7520 CRS -.9992 CST -.7387
LSA 93.9 MSA 19.2 S8A 1.3
EL1 49.2 EL2 16.9 ALF 38.47

LAUNCH DATE AUG 16 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.890 GAL 2.81 AZL 86.52 HCA 151.21 SMA 197.93 ECC .23945 INC 3.4796 V1 29.413
RP 242.99 LAP 1.68 LOP 114.24 VP 20.539 GAP 4.37 AZP 93.05 TAL 14.60 TAP 165.81 RCA 150.53 APO 245.32 V2 22.586
RC 258.972 GL 27.12 GP -33.06 ZAL 63.77 ZAP 91.62 ETS 183.10 ZAE 119.43 ETE 204.53 ZAC 54.41 ETC 287.11 LVI 11.43

DISTANCE 510.910

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.128 VHL 4.374 DLA 33.91 RAL 9.74 RAD 6642.4 VEL 11.796 PTH 6.82 VHP 2.511 DPA -20.99 RAP 37.71 ECC 1.3148
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 56 3844.40 -46.32 160.87 258.73 77.62 8 53 0 2844.4 -45.89 125.75
60.00 7 30 33 3893.43 -36.83 161.86 255.33 72.32 8 35 28 2893.4 -40.24 131.28
70.00 6 24 8 4091.17 -22.96 171.30 248.94 63.99 7 32 19 3091.2 -31.61 146.07
70.47 5 55 47 4177.71 -19.86 176.35 247.24 61.94 7 5 25 3177.7 -29.66 152.19
70.47 5 55 47 4177.71 -19.86 176.35 247.24 61.94 7 5 25 3177.7 -29.66 152.19
70.47 5 55 47 4177.71 -19.86 176.35 247.24 61.94 7 5 25 3177.7 -29.66 152.19
110.00 11 23 34 3137.99 -22.96 100.22 248.94 63.99 12 15 52 2138.0 -31.61 74.99

DIFFERENTIAL CORRECTIONS

TDE .3315 TRA -1.0131 TC3-2.6866 BAU 1.1369
RDE .6958 RRA -.3619 RC3-3.3422 FAU .44197
FDE 5.8411 FRA-2.7784 FC-20.0033 B8P 7236
BDE .7707 BRA 1.0776 BC3 4.4458 F8P 2932

MID-COURSE EXECUTION ACCURACY

SGT 2877.2 SGR 3279.8 SG3 1693.0
RRT .9105 RRF .9911 RTF .5.29
SGB 4363.0 R23 .1559 R13 .9791
SG1 4266.0 SG2 914.8 THA 49.10

ORBIT DETERMINATION ACCURACY

ST 32.6 SR 46.6 SS 84.4
CRT .7981 CRS -.9994 CST -.7873
LSA 99.9 MSA 19.3 S8A 1.3
EL1 54.3 EL2 16.8 ALF 37.31

LAUNCH DATE AUG 16 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.891 GAL 2.78 AZL 86.39 HCA 152.13 SMA 197.98 ECC .23942 INC 3.6111 V1 29.413
RP 243.24 LAP 1.69 LOP 115.16 VP 20.512 GAP 4.15 AZP 93.19 TAL 14.44 TAP 166.97 RCA 150.55 APO 245.34 V2 22.580
RC 261.736 GL 28.06 GP -33.84 ZAL 64.18 ZAP 90.36 ETS 182.30 ZAE 117.80 ETE 203.83 ZAC 53.79 ETC 287.29 LVI 12.10

DISTANCE 514.693

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.349 VHL 4.399 DLA 34.82 RAL 9.43 RAD 6642.5 VEL 11.805 PTH 6.83 VHP 2.532 DPA -21.90 RAP 37.58 ECC 1.3184
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 24 3870.50 -45.91 183.25 259.33 75.82 8 45 54 2870.5 -46.30 128.13
60.00 7 18 37 3931.38 -36.00 184.75 255.37 70.51 8 24 8 2931.4 -40.30 134.51
68.78 5 44 31 4210.89 -20.27 179.18 247.38 61.06 6 54 42 3210.9 -30.38 155.05
68.78 5 44 31 4210.89 -20.27 179.18 247.38 61.06 6 54 42 3210.9 -30.38 155.05
68.78 5 44 31 4210.89 -20.27 179.18 247.38 61.06 6 54 42 3210.9 -30.38 155.05
68.78 5 44 31 4210.89 -20.27 179.18 247.38 61.06 6 54 42 3210.9 -30.38 155.05
68.78 5 44 31 4210.89 -20.27 179.18 247.38 61.06 6 54 42 3210.9 -30.38 155.05

DIFFERENTIAL CORRECTIONS

TDE .3952 TRA -1.0475 TC3-2.8191 BAU 1.1808
RDE .7807 RRA -.3853 RC3-3.5894 FAU .43386
FDE 5.9378 FRA-2.7747 FC-19.4128 B8P 7537
BDE .8572 BRA 1.1161 BC3 4.5641 F8P 2881

MID-COURSE EXECUTION ACCURACY

SGT 3029.5 SGR 3365.5 SG3 1663.9
RRT .9178 RRF .9918 RTF .9196
SGB 4528.2 R23 .1559 R13 .9798
SG1 4435.2 SG2 912.9 THA 48.27

ORBIT DETERMINATION ACCURACY

ST 36.0 SR 50.6 SS 86.0
CRT .8345 CRS -.9995 CST -.8257
LSA 104.3 MSA 19.3 S8A 1.2
EL1 59.8 EL2 16.8 ALF 36.27



LAUNCH DATE AUG 16 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

DISTANCE 510.476

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.892 GAL 2.74 AZL 86.25 HCA 153.04 SMA 197.97 ECC .23940 INC 3.7501 V1 29.413
RP 243.50 LAP 1.70 LOP 116.08 VP 20.487 GAP 3.92 AZP 93.34 TAL 14.28 TAP 187.32 RCA 150.57 APO 245.36 V2 22.535
RC 284.483 GL 29.04 GP -34.83 ZAL 64.80 ZAP 89.14 ETS 181.47 ZAE 116.20 ETE 202.75 ZAC 53.15 ETC 287.47 LVI 12.79

PLANETOCENTRIC CONIC

C3 19.597 VHL 4.427 DLA 35.78 RAL 9.09 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.556 DPA -22.82 RAP 37.48 ECC 1.3225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 33 10 3898.47 -45.41 165.77 259.90 73.94 8 38 9 2898.5 -46.68 130.73
60.00 7 4 59 3973.89 -34.99 167.90 255.28 68.58 8 11 13 2973.9 -40.25 138.12
67.11 5 33 42 4242.34 -20.67 181.92 247.54 60.12 6 44 24 3242.3 -31.12 157.83
67.11 5 33 42 4242.34 -20.67 181.92 247.54 60.12 6 44 24 3242.3 -31.12 157.83
67.11 5 33 42 4242.34 -20.67 181.92 247.54 60.12 6 44 24 3242.3 -31.12 157.83
67.11 5 33 42 4242.34 -20.67 181.92 247.54 60.12 6 44 24 3242.3 -31.12 157.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4623 TRA-1.0814 TC3-2.9453 BAU 1.2248 SGT 3183.6 SGR 3450.5 SG3 1630.3 ST 39.8 SR 54.7 SS 87.4
RDE .8280 RRA -.4094 RC3-3.6303 FAU .42472 RRT .9240 RRF .9925 RTF .9254 CRT .8629 CRS -.9996 CST -.8556
FDE 6.0169 FRA-2.7632 FC-18.7628 BSP 7838 SGB 4694.8 R23 .1559 R13 .9804 LSA 108.8 MSA 19.4 SSA 1.1
BDE .9484 BRA 1.1563 BC3 4.6748 FSP 2823 SG1 4605.3 SG2 912.1 THA 47.49 EL1 65.5 EL2 16.8 ALF 55.29

LAUNCH DATE AUG 16 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

DISTANCE 522.258

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.893 GAL 2.71 AZL 86.10 HCA 153.95 SMA 198.00 ECC .23941 INC 3.8979 V1 29.413
RP 243.74 LAP 1.71 LOP 116.99 VP 20.462 GAP 3.70 AZP 93.50 TAL 14.12 TAP 168.07 RCA 150.60 APO 245.40 V2 22.511
RC 267.212 GL 30.06 GP -35.44 ZAL 65.05 ZAP 87.97 ETS 180.63 ZAE 114.63 ETE 201.88 ZAC 52.48 ETC 287.66 LVI 13.51

PLANETOCENTRIC CONIC

C3 19.878 VHL 4.458 DLA 36.77 RAL 8.71 RAD 6642.8 VEL 11.827 PTH 6.85 VHP 2.583 DPA -23.74 RAP 37.42 ECC 1.3271
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 24 9 3928.58 -44.81 168.42 260.42 71.97 8 29 37 2928.6 -47.01 133.56
60.00 6 49 4 4022.49 -33.73 171.40 255.00 66.49 7 56 7 3022.5 -40.05 142.24
65.44 5 23 14 4272.35 -21.07 184.58 247.70 59.14 6 34 26 3272.3 -31.88 160.54
65.44 5 23 14 4272.35 -21.07 184.58 247.70 59.14 6 34 26 3272.3 -31.88 160.54
65.44 5 23 14 4272.35 -21.07 184.58 247.70 59.14 6 34 26 3272.3 -31.88 160.54
65.44 5 23 14 4272.35 -21.07 184.58 247.70 59.14 6 34 26 3272.3 -31.88 160.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5346 TRA-1.1167 TC3-3.0639 BAU 1.2697 SGT 3338.6 SGR 3537.2 SG3 1593.3 ST 43.8 SR 58.9 SS 88.7
RDE .8995 RRA -.4353 RC3-3.6663 FAU .41481 RRT .9295 RRF .9931 RTF .9304 CRT .8857 CRS -.9997 CST -.8796
FDE 6.0897 FRA-2.7498 FC-18.0663 BSP 8138 SGB 4863.9 R23 .1558 R13 .9810 LSA 113.5 MSA 19.4 SSA 1.1
BDE 1.0463 BRA 1.1986 BC3 4.7779 FSP 2757 SG1 4777.7 SG2 911.4 THA 46.78 EL1 71.5 EL2 16.8 ALF 54.39

LAUNCH DATE AUG 16 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

DISTANCE 526.039

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.895 GAL 2.68 AZL 85.94 HCA 154.86 SMA 198.03 ECC .23943 INC 4.0553 V1 29.413
RP 243.98 LAP 1.72 LOP 117.90 VP 20.438 GAP 3.48 AZP 93.67 TAL 13.95 TAP 168.81 RCA 150.62 APO 245.44 V2 22.487
RC 269.924 GL 31.14 GP -36.28 ZAL 65.52 ZAP 86.84 ETS 179.77 ZAE 113.08 ETE 201.03 ZAC 51.79 ETC 287.86 LVI 14.26

PLANETOCENTRIC CONIC

C3 20.195 VHL 4.494 DLA 37.81 RAL 8.30 RAD 6642.9 VEL 11.841 PTH 6.86 VHP 2.614 DPA -24.67 RAP 37.41 ECC 1.3324
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 14 10 3961.14 -44.09 171.22 260.85 69.92 8 20 11 2961.1 -47.29 136.66
60.00 6 29 48 4080.07 -32.09 175.40 254.41 64.18 7 37 48 3080.1 -39.60 147.07
63.78 5 13 0 4301.27 -21.47 187.19 247.87 58.09 6 24 41 3301.3 -32.65 163.23
63.78 5 13 0 4301.27 -21.47 187.19 247.87 58.09 6 24 41 3301.3 -32.65 163.23
63.78 5 13 0 4301.27 -21.47 187.19 247.87 58.09 6 24 41 3301.3 -32.65 163.23
63.78 5 13 0 4301.27 -21.47 187.19 247.87 58.09 6 24 41 3301.3 -32.65 163.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6114 TRA-1.1533 TC3-3.1728 BAU 1.3149 SGT 3493.3 SGR 3622.2 SG3 1552.0 ST 48.1 SR 63.4 SS 89.8
RDE .9793 RRA -.4623 RC3-3.6931 FAU .40369 RRT .9344 RRF .9937 RTF .9348 CRT .9039 CRS -.9997 CST -.8886
FDE 6.1419 FRA-2.7298 FC-17.3056 BSP 8453 SGB 5032.2 R23 .1557 R13 .9815 LSA 118.4 MSA 19.4 SSA 1.0
BDE 1.1511 BRA 1.2425 BC3 4.8687 FSP 2689 SG1 4949.1 SG2 911.0 THA 46.11 EL1 77.8 EL2 16.8 ALF 53.56

LAUNCH DATE AUG 16 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

DISTANCE 529.819

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.897 GAL 2.65 AZL 85.78 HCA 155.77 SMA 198.07 ECC .23946 INC 4.2234 V1 29.413
RP 244.22 LAP 1.73 LOP 118.81 VP 20.416 GAP 3.25 AZP 93.85 TAL 13.77 TAP 169.54 RCA 150.64 APO 245.50 V2 22.464
RC 272.618 GL 32.26 GP -37.14 ZAL 66.01 ZAP 85.77 ETS 178.90 ZAE 111.57 ETE 200.18 ZAC 51.06 ETC 288.07 LVI 15.04

PLANETOCENTRIC CONIC

C3 20.554 VHL 4.534 DLA 38.90 RAL 7.89 RAD 6643.1 VEL 11.856 PTH 6.87 VHP 2.649 DPA -25.62 RAP 37.43 ECC 1.3383
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 3 2 3996.57 -43.22 174.18 261.17 67.77 8 9 39 2996.6 -47.49 140.06
60.00 6 4 43 4153.31 -29.81 180.27 253.30 61.92 7 13 56 3153.3 -38.71 153.10
62.10 5 2 56 4329.31 -21.86 189.78 248.05 56.99 6 15 5 3329.3 -33.44 165.90
62.10 5 2 56 4329.31 -21.86 189.78 248.05 56.99 6 15 5 3329.3 -33.44 165.90
62.10 5 2 56 4329.31 -21.86 189.78 248.05 56.99 6 15 5 3329.3 -33.44 165.90
62.10 5 2 56 4329.31 -21.86 189.78 248.05 56.99 6 15 5 3329.3 -33.44 165.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6925 TRA-1.1921 TC3-3.2723 BAU 1.3602 SGT 3649.2 SGR 3709.0 SG3 1507.3 ST 52.7 SR 67.9 SS 90.8
RDE 1.0548 RRA -.4921 RC3-3.7141 FAU .39186 RRT .9387 RRF .9942 RTF .9387 CRT .9184 CRS -.9998 CST -.9138
FDE 6.1796 FRA-2.7103 FC-16.5049 BSP 8762 SGB 5203.2 R23 .1555 R13 .9821 LSA 123.5 MSA 19.5 SSA .9
BDE 1.2618 BRA 1.2897 BC3 4.9500 FSP 2611 SG1 5122.9 SG2 910.6 THA 45.50 EL1 84.3 EL2 16.8 ALF 52.79

LAUNCH DATE AUG 16 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

DISTANCE 533.597

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.899 GAL 2.61 AZL 85.60 HCA 156.67 SMA 198.11 ECC .23951 INC 4.4034 V1 29.413
RP 244.45 LAP 1.74 LOP 119.72 VP 20.394 GAP 3.03 AZP 94.04 TAL 13.59 TAP 170.26 RCA 150.66 APO 245.56 V2 22.441
RC 275.293 GL 33.45 GP -38.03 ZAL 66.52 ZAP 84.75 ETS 178.01 ZAE 110.09 ETE 199.35 ZAC 50.31 ETC 288.30 LVI 19.85

PLANETOCENTRIC CONIC

C3 20.962 VHL 4.578 DLA 40.03 RAL 7.34 RAD 6643.5 VEL 11.873 PTH 6.89 VHP 2.689 DPA -26.57 RAP 37.51 ECC 1.3450
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 50 31 4035.41 -42.17 177.32 261.33 65.53 7 37 47 3035.4 -47.57 143.01
60.00 5 22 54 4272.28 -25.72 187.68 250.72 57.83 6 34 7 3272.3 -36.58 162.47
60.40 4 52 59 4356.54 -22.24 192.34 248.23 55.82 6 5 36 3356.5 -34.25 168.57
60.40 4 52 59 4356.54 -22.24 192.34 248.23 55.82 6 5 36 3356.5 -34.25 168.57
60.40 4 52 59 4356.54 -22.24 192.34 248.23 55.82 6 5 36 3356.5 -34.25 168.57
60.40 4 52 59 4356.54 -22.24 192.34 248.23 55.82 6 5 36 3356.5 -34.25 168.57
60.40 4 52 59 4356.54 -22.24 192.34 248.23 55.82 6 5 36 3356.5 -34.25 168.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7789 TRA-1.2325 TC3-3.3605 BAU 1.4062 SGT 3804.7 SGR 3796.1 SG3 1458.8 ST 57.5 SR 72.6 SS 91.6
RDE 1.1397 RRA -.5237 RC3-3.7263 FAU .37908 RRT .9426 RRF .9946 RTF .9421 CRT .9302 CRS -.9998 CST -.9261
FDE 6.2043 FRA-2.6851 FC-15.6565 BSP 9068 SGB 5374.6 R23 .1553 R13 .9825 LSA 128.8 MSA 19.5 S3A .9
BDE 1.3805 BRA 1.3392 BC3 5.0179 FSP 2526 SG1 5296.9 SG2 910.5 THA 44.93 EL1 91.1 EL2 16.8 ALF 52.10

LAUNCH DATE AUG 16 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

DISTANCE 537.375

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.901 GAL 2.58 AZL 85.40 HCA 157.58 SMA 198.16 ECC .23958 INC 4.5967 V1 29.413
RP 244.68 LAP 1.75 LOP 120.63 VP 20.373 GAP 2.82 AZP 94.25 TAL 13.41 TAP 170.98 RCA 150.68 APO 245.63 V2 22.418
RC 277.948 GL 34.69 GP -38.95 ZAL 67.06 ZAP 83.79 ETS 177.11 ZAE 108.64 ETE 198.52 ZAC 49.52 ETC 288.54 LVI 16.70

PLANETOCENTRIC CONIC

C3 21.425 VHL 4.629 DLA 41.20 RAL 6.77 RAD 6643.5 VEL 11.892 PTH 6.90 VHP 2.733 DPA -27.54 RAP 37.63 ECC 1.3526
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 36 14 4078.46 -40.90 180.67 261.29 63.19 7 44 13 3078.5 -47.52 147.97
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26
58.69 4 43 3 4383.24 -22.60 194.89 248.40 54.58 5 56 7 3383.2 -35.06 171.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8700 TRA-1.2750 TC3-3.4382 BAU 1.4526 SGT 3959.7 SGR 3883.2 SG3 1406.4 ST 62.5 SR 77.5 SS 92.2
RDE 1.2293 RRA -.5575 RC3-3.7299 FAU .36942 RRT .9460 RRF .9950 RTF .9451 CRT .9396 CRS -.9998 CST -.9359
FDE 6.2083 FRA-2.6544 FC-14.7657 B8P 9377 SGB 5346.0 R23 .1552 R13 .9829 LSA 134.3 MSA 19.5 S3A .8
BDE 1.5059 BRA 1.3916 BC3 5.0715 FSP 2435 SG1 5470.7 SG2 910.8 THA 44.41 EL1 98.1 EL2 16.9 ALF 51.47

LAUNCH DATE AUG 16 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

DISTANCE 541.150

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.904 GAL 2.54 AZL 85.19 HCA 158.48 SMA 198.21 ECC .23966 INC 4.6050 V1 29.413
RP 244.90 LAP 1.76 LOP 121.53 VP 20.353 GAP 2.60 AZP 94.47 TAL 13.22 TAP 171.70 RCA 150.70 APO 245.71 V2 22.397
RC 280.584 GL 35.99 GP -39.91 ZAL 67.62 ZAP 82.89 ETS 176.19 ZAE 107.24 ETE 197.71 ZAC 48.69 ETC 288.80 LVI 17.58

PLANETOCENTRIC CONIC

C3 21.953 VHL 4.685 DLA 42.43 RAL 6.14 RAD 6643.7 VEL 11.914 PTH 6.92 VHP 2.783 DPA -28.53 RAP 37.81 ECC 1.3613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 19 39 4126.91 -39.35 184.28 260.94 60.74 7 28 28 3126.9 -47.26 152.63
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00
56.94 4 33 5 4409.52 -22.94 197.45 248.58 53.27 5 46 35 3409.5 -35.88 174.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9662 TRA-1.3199 TC3-3.4982 BAU 1.4994 SGT 4113.9 SGR 3970.3 SG3 1380.4 ST 67.7 SR 82.5 SS 92.5
RDE 1.3248 RRA -.5933 RC3-3.7230 FAU .35089 RRT .9490 RRF .9954 RTF .9577 CRT .9473 CRS -.9999 CST -.9438
FDE 6.1943 FRA-2.6171 FC-13.8357 B8P 9694 SGB 5717.3 R23 .1554 R13 .9833 LSA 139.9 MSA 19.6 S3A .8
BDE 1.6397 BRA 1.4472 BC3 5.1086 FSP 2342 SG1 5644.1 SG2 911.9 THA 43.93 EL1 105.4 EL2 17.0 ALF 50.91

LAUNCH DATE AUG 16 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

DISTANCE 544.925

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.907 GAL 2.51 AZL 84.97 HCA 159.38 SMA 198.26 ECC .23975 INC 5.0301 V1 29.413
RP 245.11 LAP 1.77 LOP 122.44 VP 20.334 GAP 2.38 AZP 94.71 TAL 13.03 TAP 172.40 RCA 150.73 APO 245.79 V2 22.375
RC 283.188 GL 37.37 GP -40.89 ZAL 68.20 ZAP 82.05 ETS 175.26 ZAE 105.87 ETE 196.90 ZAC 47.82 ETC 289.08 LVI 18.91

PLANETOCENTRIC CONIC

C3 22.558 VHL 4.750 DLA 43.72 RAL 5.42 RAD 6644.0 VEL 11.939 PTH 6.94 VHP 2.838 DPA -29.53 RAP 38.05 ECC 1.3712
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 59 52 4182.76 -37.41 188.22 260.15 58.14 7 9 35 3182.8 -46.70 157.91
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79
55.16 4 23 1 4435.53 -23.25 200.03 248.73 51.87 5 36 56 3435.5 -36.69 176.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0664 TRA-1.3684 TC3-3.5464 BAU 1.5477 SGT 4268.6 SGR 4061.6 SG3 1292.1 ST 73.1 SR 87.5 SS 92.5
RDE 1.4245 RRA -.6382 RC3-3.7094 FAU .33584 RRT .9521 RRF .9958 RTF .9503 CRT .9537 CRS -.9999 CST -.9503
FDE 6.1518 FRA-2.5884 FC-12.8888 B8P 9981 SGB 5892.1 R23 .1548 R13 .9837 LSA 145.5 MSA 19.6 S3A .7
BDE 1.7795 BRA 1.5091 BC3 5.1320 FSP 2233 SG1 5821.3 SG2 910.9 THA 43.51 EL1 112.7 EL2 17.1 ALF 50.40

LAUNCH DATE AUG 16 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.910 GAL 2.47 AZL 84.73 HCA 160.27 SMA 198.32 ECC .23986 INC 5.2743 V1 29.413
RP 245.32 LAP 1.78 LOP 123.34 VP 20.316 GAP 2.17 AZP 94.97 TAL 12.83 TAP 173.10 RCA 150.75 APO 245.88 V2 22.334
RC 285.791 GL 38.81 GP -41.92 ZAL 68.82 ZAP 81.28 ETS 174.31 ZAE 104.94 ETE 196.10 ZAC 46.91 ETC 289.39 LVI 18.48

DISTANCE 548.698

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.253 VHL 4.822 DLA 45.06 RAL 4.61 RAD 6644.3 VEL 11.968 PTH 6.97 VHP 2.900 DPA -30.55 RAP 38.35 ECC 1.3827
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 35 8 4250.03 -34.90 192.88 258.69 55.34 6 45 58 3250.0 -45.70 164.00
53.34 4 12 44 4461.44 -23.53 202.63 248.87 50.40 5 27 6 3461.4 -37.50 179.65
53.34 4 12 44 4461.44 -23.53 202.63 248.87 50.40 5 27 6 3461.4 -37.50 179.65
53.34 4 12 44 4461.44 -23.53 202.63 248.87 50.40 5 27 6 3461.4 -37.50 179.65
53.34 4 12 44 4461.44 -23.53 202.63 248.87 50.40 5 27 6 3461.4 -37.50 179.65
53.34 4 12 44 4461.44 -23.53 202.63 248.87 50.40 5 27 6 3461.4 -37.50 179.65

DIFFERENTIAL CORRECTIONS

TDE 1.1719 TRA-1.4201 TC3-3.5779 BAU 1.5980
RDE 1.5330 RRA -.6812 RC3-3.6819 FAU .31978
FDE 6.0942 FRA-2.5483 FC-11.9052 BSP 10283
BDE 1.9296 BRA 1.5750 BC3 5.1340 FSP 2125

MID-COURSE EXECUTION ACCURACY

SGT 4421.6 SGR 4152.1 SG3 1229.9
RRT .9546 RRF .9961 RTF .9523
SGB 6065.5 R23 .1549 R13 .9839
SG1 5996.6 SG2 911.7 THA 43.11

ORBIT DETERMINATION ACCURACY

ST 78.5 SR 92.8 SS 92.2
CRT .9587 CRS -.9999 CST -.9554
LSA 151.3 MSA 19.7 SSA .7
EL1 120.3 EL2 17.2 ALF 49.99

LAUNCH DATE AUG 16 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.913 GAL 2.43 AZL 84.46 HCA 161.17 SMA 198.38 ECC .23998 INC 5.5406 V1 29.413
RP 245.53 LAP 1.79 LOP 124.24 VP 20.299 GAP 1.95 AZP 95.25 TAL 12.63 TAP 173.80 RCA 150.77 APO 245.98 V2 22.334
RC 288.361 GL 40.34 GP -42.99 ZAL 69.45 ZAP 80.58 ETS 173.36 ZAE 103.26 ETE 195.31 ZAC 45.95 ETC 289.72 LVI 20.50

DISTANCE 552.470

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.055 VHL 4.905 DLA 46.45 RAL 3.69 RAD 6644.6 VEL 12.001 PTH 6.99 VHP 2.970 DPA -31.59 RAP 38.71 ECC 1.3959
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 0 38 4340.07 -31.27 198.20 255.94 52.12 6 12 58 3340.1 -43.81 171.93
51.48 4 2 13 4487.33 -23.76 205.26 248.97 48.83 5 17 0 3487.3 -38.30 182.60
51.48 4 2 13 4487.33 -23.76 205.26 248.97 48.83 5 17 0 3487.3 -38.30 182.60
51.48 4 2 13 4487.33 -23.76 205.26 248.97 48.83 5 17 0 3487.3 -38.30 182.60
51.48 4 2 13 4487.33 -23.76 205.26 248.97 48.83 5 17 0 3487.3 -38.30 182.60
51.48 4 2 13 4487.33 -23.76 205.26 248.97 48.83 5 17 0 3487.3 -38.30 182.60

DIFFERENTIAL CORRECTIONS

TDE 1.2830 TRA-1.4732 TC3-3.5890 BAU 1.6443
RDE 1.6485 RRA -.7288 RC3-3.6417 FAU .30288
FDE 6.0101 FRA-2.4962 FC-10.9007 BSP 10609
BDE 2.0889 BRA 1.6436 BC3 5.1130 FSP 2016

MID-COURSE EXECUTION ACCURACY

SGT 4569.5 SGR 4242.2 SG3 1164.1
RRT .9569 RRF .9963 RTF .9541
SGB 6235.1 R23 .1550 R13 .9842
SG1 6167.9 SG2 912.8 THA 42.78

ORBIT DETERMINATION ACCURACY

ST 84.0 SR 98.2 SS 91.6
CRT .9629 CRS -.9999 CST -.9597
LSA 157.2 MSA 19.7 SSA .6
EL1 128.0 EL2 17.4 ALF 49.64

LAUNCH DATE AUG 16 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.916 GAL 2.40 AZL 84.17 HCA 162.06 SMA 198.44 ECC .24011 INC 5.8318 V1 29.413
RP 245.73 LAP 1.79 LOP 125.14 VP 20.282 GAP 1.74 AZP 95.55 TAL 12.42 TAP 174.49 RCA 150.79 APO 246.09 V2 22.314
RC 290.907 GL 41.95 GP -44.10 ZAL 70.12 ZAP 79.94 ETS 172.41 ZAE 102.03 ETE 194.53 ZAC 44.95 ETC 290.09 LVI 21.56

DISTANCE 556.240

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.985 VHL 4.999 DLA 47.90 RAL 2.63 RAD 6645.0 VEL 12.040 PTH 7.03 VHP 3.048 DPA -32.66 RAP 39.15 ECC 1.4112
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66
49.57 3 51 18 4513.43 -23.93 207.93 249.01 47.17 5 6 31 3513.4 -39.06 185.66

DIFFERENTIAL CORRECTIONS

TDE 1.3964 TRA-1.5322 TC3-3.5827 BAU 1.8943
RDE 1.7703 RRA -.7853 RC3-3.5908 FAU .28548
FDE 5.8939 FRA-2.4503 FC3-9.8919 BSP 10906
BDE 2.2548 BRA 1.7218 BC3 5.0723 FSP 1897

MID-COURSE EXECUTION ACCURACY

SGT 4717.4 SGR 4336.8 SG3 1098.2
RRT .9592 RRF .9965 RTF .5558
SGB 6407.8 R23 .1548 R13 .9844
SG1 6342.5 SG2 912.1 THA 42.49

ORBIT DETERMINATION ACCURACY

ST 89.3 SR 103.6 SS 90.6
CRT .9663 CRS -.9999 CST -.9631
LSA 162.8 MSA 19.8 SSA .6
EL1 135.6 EL2 17.5 ALF 49.37

LAUNCH DATE AUG 16 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

RL 151.48 LAL -.00 LOL 322.99 VL 32.919 GAL 2.36 AZL 83.85 HCA 162.96 SMA 198.51 ECC .24026 INC 6.1520 V1 29.413
RP 245.93 LAP 1.80 LOP 126.04 VP 20.267 GAP 1.52 AZP 95.88 TAL 12.22 TAP 175.17 RCA 150.81 APO 246.20 V2 22.295
RC 293.430 GL 43.66 GP -45.25 ZAL 70.82 ZAP 79.39 ETS 171.45 ZAE 100.85 ETE 193.76 ZAC 43.89 ETC 290.50 LVI 22.68

DISTANCE 560.010

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.071 VHL 5.106 DLA 49.41 RAL 1.42 RAD 6645.4 VEL 12.084 PTH 7.06 VHP 3.135 DPA -33.74 RAP 39.65 ECC 1.4291
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83
47.63 3 39 56 4539.80 -24.02 210.64 248.98 45.42 4 55 36 3539.8 -39.78 188.83

DIFFERENTIAL CORRECTIONS

TDE 1.5085 TRA-1.5986 TC3-3.5599 BAU 1.7519
RDE 1.8872 RRA -.8614 RC3-3.5482 FAU .26936
FDE 5.7103 FRA-2.4354 FC3-8.9445 BSP 11057
BDE 2.4160 BRA 1.8159 BC3 5.0262 FSP 1732

MID-COURSE EXECUTION ACCURACY

SGT 4866.6 SGR 4432.1 SG3 1030.1
RRT .9625 RRF .9968 RTF .9589
SGB 6595.8 R23 .1507 R13 .9853
SG1 6534.1 SG2 899.8 THA 42.35

ORBIT DETERMINATION ACCURACY

ST 94.4 SR 108.3 SS 88.5
CRT .9697 CRS -.9999 CST -.9663
LSA 167.6 MSA 19.7 SSA .5
EL1 142.6 EL2 17.5 ALF 49.07

LAUNCH DATE AUG 16 1973 FLIGHT TIME 250.00 ARRIVAL DATE MAY 1 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1, EL2).

LAUNCH DATE AUG 16 1973 FLIGHT TIME 260.00 ARRIVAL DATE MAY 3 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1, EL2).

LAUNCH DATE AUG 16 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 5 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1, EL2).

LAUNCH DATE AUG 16 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 7 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1, EL2).

LAUNCH DATE AUG 16 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

DISTANCE 578.817

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.939 GAL 2.16 AZL 81.60 MCA 167.39 SMA 198.89 ECC .24115 INC 9.3976 V1 29.413  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.202 GAP .47 AZP 98.20 TAL 11.14 TAP 178.52 RCA 150.93 APO 246.85 V2 22.207  
 RC 305.673 GL 53.80 GP -51.80 ZAL 74.79 ZAP 77.92 ETS 166.89 ZAE 95.87 ETE 190.22 ZAC 37.75 ETC 293.35 LVI 29.11

PLANETOCENTRIC CONIC

C3 35.483 VHL 5.957 DLA 57.74 RAL 351.56 RAD 8649.1 VEL 12.465 PTH 7.36 VHP 3.792 DPA -39.47 RAP 43.60 ECC 1.5840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84  
 37.31 2 30 18 4683.54 -22.70 224.76 246.26 35.36 3 48 22 3683.5 -41.89 206.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0047 TRA-2.0137 TC3-3.0711 BAU 2.0291 SGT 5501.8 SGR 4976.8 SG3 643.5 ST 110.8 SR 132.5 SS 72.0  
 RDE 2.6497 RRA-1.3240 RC3-2.9773 FAU .16948 RRT .9696 RRF .9969 RTF .9605 CRT .9713 CRS -.9997 CST -.9652  
 FDE 4.4255 FRA-2.0076 FC3-4.1349 BSP 12711 SGB 7418.7 R23 .1601 R13 .9843 LSA 185.8 MSA 21.9 S3A .3  
 BDE 3.3226 BRA 2.4100 BC3 4.2773 FSP 1108 SG1 7362.7 S62 910.3 THA 42.04 EL1 171.5 EL2 20.4 ALF 50.22

LAUNCH DATE AUG 16 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

DISTANCE 582.570

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 32.943 GAL 2.12 AZL 80.96 MCA 168.26 SMA 198.97 ECC .24138 INC 9.0426 V1 29.413  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.191 GAP .26 AZP 98.86 TAL 10.91 TAP 179.18 RCA 150.95 APO 246.99 V2 22.191  
 RC 308.047 GL 56.22 GP -53.26 ZAL 75.68 ZAP 77.92 ETS 166.11 ZAE 95.10 ETE 189.63 ZAC 36.34 ETC 294.15 LVI 30.57

PLANETOCENTRIC CONIC

C3 38.754 VHL 6.225 DLA 59.49 RAL 348.36 RAD 8650.2 VEL 12.595 PTH 7.46 VHP 3.990 DPA -40.66 RAP 44.72 ECC 1.6378  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81  
 35.21 2 12 7 4716.30 -21.89 227.61 244.68 33.17 3 30 44 3716.3 -41.77 210.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0225 TRA-2.1284 TC3-2.9023 BAU 2.0973 SGT 5604.4 SGR 5108.9 SG3 564.2 ST 109.7 SR 134.8 SS 66.1  
 RDE 2.7949 RRA-1.4741 RC3-2.8218 FAU .14896 RRT .9707 RRF .9967 RTF .9597 CRT .9679 CRS -.9995 CST -.9599  
 FDE 4.0125 FRA-1.8981 FC3-3.3277 BSP 12991 SGB 7583.5 R23 .1641 R13 .9836 LSA 184.6 MSA 23.0 S3A .3  
 BDE 3.4499 BRA 2.5890 BC3 4.0480 FSP 968 SG1 7528.3 S62 913.7 THA 42.27 EL1 172.5 EL2 21.6 ALF 51.05

LAUNCH DATE AUG 16 1973

FLIGHT TIME 320.00

ARRIVAL DATE JUL 2 1974

HELIOCENTRIC CONIC

DISTANCE 680.875

EARTH TO MARS

RL 151.48 LAL -.00 LOL 322.99 VL 33.078 GAL .64 AZL 99.08 MCA 191.40 SMA 201.66 ECC .24907 INC 9.0799 V1 29.413  
 RP 249.21 LAP 1.79 LOP 154.25 VP 20.174 GAP -4.74 AZP 91.10 TAL 3.23 TAP 194.63 RCA 151.43 APO 251.89 V2 21.974  
 RC 359.480 GL -57.51 GP 50.06 ZAL 83.55 ZAP 66.27 ETS 214.25 ZAE 77.67 ETE 196.73 ZAC 135.37 ETC 290.17 LVI -68.84

PLANETOCENTRIC CONIC

C3 38.293 VHL 6.188 DLA -39.34 RAL 58.34 RAD 8650.1 VEL 12.577 PTH 7.44 VHP 4.273 DPA 53.00 RAP 353.98 ECC 1.6302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 16 47 30 2425.59 -3.67 63.28 290.22 137.47 17 27 56 1425.6 14.64 47.36  
 60.00 19 13 17 2035.69 9.25 40.55 302.40 129.40 19 47 13 1035.7 24.24 20.81  
 61.43 20 19 5 1849.21 16.03 30.23 307.81 126.42 20 49 54 849.2 29.44 8.50  
 61.43 20 19 5 1849.21 16.03 30.23 307.81 126.42 20 49 54 849.2 29.44 8.50  
 61.43 20 19 5 1849.21 16.03 30.23 307.81 126.42 20 49 54 849.2 29.44 8.50  
 61.43 20 19 5 1849.21 16.03 30.23 307.81 126.42 20 49 54 849.2 29.44 8.50  
 61.43 20 19 5 1849.21 16.03 30.23 307.81 126.42 20 49 54 849.2 29.44 8.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-7.1899 TRA 2.0472 TC3-5.0608 BAU 2.8183 SGT 9450.2 SGR 4284.9 SG3 452.3 ST 334.1 SR 138.4 SS 54.3  
 RDE 2.9191 RRA-1.6419 RC3 2.1668 FAU .12405 RRT -.9769 RRF -.9932 RTF .5227 CRT -.9945 CRS .9978 CST -.9854  
 FDE-3.0473 FRA 2.2725 FC3-2.8044 BSP 18207 SGB10376.3 R23 .2578 R13 -.9627 LSA 365.3 MSA 15.7 S3A .3  
 BDE 7.7414 BRA 2.8243 BC3 5.5051 FSP 728 SG110342.5 S62 837.3 THA 155.94 EL1 361.4 EL2 13.3 ALF 157.58

LAUNCH DATE AUG 17 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 23 1973

HELIOCENTRIC CONIC

DISTANCE 274.855

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 35.436 GAL 2.33 AZL 90.04 HCA 84.20 SMA 267.09 ECC .43450 INC .0357 V1 29.418
RP 219.82 LAP -.04 LOP 48.14 VP 26.697 GAP 23.78 AZP 90.00 TAL 7.70 TAP 91.89 RCA 151.04 APO 383.13 V2 25.005
RC 81.936 GL -.22 GP -5.24 ZAL 73.54 ZAP 173.68 ETS 237.78 ZAE 159.90 ETE 345.38 ZAC 77.78 ETC 282.52 LVI -11.28

PLANETOCENTRIC CONIC

C3 39.011 VHL 6.246 DLA 13.80 RAL 35.21 RAD 6650.3 VEL 12.605 PTH 7.48 VHP 8.641 DPA 11.12 RAP 43.93 ECC 1.6420
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 6 0 3576.58 -47.15 139.28 282.41 97.24 12 5 36 2576.6 -38.92 103.93
60.00 11 30 10 3512.25 -40.19 130.38 283.29 93.28 12 28 42 2512.2 -34.50 100.84
70.00 12 4 53 3410.07 -34.15 122.34 283.53 90.25 13 1 43 2410.1 -30.48 94.22
80.00 12 56 47 3247.45 -29.81 109.93 283.46 88.21 13 50 55 2247.5 -27.31 82.75
90.00 14 10 55 3008.21 -28.18 92.28 283.39 87.47 15 1 3 2008.2 -26.38 65.42
100.00 15 39 39 2721.92 -29.81 71.30 283.46 86.21 16 25 1 1721.9 -27.31 44.11
110.00 17 4 19 2456.89 -34.15 51.25 283.53 90.25 17 45 16 1456.9 -30.48 23.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3069 TRA -.6719 TC3 .3128 BAU .1687 SGT 954.1 SGR 624.2 SCS 131.9 ST 18.7 SR 29.0 SS 6.7
RDE -.6274 RRA .2314 RC3 -.0823 FAU .05408 RRT -.0977 RRF .1211 RTF -.5698 CRT .6716 CRS .0286 CST .9348
FDE .1737 FRA .2565 FC3-1.2001 B8P 1275 SGB 1140.2 R23 -.0251 R13 .5731 LSA 32.7 MSA 12.7 S8A 1.5
BDE .6985 BRA .9021 BC3 .3234 F8P 158 SGI 957.5 SGI 619.0 THA 173.70 EL1 32.2 EL2 12.5 ALF 61.89

LAUNCH DATE AUG 17 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 23 1973

HELIOCENTRIC CONIC

DISTANCE 277.207

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 35.285 GAL 2.37 AZL 90.00 HCA 85.32 SMA 261.47 ECC .42244 INC .0000 V1 29.418
RP 220.19 LAP -.00 LOP 49.26 VP 26.417 GAP 23.38 AZP 90.00 TAL 8.00 TAP 93.32 RCA 151.01 APO 371.93 V2 24.964
RC 83.701 GL -.02 GP -5.36 ZAL 72.94 ZAP 173.09 ETS 232.65 ZAE 159.50 ETE 345.08 ZAC 77.60 ETC 282.54 LVI -11.07

PLANETOCENTRIC CONIC

C3 37.290 VHL 6.107 DLA 13.80 RAL 34.55 RAD 6649.7 VEL 12.537 PTH 7.41 VHP 8.372 DPA 11.09 RAP 44.25 ECC 1.6137
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 3 24 3585.16 -47.05 134.20 280.63 98.06 12 2 49 2565.2 -38.53 103.11
60.00 11 27 34 3500.83 -40.14 129.41 281.63 93.93 12 25 55 2500.8 -34.20 100.01
70.00 12 2 17 3398.65 -34.15 121.44 281.94 90.78 12 58 56 2398.6 -30.26 93.41
80.00 12 54 12 3236.02 -29.83 109.09 281.91 88.66 13 48 8 2236.0 -27.35 81.94
90.00 14 8 19 2996.78 -28.21 91.45 281.86 87.88 14 58 16 1996.8 -26.24 64.61
100.00 15 37 3 2710.49 -29.83 70.45 281.91 86.66 16 22 14 1710.5 -27.35 43.30
110.00 17 1 44 2445.47 -34.15 50.36 281.94 90.78 17 42 29 1445.5 -30.26 22.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3071 TRA -.8621 TC3 .3434 BAU .1771 SGT 976.0 SGR 630.0 SCS 140.9 ST 19.1 SR 29.1 SS 7.0
RDE -.6170 RRA .2297 RC3 -.0914 FAU .05654 RRT -.1054 RRF .1301 RTF -.5810 CRT .6751 CRS .0400 CST .9295
FDE .1828 FRA .2523 FC3-1.3127 B8P 1321 SGB 1161.7 R23 -.0266 R13 .5846 LSA 33.1 MSA 12.8 S8A 1.6
BDE .6892 BRA .8922 BC3 .3553 F8P 171 SGI 979.8 SGI 624.0 THA 173.43 EL1 32.5 EL2 12.6 ALF 61.44

LAUNCH DATE AUG 17 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 27 1973

HELIOCENTRIC CONIC

DISTANCE 279.707

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 35.142 GAL 2.42 AZL 89.97 HCA 86.43 SMA 258.41 ECC .41114 INC .0297 V1 29.418
RP 220.87 LAP .03 LOP 50.38 VP 26.188 GAP 22.98 AZP 90.00 TAL 8.31 TAP 94.78 RCA 150.99 APO 361.82 V2 24.923
RC 85.936 GL .20 GP -5.50 ZAL 72.33 ZAP 172.44 ETS 228.36 ZAE 159.17 ETE 344.74 ZAC 77.42 ETC 282.52 LVI -10.86

PLANETOCENTRIC CONIC

C3 35.717 VHL 5.976 DLA 13.80 RAL 33.89 RAD 6649.2 VEL 12.474 PTH 7.37 VHP 8.112 DPA 11.05 RAP 44.57 ECC 1.5878
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 11 0 45 3554.28 -46.94 133.17 278.89 98.85 12 0 0 2554.3 -38.16 102.35
60.00 11 24 56 3489.85 -40.09 128.49 280.00 94.56 12 23 6 2489.9 -33.91 99.24
70.00 11 59 39 3387.77 -34.13 120.59 280.38 91.28 12 56 7 2387.8 -30.05 92.63
80.00 12 51 33 3225.15 -29.85 108.28 280.40 89.08 13 45 18 2225.1 -27.19 81.17
90.00 14 5 40 2985.91 -28.23 90.65 280.35 88.28 14 55 26 1985.9 -26.10 63.85
100.00 15 34 25 2699.62 -29.85 69.65 280.40 89.08 16 19 24 1699.6 -27.19 42.54
110.00 16 59 5 2434.59 -34.13 49.51 280.38 91.28 17 39 40 1434.6 -30.05 21.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3077 TRA -.8512 TC3 .3749 BAU .1894 SGT 997.0 SGR 635.6 SCS 190.3 ST 19.4 SR 29.3 SS 7.1
RDE -.6070 RRA .2278 RC3 -.1011 FAU .05913 RRT -.1130 RRF .1402 RTF -.5517 CRT .6796 CRS .0501 CST .9243
FDE .1912 FRA .2487 FC3-1.4333 B8P 1366 SGB 1182.3 R23 -.0294 R13 .5956 LSA 33.4 MSA 12.9 S8A 1.6
BDE .6806 BRA .8812 BC3 .3883 F8P 185 SGI 1001.2 SGI 628.8 THA 173.18 EL1 32.8 EL2 12.7 ALF 60.86

LAUNCH DATE AUG 17 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 28 1973

HELIOCENTRIC CONIC

DISTANCE 282.336

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 35.008 GAL 2.47 AZL 89.93 HCA 87.54 SMA 251.82 ECC .40053 INC .0678 V1 29.418
RP 220.98 LAP .07 LOP 51.49 VP 25.968 GAP 22.59 AZP 90.00 TAL 8.63 TAP 96.18 RCA 150.96 APO 382.68 V2 24.882
RC 87.440 GL .41 GP -5.83 ZAL 71.72 ZAP 171.75 ETS 224.75 ZAE 158.90 ETE 344.35 ZAC 77.24 ETC 282.49 LVI -10.85

PLANETOCENTRIC CONIC

C3 34.278 VHL 5.895 DLA 13.80 RAL 33.22 RAD 6648.6 VEL 12.417 PTH 7.32 VHP 7.863 DPA 11.01 RAP 44.88 ECC 1.5641
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 10 58 5 3543.94 -46.83 132.20 277.20 99.59 11 57 9 2543.9 -37.79 101.62
60.00 11 22 15 3479.62 -40.03 127.62 278.41 95.15 12 20 14 2479.6 -33.63 98.50
70.00 11 56 58 3377.45 -34.11 119.79 278.86 91.76 12 53 15 2377.5 -29.84 91.90
80.00 12 48 52 3214.84 -29.85 107.51 278.91 89.49 13 42 26 2214.8 -27.03 80.44
90.00 14 2 59 2975.60 -28.25 89.90 278.88 88.66 14 52 35 1975.6 -25.96 63.13
100.00 15 31 43 2689.31 -29.85 68.88 278.91 89.49 16 16 33 1689.3 -27.03 41.81
110.00 16 56 24 2424.27 -34.11 48.71 278.86 91.76 17 36 48 1424.3 -29.84 20.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3084 TRA -.8405 TC3 .4077 BAU .1937 SGT 1018.0 SGR 640.9 SCS 180.4 ST 19.7 SR 29.4 SS 7.4
RDE -.5973 RRA .2262 RC3 -.1115 FAU .06187 RRT -.1211 RRF .1506 RTF -.6022 CRT .6842 CRS .0607 CST .9186
FDE .2009 FRA .2402 FC3-1.5628 B8P 1413 SGB 1203.0 R23 -.0318 R13 .6065 LSA 33.8 MSA 13.0 S8A 1.7
BDE .6722 BRA .8704 BC3 .4227 F8P 201 SGI 1022.9 SGI 633.2 THA 172.91 EL1 33.0 EL2 12.8 ALF 60.47

LAUNCH DATE AUG 17 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 1 1973

Heliocentric Conic: RL 151.49 LAL -.00 LOL 323.95 VL 34.001 GAL 2.51 AZL 89.90 HCA 88.65 SMA 247.66 ECC .39056 INC .1037 V1 29.418  
 RP 221.33 LAP .10 LOP 52.60 VP 25.786 GAP 22.21 AZP 90.00 TAL 8.96 TAP 97.61 RCA 150.93 APO 344.39 V2 24.840  
 RC 89.407 GL .84 GP -8.78 ZAL 71.11 ZAP 171.02 ETS 221.70 ZAE 156.68 ETE 343.92 ZAC 77.05 ETC 282.46 LVI -10.43

Distance 285.078

Planeto-centric Conic: C3 32.957 VHL 5.741 DLA 13.81 RAL 32.55 RAD 6648.1 VEL 12.364 PTH 7.28 VHP 7.623 DPA 10.96 RAP 45.17 ECC 1.5424  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 55 22 3534.15 -46.71 131.28 275.56 100.29 11 54 17 2534.1 -37.44 100.95  
 60.00 11 19 32 3469.84 -39.96 126.79 276.87 95.70 12 17 22 2469.8 -33.36 97.81  
 70.00 11 54 14 3367.70 -34.09 119.03 277.38 92.21 12 50 22 2367.7 -29.64 91.21  
 80.00 12 46 8 3205.11 -29.86 106.79 277.47 89.87 13 39 33 2205.1 -26.88 79.76  
 90.00 14 0 15 2965.88 -28.26 89.19 277.45 89.01 14 49 41 1965.9 -25.82 62.45  
 100.00 15 29 0 2679.58 -29.86 68.16 277.47 89.87 16 13 39 1679.6 -26.88 41.13  
 110.00 16 53 41 2414.51 -34.09 47.95 277.38 92.21 17 33 55 1414.5 -29.64 20.13

Differential Corrections: TDE -.3092 TRA -.8295 TC3 .4413 BAU .2018 SGT 1038.6 SGR 646.1 SG3 171.0 ST 20.1 SR 29.5 SS 7.6  
 RDE -.5880 RRA .2245 RC3 -.1228 FAU .06476 RRT -.1297 RRF .1614 RTF -.8120 CRT .6890 CRS .8715 CST .9122  
 FDE .2115 FRA .2319 FC3-1.7011 BSP 1459 SGB 1223.2 R23 -.0343 R13 .6166 LSA 34.1 MSA 13.0 SSA 1.7  
 BDE .6643 BRA .8594 BC3 .4580 FSP 217 SG1 1044.0 SG2 637.3 THA 172.62 EL1 33.3 EL2 12.9 ALF 59.98

Mid-course Execution Accuracy: SGT 1038.6 SGR 646.1 SG3 171.0  
 RRT -.1297 RRF .1614 RTF -.8120  
 SGB 1223.2 R23 -.0343 R13 .6166  
 SG1 1044.0 SG2 637.3 THA 172.62

Orbit Determination Accuracy: ST 20.1 SR 29.5 SS 7.6  
 CRT .6890 CRS .8715 CST .9122  
 LSA 34.1 MSA 13.0 SSA 1.7  
 EL1 33.3 EL2 12.9 ALF 59.98

LAUNCH DATE AUG 17 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 3 1973

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 34.762 GAL 2.56 AZL 89.86 HCA 89.76 SMA 243.87 ECC .38121 INC .1392 V1 29.418  
 RP 221.71 LAP .14 LOP 53.70 VP 25.554 GAP 21.82 AZP 90.00 TAL 9.28 TAP 99.04 RCA 150.90 APO 336.83 V2 24.799  
 RC 91.436 GL .87 GP -5.93 ZAL 70.49 ZAP 170.27 ETS 219.10 ZAE 156.52 ETE 343.45 ZAC 76.86 ETC 282.44 LVI -10.22

Distance 287.922

Planeto-centric Conic: C3 31.748 VHL 5.635 DLA 13.82 RAL 31.87 RAD 6647.7 VEL 12.315 PTH 7.25 VHP 7.392 DPA 10.89 RAP 45.46 ECC 1.5225  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 52 30 3524.90 -46.60 130.42 273.98 100.95 11 51 23 2524.9 -37.11 100.32  
 60.00 11 16 47 3460.62 -39.90 126.02 275.37 96.22 12 14 28 2460.6 -33.11 97.17  
 70.00 11 51 29 3358.51 -34.06 118.31 275.93 92.63 12 47 28 2358.5 -29.44 90.57  
 80.00 12 43 22 3195.96 -29.86 106.11 276.05 90.22 13 36 38 2196.0 -26.73 79.12  
 90.00 13 57 29 2956.76 -28.27 88.52 276.05 89.35 14 46 45 1956.8 -25.69 61.81  
 100.00 15 26 14 2670.43 -29.86 67.48 276.05 90.22 16 10 44 1670.4 -26.73 40.49  
 110.00 16 50 55 2405.33 -34.06 47.23 275.93 92.63 17 31 1 1405.3 -29.44 19.48

Differential Corrections: TDE -.3103 TRA -.8189 TC3 .4754 BAU .2097 SGT 1059.2 SGR 651.2 SG3 182.3 ST 20.4 SR 29.6 SS 7.6  
 RDE -.5789 RRA .2228 RC3 -.1349 FAU .06783 RRT -.1388 RRF .1733 RTF -.6213 CRT .6941 CRS .8814 CST .9059  
 FDE .2225 FRA .2230 FC3-1.8496 BSP 1501 SGB 1243.3 R23 -.0374 R13 .6264 LSA 34.4 MSA 13.0 SSA 1.8  
 BDE .6568 BRA .8486 BC3 .4941 FSP 233 SG1 1065.2 SG2 641.2 THA 172.33 EL1 33.6 EL2 13.0 ALF 59.47

Mid-course Execution Accuracy: SGT 1059.2 SGR 651.2 SG3 182.3  
 RRT -.1388 RRF .1733 RTF -.6213  
 SGB 1243.3 R23 -.0374 R13 .6264  
 SG1 1065.2 SG2 641.2 THA 172.33

Orbit Determination Accuracy: ST 20.4 SR 29.6 SS 7.6  
 CRT .6941 CRS .8814 CST .9059  
 LSA 34.4 MSA 13.0 SSA 1.8  
 EL1 33.6 EL2 13.0 ALF 59.47

LAUNCH DATE AUG 17 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 5 1973

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 34.649 GAL 2.60 AZL 89.82 HCA 90.86 SMA 240.41 ECC .37242 INC .1754 V1 29.418  
 RP 222.09 LAP .18 LOP 54.80 VP 25.359 GAP 21.44 AZP 90.00 TAL 9.61 TAP 100.47 RCA 150.87 APO 329.94 V2 24.757  
 RC 93.523 GL 1.10 GP -6.08 ZAL 69.88 ZAP 169.48 ETS 216.88 ZAE 158.42 ETE 342.92 ZAC 76.66 ETC 282.42 LVI -10.00

Distance 290.856

Planeto-centric Conic: C3 30.638 VHL 5.535 DLA 13.83 RAL 31.20 RAD 6647.3 VEL 12.271 PTH 7.21 VHP 7.169 DPA 10.82 RAP 45.74 ECC 1.5042  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 49 53 3516.20 -46.48 129.61 272.44 101.36 11 48 30 2516.2 -36.79 99.73  
 60.00 11 14 1 3451.98 -39.83 125.29 273.91 96.71 12 11 33 2452.0 -32.86 96.57  
 70.00 11 48 42 3349.90 -34.04 117.64 274.53 93.03 12 44 32 2349.9 -29.26 89.96  
 80.00 12 40 34 3187.40 -29.83 105.47 274.68 90.36 13 33 41 2187.4 -26.59 78.33  
 90.00 13 54 40 2948.22 -28.28 87.90 274.68 89.66 14 43 48 1948.2 -25.57 61.22  
 100.00 15 23 26 2661.87 -29.85 66.84 274.68 90.36 16 7 48 1661.9 -26.59 39.89  
 110.00 16 48 9 2396.72 -34.04 46.56 274.53 93.03 17 28 5 1396.7 -29.26 18.88

Differential Corrections: TDE -.3109 TRA -.8079 TC3 .5103 BAU .2176 SGT 1079.1 SGR 656.1 SG3 194.2 ST 20.7 SR 29.7 SS 8.1  
 RDE -.5700 RRA .2210 RC3 -.1478 FAU .07100 RRT -.1489 RRF .1858 RTF -.6300 CRT .6989 CRS .8911 CST .8990  
 FDE .2346 FRA .2128 FC3-2.0084 BSP 1846 SGB 1262.9 R23 -.0401 R13 .6360 LSA 34.6 MSA 13.1 SSA 1.9  
 BDE .8493 BRA .8378 BC3 .5312 FSP 292 SG1 1086.0 SG2 644.7 THA 171.98 EL1 33.8 EL2 13.0 ALF 59.01

Mid-course Execution Accuracy: SGT 1079.1 SGR 656.1 SG3 194.2  
 RRT -.1489 RRF .1858 RTF -.6300  
 SGB 1262.9 R23 -.0401 R13 .6360  
 SG1 1086.0 SG2 644.7 THA 171.98

Orbit Determination Accuracy: ST 20.7 SR 29.7 SS 8.1  
 CRT .6989 CRS .8911 CST .8990  
 LSA 34.6 MSA 13.1 SSA 1.9  
 EL1 33.8 EL2 13.0 ALF 59.01

LAUNCH DATE AUG 17 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 7 1973

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 34.542 GAL 2.65 AZL 89.79 HCA 91.95 SMA 237.24 ECC .36416 INC .2108 V1 29.418  
 RP 222.48 LAP .21 LOP 55.90 VP 25.172 GAP 21.07 AZP 90.01 TAL 9.94 TAP 101.90 RCA 150.84 APO 323.63 V2 24.715  
 RC 95.665 GL 1.34 GP -6.24 ZAL 69.27 ZAP 168.68 ETS 214.97 ZAE 158.37 ETE 342.34 ZAC 76.46 ETC 282.40 LVI -9.77

Distance 293.871

Planeto-centric Conic: C3 29.620 VHL 5.442 DLA 13.84 RAL 30.52 RAD 6646.9 VEL 12.229 PTH 7.18 VHP 6.954 DPA 10.74 RAP 46.01 ECC 1.4875  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 47 8 3508.04 -46.37 128.85 270.96 102.13 11 45 36 2508.0 -36.49 99.18  
 60.00 11 11 14 3443.85 -39.77 124.61 272.50 97.17 12 8 38 2443.9 -32.63 96.01  
 70.00 11 45 54 3341.86 -34.01 117.02 273.16 93.39 12 41 36 2341.9 -29.09 89.40  
 80.00 12 37 44 3179.44 -29.85 104.88 273.35 90.87 13 30 44 2179.4 -26.45 77.97  
 90.00 13 51 50 2940.29 -28.28 87.32 273.36 89.95 14 40 50 1940.3 -25.45 60.67  
 100.00 15 20 36 2653.91 -29.85 66.25 273.35 90.87 16 4 50 1653.9 -26.45 39.34  
 110.00 16 45 20 2388.68 -34.01 45.93 273.16 93.39 17 25 9 1388.7 -29.09 18.32

Differential Corrections: TDE -.3119 TRA -.7966 TC3 .5457 BAU .2254 SGT 1098.5 SGR 660.9 SG3 206.8 ST 20.9 SR 29.8 SS 8.3  
 RDE -.5615 RRA .2192 RC3 -.1616 FAU .07447 RRT -.1593 RRF .1989 RTF -.6392 CRT .7042 CRS .9004 CST .8918  
 FDE .2471 FRA .2005 FC3-2.1765 BSP 1590 SGB 1282.0 R23 -.0431 R13 .6453 LSA 34.9 MSA 13.1 SSA 1.9  
 BDE .6423 BRA .8263 BC3 .5691 FSP 272 SG1 1106.2 SG2 648.0 THA 171.64 EL1 34.0 EL2 13.0 ALF 58.52

Mid-course Execution Accuracy: SGT 1098.5 SGR 660.9 SG3 206.8  
 RRT -.1593 RRF .1989 RTF -.6392  
 SGB 1282.0 R23 -.0431 R13 .6453  
 SG1 1106.2 SG2 648.0 THA 171.64

Orbit Determination Accuracy: ST 20.9 SR 29.8 SS 8.3  
 CRT .7042 CRS .9004 CST .8918  
 LSA 34.9 MSA 13.1 SSA 1.9  
 EL1 34.0 EL2 13.0 ALF 58.52

LAUNCH DATE AUG 17 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 34.441 GAL 2.89 AZL 89.75 HCA 93.05 SMA 234.32 ECC .35639 INC .2461 V1 29.418  
 RP 222.86 LAP .25 LOP 56.99 VP 24.993 GAP 20.70 AZP 90.01 TAL 10.28 TAP 103.32 RCA 150.81 APO 317.83 V2 24.673  
 RC 97.860 GL 1.58 GP -6.41 ZAL 68.66 ZAP 187.85 ETS 213.31 ZAE 158.37 ETE 341.71 ZAC 76.26 ETC 282.36 LVI -9.95

DISTANCE 298.956

EARTH TO MARS  
 DPA 10.64 RAP 46.27 ECC 1.4721

PLANETOCENTRIC CONIC  
 C3 28.685 VML 5.358 DLA 13.86 RAL 29.84 RAD 6646.5 VEL 12.191 PTH 7.15 VHP 6.747  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00	10 44 21	3500.40	-48.26	128.15	269.53	102.66	11 42 41	2500.4	-36.21	98.67
60.00	11 6 26	3436.27	-39.70	123.98	271.13	97.60	12 5 43	2436.3	-32.41	95.46
70.00	11 43 4	3334.36	-33.97	116.43	271.84	93.74	12 38 38	2334.4	-28.92	88.88
80.00	12 34 53	3172.02	-29.84	104.33	272.05	91.16	13 27 45	2172.0	-26.33	77.46
90.00	13 48 58	2932.92	-28.28	86.78	272.07	90.22	14 37 50	1932.9	-25.34	60.16
100.00	15 17 45	2646.49	-29.84	65.70	272.05	91.16	16 1 51	1646.5	-26.33	38.82
110.00	16 42 30	2381.18	-33.97	45.35	271.84	93.74	17 22 11	1381.2	-28.92	17.80

MID-COURSE EXECUTION ACCURACY  
 SGT 1114.1 SGR 665.5 SG3 219.7  
 RRT -.1808 RRF .2115 RTF -.6639  
 SGB 1297.7 R23 -.0302 R13 .6697  
 SG1 1123.9 SG2 648.8 THA 170.72

ORBIT DETERMINATION ACCURACY  
 ST 20.8 SR 29.8 SS 8.7  
 CRT .7018 CR8 .9098 CST .8814  
 LSA 34.9 MSA 13.0 SSA 2.0  
 EL1 33.9 EL2 12.9 ALF 59.10

DIFFERENTIAL CORRECTIONS  
 TDE -.3018 TRA -.7742 TC3 .5973 BAU .2388  
 RDE -.5530 RRA .2175 RC3 -.1780 FAU .07790  
 FDE .2638 FRA .1897 FC3-2.3512 B8P 1489  
 BDE .6300 BRA .8041 BC3 .6227 F8P 296

LAUNCH DATE AUG 17 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 34.346 GAL 2.74 AZL 89.72 HCA 94.14 SMA 231.85 ECC .34909 INC .2812 V1 29.418  
 RP 223.25 LAP .28 LOP 58.08 VP 24.820 GAP 20.33 AZP 90.02 TAL 10.61 TAP 104.74 RCA 150.78 APO 312.52 V2 24.631  
 RC 100.104 GL 1.83 GP -6.58 ZAL 68.06 ZAP 167.00 ETS 211.85 ZAE 158.43 ETE 341.02 ZAC 76.05 ETC 282.36 LVI -9.32

DISTANCE 300.108

EARTH TO MARS  
 DPA 10.54 RAP 46.52 ECC 1.4579

PLANETOCENTRIC CONIC  
 C3 27.826 VML 5.275 DLA 13.89 RAL 29.17 RAD 6646.1 VEL 12.156 PTH 7.12 VHP 6.547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00	10 41 35	3493.32	-46.15	127.50	268.16	103.15	11 39 48	2493.3	-35.94	98.20
60.00	11 5 38	3429.28	-39.63	123.39	269.82	97.99	12 2 47	2429.3	-32.20	95.00
70.00	11 40 14	3327.48	-35.94	115.90	270.56	94.05	12 35 41	2327.5	-28.77	88.41
80.00	12 32 0	3165.26	-29.83	103.83	270.80	91.42	13 24 45	2165.3	-26.21	76.99
90.00	13 46 4	2926.21	-28.28	86.29	270.83	90.47	14 34 50	1926.2	-25.23	59.69
100.00	15 14 52	2639.73	-29.83	65.20	270.80	91.42	15 58 52	1639.7	-26.21	38.36
110.00	16 39 40	2374.30	-33.94	44.82	270.56	94.05	17 19 14	1374.3	-28.77	17.32

MID-COURSE EXECUTION ACCURACY  
 SGT 1134.0 SGR 670.4 SG3 233.9  
 RRT -.1888 RRF .2269 RTF -.6654  
 SGB 1317.4 R23 -.0397 R13 .6722  
 SG1 1144.5 SG2 652.3 THA 170.53

ORBIT DETERMINATION ACCURACY  
 ST 21.1 SR 29.8 SS 9.0  
 CRT .7101 CR8 .9176 CST .8747  
 LSA 35.2 MSA 13.0 SSA 2.1  
 EL1 34.1 EL2 13.0 ALF 58.23

DIFFERENTIAL CORRECTIONS  
 TDE -.3089 TRA -.7671 TC3 .6275 BAU .2441  
 RDE -.5450 RRA .2155 RC3 -.1918 FAU .08177  
 FDE .2766 FRA .1730 FC3-2.5441 B8P 1581  
 BDE .6254 BRA .7966 BC3 .6561 F8P 318

LAUNCH DATE AUG 17 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 34.256 GAL 2.78 AZL 89.68 HCA 95.22 SMA 229.19 ECC .34223 INC .3164 V1 29.418  
 RP 223.64 LAP .32 LOP 59.17 VP 24.854 GAP 19.97 AZP 90.03 TAL 10.93 TAP 106.15 RCA 150.75 APO 307.62 V2 24.590  
 RC 102.397 GL 2.09 GP -6.77 ZAL 67.47 ZAP 166.13 ETS 210.58 ZAE 158.53 ETE 340.25 ZAC 75.84 ETC 282.35 LVI -9.09

DISTANCE 303.317

EARTH TO MARS  
 DPA 10.42 RAP 46.75 ECC 1.4449

PLANETOCENTRIC CONIC  
 C3 27.036 VML 5.200 DLA 13.92 RAL 28.51 RAD 6645.8 VEL 12.124 PTH 7.10 VHP 6.358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00	10 38 48	3486.78	-46.05	126.90	268.84	103.60	11 36 55	2486.8	-35.69	97.77
60.00	11 2 50	3422.83	-39.57	122.86	268.55	98.35	11 59 52	2422.8	-32.01	94.57
70.00	11 37 22	3321.17	-33.91	113.41	269.33	94.34	12 32 44	2321.2	-28.62	87.97
80.00	12 29 6	3159.08	-29.82	103.37	269.59	91.66	13 21 45	2159.1	-26.10	76.56
90.00	13 43 9	2920.10	-28.27	85.84	269.62	90.69	14 31 49	1920.1	-25.14	59.27
100.00	15 11 58	2633.56	-29.82	64.74	269.59	91.66	15 53 52	1633.6	-26.10	37.93
110.00	16 36 49	2367.99	-33.91	44.33	269.33	94.34	17 16 17	1368.0	-28.62	18.89

MID-COURSE EXECUTION ACCURACY  
 SGT 1152.7 SGR 675.3 SG3 248.9  
 RRT -.1984 RRF .2430 RTF -.6683  
 SGB 1336.0 R23 -.0478 R13 .6760  
 SG1 1164.2 SG2 655.4 THA 170.25

ORBIT DETERMINATION ACCURACY  
 ST 21.5 SR 29.8 SS 9.2  
 CRT .7177 CR8 .9249 CST .8675  
 LSA 35.5 MSA 13.0 SSA 2.2  
 EL1 34.4 EL2 13.0 ALF 57.47

DIFFERENTIAL CORRECTIONS  
 TDE -.3109 TRA -.7588 TC3 .6589 BAU .2498  
 RDE -.5371 RRA .2134 RC3 -.2086 FAU .08583  
 FDE .2908 FRA .1550 FC3-2.7482 B8P 1654  
 BDE .6206 BRA .7882 BC3 .6911 F8P 340

LAUNCH DATE AUG 17 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 34.172 GAL 2.82 AZL 89.65 HCA 96.30 SMA 226.91 ECC .33578 INC .3517 V1 29.418  
 RP 224.03 LAP .35 LOP 60.25 VP 24.494 GAP 19.81 AZP 90.04 TAL 11.26 TAP 107.56 RCA 150.72 APO 303.10 V2 24.548  
 RC 104.733 GL 2.34 GP -6.95 ZAL 68.89 ZAP 165.24 ETS 209.45 ZAE 156.67 ETE 339.42 ZAC 75.62 ETC 282.33 LVI -8.88

DISTANCE 306.578

EARTH TO MARS  
 DPA 10.29 RAP 46.97 ECC 1.4330

PLANETOCENTRIC CONIC  
 C3 26.310 VML 5.129 DLA 13.95 RAL 27.85 RAD 6645.5 VEL 12.094 PTH 7.07 VHP 6.189  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00	10 36 2	3480.75	-45.95	126.35	265.57	104.02	11 34 3	2480.8	-35.46	97.38
60.00	11 0 1	3416.93	-39.51	122.37	267.33	98.67	11 56 58	2416.9	-31.83	94.16
70.00	11 34 31	3315.42	-33.88	114.96	268.14	94.60	12 29 46	2315.4	-28.49	87.57
80.00	12 26 11	3153.50	-29.80	102.95	268.42	91.88	13 18 45	2153.5	-26.00	76.18
90.00	13 40 12	2914.59	-28.27	85.44	268.46	90.89	14 28 47	1914.6	-25.05	58.89
100.00	15 9 3	2627.97	-29.80	64.32	268.42	91.88	15 52 51	1628.0	-26.00	37.54
110.00	16 33 57	2362.23	-33.88	43.88	268.14	94.60	17 13 19	1362.2	-28.49	18.49

MID-COURSE EXECUTION ACCURACY  
 SGT 1170.7 SGR 680.3 SG3 264.8  
 RRT -.2097 RRF .2599 RTF -.6725  
 SGB 1354.0 R23 -.0547 R13 .6812  
 SG1 1183.3 SG2 658.1 THA 169.90

ORBIT DETERMINATION ACCURACY  
 ST 21.8 SR 29.8 SS 9.5  
 CRT .7246 CR8 .9318 CST .8601  
 LSA 35.8 MSA 13.0 SSA 2.3  
 EL1 34.6 EL2 13.0 ALF 56.80

DIFFERENTIAL CORRECTIONS  
 TDE -.3141 TRA -.7494 TC3 .6917 BAU .2580  
 RDE -.5294 RRA .2112 RC3 -.2284 FAU .09010  
 FDE .3067 FRA .1355 FC3-2.9847 B8P 1718  
 BDE .6158 BRA .7785 BC3 .7278 F8P 365



LAUNCH DATE AUG 17 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC

DISTANCE 309.887

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 34.091 GAL 2.88 AZL 89.61 HCA 97.38 SMA 224.81 ECC .32971 INC .3869 V1 29.418
RP 224.42 LAP .38 LOP 61.33 VP 24.340 GAP 19.25 AZP 90.05 TAL 11.58 TAP 108.98 RCA 150.69 APO 298.93 V2 24.506
RC 107.119 GL 2.60 GP -7.15 ZAL 66.32 ZAP 164.34 ETS 208.44 ZAE 158.86 ETE 336.31 ZAC 75.40 ETC 292.32 LVI -8.63

PLANETOCENTRIC CONIC

C3 25.641 VHL 5.064 DLA 14.00 RAL 27.20 RAD 6645.3 VEL 12.067 PTH 7.05 VHP 5.990 DPA 10.15 RAP 47.18 ECC 1.4220
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 33 17 3475.24 -45.86 125.85 264.36 104.39 11 31 12 2475.2 -35.25 97.02
60.00 10 57 13 3411.55 -39.46 121.92 266.15 98.97 11 54 4 2411.6 -31.67 93.80
70.00 11 31 38 3310.22 -33.85 114.56 267.00 94.84 12 26 49 2310.2 -28.37 87.22
80.00 12 23 15 3148.50 -29.79 102.58 267.29 92.08 13 15 44 2148.5 -25.91 75.83
90.00 13 37 15 2909.69 -28.26 85.08 267.34 91.07 14 25 45 1909.7 -24.97 58.55
100.00 15 6 7 2622.97 -29.79 63.95 267.29 92.08 15 49 50 1623.0 -25.91 37.20
110.00 16 31 5 2357.04 -33.85 43.48 267.00 94.84 17 10 22 1357.0 -28.37 16.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3164 TRA -.7392 TC3 .7242 BAU .2621 SGT 1187.1 SGR 685.4 S63 281.4 ST 22.1 SR 29.8 SS 9.9
RDE -.5219 RRA .2089 RC3 -.2453 FAU .09457 RRT -.2222 RRF .2775 RTF -.6769 CRT .7310 CR8 .9380 CST .8521
FDE .3237 FRA .1138 FC3-3.1931 BSP 1770 SGB 1370.7 R23 -.0608 R13 .6867 LSA 36.0 MSA 12.9 S8A 2.3
BDE .6103 BRA .7681 BC3 .7647 FSP 392 SG1 1201.1 S62 660.4 THA 169.47 EL1 34.7 EL2 12.9 ALF 56.21

LAUNCH DATE AUG 17 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC

DISTANCE 313.239

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 34.016 GAL 2.90 AZL 89.58 HCA 98.45 SMA 222.86 ECC .32400 INC .4222 V1 29.418
RP 224.81 LAP .42 LOP 62.40 VP 24.191 GAP 18.90 AZP 90.06 TAL 11.90 TAP 110.36 RCA 150.65 APO 295.07 V2 24.484
RC 109.544 GL 2.87 GP -7.35 ZAL 65.78 ZAP 163.42 ETS 207.54 ZAE 159.09 ETE 337.50 ZAC 75.18 ETC 292.32 LVI -8.39

PLANETOCENTRIC CONIC

C3 25.029 VHL 5.003 DLA 14.04 RAL 28.56 RAD 6645.0 VEL 12.041 PTH 7.03 VHP 5.818 DPA 10.00 RAP 47.38 ECC 1.4119
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 30 32 3470.23 -45.77 125.40 263.20 104.73 11 28 23 2470.2 -35.06 96.70
60.00 10 54 24 3406.70 -39.40 121.52 265.03 99.24 11 51 11 2406.7 -31.53 93.47
70.00 11 28 46 3305.59 -33.82 114.20 265.90 95.05 12 23 51 2305.6 -28.27 86.90
80.00 12 20 19 3144.08 -29.78 102.26 266.20 92.25 13 12 43 2144.1 -25.83 75.53
90.00 13 34 16 2905.36 -28.26 84.77 266.26 91.23 14 22 41 1905.4 -24.90 58.26
100.00 15 3 10 2618.55 -29.78 63.62 266.20 92.25 15 46 49 1618.6 -25.83 36.90
110.00 16 28 12 2352.40 -33.82 43.12 265.90 95.05 17 7 25 1352.4 -28.27 15.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3186 TRA -.7289 TC3 .7566 BAU .2682 SGT 1202.8 SGR 690.7 S63 298.9 ST 22.4 SR 29.7 SS 10.2
RDE -.5145 RRA .2064 RC3 -.2653 FAU .09926 RRT -.2355 RRF .2958 RTF -.6815 CRT .7373 CR8 .9436 CST .8444
FDE .3423 FRA .0905 FC3-3.4339 BSP 1814 SGB 1387.0 R23 -.0670 R13 .6923 LSA 36.3 MSA 12.9 S8A 2.4
BDE .6051 BRA .7576 BC3 .8018 FSP 420 SG1 1218.5 S62 662.6 THA 169.01 EL1 34.9 EL2 12.9 ALF 55.62

LAUNCH DATE AUG 17 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC

DISTANCE 316.630

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.944 GAL 2.94 AZL 89.54 HCA 99.52 SMA 221.06 ECC .31863 INC .4574 V1 29.418
RP 225.20 LAP .45 LOP 63.47 VP 24.048 GAP 18.55 AZP 90.08 TAL 12.22 TAP 111.74 RCA 150.62 APO 291.49 V2 24.422
RC 112.011 GL 3.14 GP -7.56 ZAL 65.22 ZAP 162.47 ETS 206.73 ZAE 159.36 ETE 336.40 ZAC 74.95 ETC 282.31 LVI -8.15

PLANETOCENTRIC CONIC

C3 24.458 VHL 4.946 DLA 14.10 RAL 25.93 RAD 6644.8 VEL 12.018 PTH 7.01 VHP 5.691 DPA 9.84 RAP 47.56 ECC 1.4025
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 27 49 3465.71 -45.89 124.99 262.09 105.04 11 25 35 2465.7 -34.89 96.41
60.00 10 51 37 3402.37 -39.36 121.16 263.95 99.48 11 48 19 2402.4 -31.39 93.18
70.00 11 25 53 3301.90 -33.80 113.88 264.85 95.24 12 20 55 2301.5 -28.17 86.62
80.00 12 17 21 3140.25 -29.77 101.97 265.16 92.40 13 9 41 2140.2 -25.76 75.27
90.00 13 31 16 2901.67 -28.25 84.50 265.22 91.36 14 19 38 1901.7 -24.84 58.00
100.00 15 0 13 2614.72 -29.77 63.34 265.16 92.40 15 43 47 1614.7 -23.76 36.63
110.00 16 25 19 2348.31 -33.80 42.80 264.85 95.24 17 4 28 1348.3 -28.17 15.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3203 TRA -.7185 TC3 .7883 BAU .2743 SGT 1217.5 SGR 696.2 S63 317.4 ST 22.6 SR 29.6 SS 10.6
RDE -.5071 RRA .2039 RC3 -.2865 FAU .10422 RRT -.2500 RRF .3152 RTF -.6598 CRT .7431 CR8 .9485 CST .8364
FDE .3622 FRA .0851 FC3-3.6890 BSP 1855 SGB 1402.5 R23 -.0729 R13 .6979 LSA 36.5 MSA 12.8 S8A 2.5
BDE .5998 BRA .7468 BC3 .8387 FSP 450 SG1 1235.1 S62 664.5 THA 168.49 EL1 35.0 EL2 12.8 ALF 55.08

LAUNCH DATE AUG 17 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC

DISTANCE 320.057

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.877 GAL 2.98 AZL 89.51 HCA 100.59 SMA 219.38 ECC .31357 INC .4930 V1 29.418
RP 225.59 LAP .48 LOP 64.54 VP 23.910 GAP 18.21 AZP 90.09 TAL 12.53 TAP 113.12 RCA 150.59 APO 288.18 V2 24.380
RC 114.516 GL 3.41 GP -7.78 ZAL 64.69 ZAP 161.52 ETS 206.00 ZAE 159.67 ETE 335.20 ZAC 74.71 ETC 282.31 LVI -7.91

PLANETOCENTRIC CONIC

C3 23.935 VHL 4.892 DLA 14.18 RAL 25.31 RAD 6644.5 VEL 11.996 PTH 6.99 VHP 5.491 DPA 9.66 RAP 47.73 ECC 1.3939
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 25 6 3461.69 -45.62 124.63 261.03 105.31 11 22 48 2461.7 -34.73 96.15
60.00 10 48 49 3398.55 -39.31 120.84 262.92 99.69 11 45 28 2398.6 -31.28 92.93
70.00 11 23 0 3297.95 -33.78 113.61 263.83 95.40 12 17 58 2297.9 -28.09 86.38
80.00 12 14 23 3136.99 -29.76 101.73 264.16 92.53 13 6 40 2137.0 -25.70 75.04
90.00 13 28 15 2898.55 -28.24 84.27 264.22 91.48 14 16 34 1898.6 -24.79 57.79
100.00 14 57 14 2611.46 -29.76 63.10 264.16 92.53 15 40 46 1611.5 -25.70 36.41
110.00 16 22 27 2344.77 -33.78 42.53 263.83 95.40 17 1 31 1344.8 -28.09 15.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3220 TRA -.7079 TC3 .8192 BAU .2802 SGT 1231.2 SGR 702.1 S63 336.9 ST 22.8 SR 29.5 SS 11.0
RDE -.4998 RRA .2012 RC3 -.3088 FAU .10942 RRT -.2652 RRF .3355 RTF -.6901 CRT .7490 CR8 .9527 CST .8288
FDE .3836 FRA .0378 FC3-3.9578 BSP 1896 SGB 1417.4 R23 -.0790 R13 .7036 LSA 36.7 MSA 12.7 S8A 2.6
BDE .5946 BRA .7360 BC3 .8755 FSP 482 SG1 1251.0 S62 666.3 THA 167.93 EL1 35.1 EL2 12.7 ALF 54.53

LAUNCH DATE AUG 17 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC

RL 131.45 LAL -.00 LOL 323.95 VL 33.813 GAL 3.02 AZL 89.47 HCA 101.65 SMA 217.83 ECC .30882 INC .5285 V1 29.418
RP 225.98 LAP .52 LOP 65.60 VP 23.777 GAP 17.86 AZP 90.11 TAL 12.83 TAP 114.48 RCA 150.56 APO 285.10 V2 24.338
RC 117.057 GL 3.69 GP -8.01 ZAL 64.18 ZAP 160.54 ETS 203.33 ZAE 160.00 ETE 333.87 ZAC 74.47 ETC 262.31 LVI -7.87

DISTANCE 323.516

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.453 VHL 4.843 DLA 14.23 RAL 24.71 RAD 6644.3 VEL 11.976 PTH 6.97 VHP 5.336 DPA 9.47 RAP 47.88 ECC 1.3860
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 22 25 3459.14 -45.56 124.31 260.02 105.54 11 20 3 2458.1 -34.59 95.92
60.00 10 46 3 3393.23 -39.27 120.37 261.94 99.87 11 42 38 2395.2 -31.17 92.71
70.00 11 20 8 3294.94 -33.76 113.38 262.87 95.53 12 15 2 2294.9 -28.02 86.17
80.00 12 11 23 3134.31 -29.75 101.53 263.20 92.63 13 3 38 2134.3 -25.65 74.86
90.00 13 25 13 2896.03 -28.24 84.08 263.27 91.57 14 13 29 1896.0 -24.75 57.61
100.00 14 54 15 2608.78 -29.75 62.90 263.20 92.63 15 37 44 1608.8 -25.65 36.23
110.00 16 19 34 2341.76 -33.76 42.29 262.87 95.53 16 58 36 1341.8 -28.02 15.09

DIFFERENTIAL CORRECTIONS

TDE -.3240 TRA -.6972 TC3 .8488 BAU .2858
RDE -.4926 RRA .1983 RC3 -.3325 FAU .11489
FDE .4073 FRA .0082 FC3-4.2411 B8P 1926
BDE .5895 BRA .7249 BC3 .9116 F8P 516

MID-COURSE EXECUTION ACCURACY

SGT 1243.8 SGR 708.4 SG3 357.3
RRT -.2808 RRF .3565 RTF -.6940
SGB 1431.4 R23 -.0855 R13 .7090
SG1 1265.9 SG2 668.0 THA 167.33

ORBIT DETERMINATION ACCURACY

ST 23.1 SR 29.4 SS 11.5
CRT .7553 CRS .9564 CST .8217
LSA 36.8 MSA 12.6 S8A 2.7
EL1 35.1 EL2 12.6 ALF 53.96

LAUNCH DATE AUG 17 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 33.753 GAL 3.05 AZL 89.44 HCA 102.71 SMA 216.38 ECC .30434 INC .5643 V1 29.418
RP 226.37 LAP .55 LOP 66.66 VP 23.648 GAP 17.53 AZP 90.12 TAL 13.13 TAP 113.84 RCA 150.53 APO 282.24 V2 24.297
RC 119.633 GL 3.97 GP -8.25 ZAL 63.68 ZAP 159.54 ETS 204.73 ZAE 160.37 ETE 332.41 ZAC 74.23 ETC 262.32 LVI -7.43

DISTANCE 327.005

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.009 VHL 4.797 DLA 14.31 RAL 24.12 RAD 6644.2 VEL 11.958 PTH 6.96 VHP 5.186 DPA 9.26 RAP 48.01 ECC 1.3787
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 19 45 3455.06 -45.50 124.04 259.07 105.75 11 17 20 2455.1 -34.47 95.73
60.00 10 43 17 3392.41 -39.24 120.34 261.00 100.03 11 39 49 2392.4 -31.09 92.52
70.00 11 17 15 3292.46 -33.74 113.18 261.94 95.65 12 12 7 2292.5 -27.96 86.00
80.00 12 8 24 3132.19 -29.75 101.37 262.29 92.71 13 0 36 2132.2 -25.61 74.71
90.00 13 22 10 2894.09 -28.24 83.94 262.35 91.64 14 10 24 1894.1 -24.72 57.48
100.00 14 51 16 2606.66 -29.75 62.74 262.29 92.71 15 34 42 1606.7 -25.61 36.08
110.00 16 16 41 2339.28 -33.74 42.10 261.94 95.65 16 55 40 1339.3 -27.96 14.92

DIFFERENTIAL CORRECTIONS

TDE -.3256 TRA -.6870 TC3 .8766 BAU .2912
RDE -.4853 RRA .1952 RC3 -.3575 FAU .12065
FDE .4323 FRA -.0239 FC3-4.5397 B8P 1962
BDE .5844 BRA .7142 BC3 .9467 F8P 552

MID-COURSE EXECUTION ACCURACY

SGT 1255.3 SGR 715.3 SG3 378.9
RRT -.2972 RRF .3785 RTF -.6972
SGB 1444.8 R23 -.0924 R13 .7140
SG1 1280.2 SG2 689.7 THA 166.68

ORBIT DETERMINATION ACCURACY

ST 23.3 SR 29.2 SS 11.9
CRT .7610 CRS .9595 CST .8145
LSA 37.0 MSA 12.6 S8A 2.8
EL1 35.2 EL2 12.5 ALF 53.40

LAUNCH DATE AUG 17 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 33.696 GAL 3.08 AZL 89.40 HCA 103.77 SMA 215.04 ECC .30013 INC .6001 V1 29.418
RP 226.76 LAP .58 LOP 67.72 VP 23.524 GAP 17.19 AZP 90.14 TAL 13.41 TAP 117.18 RCA 150.50 APO 279.58 V2 24.255
RC 122.240 GL 4.25 GP -8.49 ZAL 63.20 ZAP 158.53 ETS 204.17 ZAE 160.78 ETE 330.80 ZAC 73.98 ETC 262.32 LVI -7.18

DISTANCE 330.520

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.599 VHL 4.754 DLA 14.39 RAL 23.54 RAD 6644.0 VEL 11.941 PTH 6.94 VHP 5.042 DPA 9.04 RAP 48.13 ECC 1.3719
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 17 6 3452.43 -45.45 123.81 258.16 105.92 11 14 39 2452.4 -34.37 95.56
60.00 10 40 32 3390.08 -39.21 120.15 260.11 100.15 11 37 2 2390.1 -31.01 92.36
70.00 11 14 22 3290.50 -33.73 113.03 261.06 95.73 12 9 12 2290.5 -27.91 85.87
80.00 12 5 23 3130.64 -29.74 101.28 261.41 92.77 12 57 34 2130.6 -25.58 74.61
90.00 13 19 6 2892.73 -28.23 83.84 261.48 91.69 14 7 19 1892.7 -24.69 57.39
100.00 14 48 15 2605.11 -29.74 62.63 261.41 92.77 15 31 40 1605.1 -25.58 35.98
110.00 16 13 48 2337.32 -33.73 41.95 261.06 95.73 16 52 46 1337.3 -27.91 14.79

DIFFERENTIAL CORRECTIONS

TDE -.3271 TRA -.6764 TC3 .9028 BAU .2964
RDE -.4781 RRA .1918 RC3 -.3840 FAU .12670
FDE .4588 FRA -.0593 FC3-4.8537 B8P 1989
BDE .5793 BRA .7031 BC3 .9811 F8P 589

MID-COURSE EXECUTION ACCURACY

SGT 1265.2 SGR 722.7 SG3 401.6
RRT -.3141 RRF .4014 RTF -.7001
SGB 1457.0 R23 -.0996 R13 .7189
SG1 1293.2 SG2 671.3 THA 165.98

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 29.0 SS 12.4
CRT .7688 CRS .9620 CST .8075
LSA 37.2 MSA 12.5 S8A 2.9
EL1 35.2 EL2 12.4 ALF 52.85

LAUNCH DATE AUG 17 1973

FLIGHT TIME 136.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 33.642 GAL 3.12 AZL 89.36 HCA 104.82 SMA 213.79 ECC .29817 INC .6363 V1 29.418
RP 227.15 LAP .62 LOP 68.77 VP 23.404 GAP 16.86 AZP 90.16 TAL 13.69 TAP 118.51 RCA 150.47 APO 277.10 V2 24.214
RC 124.878 GL 4.54 GP -8.75 ZAL 62.74 ZAP 157.48 ETS 203.66 ZAE 161.18 ETE 329.02 ZAC 73.73 ETC 262.33 LVI -6.93

DISTANCE 334.060

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.220 VHL 4.714 DLA 14.49 RAL 22.98 RAD 6643.8 VEL 11.925 PTH 6.93 VHP 4.903 DPA 8.81 RAP 48.24 ECC 1.3657
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 14 29 3450.26 -45.41 123.61 257.30 106.07 11 12 0 2450.3 -34.26 95.43
60.00 10 37 48 3388.22 -39.19 119.99 259.26 100.26 11 34 16 2388.2 -30.96 92.24
70.00 11 11 29 3289.06 -33.72 112.92 260.22 95.80 12 6 18 2289.1 -27.88 85.77
80.00 12 2 22 3129.64 -29.74 101.19 260.58 92.81 12 54 32 2129.6 -25.57 74.54
90.00 13 16 1 2891.95 -28.23 83.79 260.64 91.72 14 4 12 1892.0 -24.68 57.34
100.00 14 45 14 2604.11 -29.74 62.55 260.58 92.81 15 28 38 1604.1 -25.57 35.91
110.00 16 10 56 2335.88 -33.72 41.84 260.22 95.80 16 49 51 1335.9 -27.88 14.69

DIFFERENTIAL CORRECTIONS

TDE -.3287 TRA -.6666 TC3 .9269 BAU .3013
RDE -.4709 RRA .1884 RC3 -.4118 FAU .13303
FDE .4671 FRA -.0962 FC3-5.1832 B8P 2014
BDE .5743 BRA .6927 BC3 1.0143 F8P 630

MID-COURSE EXECUTION ACCURACY

SGT 1274.2 SGR 730.9 SG3 425.4
RRT -.3313 RRF .4251 RTF -.7022
SGB 1469.0 R23 -.1076 R13 .7233
SG1 1305.7 SG2 673.0 THA 165.23

ORBIT DETERMINATION ACCURACY

ST 23.6 SR 28.8 SS 12.9
CRT .7724 CRS .9639 CST .8010
LSA 37.3 MSA 12.5 S8A 3.0
EL1 35.2 EL2 12.3 ALF 52.28

LAUNCH DATE AUG 17 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC

DISTANCE 337.623

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.991 GAL 3.15 AZL 89.33 HCA 105.87 SMA 212.62 ECC .29244 INC -.6725 V1 29.418
RP 227.54 LAP .65 LOP 69.82 VP 23.288 GAP 16.54 AZP 90.18 TAL 13.07 TAP 119.83 RCA 150.44 APO 274.80 V2 24.172
RC 127.544 GL 4.83 GP -9.01 ZAL 62.30 ZAP 156.43 ETS 203.19 ZAE 161.61 ETE 327.06 ZAC 73.46 ETC 282.35 LVI -6.68

PLANETOCENTRIC CONIC

C3 21.871 VHL 4.677 DLA 14.59 RAL 22.43 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 4.769 DPA 8.56 RAP 48.32 ECC 1.3599
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 11 54 3448.52 -45.38 123.46 256.49 106.18 11 9 22 2448.5 -34.22 95.32
60.00 10 35 4 3386.83 -39.17 119.88 258.46 100.33 11 31 31 2386.8 -30.91 92.15
70.00 11 8 37 3288.13 -33.71 112.85 259.43 95.84 12 3 25 2288.1 -27.85 85.71
80.00 11 59 20 3129.20 -29.74 101.15 259.78 92.83 12 51 29 2129.2 -25.56 74.51
90.00 13 12 54 2891.75 -28.23 83.77 259.85 91.73 14 1 6 1891.7 -24.68 57.32
100.00 14 42 12 2603.67 -29.74 62.52 259.78 92.83 15 25 35 1603.7 -25.56 35.88
110.00 16 8 3 2334.95 -33.71 41.77 259.43 95.84 16 46 58 1335.0 -27.85 14.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3304 TRA -.6564 TC3 .9487 BAU .3059 SGT 1281.3 SGR 739.9 SG3 450.5 ST 23.8 SR 28.6 SS 13.5
RDE -.4635 RRA .1846 RC3 -.4413 FAU .13969 RRT -.3487 RRF .4493 RTF -.7039 CRT .7782 CRS .9655 CST .7949
FDE .5185 FRA -.1371 FC3-5.5295 BSP 2040 SGB 1479.6 R23 -.1158 R13 .7276 LSA 37.5 MSA 12.4 SSA 3.1
BDE .5692 BRA .6819 BC3 1.0463 FSP 672 SG1 1316.8 SG2 674.8 THA 164.43 EL1 35.2 EL2 12.2 ALF 51.69

LAUNCH DATE AUG 17 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC

DISTANCE 341.207

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.544 GAL 3.18 AZL 89.29 HCA 106.91 SMA 211.53 ECC .28894 INC .7090 V1 29.418
RP 227.93 LAP .68 LOP 70.86 VP 23.176 GAP 16.21 AZP 90.21 TAL 14.23 TAP 121.14 RCA 150.41 APO 272.65 V2 24.131
RC 130.237 GL 5.12 GP -9.28 ZAL 61.88 ZAP 155.36 ETS 202.75 ZAE 162.05 ETE 324.91 ZAC 73.20 ETC 282.37 LVI -6.42

PLANETOCENTRIC CONIC

C3 21.548 VHL 4.642 DLA 14.70 RAL 21.90 RAD 6643.5 VEL 11.897 PTH 6.91 VHP 4.639 DPA 8.29 RAP 48.39 ECC 1.3546
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 9 20 3447.22 -45.35 123.34 255.72 106.27 11 6 47 2447.2 -34.16 95.23
60.00 10 32 22 3385.90 -39.16 119.80 257.70 100.38 11 28 48 2385.9 -30.88 92.08
70.00 11 5 44 3287.71 -33.71 112.82 258.67 95.86 12 0 32 2287.7 -27.84 85.68
80.00 11 56 17 3129.31 -29.74 101.16 259.02 92.82 12 48 26 2129.3 -25.56 74.52
90.00 13 9 46 2892.12 -28.23 83.80 259.09 91.71 13 57 58 1892.1 -24.68 57.35
100.00 14 39 9 2603.78 -29.74 62.53 259.02 92.82 15 22 33 1603.8 -25.56 35.88
110.00 16 5 10 2334.53 -33.71 41.73 258.67 95.86 16 44 5 1334.5 -27.84 14.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3321 TRA -.6471 TC3 .9669 BAU .3100 SGT 1286.8 SGR 749.8 SG3 476.6 ST 24.0 SR 28.4 SS 14.1
RDE -.4561 RRA .1807 RC3 -.4722 FAU .14661 RRT -.3661 RRF .4741 RTF -.7044 CRT .7836 CRS .9666 CST .7895
FDE .5520 FRA -.1792 FC3-5.6905 BSP 2065 SGB 1489.3 R23 -.1250 R13 .7311 LSA 37.6 MSA 12.4 SSA 3.2
BDE .5641 BRA .6719 BC3 1.0760 FSP 716 SG1 1326.6 SG2 676.8 THA 163.57 EL1 35.1 EL2 12.0 ALF 51.07

LAUNCH DATE AUG 17 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC

DISTANCE 344.809

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.498 GAL 3.20 AZL 89.25 HCA 107.96 SMA 210.51 ECC .28564 INC .7459 V1 29.418
RP 228.32 LAP .71 LOP 71.90 VP 23.068 GAP 15.89 AZP 90.23 TAL 14.48 TAP 122.44 RCA 150.38 APO 270.64 V2 24.090
RC 132.954 GL 5.42 GP -9.57 ZAL 61.48 ZAP 154.26 ETS 202.34 ZAE 162.49 ETE 322.53 ZAC 72.93 ETC 282.39 LVI -6.16

PLANETOCENTRIC CONIC

C3 21.249 VHL 4.610 DLA 14.82 RAL 21.39 RAD 6643.4 VEL 11.885 PTH 6.90 VHP 4.515 DPA 8.01 RAP 48.44 ECC 1.3497
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 6 48 3448.34 -45.33 123.26 255.00 106.33 11 4 14 2446.3 -34.13 95.18
60.00 10 29 40 3385.43 -39.16 119.78 256.99 100.41 11 26 8 2385.4 -30.87 92.05
70.00 11 2 51 3287.78 -33.71 112.82 257.95 95.86 11 37 39 2287.8 -27.85 85.69
80.00 11 53 13 3129.96 -29.74 101.21 258.31 92.80 12 45 23 2130.0 -25.57 74.56
90.00 13 6 37 2893.05 -28.23 83.87 258.37 91.68 13 54 50 1893.1 -24.70 57.41
100.00 14 36 5 2604.43 -29.74 62.58 258.31 92.80 15 19 29 1604.4 -25.57 35.93
110.00 16 2 17 2334.60 -33.71 41.74 257.95 95.86 16 41 12 1334.6 -27.85 14.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3339 TRA -.6376 TC3 .9836 BAU .3141 SGT 1291.0 SGR 760.7 SG3 504.0 ST 24.2 SR 28.1 SS 14.8
RDE -.4485 RRA .1764 RC3 -.5048 FAU .15388 RRT -.3835 RRF .4994 RTF -.7047 CRT .7892 CRS .9674 CST .7845
FDE .5885 FRA -.2258 FC3-6.2692 BSP 2086 SGB 1498.5 R23 -.1345 R13 .7349 LSA 37.8 MSA 12.3 SSA 3.3
BDE .5591 BRA .6616 BC3 1.1056 FSP 764 SG1 1335.8 SG2 679.0 THA 162.65 EL1 35.1 EL2 11.9 ALF 50.42

LAUNCH DATE AUG 17 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC

DISTANCE 348.428

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 33.456 GAL 3.23 AZL 89.22 HCA 108.99 SMA 209.57 ECC .28253 INC .7831 V1 29.418
RP 228.70 LAP .74 LOP 72.94 VP 22.963 GAP 15.57 AZP 90.25 TAL 14.72 TAP 123.72 RCA 150.36 APO 268.77 V2 24.049
RC 135.894 GL 5.72 GP -9.86 ZAL 61.10 ZAP 153.15 ETS 201.96 ZAE 162.93 ETE 319.90 ZAC 72.65 ETC 282.42 LVI -5.90

PLANETOCENTRIC CONIC

C3 20.974 VHL 4.580 DLA 14.95 RAL 20.89 RAD 6643.3 VEL 11.873 PTH 6.89 VHP 4.395 DPA 7.71 RAP 48.48 ECC 1.3452
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 4 17 3445.87 -45.33 123.22 254.33 106.36 11 1 42 2445.9 -34.11 95.15
60.00 10 26 59 3385.41 -39.16 119.76 256.31 100.41 11 23 25 2385.4 -30.87 92.05
70.00 10 59 58 3288.34 -33.71 112.87 257.28 95.83 11 54 47 2288.3 -27.86 85.72
80.00 11 50 8 3131.16 -29.74 101.30 257.63 92.75 12 42 19 2131.2 -25.59 74.64
90.00 13 3 26 2894.56 -28.24 83.98 257.69 91.62 13 51 41 1894.6 -24.72 57.51
100.00 14 33 0 2605.63 -29.74 62.67 257.63 92.75 15 16 25 1605.6 -25.59 36.01
110.00 15 59 25 2335.16 -33.71 41.78 257.28 95.83 16 38 20 1335.2 -27.86 14.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3356 TRA -.6289 TC3 .9968 BAU .3178 SGT 1293.4 SGR 773.0 SG3 532.7 ST 24.3 SR 27.8 SS 15.4
RDE -.4408 RRA .1719 RC3 -.5391 FAU .16147 RRT -.4007 RRF .5252 RTF -.7040 CRT .7945 CRS .9678 CST .7800
FDE .6271 FRA -.2741 FC3-6.6650 BSP 2105 SGB 1506.8 R23 -.1449 R13 .7383 LSA 37.9 MSA 12.3 SSA 3.4
BDE .5539 BRA .6519 BC3 1.1332 FSP 813 SG1 1343.8 SG2 681.4 THA 161.66 EL1 35.0 EL2 11.7 ALF 49.76

LAUNCH DATE AUG 17 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.415 GAL 3.25 AZL 89.18 HCA 110.03 SMA 208.68 ECC .27961 INC .8205 V1 29.418  
 RP 229.08 LAP .77 LOP 73.98 VP 22.861 GAP 15.26 AZP 90.28 TAL 14.96 TAP 124.99 RCA 150.33 APO 267.03 V2 24.008  
 RC 138.457 GL 6.03 GP -10.17 ZAL 60.73 ZAP 152.01 ETS 201.59 ZAE 183.36 ETE 317.01 ZAC 72.36 ETC 282.45 LVI -5.64

DISTANCE 352.064 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.719 VHL 4.532 DLA 15.09 RAL 20.40 RAD 6643.2 VEL 11.863 PTH 6.88 VHP 4.279 DPA 7.40 RAP 48.49 ECC 1.3410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 47 3445.78 -45.32 123.21 253.70 106.37 10 59 12 2445.0 -34.11 95.14  
 60.00 10 24 19 3385.79 -39.16 119.79 255.67 100.39 11 20 45 2385.8 -30.88 92.08  
 70.00 10 57 5 3269.36 -33.72 112.94 256.64 95.79 11 51 54 2289.4 -27.88 85.79  
 80.00 11 47 2 3132.85 -29.75 101.42 256.98 92.69 12 39 14 2132.0 -25.63 74.76  
 90.00 13 0 14 2896.58 -28.24 84.12 257.04 91.55 13 48 30 1896.6 -24.76 57.85  
 100.00 14 29 53 2607.32 -29.75 62.79 256.98 92.69 15 13 21 1607.3 -25.63 38.13  
 110.00 15 56 31 2336.18 -33.72 41.86 256.64 95.79 16 35 27 1336.2 -27.88 14.71

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3233 TRA -.6068 TC3 1.0330 BAU .3276 SGT 1294.5 SGR 787.3 SG3 963.5 ST 23.6 SR 27.5 SS 16.0  
 RDE -.4334 RRA .1666 RC3 -.5761 FAU .16967 RRT -.4347 RRF .5524 RTF -.7104 CRT .7946 CRS .9671 CST .7680  
 FDE .6612 FRA -.3329 FC3 -7.0897 BSP 1954 SGB 1515.1 R23 -.1339 R13 .7545 LSA 37.5 MSA 12.1 88A 3.5  
 BDE .5407 BRA .6292 BC3 1.1828 FSP 856 SG1 1355.4 S22 677.2 THA 160.00 EL1 34.4 EL2 11.5 ALF 50.45

LAUNCH DATE AUG 17 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.378 GAL 3.27 AZL 89.14 HCA 111.06 SMA 207.85 ECC .27886 INC .8583 V1 29.418  
 RP 229.48 LAP .80 LOP 75.01 VP 22.763 GAP 14.95 AZP 90.31 TAL 15.18 TAP 126.24 RCA 150.31 APO 265.40 V2 23.967  
 RC 141.241 GL 6.33 GP -10.48 ZAL 60.39 ZAP 150.85 ETS 201.25 ZAE 163.77 ETE 313.84 ZAC 72.07 ETC 282.48 LVI -5.37

DISTANCE 355.714 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.484 VHL 4.526 DLA 15.24 RAL 19.94 RAD 6643.1 VEL 11.853 PTH 6.87 VHP 4.168 DPA 7.06 RAP 48.48 ECC 1.3371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 19 3446.13 -45.33 123.24 253.11 106.34 10 56 45 2446.1 -34.12 95.17  
 60.00 10 21 39 3386.65 -39.17 119.86 255.08 100.34 11 18 6 2386.7 -30.91 92.13  
 70.00 10 54 11 3290.90 -33.73 113.06 256.04 95.72 11 49 2 2290.9 -27.92 85.90  
 80.00 11 43 54 3135.14 -29.75 101.59 256.38 92.60 12 36 9 2135.1 -25.67 74.91  
 90.00 12 56 59 2899.23 -28.25 84.32 256.44 91.45 13 45 18 1899.2 -24.80 57.83  
 100.00 14 26 46 2609.61 -29.75 62.96 256.38 92.60 15 10 15 1609.6 -25.67 38.28  
 110.00 15 53 38 2337.72 -33.73 41.98 256.04 95.72 16 32 35 1337.7 -27.92 14.82

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3303 TRA -.6042 TC3 1.0296 BAU .3282 SGT 1293.0 SGR 802.0 SG3 594.5 ST 24.1 SR 27.1 SS 16.8  
 RDE -.4251 RRA .1616 RC3 -.6138 FAU .17783 RRT -.4445 RRF .5780 RTF -.7097 CRT .8016 CRS .9673 CST .7671  
 FDE .7084 FRA -.3856 FC3 -7.5159 BSP 2032 SGB 1521.5 R23 -.1539 R13 .7523 LSA 37.9 MSA 12.2 88A 3.6  
 BDE .5383 BRA .8254 BC3 1.1988 FSP 912 SG1 1359.4 S22 683.3 THA 159.07 EL1 34.4 EL2 11.3 ALF 49.19

LAUNCH DATE AUG 17 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.342 GAL 3.30 AZL 89.10 HCA 112.09 SMA 207.08 ECC .27428 INC .8966 V1 29.418  
 RP 229.86 LAP .83 LOP 76.04 VP 22.668 GAP 14.64 AZP 90.34 TAL 15.39 TAP 127.48 RCA 150.28 APO 263.88 V2 23.927  
 RC 144.046 GL 6.65 GP -10.81 ZAL 60.07 ZAP 149.66 ETS 200.92 ZAE 164.14 ETE 310.37 ZAC 71.77 ETC 282.52 LVI -5.10

DISTANCE 359.378 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.286 VHL 4.302 DLA 15.40 RAL 19.49 RAD 6643.0 VEL 11.844 PTH 6.86 VHP 4.081 DPA 6.71 RAP 48.46 ECC 1.3335  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 58 52 3446.86 -45.34 123.31 252.57 106.29 10 54 19 2446.9 -34.15 95.21  
 60.00 10 19 0 3387.94 -39.19 119.97 254.53 100.27 11 15 28 2387.9 -30.95 92.22  
 70.00 10 51 17 3292.92 -33.74 113.22 255.47 95.62 11 46 10 2292.9 -27.97 86.04  
 80.00 11 40 45 3137.95 -29.76 101.80 255.81 92.49 12 33 3 2138.0 -25.72 75.11  
 90.00 12 53 43 2902.44 -28.25 84.55 255.86 91.34 13 42 5 1902.4 -24.85 58.05  
 100.00 14 23 37 2612.42 -29.76 63.17 255.81 92.49 15 7 9 1612.4 -25.72 36.48  
 110.00 15 50 44 2339.74 -33.74 42.14 255.47 95.62 16 29 43 1339.7 -27.97 14.95

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3356 TRA -.6005 TC3 1.0258 BAU .3295 SGT 1289.8 SGR 818.4 SG3 626.8 ST 24.5 SR 26.7 SS 17.8  
 RDE -.4165 RRA .1564 RC3 -.6335 FAU .18633 RRT -.4552 RRF .6036 RTF -.7121 CRT .8078 CRS .9674 CST .7664  
 FDE .7596 FRA -.4407 FC3 -7.9599 BSP 2089 SGB 1527.5 R23 -.1718 R13 .7518 LSA 38.2 MSA 12.2 88A 3.7  
 BDE .5349 BRA .6205 BC3 1.2161 FSP 972 SG1 1363.1 S22 689.5 THA 157.98 EL1 34.5 EL2 11.2 ALF 48.06

LAUNCH DATE AUG 17 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.308 GAL 3.31 AZL 89.06 HCA 113.11 SMA 206.38 ECC .27185 INC .9352 V1 29.418  
 RP 230.25 LAP .86 LOP 77.06 VP 22.576 GAP 14.34 AZP 90.37 TAL 15.59 TAP 128.70 RCA 150.26 APO 262.46 V2 23.887  
 RC 146.870 GL 6.96 GP -11.15 ZAL 59.77 ZAP 148.46 ETS 200.61 ZAE 164.48 ETE 306.60 ZAC 71.47 ETC 282.56 LVI -4.82

DISTANCE 363.053 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.064 VHL 4.479 DLA 15.57 RAL 19.05 RAD 6642.9 VEL 11.835 PTH 6.85 VHP 3.958 DPA 6.25 RAP 48.41 ECC 1.3302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 54 27 3447.98 -45.37 123.41 252.06 106.22 10 51 55 2448.0 -34.19 95.28  
 60.00 10 16 22 3389.64 -39.21 120.11 254.01 100.18 11 12 52 2389.6 -31.00 92.33  
 70.00 10 48 23 3295.41 -33.76 113.41 254.95 95.51 11 43 18 2295.4 -28.03 86.21  
 80.00 11 37 34 3141.30 -29.77 102.05 255.27 92.36 12 29 55 2141.3 -25.78 75.34  
 90.00 12 50 24 2906.20 -28.26 84.83 255.32 91.20 13 38 50 1906.2 -24.92 58.31  
 100.00 14 20 25 2615.77 -29.77 63.42 255.27 92.36 15 4 1 1615.8 -25.78 36.71  
 110.00 15 47 49 2342.23 -33.76 42.33 254.95 95.51 16 26 51 1342.2 -28.03 15.12

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3389 TRA -.5955 TC3 1.0205 BAU .3312 SGT 1284.1 SGR 836.6 SG3 680.5 ST 24.7 SR 26.3 SS 18.8  
 RDE -.4078 RRA .1506 RC3 -.6952 FAU .19319 RRT -.4667 RRF .6292 RTF -.6948 CRT .8129 CRS .9670 CST .7642  
 FDE .8116 FRA -.5013 FC3 -8.4219 BSP 2120 SGB 1532.6 R23 -.1879 R13 .7526 LSA 38.5 MSA 12.3 88A 3.7  
 BDE .5302 BRA .6142 BC3 1.2348 FSP 1031 SG1 1365.5 S22 695.8 THA 156.71 EL1 34.4 EL2 11.0 ALF 47.10

LAUNCH DATE AUG 17 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC DISTANCE 366.740 EARTH TO MARS  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.277 GAL 3.33 AZL 89.03 HCA 114.13 SMA 205.69 ECC .26957 INC .9744 V1 29.418  
 RP 230.63 LAP .89 LOP 78.08 VP 22.487 GAP 14.04 AZP 90.40 TAL 15.78 TAP 129.91 RCA 150.24 APO 261.13 V2 23.847  
 RC 149.713 GL 7.28 GP -11.50 ZAL 59.49 ZAP 147.23 ETS 200.31 ZAE 164.75 ETE 302.52 ZAC 71.16 ETC 282.61 LVI -4.54

PLANETOCENTRIC CONIC  
 C3 19.878 VHL 4.459 DLA 15.75 RAL 18.63 RAD 6642.8 VEL 11.827 PTH 6.85 VHP 3.859 DPA 5.96 RAP 48.35 ECC 1.3271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 52 3 3449.47 -45.39 123.54 251.60 106.12 10 49 32 2449.5 -34.25 95.38  
 60.00 10 13 44 3391.76 -39.23 120.28 253.54 100.06 11 10 15 2391.8 -31.07 92.47  
 70.00 10 45 27 3298.38 -33.78 113.64 254.46 95.38 11 40 26 2298.4 -28.10 86.41  
 80.00 11 34 21 3145.17 -29.78 102.34 254.77 92.21 12 26 46 2145.2 -25.85 75.60  
 90.00 12 47 2 2910.53 -28.26 85.14 254.82 91.04 13 35 33 1910.5 -24.99 58.61  
 100.00 14 17 12 2619.64 -29.78 63.71 254.77 92.21 15 0 52 1619.6 -25.85 36.97  
 110.00 15 44 54 2345.19 -33.78 42.56 254.46 95.38 16 23 59 1345.2 -28.10 15.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3418 TRA -.5905 TC3 1.0128 BAU .3331 SGT 1276.5 SGR 856.7 SG3 695.4 ST 25.0 SR 25.8 SS 19.4  
 RDE -.3987 RRA .1448 RC3 -.7389 FAU .20433 RRT -.4774 RRF .6543 RTF -.6872 CRT .8176 CRS .9665 CST .7622  
 FDE .8674 FRA -.5641 FC3 -8.8988 BSP 2142 SGB 1537.4 R23 -.2033 R13 .7541 LSA 38.7 MSA 12.3 SSA 3.8  
 BDE .5250 BRA .6079 BC3 1.2535 FSP 1093 SG1 1367.3 SG2 702.8 THA 155.31 EL1 34.2 EL2 10.8 ALF 46.15

LAUNCH DATE AUG 17 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 370.437 EARTH TO MARS  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.247 GAL 3.35 AZL 88.99 HCA 115.15 SMA 205.06 ECC .26742 INC 1.0140 V1 29.418  
 RP 231.01 LAP .92 LOP 79.10 VP 22.401 GAP 13.74 AZP 90.43 TAL 15.96 TAP 131.11 RCA 150.22 APO 259.89 V2 23.807  
 RC 152.572 GL 7.60 GP -11.86 ZAL 59.23 ZAP 145.98 ETS 200.01 ZAE 164.96 ETE 298.15 ZAC 70.84 ETC 282.66 LVI -4.26

PLANETOCENTRIC CONIC  
 C3 19.706 VHL 4.439 DLA 15.94 RAL 18.23 RAD 6642.7 VEL 11.820 PTH 6.84 VHP 3.764 DPA 5.55 RAP 48.26 ECC 1.3243  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 49 40 3451.34 -45.43 123.71 251.18 106.00 10 47 11 2451.3 -34.33 95.49  
 60.00 10 11 5 3394.29 -39.26 120.49 253.09 99.92 11 7 40 2394.3 -31.14 92.64  
 70.00 10 42 31 3301.81 -33.80 113.91 254.00 95.22 11 37 32 2301.8 -28.18 86.64  
 80.00 11 31 5 3149.58 -29.79 102.66 254.30 92.04 12 23 35 2149.6 -25.93 75.91  
 90.00 12 43 38 2915.43 -28.27 85.50 254.34 90.86 13 32 13 1915.4 -25.06 58.95  
 100.00 14 13 57 2624.05 -29.79 64.03 254.30 92.04 14 57 41 1624.1 -25.93 37.27  
 110.00 15 41 57 2348.62 -33.80 42.82 254.00 95.22 16 21 6 1348.6 -28.18 15.56

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3435 TRA -.5855 TC3 1.0017 BAU .3353 SGT 1267.0 SGR 878.8 SG3 731.7 ST 25.1 SR 25.3 SS 20.3  
 RDE -.3893 RRA .1381 RC3 -.7848 FAU .21384 RRT -.4874 RRF .6789 RTF -.6789 CRT .8218 CRS .9659 CST .7604  
 FDE .9279 FRA -.6301 FC3 -9.3943 BSP 2158 SGB 1542.0 R23 -.2178 R13 .7565 LSA 38.9 MSA 12.4 SSA 3.8  
 BDE .5192 BRA .6016 BC3 1.2726 FSP 1158 SG1 1368.5 SG2 710.5 THA 133.75 EL1 34.0 EL2 10.6 ALF 45.22

LAUNCH DATE AUG 17 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 374.144 EARTH TO MARS  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.219 GAL 3.36 AZL 88.95 HCA 116.18 SMA 204.47 ECC .26541 INC 1.0542 V1 29.418  
 RP 231.39 LAP .95 LOP 80.11 VP 22.317 GAP 13.44 AZP 90.46 TAL 16.13 TAP 132.29 RCA 150.20 APO 258.74 V2 23.767  
 RC 155.447 GL 7.93 GP -12.23 ZAL 58.99 ZAP 144.70 ETS 199.72 ZAE 165.09 ETE 293.51 ZAC 70.52 ETC 282.72 LVI -3.98

PLANETOCENTRIC CONIC  
 C3 19.548 VHL 4.421 DLA 16.14 RAL 17.84 RAD 6642.6 VEL 11.814 PTH 6.83 VHP 3.673 DPA 5.13 RAP 48.16 ECC 1.3217  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 47 17 3453.57 -45.47 123.91 250.79 105.85 10 44 31 2453.6 -34.41 95.64  
 60.00 10 8 27 3387.23 -39.30 120.74 252.69 99.76 11 5 4 2397.2 -31.24 92.84  
 70.00 10 39 33 3305.70 -33.82 114.21 253.57 95.05 11 34 39 2305.7 -28.27 86.91  
 80.00 11 27 47 3154.53 -29.81 103.03 253.86 91.84 12 20 22 2154.5 -26.02 76.25  
 90.00 12 40 10 2920.90 -28.27 85.90 253.90 90.66 13 28 51 1920.9 -25.15 59.32  
 100.00 14 10 39 2629.00 -29.81 64.40 253.86 91.84 14 54 28 1629.0 -26.02 37.62  
 110.00 15 38 59 2352.52 -33.82 43.13 253.57 95.05 16 18 12 1352.5 -28.27 15.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3447 TRA -.5805 TC3 .9871 BAU .3375 SGT 1254.9 SGR 903.1 SG3 769.1 ST 25.3 SR 24.8 SS 21.3  
 RDE -.3795 RRA .1312 RC3 -.8328 FAU .22363 RRT -.4957 RRF .7028 RTF -.6904 CRT .8257 CRS .9651 CST .7583  
 FDE .9918 FRA -.7006 FC3 -9.9044 BSP 2167 SGB 1546.1 R23 -.2315 R13 .7596 LSA 39.1 MSA 12.6 SSA 3.8  
 BDE .5127 BRA .5952 BC3 1.2915 FSP 1226 SG1 1368.7 SG2 719.2 THA 132.03 EL1 33.8 EL2 10.4 ALF 44.29

LAUNCH DATE AUG 17 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 377.859 EARTH TO MARS  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.193 GAL 3.37 AZL 88.90 HCA 117.17 SMA 203.92 ECC .26351 INC 1.0949 V1 29.418  
 RP 231.77 LAP .97 LOP 81.12 VP 22.236 GAP 13.15 AZP 90.50 TAL 16.28 TAP 133.45 RCA 150.18 APO 257.66 V2 23.728  
 RC 158.336 GL 8.27 GP -12.62 ZAL 58.77 ZAP 143.40 ETS 199.44 ZAE 165.12 ETE 288.66 ZAC 70.19 ETC 282.78 LVI -3.69

PLANETOCENTRIC CONIC  
 C3 19.401 VHL 4.405 DLA 16.36 RAL 17.47 RAD 6642.6 VEL 11.807 PTH 6.83 VHP 3.586 DPA 4.69 RAP 48.03 ECC 1.3193  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 44 56 3456.17 -45.52 124.14 250.44 105.68 10 42 32 2456.2 -34.52 95.80  
 60.00 10 5 49 3400.59 -39.34 121.01 252.32 99.58 11 2 29 2400.6 -31.34 93.06  
 70.00 10 36 34 3310.07 -33.85 114.55 253.18 94.85 11 31 44 2310.1 -28.37 87.21  
 80.00 11 24 27 3160.02 -29.82 103.44 253.45 91.63 12 17 7 2160.0 -26.12 76.63  
 90.00 12 36 39 2926.95 -28.28 86.34 253.48 90.44 13 25 26 1926.9 -25.25 59.74  
 100.00 14 7 19 2634.49 -29.82 64.81 253.45 91.63 14 51 13 1634.5 -26.12 37.99  
 110.00 15 36 0 2356.89 -33.85 43.46 253.18 94.85 16 15 17 1356.9 -28.37 16.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3458 TRA -.5766 TC3 .9686 BAU .3400 SGT 1241.5 SGR 929.8 SG3 808.0 ST 25.4 SR 24.2 SS 22.3  
 RDE -.3693 RRA .1240 RC3 -.8834 FAU .23379 RRT -.5018 RRF .7260 RTF -.6582 CRT .8292 CRS .9642 CST .7564  
 FDE 1.0605 FRA -.7734 FC3 -10.4328 BSP 2175 SGB 1551.1 R23 -.2449 R13 .7632 LSA 39.4 MSA 12.7 SSA 3.9  
 BDE .5059 BRA .5898 BC3 1.3109 FSP 1296 SG1 1368.9 SG2 729.4 THA 150.15 EL1 33.5 EL2 10.2 ALF 43.30

LAUNCH DATE AUG 17 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.166 GAL 3.39 AZL 86.86 HCA 118.18 SMA 203.41 ECC .26174 INC 1.1362 V1 29.418  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.157 GAP 12.86 AZP 90.54 TAL 18.43 TAP 134.81 RCA 150.17 APO 256.65 V2 23.689  
 RC 161.236 GL 8.60 GP -13.01 ZAL 58.57 ZAP 142.08 ETS 199.15 ZAE 165.04 ETE 283.66 ZAC 69.85 ETC 282.85 LVI -3.39

DISTANCE 381.502 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.265 VHL 4.389 DLA 16.58 RAL 17.11 RAD 6642.5 VEL 11.802 PTH 6.82 VHP 3.502 DPA 4.22 RAP 47.89 ECC 1.3171  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 42 35 3459.13 -45.57 124.40 250.13 105.48 10 40 14 2459.1 -34.63 95.99  
 60.00 10 3 10 3404.34 -39.38 121.32 251.98 99.37 10 59 54 2404.3 -31.45 93.32  
 70.00 10 33 33 3314.91 -33.88 114.92 252.82 94.63 11 28 48 2314.9 -28.48 87.54  
 80.00 11 21 3 3166.05 -29.83 103.89 253.07 91.39 12 13 49 2166.1 -26.22 77.04  
 90.00 12 33 4 2933.58 -28.28 86.83 253.10 90.20 13 21 58 1933.6 -25.35 60.20  
 100.00 14 3 55 2640.52 -29.83 65.26 253.07 91.39 14 47 55 1640.5 -26.22 38.41  
 110.00 15 32 59 2361.73 -33.88 43.84 252.82 94.63 16 12 21 1361.7 -26.48 16.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3463 TRA -.8731 TC3 .9449 BAU .3426 SGT 1225.5 SGR 958.8 SG3 847.9 ST 25.5 SR 23.8 SS 23.4  
 RDE -.3586 RRA .1164 RC3 -.9360 FAU .24419 RRT -.5052 RRF .7481 RTF -.6449 CRT .8322 CR8 .9631 C8T .7543  
 FDE 1.1330 FRA -.6490 FC-10.9732 B8P 2179 SGB 1556.0 R23 -.2572 R13 .7676 LSA 39.6 MSA 12.9 S8A 3.9  
 BDE .4985 BRA .5848 BC3 1.3300 F8P 1368 SG1 1368.1 SG2 741.1 THA 148.07 EL1 33.2 EL2 10.0 ALF 42.30

LAUNCH DATE AUG 17 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.145 GAL 3.40 AZL 88.82 HCA 119.18 SMA 202.93 ECC .26007 INC 1.1783 V1 29.418  
 RP 232.51 LAP 1.03 LOP 83.13 VP 22.081 GAP 12.57 AZP 90.57 TAL 16.56 TAP 135.74 RCA 150.15 APO 255.71 V2 23.650  
 RC 164.150 GL 8.95 GP -13.42 ZAL 58.39 ZAP 140.74 ETS 198.87 ZAE 164.85 ETE 278.58 ZAC 69.51 ETC 282.92 LVI -3.00

DISTANCE 385.313 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.141 VHL 4.375 DLA 16.81 RAL 16.77 RAD 6642.5 VEL 11.797 PTH 6.82 VHP 3.422 DPA 3.74 RAP 47.73 ECC 1.3150  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 40 15 3462.48 -45.63 124.70 249.86 105.25 10 37 57 2462.5 -34.76 96.20  
 60.00 10 0 31 3408.51 -39.42 121.67 251.68 99.14 10 57 19 2408.5 -31.58 93.60  
 70.00 10 30 30 3320.22 -33.91 115.33 252.49 94.38 11 25 50 2320.2 -28.60 87.91  
 80.00 11 17 36 3172.64 -29.84 104.38 252.72 91.14 12 10 28 2172.6 -26.34 77.50  
 90.00 12 29 25 2940.81 -28.28 87.36 252.74 89.93 13 18 26 1940.8 -25.46 60.70  
 100.00 14 0 27 2647.11 -29.84 65.74 252.72 91.14 14 44 34 1647.1 -26.34 38.87  
 110.00 15 29 56 2367.04 -33.91 44.25 252.49 94.38 16 9 23 1367.0 -28.60 16.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3466 TRA -.5701 TC3 .9185 BAU .3454 SGT 1207.3 SGR 990.2 SG3 888.8 ST 25.6 SR 22.9 SS 24.5  
 RDE -.3474 RRA .1083 RC3 -.9908 FAU .25482 RRT -.5055 RRF .7691 RTF -.6294 CRT .8351 CR8 .9619 C8T .7523  
 FDE 1.2105 FRA -.9275 FC-11.5256 B8P 2175 SGB 1561.4 R23 -.2679 R13 .7730 LSA 39.9 MSA 13.0 S8A 3.9  
 BDE .4907 BRA .5803 BC3 1.3497 F8P 1439 SG1 1367.0 SG2 754.6 THA 145.77 EL1 32.9 EL2 9.6 ALF 41.23

LAUNCH DATE AUG 17 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.123 GAL 3.40 AZL 88.78 HCA 120.18 SMA 202.48 ECC .25850 INC 1.2210 V1 29.418  
 RP 232.89 LAP 1.06 LOP 84.14 VP 22.007 GAP 12.29 AZP 90.61 TAL 16.68 TAP 136.87 RCA 150.14 APO 254.83 V2 23.612  
 RC 167.073 GL 9.30 GP -13.84 ZAL 58.23 ZAP 139.37 ETS 198.59 ZAE 164.54 ETE 273.51 ZAC 69.16 ETC 282.99 LVI -2.79

DISTANCE 389.050 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 19.026 VHL 4.362 DLA 17.06 RAL 16.44 RAD 6642.4 VEL 11.792 PTH 6.82 VHP 3.345 DPA 3.24 RAP 47.54 ECC 1.3131  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 37 55 3466.14 -45.70 125.03 249.62 105.01 10 35 41 2466.1 -34.90 96.44  
 60.00 9 57 50 3413.08 -39.47 122.05 251.40 98.89 10 54 43 2413.1 -31.72 93.90  
 70.00 10 27 25 3326.01 -33.93 115.78 252.19 94.12 11 22 51 2326.0 -28.73 88.30  
 80.00 11 14 4 3179.79 -29.85 104.91 252.40 90.86 12 7 4 2179.8 -26.46 78.00  
 90.00 12 25 41 2948.66 -28.28 87.93 252.41 89.64 13 14 49 1948.7 -25.57 61.25  
 100.00 13 56 56 2654.26 -29.85 66.28 252.40 90.86 14 41 10 1654.3 -26.46 39.36  
 110.00 15 26 51 2372.83 -33.93 44.70 252.19 94.12 16 6 24 1372.8 -28.73 17.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3466 TRA -.5680 TC3 .8835 BAU .3487 SGT 1187.7 SGR 1024.4 SG3 931.0 ST 25.6 SR 22.2 SS 25.7  
 RDE -.3335 RRA .0997 RC3-1.0483 FAU .26577 RRT -.5024 RRF .7890 RTF -.6.13 CRT .8377 CR8 .9806 C8T .7503  
 FDE 1.2943 FRA-1.0093 FC-12.0936 B8P 2182 SGB 1568.4 R23 -.2765 R13 .7796 LSA 40.2 MSA 13.2 S8A 3.9  
 BDE .4824 BRA .5787 BC3 1.3710 F8P 1516 SG1 1366.5 SG2 769.8 THA 143.23 EL1 32.5 EL2 9.5 ALF 40.08

LAUNCH DATE AUG 17 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 33.103 GAL 3.41 AZL 88.74 HCA 121.18 SMA 202.07 ECC .25703 INC 1.2644 V1 29.418  
 RP 233.25 LAP 1.08 LOP 85.13 VP 21.935 GAP 12.01 AZP 90.65 TAL 16.80 TAP 137.98 RCA 150.13 APO 254.00 V2 23.573  
 RC 170.003 GL 9.65 GP -14.28 ZAL 58.08 ZAP 137.97 ETS 198.30 ZAE 164.11 ETE 268.52 ZAC 68.80 ETC 283.07 LVI -2.48

DISTANCE 392.794 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.921 VHL 4.350 DLA 17.32 RAL 16.12 RAD 6642.4 VEL 11.787 PTH 6.81 VHP 3.272 DPA 2.71 RAP 47.33 ECC 1.3114  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 35 34 3470.15 -45.77 125.39 249.41 104.74 10 33 24 2470.2 -35.06 96.69  
 60.00 9 55 9 3418.03 -39.52 122.46 251.16 98.61 10 52 7 2418.0 -31.87 94.24  
 70.00 10 24 17 3332.25 -33.96 116.27 251.92 93.83 11 19 49 2332.2 -28.87 88.74  
 80.00 11 10 29 3187.47 -29.85 105.48 252.10 90.56 12 3 36 2187.5 -26.59 78.53  
 90.00 12 21 52 2957.07 -28.27 88.55 252.10 89.34 13 11 9 1957.1 -25.70 61.83  
 100.00 13 53 21 2661.94 -29.85 66.85 252.10 90.56 14 37 43 1661.9 -26.59 39.90  
 110.00 15 23 44 2379.07 -33.96 45.19 251.92 93.83 16 3 23 1379.1 -28.87 17.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3328 TRA -.5536 TC3 .8733 BAU .3578 SGT 1163.1 SGR 1064.7 SG3 977.4 ST 24.8 SR 21.5 SS 26.5  
 RDE -.3249 RRA .0891 RC3-1.1117 FAU .27794 RRT -.5177 RRF .8091 RTF -.6091 CRT .8373 CR8 .9565 C8T .7380  
 FDE 1.3582 FRA-1.1136 FC-12.7178 B8P 2048 SGB 1576.8 R23 -.2261 R13 .7972 LSA 39.8 MSA 13.3 S8A 3.9  
 BDE .4651 BRA .5607 BC3 1.4137 F8P 1587 SG1 1376.1 SG2 770.0 THA 139.85 EL1 31.5 EL2 9.3 ALF 40.24

LAUNCH DATE AUG 17 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC										DISTANCE 396.542										EARTH TO MARS																																													
RL	151.45	LAL	-.00	LOL	323.95	VL	33.084	GAL	3.42	AZL	88.69	HCA	122.17	SMA	201.68	ECC	.25565	INC	1.3085	V1	29.418	RP	233.62	LAP	1.11	LOP	86.13	VP	21.866	GAP	11.73	AZP	90.70	TAL	16.90	TAP	139.07	RCA	150.12	APO	253.24	V2	23.536	RC	172.941	GL	10.01	GP	-14.72	ZAL	57.97	ZAP	136.56	ETS	198.02	ZAE	163.55	ETE	263.70	ZAC	68.44	ETC	263.16	LVI	-2.17
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	18.823	VHL	4.339	DLA	17.59	RAL	15.02	RAD	6642.3	VEL	11.783	PTH	6.81	VHP	3.202	DPA	2.17	RAP	47.11	ECC	1.3098	SGT	1141.9	SGR	1101.6	SG3	1018.7	ST	25.4	SR	20.6	SS	28.1	CR1	.841D	CR5	.9565	CST	.7425	LSA	40.7	MSA	13.7	SSA	3.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.4893	RRF	.8254	RTF	-.5698	CR2	.8428	CR8	.9552	C8T	.7383	L8A	41.3	M8A	14.0	S8A	3.8																						
50.00	9	33	14	3474.57	-45.84	125.79	249.24	104.44	10	31	9	2474.6	-35.23	96.98	SG6	1369.6	SG2	801.0	THA	137.10	EL1	31.5	EL2	9.0	ALF	37.97																																							

LAUNCH DATE AUG 17 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC										DISTANCE 400.296										EARTH TO MARS																																													
RL	151.45	LAL	-.00	LOL	323.95	VL	33.066	GAL	3.42	AZL	88.65	HCA	123.16	SMA	201.32	ECC	.25436	INC	1.3536	V1	29.418	RP	233.99	LAP	1.13	LOP	87.12	VP	21.798	GAP	11.45	AZP	90.74	TAL	16.98	TAP	140.15	RCA	150.11	APO	252.53	V2	23.498	RC	175.806	GL	10.38	GP	-15.18	ZAL	57.86	ZAP	135.12	ETS	197.72	ZAE	162.87	ETE	259.11	ZAC	68.07	ETC	263.25	LVI	-1.85
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	18.735	VHL	4.328	DLA	17.87	RAL	15.53	RAD	6642.3	VEL	11.779	PTH	6.80	VHP	3.136	DPA	1.61	RAP	46.87	ECC	1.3083	SGT	1119.0	SGR	1142.8	SG3	1062.1	ST	25.6	SR	19.7	SS	29.5	CR1	.8428	CR5	.9552	CST	.7416	LSA	41.3	M8A	14.0	S8A	3.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.4662	RRF	.8413	RTF	-.5350	CR2	.8428	CR8	.9552	C8T	.7416	L8A	41.3	M8A	14.0	S8A	3.8																						
50.00	9	30	54	3479.33	-45.92	126.22	249.11	104.11	10	28	53	2479.3	-35.41	97.29	SG6	1369.6	SG2	826.0	THA	133.70	EL1	31.1	EL2	8.7	ALF	36.28																																							

LAUNCH DATE AUG 17 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC										DISTANCE 404.054										EARTH TO MARS																																													
RL	151.45	LAL	-.00	LOL	323.95	VL	33.049	GAL	3.42	AZL	88.60	HCA	124.15	SMA	200.98	ECC	.25315	INC	1.3995	V1	29.418	RP	234.35	LAP	1.16	LOP	88.11	VP	21.733	GAP	11.18	AZP	90.79	TAL	17.06	TAP	141.21	RCA	150.11	APO	251.86	V2	23.461	RC	178.836	GL	10.75	GP	-15.65	ZAL	57.78	ZAP	133.66	ETS	197.42	ZAE	162.07	ETE	254.77	ZAC	67.69	ETC	263.34	LVI	-1.52
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	18.654	VHL	4.319	DLA	18.17	RAL	15.25	RAD	6642.2	VEL	11.776	PTH	6.80	VHP	3.073	DPA	1.03	RAP	46.61	ECC	1.3070	SGT	1094.9	SGR	1187.8	SG3	1106.8	ST	25.6	SR	18.8	SS	30.9	CR1	.8439	CR5	.9526	C8T	.7383	L8A	41.8	M8A	14.6	S8A	3.7																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.4414	RRF	.8561	RTF	-.4489	CR2	.8439	CR8	.9526	C8T	.7383	L8A	41.8	M8A	14.6	S8A	3.7																						
50.00	9	28	33	3484.45	-46.01	126.69	249.00	103.76	10	26	37	2484.5	-35.61	97.62	SG6	1373.9	SG2	848.9	THA	129.75	EL1	30.7	EL2	8.4	ALF	34.76																																							

LAUNCH DATE AUG 17 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC										DISTANCE 407.816										EARTH TO MARS																																													
RL	151.45	LAL	-.00	LOL	323.95	VL	33.034	GAL	3.42	AZL	88.55	HCA	125.14	SMA	200.87	ECC	.25202	INC	1.4464	V1	29.418	RP	234.71	LAP	1.18	LOP	89.09	VP	21.669	GAP	10.90	AZP	90.83	TAL	17.13	TAP	142.27	RCA	150.10	APO	251.25	V2	23.424	RC	181.791	GL	11.13	GP	-16.13	ZAL	57.72	ZAP	132.19	ETS	197.11	ZAE	161.16	ETE	250.71	ZAC	67.31	ETC	263.44	LVI	-1.20
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	18.580	VHL	4.310	DLA	18.47	RAL	14.98	RAD	6642.2	VEL	11.773	PTH	6.80	VHP	3.014	DPA	.43	RAP	46.33	ECC	1.3058	SGT	1069.4	SGR	1235.2	SG3	1151.9	ST	25.6	SR	17.8	SS	32.3	CR1	.8446	CR5	.9495	CST	.7358	LSA	42.3	M8A	14.6	S8A	3.7																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.4107	RRF	.8698	RTF	-.4576	CR2	.8446	CR8	.9495	C8T	.7358	L8A	42.3	M8A	14.6	S8A	3.7																						
50.00	9	26	11	3489.94	-46.10	127.19	248.93	103.39	10	24	21	2489.9	-35.81	97.98	SG6	1382.0	SG2	871.5	THA	125.30	EL1	30.1	EL2	8.1	ALF	33.20																																							

LAUNCH DATE AUG 17 1973 FLIGHT TIME 176.00 ARRIVAL DATE FEB 11 1974

Heliocentric Conic: RL 151.45 LAL -0.00 LOL 323.95 VL 33.019 GAL 3.42 AZL 88.51 HCA 126.12 SMA 200.38 ECC .25096 INC 1.4942 V1 29.418  
 RP 235.08 LAP 1.21 LOP 90.08 VP 21.607 GAP 10.63 AZP 90.88 TAL 17.19 TAP 143.30 RCA 150.10 APO 230.67 V2 23.387  
 RC 184.750 GL 11.52 GP -16.82 ZAL 57.87 ZAP 130.69 ETS 196.79 ZAE 160.16 ETE 246.94 ZAC 66.93 ETC 293.54 LVI -8.86

Planetocentric Conic: C3 18.514 VHL 4.303 DLA 18.79 RAL 14.73 RAD 6642.2 VEL 11.770 PTH 6.80 VHP 2.957 DPA -.19 RAP 46.04 ECC 1.3047  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 23 48 3498.79 -46.19 127.73 248.90 102.98 10 22 4 2495.8 -36.03 98.37  
 60.00 9 41 18 3449.21 -39.81 125.06 250.42 96.87 10 38 47 2449.2 -32.78 96.38  
 70.00 10 7 49 3371.15 -34.10 119.30 250.98 92.05 11 4 0 2371.1 -29.71 91.46  
 80.00 10 51 10 3235.25 -29.83 109.03 251.01 88.69 11 45 5 2235.2 -27.34 81.88  
 90.00 12 1 6 3009.47 -28.17 92.37 250.95 87.42 12 51 16 2009.5 -26.40 65.51  
 100.00 13 34 2 2709.72 -29.83 70.40 251.01 86.69 14 19 11 1709.7 -27.34 43.25  
 110.00 15 7 15 2417.97 -34.10 48.21 250.98 92.05 15 47 33 1418.0 -29.71 20.37

Differential Corrections: TDE -.3357 TRA -.5751 TC3 .5670 BAV .3634 SGT 1045.1 SGR 1285.9 SG3 1197.4 ST 25.4 SR 16.8 SS 33.8  
 RDE -.2502 RRA .0398 RC3-1.4417 FAU .33430 RRT -.3732 RRF .8824 RTF -.4102 CRT .8450 CR8 .9454 C8T .7280  
 FDE 1.9013 FRA-1.5410 FC-15.6324 B8P 2273 SGB 1657.0 R23 -.2284 R13 .8568 LSA 42.8 MSA 14.9 S8A 3.6  
 BDE .4187 BRA .5765 BC3 1.5492 F8P 2000 SG1 1395.5 SG2 893.4 THA 120.38 EL1 29.5 EL2 7.7 ALF 31.57

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 13 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 33.006 GAL 3.42 AZL 88.46 HCA 127.10 SMA 200.12 ECC .24997 INC 1.5432 V1 29.418  
 RP 235.42 LAP 1.23 LOP 91.08 VP 21.547 GAP 10.37 AZP 90.93 TAL 17.23 TAP 144.33 RCA 150.09 APO 250.14 V2 23.351  
 RC 187.714 GL 11.92 GP -17.13 ZAL 57.64 ZAP 129.17 ETS 196.48 ZAE 159.05 ETE 243.46 ZAC 66.53 ETC 283.64 LVI -.52

Planetocentric Conic: C3 18.455 VHL 4.296 DLA 19.13 RAL 14.49 RAD 6642.1 VEL 11.768 PTH 6.79 VHP 2.904 DPA -.82 RAP 45.73 ECC 1.3037  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 24 3502.01 -46.28 128.30 248.89 102.55 10 19 46 2502.0 -36.27 98.78  
 60.00 9 38 24 3456.72 -39.87 125.69 250.36 96.45 10 36 1 2456.7 -32.99 96.90  
 70.00 10 4 18 3390.49 -34.12 120.03 250.87 91.62 11 0 38 2380.5 -29.90 92.12  
 80.00 10 46 58 3246.75 -29.81 109.88 250.86 88.24 11 41 4 2246.8 -27.50 82.70  
 90.00 11 56 33 3022.12 -28.13 93.30 250.78 86.96 12 46 55 2022.1 -26.55 66.40  
 100.00 13 29 49 2721.22 -29.81 71.25 250.86 88.24 14 15 11 1721.2 -27.50 44.06  
 110.00 15 3 44 2427.31 -34.12 48.94 250.87 91.62 15 44 11 1427.3 -29.90 21.03

Differential Corrections: TDE -.3286 TRA -.5771 TC3 .5004 BAV .3940 SGT 1020.1 SGR 1340.4 SG3 1243.9 ST 25.1 SR 15.7 SS 35.2  
 RDE -.2338 RRA .0275 RC3-1.5166 FAU .34620 RRT -.3330 RRF .8941 RTF -.3603 CRT .8445 CR8 .9399 C8T .7193  
 FDE 2.0144 FRA-1.6397 FC-16.2408 B8P 2288 SGB 1684.4 R23 -.1942 R13 .8753 LSA 43.3 MSA 15.2 S8A 3.5  
 BDE .4033 BRA .5777 BC3 1.5971 F8P 2074 SG1 1417.9 SG2 909.3 THA 115.15 EL1 28.7 EL2 7.4 ALF 30.06

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 15 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.993 GAL 3.42 AZL 88.41 HCA 128.07 SMA 199.87 ECC .24905 INC 1.5933 V1 29.418  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.489 GAP 10.10 AZP 90.98 TAL 17.27 TAP 145.34 RCA 150.09 APO 249.65 V2 23.315  
 RC 190.680 GL 12.33 GP -17.84 ZAL 57.63 ZAP 127.84 ETS 196.12 ZAE 157.87 ETE 240.25 ZAC 66.14 ETC 283.75 LVI -.17

Planetocentric Conic: C3 18.402 VHL 4.290 DLA 19.47 RAL 14.25 RAD 6642.1 VEL 11.765 PTH 6.79 VHP 2.854 DPA -1.48 RAP 45.40 ECC 1.3028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 18 58 3508.63 -46.38 128.91 248.92 102.09 10 17 27 2508.6 -36.31 99.22  
 60.00 9 35 28 3464.70 -39.93 126.36 250.32 95.99 10 33 12 2464.7 -33.22 97.45  
 70.00 10 0 41 3390.42 -34.14 120.80 250.78 91.16 10 57 12 2390.4 -30.10 92.82  
 80.00 10 42 37 3259.00 -29.78 110.79 250.73 87.76 11 36 56 2259.0 -27.68 83.57  
 90.00 11 51 48 3035.62 -28.08 94.28 250.63 86.47 12 42 24 2035.6 -26.71 67.36  
 100.00 13 25 29 2733.47 -29.78 72.16 250.73 87.76 14 11 2 1733.5 -27.68 44.93  
 110.00 15 0 8 2437.24 -34.14 49.72 250.78 91.16 15 40 45 1437.2 -30.10 21.74

Differential Corrections: TDE -.3269 TRA -.5862 TC3 .4143 BAV .4044 SGT 1003.4 SGR 1394.7 SG3 1287.6 ST 25.1 SR 14.5 SS 36.9  
 RDE -.2150 RRA .0184 RC3-1.3908 FAU .35721 RRT -.2708 RRF .9043 RTF -.2210 CRT .8445 CR8 .9344 C8T .7144  
 FDE 2.1495 FRA-1.7229 FC-16.8036 B8P 2365 SGB 1718.1 R23 -.1551 R13 .8921 LSA 44.2 MSA 15.5 S8A 3.4  
 BDE .3812 BRA .5865 BC3 1.6436 F8P 2168 SG1 1441.9 SG2 934.2 THA 109.48 EL1 28.2 EL2 6.9 ALF 27.80

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 17 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.982 GAL 3.41 AZL 88.38 HCA 129.05 SMA 199.84 ECC .24819 INC 1.6445 V1 29.418  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.433 GAP 9.84 AZP 91.04 TAL 17.29 TAP 146.34 RCA 150.09 APO 249.19 V2 23.279  
 RC 193.649 GL 12.74 GP -18.17 ZAL 57.64 ZAP 128.09 ETS 195.77 ZAE 156.80 ETE 237.30 ZAC 65.73 ETC 283.87 LVI -.18

Planetocentric Conic: C3 18.355 VHL 4.284 DLA 19.83 RAL 14.03 RAD 6642.1 VEL 11.763 PTH 6.79 VHP 2.806 DPA -2.15 RAP 45.06 ECC 1.3021  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 30 3515.62 -46.47 129.53 248.98 101.60 10 15 6 2515.6 -36.77 99.69  
 60.00 9 32 27 3473.13 -39.99 127.07 250.32 95.52 10 30 21 2473.1 -33.45 98.05  
 70.00 9 58 59 3400.92 -34.15 121.62 250.71 90.67 10 53 40 2400.9 -30.31 93.57  
 80.00 10 38 6 3271.99 -29.74 111.76 250.62 87.26 11 32 38 2272.0 -27.85 84.49  
 90.00 11 46 33 3049.98 -28.01 95.33 250.50 85.95 12 37 43 2050.0 -26.87 68.36  
 100.00 13 20 58 2746.47 -29.74 73.12 250.62 87.26 14 6 45 1746.5 -27.35 45.86  
 110.00 14 56 25 2447.74 -34.15 50.54 250.71 90.67 15 37 13 1447.7 -30.31 22.49

Differential Corrections: TDE -.3211 TRA -.5933 TC3 .3288 BAV .4172 SGT 987.5 SGR 1453.0 SG3 1332.1 ST 24.9 SR 13.3 SS 38.6  
 RDE -.1958 RRA .0040 RC3-1.6680 FAU .36845 RRT -.2055 RRF .9137 RTF -.2186 CRT .8441 CR8 .9259 C8T .7055  
 FDE 2.2820 FRA-1.8156 FC-17.3784 B8P 2431 SGB 1756.9 R23 -.1107 R13 .9075 LSA 45.0 MSA 15.8 S8A 3.4  
 BDE .3761 BRA .5933 BC3 1.7001 F8P 2251 SG1 1477.6 SG2 950.4 THA 103.72 EL1 27.5 EL2 6.5 ALF 25.71

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 17 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 19 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.971 GAL 3.41 AZL 88.30 HCA 130.02 SMA 199.43 ECC .24739 INC 1.6970 V1 29.418  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.378 GAP 9.57 AZP 91.09 TAL 17.31 TAP 147.32 RCA 150.09 APO 248.76 V2 23.244  
 RC 196.619 GL 13.17 GP -18.70 ZAL 57.66 ZAP 124.52 ETS 195.40 ZAE 155.27 ETE 234.59 ZAC 65.33 ETC 263.98 LVI .54

Planetocentric Conic: C3 18.315 VHL 4.280 DLA 20.21 RAL 13.81 RAD 6642.1 VEL 11.762 PTH 6.79 VHP 2.762 DPA -2.84 RAP 44.71 ECC 1.3014  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 14 0 3523.02 -46.57 130.24 249.07 101.08 10 12 43 2523.0 -37.04 100.19  
 60.00 9 29 23 3482.04 -40.04 127.82 250.34 95.01 10 27 25 2482.0 -33.70 98.68  
 70.00 9 53 10 3412.03 -34.15 122.49 250.67 90.16 10 50 2 2412.0 -30.52 94.36  
 80.00 10 33 26 3285.79 -29.69 112.78 250.53 86.72 11 28 12 2285.8 -28.03 85.48  
 90.00 11 41 45 3065.25 -27.93 96.44 250.39 85.40 12 32 50 2065.3 -27.03 69.46  
 100.00 13 16 18 2760.26 -29.69 74.15 250.53 86.72 14 2 18 1760.3 -28.03 46.84  
 110.00 14 52 36 2456.85 -34.15 51.41 250.67 90.16 15 33 35 1456.8 -30.52 23.28

Differential Corrections: TDE -.3142 TRA -.6016 TC3 .2376 BAU .4318 SGT 977.2 SGR 1514.0 SG3 1375.9 ST 24.7 SR 12.0 SS 40.2  
 RDE -.1757 RRA -.0087 RC3-1.7473 FAU .37948 RRT -.1314 RRF .9222 RTF -.1382 CRT .8435 CR8 .9141 CST .6946  
 FDE 2.4185 FRA-1.9066 FC-17.9376 BSP 2506 SGB 1801.9 R23 -.0657 R13 .9200 LSA 45.8 MSA 16.2 SSA 3.3  
 BDE .3600 BRA .6016 BC3 1.7634 FSP 2332 SG1 1523.1 SG2 962.9 THA 98.11 EL1 26.8 EL2 5.9 ALF 23.49

LAUNCH DATE AUG 17 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 21 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.961 GAL 3.40 AZL 88.25 HCA 130.99 SMA 199.23 ECC .24664 INC 1.7509 V1 29.418  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.325 GAP 9.32 AZP 91.15 TAL 17.31 TAP 148.30 RCA 150.09 APO 248.37 V2 23.209  
 RC 199.589 GL 13.60 GP -19.25 ZAL 57.70 ZAP 122.94 ETS 195.01 ZAE 153.87 ETE 232.10 ZAC 64.91 ETC 248.10 LVI .91

Planetocentric Conic: C3 18.281 VHL 4.276 DLA 20.60 RAL 13.61 RAD 6642.1 VEL 11.760 PTH 6.79 VHP 2.721 DPA -3.55 RAP 44.35 ECC 1.3009  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 27 3530.82 -46.67 130.97 249.19 100.53 10 10 18 2530.8 -37.32 100.72  
 60.00 9 26 14 3491.44 -40.09 128.62 250.38 94.47 10 24 26 2491.4 -33.95 99.34  
 70.00 9 49 13 3423.77 -34.15 123.40 250.65 89.62 10 46 17 2423.8 -30.74 95.21  
 80.00 10 28 33 3300.43 -29.63 113.86 250.45 86.16 11 23 34 2300.4 -28.21 86.53  
 90.00 11 36 22 3081.52 -27.84 97.62 250.29 84.82 12 27 43 2081.5 -27.19 70.63  
 100.00 13 11 25 2774.90 -29.63 75.23 250.45 86.16 13 57 40 1774.9 -28.21 47.90  
 110.00 14 48 39 2470.59 -34.15 52.32 250.65 89.62 15 29 50 1470.6 -30.74 24.12

Differential Corrections: TDE -.3060 TRA -.6108 TC3 .1410 BAU .4482 SGT 973.3 SGR 1577.5 SG3 1418.9 ST 24.3 SR 10.6 SS 41.9  
 RDE -.1545 RRA -.0219 RC3-1.8285 FAU .39025 RRT -.0496 RRF .9299 RTF -.0508 CRT .8430 CR8 .8968 CST .6814  
 FDE 2.5600 FRA-1.9973 FC-18.4813 BSP 2593 SGB 1853.6 R23 -.0235 R13 .9296 LSA 46.7 MSA 16.5 SSA 3.2  
 BDE .3428 BRA .6112 BC3 1.8339 FSP 2411 SG1 1578.7 SG2 971.3 THA 92.82 EL1 26.0 EL2 5.3 ALF 21.13

LAUNCH DATE AUG 17 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 23 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.952 GAL 3.39 AZL 88.19 HCA 131.95 SMA 199.06 ECC .24595 INC 1.8062 V1 29.418  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.273 GAP 9.06 AZP 91.21 TAL 17.31 TAP 149.26 RCA 150.10 APO 248.01 V2 23.174  
 RC 202.557 GL 14.05 GP -19.80 ZAL 57.76 ZAP 121.35 ETS 194.61 ZAE 152.41 ETE 229.79 ZAC 64.50 ETC 248.23 LVI 1.29

Planetocentric Conic: C3 18.253 VHL 4.272 DLA 21.00 RAL 13.41 RAD 6642.0 VEL 11.759 PTH 6.79 VHP 2.683 DPA -4.27 RAP 43.98 ECC 1.3004  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 8 51 3539.04 -46.77 131.74 249.34 99.94 10 7 50 2539.0 -37.62 101.29  
 60.00 9 23 0 3501.35 -40.14 129.45 250.45 93.00 10 21 22 2501.4 -34.21 100.05  
 70.00 9 45 8 3436.18 -34.14 124.37 250.64 89.05 10 42 24 2436.2 -30.96 96.10  
 80.00 10 23 28 3315.98 -29.56 115.01 250.39 85.56 11 18 44 2316.0 -28.39 87.85  
 90.00 11 30 43 3098.86 -27.73 98.87 250.20 84.20 12 22 22 2098.9 -27.35 71.87  
 100.00 13 6 20 2790.45 -29.56 76.38 250.39 85.56 13 52 51 1790.4 -28.39 49.01  
 110.00 14 44 34 2483.00 -34.14 53.29 250.64 89.05 15 25 57 1483.0 -30.96 25.02

Differential Corrections: TDE -.2966 TRA -.6209 TC3 .0390 BAU .4665 SGT 977.1 SGR 1643.5 SG3 1460.9 ST 24.0 SR 9.2 SS 43.7  
 RDE -.1322 RRA -.0358 RC3-1.9112 FAU .40070 RRT .0586 RRF .9388 RTF .0519 CRT .8431 CR8 .8701 CST .6654  
 FDE 2.7047 FRA-2.0895 FC-19.0051 BSP 2690 SGB 1912.0 R23 .0139 R13 .9367 LSA 47.7 MSA 16.8 SSA 3.1  
 BDE .3247 BRA .6219 BC3 1.9116 FSP 2490 SG1 1644.2 SG2 976.0 THA 87.97 EL1 25.2 EL2 4.7 ALF 18.66

LAUNCH DATE AUG 17 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 25 1974

Heliocentric Conic: RL 151.45 LAL -.00 LOL 323.95 VL 32.944 GAL 3.38 AZL 88.14 HCA 132.91 SMA 198.89 ECC .24531 INC 1.8631 V1 29.418  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.223 GAP 8.80 AZP 91.27 TAL 17.29 TAP 150.21 RCA 150.10 APO 247.68 V2 23.140  
 RC 205.523 GL 14.50 GP -20.36 ZAL 57.84 ZAP 119.76 ETS 194.20 ZAE 150.91 ETE 227.67 ZAC 64.08 ETC 244.35 LVI 1.67

Planetocentric Conic: C3 18.231 VHL 4.270 DLA 21.42 RAL 13.21 RAD 6642.0 VEL 11.758 PTH 6.79 VHP 2.648 DPA -5.00 RAP 43.59 ECC 1.3000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 6 12 3547.69 -46.87 132.55 249.52 99.32 10 5 20 2547.7 -37.92 101.89  
 60.00 9 19 41 3511.79 -40.19 130.34 250.54 93.31 10 18 13 2511.8 -34.49 100.80  
 70.00 9 40 54 3449.28 -34.12 125.40 250.66 88.44 10 38 23 2449.3 -31.19 97.06  
 80.00 10 18 9 3332.50 -29.46 116.23 250.34 84.92 11 13 41 2332.5 -28.58 88.84  
 90.00 11 24 47 3117.36 -27.59 100.21 250.13 83.54 12 16 44 2117.4 -27.51 73.20  
 100.00 13 1 1 2806.97 -29.46 77.60 250.34 84.92 13 47 48 1807.0 -28.58 50.21  
 110.00 14 40 20 2496.10 -34.12 54.31 250.66 88.44 15 21 56 1496.1 -31.19 25.97

Differential Corrections: TDE -.2852 TRA -.6317 TC3 -.0674 BAU .4868 SGT 989.4 SGR 1712.3 SG3 1501.7 ST 23.5 SR 7.8 SS 45.4  
 RDE -.1090 RRA -.0501 RC3-1.9960 FAU .41087 RRT .1298 RRF .9430 RTF .1370 CRT .8426 CR8 .8265 CST .6457  
 FDE 2.8511 FRA-2.1799 FC-19.5104 BSP 2806 SGB 1977.5 R23 .0447 R13 .9421 LSA 48.8 MSA 17.0 SSA 3.0  
 BDE .3053 BRA .6337 BC3 1.9971 FSP 2555 SG1 1719.4 SG2 978.9 THA 83.66 EL1 24.4 EL2 4.1 ALF 16.11

LAUNCH DATE AUG 17 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 32.936 GAL 3.37 AZL 88.08 HCA 133.87 SMA 198.74 ECC .24471 INC 1.9216 V1 29.418
RP 237.81 LAP 1.39 LOP 97.83 VP 21.175 GAP 8.35 AZP 91.33 TAL 17.27 TAP 131.14 RCA 150.11 APO 247.38 V2 23.106
RC 208.485 GL 14.97 GP -20.94 ZAL 57.93 ZAP 118.15 ETS 193.76 ZAE 149.36 ETE 225.69 ZAC 63.65 ETC 284.48 LVI 2.06

DISTANCE 441.807

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.216 VHL 4.268 DLA 21.86 RAL 13.02 RAD 6642.0 VEL 11.758 PTH 6.78 VHP 2.616 DPA -5.75 RAP 43.20 ECC 1.2998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 3 29 3556.78 -46.97 133.41 249.74 98.67 10 2 46 2556.8 -38.24 102.52
60.00 9 16 15 3522.77 -40.23 131.27 250.66 92.68 10 14 58 2522.8 -34.77 101.60
70.00 9 36 30 3463.12 -34.09 126.48 250.69 87.80 10 34 13 2463.1 -31.43 98.07
80.00 10 12 33 3350.08 -29.35 117.52 250.31 84.25 11 8 23 2350.1 -28.78 90.11
90.00 11 18 30 3137.14 -27.43 101.63 250.06 82.85 12 10 47 2137.1 -27.66 74.63
100.00 12 55 23 2824.54 -29.35 78.89 250.31 84.25 13 42 30 1824.5 -28.78 51.48
110.00 14 35 56 2509.94 -34.09 55.39 250.69 87.80 15 17 46 1509.9 -31.43 26.98

DIFFERENTIAL CORRECTIONS

TDE -.2712 TRA -.6423 TC3 -.1763 BAU .5091
RDE -.0851 RRA -.0656 RC3-2.0829 FAU .42079
FDE 2.9952 FRA-2.2763 FC-19.9987 BSP 2930
BDE .2842 BRA .6456 BC3 2.0904 FSP 2618

MID-COURSE EXECUTION ACCURACY

SGT 1009.1 SGR 1784.2 SG3 1541.8
RRT .2207 RRF .9487 RTF .2313
SG8 2049.8 R23 .0682 R13 .9465
SG1 1803.8 SG2 973.5 THA 79.92

ORBIT DETERMINATION ACCURACY

ST 22.9 SR 6.5 SS 47.1
CRT .8396 CR3 .7491 CST .6201
LSA 49.8 MSA 17.3 S8A 2.9
EL1 23.6 EL2 3.4 ALF 13.61

LAUNCH DATE AUG 17 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 32.930 GAL 3.36 AZL 88.02 HCA 134.83 SMA 198.61 ECC .24416 INC 1.9818 V1 29.418
RP 238.14 LAP 1.41 LOP 98.79 VP 21.128 GAP 8.30 AZP 91.40 TAL 17.24 TAP 132.07 RCA 150.12 APO 247.10 V2 23.073
RC 211.443 GL 15.45 GP -21.52 ZAL 58.04 ZAP 116.54 ETS 193.31 ZAE 147.77 ETE 223.85 ZAC 63.22 ETC 284.61 LVI 2.46

DISTANCE 445.594

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.207 VHL 4.267 DLA 22.31 RAL 12.84 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 2.586 DPA -6.52 RAP 42.81 ECC 1.2998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 0 41 3566.33 -47.06 134.31 249.98 97.98 10 0 8 2566.3 -38.57 103.20
60.00 9 12 42 3534.32 -40.26 132.25 250.80 92.01 10 11 36 2534.3 -35.06 102.44
70.00 9 31 55 3477.73 -34.05 127.61 250.74 87.13 10 29 53 2477.7 -31.66 99.14
80.00 10 6 40 3368.76 -29.21 118.90 250.28 83.54 11 2 48 2368.8 -28.94 91.47
90.00 11 11 50 3158.32 -27.24 103.15 250.00 82.11 12 4 29 2158.3 -27.81 76.16
100.00 12 49 32 2843.23 -29.21 80.26 250.28 83.54 13 36 55 1843.2 -28.94 52.84
110.00 14 31 21 2524.55 -34.05 56.53 250.74 87.13 15 13 26 1524.5 -31.66 28.06

DIFFERENTIAL CORRECTIONS

TDE -.2524 TRA -.6911 TC3 -.2839 BAU .5337
RDE -.0821 RRA -.0829 RC3-2.1742 FAU .43091
FDE 3.1207 FRA-2.3850 FC-20.4895 BSP 3051
BDE .2599 BRA .6564 BC3 2.1927 FSP 2653

MID-COURSE EXECUTION ACCURACY

SGT 1032.8 SGR 1861.2 SG3 1582.1
RRT .3077 RRF .9539 RTF .3219
SG8 2128.5 R23 .0826 R13 .9508
SG1 1897.9 SG2 963.7 THA 76.87

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 5.3 SS 48.6
CRT .8260 CR3 .6100 CST .5858
LSA 50.6 MSA 17.5 S8A 2.8
EL1 22.5 EL2 2.9 ALF 11.48

LAUNCH DATE AUG 17 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 32.923 GAL 3.34 AZL 87.96 HCA 135.78 SMA 198.49 ECC .24366 INC 2.0440 V1 29.418
RP 238.47 LAP 1.43 LOP 99.75 VP 21.082 GAP 8.05 AZP 91.47 TAL 17.20 TAP 132.98 RCA 150.12 APO 246.85 V2 23.040
RC 214.394 GL 15.95 GP -22.10 ZAL 58.16 ZAP 114.93 ETS 192.84 ZAE 146.15 ETE 222.15 ZAC 62.79 ETC 284.74 LVI 2.88

DISTANCE 449.380

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.204 VHL 4.267 DLA 22.78 RAL 12.67 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 2.560 DPA -7.29 RAP 42.41 ECC 1.2998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 57 49 3578.39 -47.15 135.26 250.26 97.25 9 57 25 2578.4 -38.92 103.91
60.00 9 9 2 3546.52 -40.28 133.29 250.97 91.31 10 8 8 2546.5 -35.35 103.34
70.00 9 27 7 3493.23 -33.99 128.82 250.81 86.42 10 25 20 2493.2 -31.91 100.28
80.00 10 0 25 3388.79 -29.05 120.36 250.27 82.79 10 56 54 2388.8 -29.11 92.94
90.00 11 4 43 3181.18 -27.02 104.79 249.94 81.32 11 57 44 2181.2 -27.94 77.82
100.00 12 43 17 2863.28 -29.05 81.73 250.27 82.79 13 31 0 1863.3 -29.11 54.31
110.00 14 26 34 2540.05 -33.99 57.74 250.81 86.42 15 8 54 1540.1 -31.91 29.20

DIFFERENTIAL CORRECTIONS

TDE -.2457 TRA -.6745 TC3 -.4286 BAU .5578
RDE -.0300 RRA -.0939 RC3-2.2320 FAU .43733
FDE 3.3275 FRA-2.4209 FC-20.7985 BSP 3258
BDE .2475 BRA .6810 BC3 2.2921 FSP 2766

MID-COURSE EXECUTION ACCURACY

SGT 1098.4 SGR 1927.0 SG3 1610.3
RRT .4002 RRF .9980 RTF .4.27
SG8 2218.0 R23 .1100 R13 .9522
SG1 1993.1 SG2 973.2 THA 72.97

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 4.1 SS 51.1
CRT .7220 CR3 .2817 CST .5655
LSA 52.8 MSA 17.9 S8A 2.7
EL1 22.3 EL2 2.8 ALF 7.69

LAUNCH DATE AUG 17 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

RL 151.45 LAL -.00 LOL 323.95 VL 32.918 GAL 3.33 AZL 87.89 HCA 136.73 SMA 198.38 ECC .24319 INC 2.1081 V1 29.418
RP 238.79 LAP 1.44 LOP 100.70 VP 21.038 GAP 7.80 AZP 91.54 TAL 17.15 TAP 133.88 RCA 150.13 APO 246.62 V2 23.008
RC 217.340 GL 16.48 GP -22.70 ZAL 58.30 ZAP 113.32 ETS 192.35 ZAE 144.49 ETE 220.54 ZAC 62.35 ETC 284.87 LVI 3.28

DISTANCE 453.187

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.207 VHL 4.267 DLA 23.26 RAL 12.49 RAD 6642.0 VEL 11.757 PTH 6.78 VHP 2.536 DPA -8.07 RAP 42.01 ECC 1.2998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 54 51 3588.94 -47.24 136.27 250.56 96.48 9 54 38 2588.9 -39.27 104.67
60.00 9 5 13 3559.32 -40.30 134.38 251.18 90.57 10 4 32 2559.3 -35.68 104.29
70.00 9 22 8 3509.60 -33.91 130.09 250.89 85.67 10 20 35 2509.6 -32.15 101.50
80.00 9 53 48 3410.18 -28.86 121.92 250.25 81.99 10 30 38 2410.2 -29.28 94.50
90.00 10 57 5 3205.81 -26.75 106.54 249.89 80.48 11 50 31 2205.8 -28.06 79.61
100.00 12 36 40 2884.65 -28.86 83.29 250.25 81.99 13 24 44 1884.6 -29.28 55.87
110.00 14 21 32 2556.42 -33.91 59.01 250.89 85.67 15 4 9 1556.4 -32.15 30.41

DIFFERENTIAL CORRECTIONS

TDE -.2286 TRA -.6907 TC3 -.5554 BAU .5850
RDE -.0014 RRA -.1092 RC3-2.3382 FAU .44483
FDE 3.4874 FRA-2.4944 FC-21.1510 BSP 3435
BDE .2286 BRA .6993 BC3 2.4033 FSP 2826

MID-COURSE EXECUTION ACCURACY

SGT 1156.7 SGR 2001.8 SG3 1641.7
RRT .4763 RRF .9620 RTF .4913
SG8 2312.0 R23 .1230 R13 .9548
SG1 2099.2 SG2 968.7 THA 70.16

ORBIT DETERMINATION ACCURACY

ST 21.6 SR 3.8 SS 53.0
CRT .4809 CR3 -.2054 CST .5262
LSA 54.4 MSA 18.1 S8A 2.6
EL1 21.7 EL2 3.3 ALF 5.00

LAUNCH DATE AUG 17 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.913 GAL 3.31 AZL 87.83 HCA 137.68 SMA 198.28 ECC .24276 INC 2.1742 V1 29.418  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.995 GAP 7.55 AZP 91.61 TAL 17.09 TAP 154.77 RCA 150.15 APO 246.42 V2 22.975  
 RC 220.278 GL 18.98 GP -23.30 ZAL 58.46 ZAP 111.72 ETS 191.84 ZAE 142.82 ETE 219.03 ZAC 61.91 ETC 285.01 LVI 3.70

DISTANCE 456.956 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.218 VHL 4.268 DLA 23.77 RAL 12.32 RAD 6642.0 VEL 11.758 PTH 6.79 VHP 2.515 DPA -8.87 RAP 41.62 ECC 1.2908  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 47 3598.01 -47.32 137.33 250.90 95.67 9 51 45 2598.0 -39.64 105.48  
 60.00 9 1 15 3572.80 -40.30 135.53 251.36 89.79 10 0 48 2572.8 -35.97 105.30  
 70.00 9 16 49 3526.93 -33.81 131.44 250.99 84.88 10 15 36 2526.9 -32.39 102.79  
 80.00 9 46 43 3433.13 -28.63 123.59 250.24 81.14 10 43 56 2433.1 -29.43 96.19  
 90.00 10 48 50 3232.54 -26.44 108.44 249.82 79.58 11 42 43 2232.5 -28.16 81.56  
 100.00 12 29 35 2907.60 -28.63 84.96 250.24 81.14 13 18 3 1907.6 -29.43 57.56  
 110.00 14 16 15 2573.75 -33.81 60.35 250.99 84.88 14 59 9 1573.8 -32.39 31.71

DIFFERENTIAL CORRECTIONS  
 TDE -.2102 TRA -.7084 TC3 -.6886 BAU .6140 SGT 1226.7 SGR 2078.4 SG3 1870.7 ST 21.0 SR 4.6 SS 55.0  
 RDE .0292 RRA -.1246 RC3-2.4249 FAU .45170 RRT .5474 RRF .9656 RTF .5604 CRT .1849 CRS -.6210 CST .4801  
 FDE 3.6331 FRA-2.5617 FC-21.4650 BSP 3623 SGB 2413.4 R23 .1332 R13 .9571 LSA 56.1 MSA 18.3 SSA 2.5  
 BDE .2122 BRA .7192 BC3 2.5208 FSP 2879 SG1 2212.4 SG2 964.4 THA 67.62 EL1 21.1 EL2 4.5 ALF 2.42

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.908 GAL 3.30 AZL 87.76 HCA 138.63 SMA 198.19 ECC .24237 INC 2.2427 V1 29.418  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.953 GAP 7.31 AZP 91.68 TAL 17.03 TAP 155.65 RCA 150.16 APO 246.23 V2 22.944  
 RC 223.209 GL 17.52 GP -23.91 ZAL 58.63 ZAP 110.11 ETS 191.31 ZAE 141.12 ETE 217.61 ZAC 61.47 ETC 285.14 LVI 4.13

DISTANCE 460.744 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.236 VHL 4.270 DLA 24.29 RAL 12.15 RAD 6642.0 VEL 11.758 PTH 6.79 VHP 2.496 DPA -9.67 RAP 41.22 ECC 1.3001  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 37 3609.64 -47.39 138.44 251.27 94.81 9 48 46 2609.6 -40.02 106.34  
 60.00 8 57 7 3587.00 -40.29 136.73 251.59 88.97 9 56 54 2587.0 -36.29 106.37  
 70.00 9 11 15 3545.32 -33.69 132.86 251.09 84.05 10 10 21 2545.3 -32.63 104.17  
 80.00 9 39 8 3457.86 -28.36 123.38 250.23 80.24 10 36 46 2457.9 -29.57 98.02  
 90.00 10 39 51 3261.75 -26.06 110.49 249.75 78.62 11 34 13 2261.8 -28.24 83.69  
 100.00 12 22 0 2932.34 -28.36 86.74 250.23 80.24 13 10 52 1932.3 -29.57 59.39  
 110.00 14 10 42 2592.14 -33.69 61.78 251.09 84.05 14 53 54 1592.1 -32.63 33.09

DIFFERENTIAL CORRECTIONS  
 TDE -.1895 TRA -.7268 TC3 -.8259 BAU .6445 SGT 1306.5 SGR 2156.2 SG3 1696.6 ST 20.5 SR 6.1 SS 56.9  
 RDE .0608 RRA -.1408 RC3-2.5111 FAU .45771 RRT .6084 RRF .9688 RTF .6209 CRT .0113 CRS -.8226 CST .4237  
 FDE 3.8180 FRA-2.6293 FC-21.7295 BSP 3825 SGB 2521.1 R23 .1409 R13 .9594 LSA 57.9 MSA 18.5 SSA 2.4  
 BDE .1990 BRA .7403 BC3 2.6434 FSP 2928 SG1 2331.7 SG2 958.8 THA 65.32 EL1 20.5 EL2 6.1 ALF .21

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.904 GAL 3.28 AZL 87.69 HCA 139.57 SMA 198.12 ECC .24202 INC 2.3136 V1 29.418  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.913 GAP 7.06 AZP 91.76 TAL 16.95 TAP 156.52 RCA 150.17 APO 246.06 V2 22.912  
 RC 226.132 GL 18.08 GP -24.53 ZAL 58.82 ZAP 108.52 ETS 190.78 ZAE 139.41 ETE 216.26 ZAC 61.02 ETC 285.28 LVI 4.57

DISTANCE 464.534 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.261 VHL 4.273 DLA 24.83 RAL 11.98 RAD 6642.1 VEL 11.759 PTH 6.79 VHP 2.481 DPA -10.48 RAP 40.83 ECC 1.3005  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 19 3621.85 -47.45 139.62 251.67 93.91 9 45 40 2621.8 -40.41 107.25  
 60.00 8 52 47 3601.95 -40.26 138.00 251.84 88.11 9 52 49 2601.9 -36.61 107.51  
 70.00 9 5 22 3564.85 -33.55 134.36 251.20 83.17 10 4 47 2564.9 -32.87 105.64  
 80.00 9 30 56 3484.65 -28.03 127.30 250.21 79.28 10 29 0 2484.6 -29.69 100.00  
 90.00 10 29 58 3293.98 -25.61 112.74 249.65 77.58 11 24 52 2294.0 -28.28 86.05  
 100.00 12 13 47 2959.12 -28.03 88.67 250.21 79.28 13 3 7 1959.1 -29.69 61.37  
 110.00 14 4 48 2611.67 -33.55 63.28 251.20 83.17 14 48 20 1611.7 -32.87 34.56

DIFFERENTIAL CORRECTIONS  
 TDE -.1899 TRA -.7457 TC3 -.9648 BAU .6766 SGT 1393.9 SGR 2236.2 SG3 1720.2 ST 20.0 SR 7.9 SS 58.8  
 RDE .0933 RRA -.1577 RC3-2.5981 FAU .46319 RRT .6808 RRF .9718 RTF .6130 CRT -.0486 CRS -.9078 CST .3342  
 FDE 3.9721 FRA-2.6956 FC-21.9570 BSP 4032 SGB 2635.0 R23 .1457 R13 .9617 LSA 59.7 MSA 18.7 SSA 2.3  
 BDE .1903 BRA .7622 BC3 2.7714 FSP 2962 SG1 2457.0 SG2 952.2 THA 63.29 EL1 20.0 EL2 7.9 ALF 178.69

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.901 GAL 3.28 AZL 87.61 HCA 140.51 SMA 198.05 ECC .24189 INC 2.3871 V1 29.418  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.873 GAP 6.82 AZP 91.84 TAL 16.87 TAP 157.38 RCA 150.18 APO 245.92 V2 22.882  
 RC 229.048 GL 18.65 GP -25.15 ZAL 59.03 ZAP 106.93 ETS 190.19 ZAE 137.69 ETE 214.98 ZAC 60.56 ETC 285.41 LVI 5.02

DISTANCE 468.324 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 18.295 VHL 4.277 DLA 25.39 RAL 11.81 RAD 6642.1 VEL 11.761 PTH 6.79 VHP 2.468 DPA -11.30 RAP 40.44 ECC 1.3011  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 52 3634.66 -47.51 140.85 252.09 92.96 9 42 27 2634.7 -40.81 108.22  
 60.00 8 48 14 3617.70 -40.22 139.34 252.11 87.20 9 48 32 2617.7 -36.94 108.72  
 70.00 8 59 7 3585.63 -33.37 135.96 251.32 82.25 9 58 52 2585.6 -33.10 107.22  
 80.00 9 22 0 3513.82 -27.65 129.38 250.17 78.25 10 20 33 2513.8 -29.79 102.16  
 90.00 10 18 55 3329.95 -25.06 115.23 249.53 76.45 11 14 25 2330.0 -28.27 88.68  
 100.00 12 4 51 2988.30 -27.65 90.75 250.17 78.25 12 54 40 1988.3 -29.79 63.53  
 110.00 13 58 33 2632.45 -33.37 64.88 251.32 82.25 14 42 26 1632.5 -33.10 36.14

DIFFERENTIAL CORRECTIONS  
 TDE -.1382 TRA -.7635 TC3-1.1019 BAU .7108 SGT 1484.8 SGR 2321.6 SG3 1743.5 ST 19.4 SR 9.9 SS 60.5  
 RDE .1254 RRA -.1773 RC3-2.6893 FAU .46866 RRT .7064 RRF .9745 RTF .7184 CRT -.0308 CRS -.9454 CST .2654  
 FDE 4.1105 FRA-2.7776 FC-22.1777 BSP 4239 SGB 2755.8 R23 .1464 R13 .9643 LSA 61.4 MSA 18.8 SSA 2.3  
 BDE .1866 BRA .7838 BC3 2.9063 FSP 2971 SG1 2589.8 SG2 942.1 THA 61.59 EL1 19.4 EL2 9.9 ALF 178.78

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 17 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC

DISTANCE 472.113

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.898 GAL 3.24 AZL 87.54 HCA 141.45 SMA 197.99 ECC .24140 INC 2.4633 V1 29.418
RP 240.34 LAP 1.34 LOP 105.42 VP 20.835 GAP 6.58 AZP 91.93 TAL 16.78 TAP 158.23 RCA 150.20 APO 245.79 V2 22.851
RC 231.955 GL 19.25 GP -25.78 ZAL 59.25 ZAP 105.37 ETS 189.60 ZAE 135.96 ETE 213.75 ZAC 60.10 ETC 285.55 LVI 5.49

PLANETOCENTRIC CONIC

C3 18.336 VHL 4.282 DLA 25.98 RAL 11.65 RAD 6642.1 VEL 11.763 PTH 6.79 VHP 2.457 DPA -12.13 RAP 40.06 ECC 1.3018
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 38 17 3648.14 -47.55 142.15 252.55 91.96 9 39 5 2648.1 -41.22 109.25
60.00 8 43 27 3634.35 -40.16 140.75 252.39 86.25 9 44 2 2634.4 -37.27 110.01
70.00 8 52 26 3607.86 -33.15 137.66 251.43 81.26 9 52 34 2607.9 -33.32 108.92
80.00 9 12 9 3545.98 -27.18 131.66 250.12 77.14 10 11 15 2546.0 -29.85 104.55
90.00 10 6 19 3371.01 -24.37 118.04 249.35 75.20 11 2 30 2371.0 -28.19 91.68
100.00 11 55 1 3020.45 -27.18 93.03 250.12 77.14 12 45 21 2020.5 -29.85 65.92
110.00 13 51 53 2654.68 -33.15 66.57 251.43 81.26 14 36 7 1654.7 -33.32 37.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1149 TRA -.7894 TC3-1.2578 BAU .7448 SGT 1801.4 SGR 2395.1 SG3 1754.6 ST 19.3 SR 12.4 88 62.9
RDE .1657 RRA -.1903 RC3-2.7649 FAU .47048 RRT .7429 RRF .9767 RTF .7531 CRT -.0191 CR8 -.9701 CST .1871
PDE 4.3060 FRA-2.7923 FC-22.2137 B8P 4497 SGB 2881.2 R23 .1546 R13 .9652 LSA 64.1 M8A 19.1 88A 2.1
BDE .2016 BRA .8120 BC3 3.0376 F8P 3036 SGT 2722.4 SGT 943.1 THA 59.55 EL1 19.3 EL2 12.4 ALF 178.81

LAUNCH DATE AUG 17 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC

DISTANCE 475.902

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.895 GAL 3.22 AZL 87.46 HCA 142.39 SMA 197.95 ECC .24114 INC 2.5427 V1 29.418
RP 240.63 LAP 1.55 LOP 106.38 VP 20.799 GAP 6.34 AZP 92.01 TAL 16.68 TAP 159.07 RCA 150.21 APO 245.68 V2 22.821
RC 234.852 GL 19.87 GP -26.42 ZAL 59.49 ZAP 103.81 ETS 188.99 ZAE 134.22 ETE 212.58 ZAC 59.63 ETC 285.69 LVI 5.96

PLANETOCENTRIC CONIC

C3 18.387 VHL 4.288 DLA 26.59 RAL 11.48 RAD 6642.1 VEL 11.765 PTH 6.79 VHP 2.450 DPA -12.96 RAP 39.70 ECC 1.3026
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 34 31 3662.30 -47.57 143.52 253.03 90.90 9 35 33 2662.3 -41.64 110.34
60.00 8 38 25 3651.93 -40.07 142.24 252.68 85.24 9 39 17 2651.9 -37.60 111.38
70.00 8 45 18 3631.63 -32.89 139.46 251.55 80.22 9 45 49 2631.6 -33.53 110.74
80.00 9 1 11 3581.73 -26.61 134.16 250.02 75.94 10 0 53 2581.7 -29.85 107.21
90.00 9 51 30 3419.15 -23.50 121.30 249.09 73.80 10 48 29 2419.1 -28.00 95.19
100.00 11 44 3 3056.20 -26.61 95.53 250.02 75.94 12 34 59 2056.2 -29.85 68.57
110.00 13 44 44 2678.45 -32.89 68.38 251.55 80.22 14 29 22 1678.5 -33.53 39.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0851 TRA -.8122 TC3-1.4060 BAU .7808 SGT 1714.5 SGR 2476.4 SG3 1766.9 ST 19.2 SR 14.8 88 64.8
RDE .2037 RRA -.2077 RC3-2.8472 FAU .47290 RRT .7749 RRF .9788 RTF .7842 CRT .0493 CR8 -.9810 CST .0827
PDE 4.4640 FRA-2.8384 FC-22.2660 B8P 4742 SGB 3012.0 R23 .1560 R13 .9670 LSA 66.5 M8A 19.2 88A 2.1
BDE .2208 BRA .8383 BC3 3.1754 F8P 3058 SGT 2862.3 SGT 937.6 THA 57.94 EL1 19.2 EL2 14.8 ALF 5.42

LAUNCH DATE AUG 17 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC

DISTANCE 479.891

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.893 GAL 3.20 AZL 87.37 HCA 143.32 SMA 197.91 ECC .24091 INC 2.6252 V1 29.418
RP 240.93 LAP 1.57 LOP 107.30 VP 20.763 GAP 6.11 AZP 92.11 TAL 16.58 TAP 159.90 RCA 150.23 APO 245.58 V2 22.792
RC 237.739 GL 20.50 GP -27.06 ZAL 59.74 ZAP 102.28 ETS 188.37 ZAE 132.49 ETE 211.46 ZAC 59.16 ETC 285.83 LVI 6.43

PLANETOCENTRIC CONIC

C3 18.448 VHL 4.295 DLA 27.21 RAL 11.30 RAD 6642.1 VEL 11.767 PTH 6.79 VHP 2.444 DPA -13.79 RAP 39.34 ECC 1.3036
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 30 34 3677.20 -47.58 144.96 253.55 89.80 9 31 51 2677.2 -42.07 111.52
60.00 8 33 4 3670.52 -39.95 143.81 252.99 84.18 9 34 15 2670.5 -37.94 112.85
70.00 8 37 36 3657.19 -32.58 141.39 251.65 79.12 9 38 33 2657.2 -33.72 112.71
80.00 8 48 44 3622.21 -25.91 136.96 249.87 74.62 9 49 6 2622.2 -29.79 110.21
90.00 9 33 4 3478.89 -22.31 125.27 248.69 72.15 10 31 3 2478.9 -27.64 99.52
100.00 11 31 36 3096.68 -25.91 98.33 249.87 74.62 12 23 12 2096.7 -29.79 71.58
110.00 13 37 2 2704.01 -32.58 70.31 251.65 79.12 14 22 6 1704.0 -33.72 41.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0930 TRA -.8362 TC3-1.5567 BAU .8175 SGT 1834.8 SGR 2597.4 SG3 1774.9 ST 19.2 SR 17.5 88 68.8
RDE .2439 RRA -.2232 RC3-2.9266 FAU .47415 RRT .8019 RRF .9806 RTF .5.02 CRT .1352 CR8 -.9878 CST -.0305
PDE 4.4223 FRA-2.8765 FC-22.2518 B8P 4993 SGB 3147.5 R23 .1587 R13 .9685 LSA 69.0 M8A 19.3 88A 2.0
BDE .2496 BRA .8660 BC3 3.3149 F8P 3074 SGT 3006.1 SGT 932.7 THA 56.43 EL1 19.8 EL2 16.8 ALF 27.02

LAUNCH DATE AUG 17 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC

DISTANCE 483.481

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.892 GAL 3.17 AZL 87.29 HCA 144.25 SMA 197.87 ECC .24070 INC 2.7112 V1 29.418
RP 241.22 LAP 1.58 LOP 108.23 VP 20.729 GAP 5.87 AZP 92.20 TAL 16.47 TAP 160.72 RCA 150.25 APO 245.50 V2 22.763
RC 240.815 GL 21.16 GP -27.71 ZAL 60.01 ZAP 100.76 ETS 187.72 ZAE 130.76 ETE 210.37 ZAC 58.68 ETC 285.97 LVI 6.85

PLANETOCENTRIC CONIC

C3 18.519 VHL 4.303 DLA 27.87 RAL 11.12 RAD 6642.2 VEL 11.770 PTH 6.80 VHP 2.442 DPA -14.64 RAP 39.00 ECC 1.3048
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 26 25 3692.88 -47.56 146.48 254.09 88.63 9 27 58 2692.9 -42.51 112.77
60.00 8 27 24 3690.23 -39.80 145.46 253.31 83.07 9 28 55 2690.2 -38.27 114.42
70.00 8 29 15 3684.81 -32.20 143.46 251.74 77.96 9 30 39 2684.8 -33.89 114.85
80.00 8 34 11 3669.29 -25.02 140.18 249.63 73.16 9 35 20 2669.3 -29.62 113.70
90.00 9 6 39 3564.25 -20.42 130.82 247.97 70.00 10 6 3 2564.3 -26.85 105.64
100.00 11 17 3 3143.76 -25.02 101.55 249.63 73.16 12 9 26 2143.8 -29.62 75.07
110.00 13 28 41 2731.63 -32.20 72.37 251.74 77.96 14 14 13 1731.6 -33.89 43.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0179 TRA -.8610 TC3-1.7073 BAU .8557 SGT 1959.9 SGR 2639.7 SG3 1779.6 ST 19.6 SR 20.2 88 68.7
RDE .2894 RRA -.2434 RC3-3.0050 FAU .47460 RRT .8247 RRF .9823 RTF .8322 CRT .2348 CR8 -.9915 CST -.1508
PDE 4.7717 FRA-2.9117 FC-22.1889 B8P 5252 SGB 3287.8 R23 .1595 R13 .9701 LSA 71.6 M8A 19.4 88A 1.9
BDE .2859 BRA .8948 BC3 3.4562 F8P 3079 SGT 3154.2 SGT 927.6 THA 55.06 EL1 22.1 EL2 17.4 ALF 48.31

LAUNCH DATE AUG 17 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC										DISTANCE 487.269										EARTH TO MARS																																																																																				
RL	151.45	LAL	-.00	LOL	323.95	VL	32.891	GAL	3.15	AZL	87.20	HCA	145.18	SMA	197.65	ECC	.24052	INC	2.8009	V1	29.418	RP	241.50	LAP	1.60	LOP	109.16	VP	20.698	GAP	5.84	AZP	92.30	TAL	16.35	TAP	161.53	RCA	150.26	APO	245.44	V2	22.734	RC	243.479	GL	21.85	GP	-28.37	ZAL	60.30	ZAP	99.28	ETS	187.05	ZAE	129.03	ETE	209.32	ZAC	58.19	ETC	286.11	LVI	7.46																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	18.602	VHL	4.313	DLA	28.55	RAL	10.94	RAD	6642.2	VEL	11.774	PTH	6.80	VHP	2.442	DPA	-15.48	RAP	38.68	ECC	1.3061	SGT	2090.9	SGR	2722.5	SG3	1760.4	ST	20.3	SR	23.0	SS	70.6	CRT	.3377	CR3	-.9940	CST	-.2702	LSA	74.4	MSA	19.5	SSA	1.8																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8441	RRF	.9839	RTF	.8507	EL1	25.3	EL2	17.4	ALF	55.07	SG6	3432.7	R23	.1602	R13	.9715																																																													
50.00	8	22	1	3709.40	-47.52	148.08	254.65	87.40	9	23	51	2709.4	-42.95	114.10	80.00	8	21	22	3711.15	-39.61	147.21	253.63	81.90	9	23	13	2711.1	-38.59	116.10	70.00	8	20	7	3714.83	-31.76	145.68	251.80	76.71	9	22	2	2714.8	-34.03	117.18	80.00	8	16	20	3726.73	-23.63	144.03	249.25	71.46	9	18	27	2726.7	-29.28	117.94	85.95	7	49	37	3812.97	-17.10	147.63	246.51	66.79	8	53	10	2813.0	-25.19	123.46	100.00	10	59	12	3201.21	-23.83	105.40	249.25	71.46	11	52	33	2201.2	-29.28	79.30	110.00	13	19	33	2761.64	-31.76	74.60	251.80	76.71	14	5	35	1761.6	-34.03	46.10

LAUNCH DATE AUG 17 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC										DISTANCE 491.058										EARTH TO MARS																																																																																				
RL	151.45	LAL	-.00	LOL	323.95	VL	32.890	GAL	3.12	AZL	87.11	HCA	146.11	SMA	197.84	ECC	.24037	INC	2.8948	V1	29.418	RP	241.78	LAP	1.61	LOP	110.09	VP	20.663	GAP	5.40	AZP	92.40	TAL	16.23	TAP	162.34	RCA	150.28	APO	245.39	V2	22.706	RC	246.330	GL	22.56	GP	-29.04	ZAL	60.61	ZAP	97.81	ETS	186.37	ZAE	127.31	ETE	208.30	ZAC	57.68	ETC	286.26	LVI	7.99																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	18.697	VHL	4.324	DLA	29.25	RAL	10.74	RAD	6642.3	VEL	11.778	PTH	6.80	VHP	2.445	DPA	-16.33	RAP	38.38	ECC	1.3077	SGT	2226.1	SGR	2803.7	SG3	1776.2	ST	21.4	SR	26.0	SS	72.5	CRT	.4374	CR3	-.9958	CST	-.3839	LSA	77.5	MSA	19.6	SSA	1.7																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8604	RRF	.9853	RTF	.8661	EL1	28.8	EL2	17.3	ALF	57.12	SG6	3459.9	R23	.1609	R13	.9727																																																													
50.00	8	17	22	3726.83	-47.45	149.76	255.24	86.11	9	19	29	2726.8	-43.40	115.54	80.00	8	14	54	3733.41	-39.38	149.06	253.95	80.66	9	17	7	2733.4	-38.91	117.91	70.00	8	10	3	3747.73	-31.21	148.09	251.83	75.38	9	12	31	2747.7	-34.12	119.75	80.00	7	51	54	3804.90	-22.05	149.15	248.57	69.34	8	55	19	2804.9	-28.58	123.64	82.20	7	18	28	3912.15	-17.47	155.09	246.58	66.16	8	23	40	2912.1	-25.78	130.92	100.00	10	34	46	3279.37	-22.05	110.52	248.57	69.34	11	29	25	2279.4	-28.58	85.01	110.00	13	9	29	2794.55	-31.21	77.01	251.83	75.38	13	56	4	1794.5	-34.12	48.66

LAUNCH DATE AUG 17 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC										DISTANCE 494.845										EARTH TO MARS																																																																																				
RL	151.45	LAL	-.00	LOL	323.95	VL	32.889	GAL	3.10	AZL	87.01	HCA	147.03	SMA	197.83	ECC	.24024	INC	2.9930	V1	29.418	RP	242.06	LAP	1.63	LOP	111.02	VP	20.632	GAP	5.17	AZP	92.51	TAL	16.10	TAP	163.13	RCA	150.30	APO	245.35	V2	22.679	RC	249.167	GL	23.29	GP	-29.72	ZAL	60.93	ZAP	96.38	ETS	185.66	ZAE	125.60	ETE	207.32	ZAC	57.17	ETC	286.40	LVI	8.53																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	18.806	VHL	4.337	DLA	29.98	RAL	10.54	RAD	6642.3	VEL	11.782	PTH	6.81	VHP	2.451	DPA	-17.18	RAP	38.10	ECC	1.3095	SGT	2365.5	SGR	2885.4	SG3	1788.2	ST	22.8	SR	29.1	SS	74.4	CRT	.5292	CR3	-.9989	CST	-.4868	LSA	80.7	MSA	19.7	SSA	1.8																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8743	RRF	.9883	RTF	.8692	EL1	32.7	EL2	17.2	ALF	57.48	SG6	3731.1	R23	.1614	R13	.9738																																																													
50.00	8	12	26	3745.24	-47.35	151.53	255.84	84.75	9	14	51	2745.2	-43.86	117.07	80.00	8	7	57	3757.17	-39.10	151.02	254.27	79.36	9	10	34	2737.2	-39.21	119.85	70.00	7	58	48	3784.19	-30.56	150.73	251.80	73.95	9	1	52	2784.2	-34.15	122.59	80.00	6	57	32	3977.92	-17.84	160.14	246.66	65.50	8	3	50	2977.9	-26.39	135.97	79.61	6	57	32	3977.92	-17.84	160.14	246.66	65.50	8	3	50	2977.9	-26.39	135.97	79.61	6	57	32	3977.92	-17.84	160.14	246.66	65.50	8	3	50	2977.9	-26.39	135.97	110.00	12	58	14	2831.01	-30.56	79.65	251.80	73.95	13	45	25	1831.0	-34.15	51.51

LAUNCH DATE AUG 17 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC										DISTANCE 498.632										EARTH TO MARS																																																																																				
RL	151.45	LAL	-.00	LOL	323.95	VL	32.889	GAL	3.07	AZL	86.90	HCA	147.98	SMA	197.82	ECC	.24013	INC	3.0980	V1	29.418	RP	242.33	LAP	1.64	LOP	111.94	VP	20.602	GAP	4.94	AZP	92.62	TAL	15.96	TAP	163.92	RCA	150.32	APO	245.33	V2	22.652	RC	251.989	GL	24.06	GP	-30.41	ZAL	61.26	ZAP	94.98	ETS	184.94	ZAE	123.91	ETE	208.35	ZAC	56.64	ETC	286.55	LVI	9.09																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	18.930	VHL	4.351	DLA	30.74	RAL	10.32	RAD	6642.4	VEL	11.788	PTH	6.81	VHP	2.459	DPA	-18.04	RAP	37.84	ECC	1.3115	SGT	2508.3	SGR	2967.2	SG3	1756.1	ST	24.6	SR	32.3	SS	76.3	CRT	.6104	CR3	-.9977	CST	-.5767	LSA	84.1	MSA	19.7	SSA	1.5																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8862	RRF	.9876	RTF	.8904	EL1	36.9	EL2	17.1	ALF	57.16	SG6	3885.3	R23	.1616	R13	.9749																																																													
50.00	8	7	10	3764.70	-47.22	153.39	256.47	83.32	9	9	54	2764.7	-44.31	118.72	80.00	8	0	27	3782.61	-38.76	153.09	254.57	77.99	9	3	29	2782.6	-39.50	121.96	70.00	7	46	1	3825.23	-29.75	153.65	251.69	72.39	8	49	46	2825.2	-34.10	125.80	77.41	6	40	27	4031.07	-18.21	164.29	246.75	64.80	7	47	38	3031.1	-27.01	140.13	77.41	6	40	27	4031.07	-18.21	164.29	246.75	64.80	7	47	38	3031.1	-27.01	140.13	77.41	6	40	27	4031.07	-18.21	164.29	246.75	64.80	7	47	38	3031.1	-27.01	140.13	110.00	12	45	28	2872.05	-29.75	82.57	251.69	72.39	13	33	20	1872.1	-34.10	54.71

LAUNCH DATE AUG 17 1973

FLIGHT TIME 226.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC

DISTANCE 502.419

EARTH TO MARS

RL 131.45 LAL -.00 LOL 323.95 VL 32.889 GAL 3.04 AZL 86.80 HCA 148.88 SMA 197.83 ECC .24004 INC 3.2041 V1 29.418
RP 242.80 LAP 1.86 LOP 112.86 VP 20.973 GAP 4.71 AZP 92.74 TAL 15.82 TAP 164.70 RCA 150.34 APO 245.31 V2 22.625
RC 254.795 GL 24.86 GP -31.11 ZAL 61.62 ZAP 83.61 ETS 184.20 ZAE 122.23 ETE 205.42 ZAC 56.10 ETC 286.70 LVI 9.67

PLANETOCENTRIC CONIC

C3 19.071 VHL 4.387 DLA 31.53 RAL 10.10 RAD 6642.4 VEL 11.794 PTH 6.82 VHP 2.470 DPA -18.90 RAP 37.61 ECC 1.3139
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 1 31 3785.33 -47.04 155.35 257.10 81.82 9 4 37 2785.3 -44.76 120.50
60.00 7 52 18 3809.99 -38.35 155.30 254.85 76.54 8 55 48 2810.0 -39.76 124.24
70.00 7 31 8 3872.54 -28.73 156.96 251.46 70.68 8 35 40 2872.5 -33.93 129.48
75.44 6 25 32 4076.93 -18.60 167.94 246.85 64.07 7 33 29 3076.9 -27.66 143.79
75.44 6 25 32 4076.93 -18.60 167.94 246.85 64.07 7 33 29 3076.9 -27.66 143.79
75.44 6 25 32 4076.93 -18.60 167.94 246.85 64.07 7 33 29 3076.9 -27.66 143.79
110.00 12 30 34 2919.36 -28.73 85.87 251.46 70.68 13 19 13 1919.4 -33.93 58.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2004 TRA-1.0021 TC3-2.4547 BAU 1.0584 SGT 2654.2 SGR 3049.3 SG3 1740.2 ST 26.8 SR 35.7 SS 78.0
RDE .5260 RRA -.3394 RC3-3.3477 FAU .46046 RRT .8965 RRF .9887 RTF .9001 CRT .6791 CR8 -.9983 CST -.6522
PDE 5.4541 FRA-2.9879 FC-20.9024 B8P 6643 SGB 4042.7 R23 .1617 R13 .9759 LSA 87.6 MSA 19.8 SSA 1.3
BDE .5628 BRA 1.0580 BC3 4.1512 F8P 3013 SGI 3938.9 SG2 910.3 THA 49.41 EL1 41.2 EL2 17.0 ALF 56.53

LAUNCH DATE AUG 17 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

DISTANCE 506.205

EARTH TO MARS

RL 131.45 LAL -.00 LOL 323.95 VL 32.890 GAL 3.01 AZL 86.68 HCA 149.79 SMA 197.84 ECC .23997 INC 3.3160 V1 29.418
RP 242.86 LAP 1.67 LOP 113.78 VP 20.545 GAP 4.49 AZP 92.87 TAL 15.67 TAP 165.47 RCA 150.36 APO 245.31 V2 22.999
RC 257.584 GL 25.69 GP -31.63 ZAL 61.99 ZAP 92.28 ETS 183.44 ZAE 120.57 ETE 204.50 ZAC 55.54 ETC 286.85 LVI 10.27

PLANETOCENTRIC CONIC

C3 19.231 VHL 4.385 DLA 32.35 RAL 9.85 RAD 6642.5 VEL 11.800 PTH 6.82 VHP 2.484 DPA -19.77 RAP 37.41 ECC 1.3165
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 29 3807.22 -46.80 157.41 257.74 80.25 8 58 56 2807.2 -45.21 122.42
60.00 7 43 23 3839.49 -37.86 157.66 255.09 75.01 8 47 23 2839.5 -39.98 126.72
70.00 7 13 2 3929.34 -27.39 160.83 251.03 68.75 8 18 31 2929.3 -33.57 133.87
73.59 6 12 3 4118.02 -18.99 171.27 246.97 63.30 7 20 41 3118.0 -28.32 147.13
73.59 6 12 3 4118.02 -18.99 171.27 246.97 63.30 7 20 41 3118.0 -28.32 147.13
73.59 6 12 3 4118.02 -18.99 171.27 246.97 63.30 7 20 41 3118.0 -28.32 147.13
110.00 12 12 28 2976.16 -27.39 89.75 251.03 68.75 13 2 4 1976.2 -33.57 62.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2541 TRA-1.0334 TC3-2.5968 BAU 1.1008 SGT 2802.2 SGR 3130.9 SG3 1719.9 ST 29.4 SR 39.2 SS 79.7
RDE .5816 RRA -.3599 RC3-3.4044 FAU .45446 RRT .9053 RRF .9896 RTF .9082 CRT .7360 CR8 -.9987 CST -.7146
PDE 5.5710 FRA-2.9839 FC-20.4589 B8P 6935 SGB 4201.7 R23 .1618 R13 .9767 LSA 91.4 MSA 19.9 SSA 1.4
BDE .6347 BRA 1.0943 BC3 4.2817 F8P 2978 SGI 4102.3 SG2 908.4 THA 48.50 EL1 45.9 EL2 17.0 ALF 55.82

LAUNCH DATE AUG 17 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

DISTANCE 509.990

EARTH TO MARS

RL 131.45 LAL -.00 LOL 323.95 VL 32.891 GAL 2.98 AZL 86.56 HCA 150.71 SMA 197.85 ECC .23993 INC 3.4380 V1 29.418
RP 243.12 LAP 1.68 LOP 114.70 VP 20.518 GAP 4.26 AZP 93.00 TAL 15.52 TAP 166.23 RCA 150.38 APO 245.32 V2 22.573
RC 260.356 GL 26.56 GP -32.56 ZAL 62.39 ZAP 90.98 ETS 182.66 ZAE 118.94 ETE 203.60 ZAC 54.96 ETC 287.01 LVI 10.89

PLANETOCENTRIC CONIC

C3 19.412 VHL 4.406 DLA 33.21 RAL 9.59 RAD 6642.6 VEL 11.808 PTH 6.83 VHP 2.500 DPA -20.64 RAP 37.24 ECC 1.3195
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 58 3830.50 -46.51 159.58 258.38 78.60 8 52 48 2830.5 -45.63 124.49
60.00 7 33 34 3871.58 -37.26 160.17 255.28 73.39 8 38 6 2871.6 -40.16 129.43
70.00 6 49 2 4003.67 -25.46 165.74 250.24 66.42 7 55 46 3003.7 -32.83 139.55
71.82 5 59 34 4155.57 -19.38 174.37 247.10 62.49 7 8 50 3155.6 -29.01 150.24
71.82 5 59 34 4155.57 -19.38 174.37 247.10 62.49 7 8 50 3155.6 -29.01 150.24
71.82 5 59 34 4155.57 -19.38 174.37 247.10 62.49 7 8 50 3155.6 -29.01 150.24
110.00 11 48 28 3050.49 -25.46 94.66 250.24 66.42 12 39 19 2050.5 -32.83 68.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3111 TRA-1.0660 TC3-2.7349 BAU 1.1442 SGT 2952.4 SGR 3214.0 SG3 1696.3 ST 32.2 SR 42.7 SS 81.3
RDE .8386 RRA -.3820 RC3-3.4585 FAU .44776 RRT .9131 RRF .9905 RTF .5.54 CRT .7825 CR8 -.9990 CST -.7651
PDE 8.6704 FRA-2.9798 FC-19.8695 B8P 7230 SGB 4364.2 R23 .1615 R13 .9776 LSA 95.2 MSA 19.9 SSA 1.3
BDE .7103 BRA 1.1324 BC3 4.4092 F8P 2936 SGI 4289.0 SG2 906.5 THA 47.66 EL1 50.8 EL2 16.9 ALF 55.00

LAUNCH DATE AUG 17 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

DISTANCE 513.774

EARTH TO MARS

RL 131.45 LAL -.00 LOL 323.95 VL 32.892 GAL 2.95 AZL 86.44 HCA 151.62 SMA 197.88 ECC .23990 INC 3.5648 V1 29.418
RP 243.37 LAP 1.69 LOP 115.62 VP 20.492 GAP 4.03 AZP 93.14 TAL 15.36 TAP 168.98 RCA 150.41 APO 245.34 V2 22.848
RC 263.112 GL 27.48 GP -33.31 ZAL 62.80 ZAP 89.73 ETS 181.86 ZAE 117.32 ETE 202.72 ZAC 54.37 ETC 287.18 LVI 11.54

PLANETOCENTRIC CONIC

C3 19.616 VHL 4.429 DLA 34.10 RAL 9.30 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.520 DPA -21.52 RAP 37.10 ECC 1.3220
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 54 3858.32 -46.15 161.87 259.00 78.87 8 46 9 2858.3 -46.07 126.74
60.00 7 22 39 3906.75 -36.55 162.88 255.40 71.68 8 27 46 2906.8 -40.27 132.41
70.00 6 1 30 4148.85 -21.19 174.85 248.03 62.57 7 10 39 3148.8 -30.61 150.27
70.10 5 47 51 4190.45 -19.78 177.30 247.24 61.64 6 57 42 3190.4 -29.71 153.20
70.10 5 47 51 4190.45 -19.78 177.30 247.24 61.64 6 57 42 3190.4 -29.71 153.20
70.10 5 47 51 4190.45 -19.78 177.30 247.24 61.64 6 57 42 3190.4 -29.71 153.20
110.00 11 0 56 3195.67 -21.19 103.77 248.03 62.57 11 54 12 2195.7 -30.61 79.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3725 TRA-1.0993 TC3-2.8667 BAU 1.1874 SGT 3103.2 SGR 3294.9 SG3 1667.8 ST 35.5 SR 46.5 SS 82.8
RDE .7000 RRA -.4042 RC3-3.5047 FAU .43986 RRT .9197 RRF .9912 RTF .9215 CRT .8201 CR8 -.9992 CST -.8061
PDE 8.7687 FRA-2.9657 FC-19.4046 B8P 7526 SGB 4526.2 R23 .1615 R13 .9783 LSA 99.4 MSA 19.9 SSA 1.2
BDE .7930 BRA 1.1713 BC3 4.3278 F8P 2885 SGI 4434.8 SG2 905.0 THA 46.87 EL1 56.0 EL2 16.9 ALF 54.23

LAUNCH DATE AUG 17 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

DISTANCE 517.557

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.893 GAL 2.92 AZL 86.30 HCA 152.54 SMA 197.90 ECC .23989 INC 3.6990 V1 29.418  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.467 GAP 3.81 AZP 93.28 TAL 15.19 TAP 167.73 RCA 150.43 APO 245.38 V2 22.523  
 RC 265.850 GL 28.41 GP -34.07 ZAL 63.23 ZAP 88.52 ETS 181.05 ZAE 119.73 ETE 201.85 ZAC 53.75 ETC 287.35 LVI 12.20

PLANETOCENTRIC CONIC

C3 19.846 VHL 4.455 DLA 35.03 RAL 8.88 RAD 6642.8 VEL 11.826 PTH 6.85 VHP 2.543 DPA -22.41 RAP 37.00 ECC 1.3266  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 14 3881.87 -45.71 164.28 259.60 75.05 8 38 56 2881.9 -46.46 129.18  
 60.00 7 10 21 3945.70 -35.67 165.82 255.42 69.85 8 16 7 2945.7 -40.30 135.73  
 68.41 5 36 41 4223.29 -20.18 180.11 247.39 60.74 6 47 5 3223.3 -30.43 156.05  
 68.41 5 36 41 4223.29 -20.18 180.11 247.39 60.74 6 47 5 3223.3 -30.43 156.05  
 68.41 5 36 41 4223.29 -20.18 180.11 247.39 60.74 6 47 5 3223.3 -30.43 156.05  
 68.41 5 36 41 4223.29 -20.18 180.11 247.39 60.74 6 47 5 3223.3 -30.43 156.05  
 68.41 5 36 41 4223.29 -20.18 180.11 247.39 60.74 6 47 5 3223.3 -30.43 156.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4373 TRA-1.1344 TC3-2.9935 BAU 1.2314 SGT 3256.5 SGR 3376.7 SG3 1635.6 ST 39.0 SR 50.4 SS 84.3  
 RDE .7638 RRA -.4278 RC3-3.5467 FAU .43076 RRT .9256 RRF .9920 RTF .9269 CRT .8500 CRS -.9994 CBT -.8384  
 FDE 5.8510 FRA-2.9489 FC-18.7909 BSP 7826 SGB 4691.1 R23 .1615 R13 .9790 LSA 103.7 MSA 20.0 SSA 1.2  
 BDE .6801 BRA 1.2124 BC3 4.6412 FSP 2831 SG1 4603.2 SG2 904.2 THA 46.12 EL1 61.4 EL2 16.8 ALF 53.45

LAUNCH DATE AUG 17 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

DISTANCE 521.339

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.895 GAL 2.89 AZL 86.16 HCA 153.45 SMA 197.93 ECC .23989 INC 3.8415 V1 29.418  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.444 GAP 3.59 AZP 93.44 TAL 15.02 TAP 168.47 RCA 150.45 APO 245.42 V2 22.499  
 RC 268.970 GL 29.40 GP -34.86 ZAL 63.60 ZAP 87.36 ETS 180.22 ZAE 114.17 ETE 201.00 ZAC 53.11 ETC 287.53 LVI 12.90

PLANETOCENTRIC CONIC

C3 20.106 VHL 4.484 DLA 36.00 RAL 8.64 RAD 6642.9 VEL 11.837 PTH 6.85 VHP 2.569 DPA -23.30 RAP 36.94 ECC 1.3309  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 50 3910.36 -45.18 166.82 260.15 73.16 8 31 1 2910.4 -46.82 131.84  
 60.00 6 56 16 3989.49 -34.60 169.04 255.28 67.89 8 2 45 2989.5 -40.20 139.45  
 66.74 5 25 57 4254.48 -20.58 182.83 247.55 59.79 6 36 52 3254.5 -31.17 158.82  
 66.74 5 25 57 4254.48 -20.58 182.83 247.55 59.79 6 36 52 3254.5 -31.17 158.82  
 66.74 5 25 57 4254.48 -20.58 182.83 247.55 59.79 6 36 52 3254.5 -31.17 158.82  
 66.74 5 25 57 4254.48 -20.58 182.83 247.55 59.79 6 36 52 3254.5 -31.17 158.82  
 66.74 5 25 57 4254.48 -20.58 182.83 247.55 59.79 6 36 52 3254.5 -31.17 158.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5069 TRA-1.1703 TC3-3.1119 BAU 1.2755 SGT 3409.4 SGR 3458.5 SG3 1599.7 ST 42.8 SR 54.4 SS 85.6  
 RDE .8315 RRA -.4524 RC3-3.5825 FAU .42087 RRT .9307 RRF .9926 RTF .9315 CRT .8743 CRS -.9993 CBT -.8647  
 FDE 5.9248 FRA-2.9265 FC-18.1219 BSP 8134 SGB 4856.5 R23 .1614 R13 .9796 LSA 108.3 MSA 20.0 SSA 1.1  
 BDE .9738 BRA 1.2547 BC3 4.7453 FSP 2770 SG1 4771.7 SG2 903.6 THA 45.44 EL1 67.2 EL2 16.8 ALF 52.72

LAUNCH DATE AUG 17 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

DISTANCE 525.120

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.897 GAL 2.86 AZL 86.01 HCA 154.36 SMA 197.97 ECC .23992 INC 3.9929 V1 29.418  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.420 GAP 3.37 AZP 93.67 TAL 14.85 TAP 169.20 RCA 150.47 APO 245.47 V2 22.475  
 RC 271.273 GL 30.43 GP -35.67 ZAL 64.15 ZAP 86.25 ETS 179.37 ZAE 112.64 ETE 200.16 ZAC 52.44 ETC 287.72 LVI 13.62

PLANETOCENTRIC CONIC

C3 20.400 VHL 4.517 DLA 37.00 RAL 8.26 RAD 6643.0 VEL 11.849 PTH 6.87 VHP 2.599 DPA -24.20 RAP 36.92 ECC 1.3357  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 36 3941.06 -44.54 169.50 260.65 71.18 8 22 17 2941.1 -47.13 134.74  
 60.00 6 39 42 4039.91 -33.25 172.63 254.93 65.77 7 47 2 3039.9 -39.93 143.71  
 65.07 5 15 32 4284.33 -20.97 185.48 247.71 58.79 6 26 56 3284.3 -31.93 161.53  
 65.07 5 15 32 4284.33 -20.97 185.48 247.71 58.79 6 26 56 3284.3 -31.93 161.53  
 65.07 5 15 32 4284.33 -20.97 185.48 247.71 58.79 6 26 56 3284.3 -31.93 161.53  
 65.07 5 15 32 4284.33 -20.97 185.48 247.71 58.79 6 26 56 3284.3 -31.93 161.53  
 65.07 5 15 32 4284.33 -20.97 185.48 247.71 58.79 6 26 56 3284.3 -31.93 161.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5801 TRA-1.2082 TC3-3.2233 BAU 1.3206 SGT 3564.1 SGR 3541.5 SG3 1560.3 ST 46.9 SR 58.6 SS 86.8  
 RDE .9021 RRA -.4791 RC3-3.6132 FAU .41023 RRT .9354 RRF .9932 RTF .9356 CRT .8937 CRS -.9996 CBT -.8855  
 FDE 5.9813 FRA-2.9032 FC-17.4088 BSP 8432 SGB 5024.4 R23 .1612 R13 .9802 LSA 112.9 MSA 20.0 SSA 1.0  
 BDE 1.0725 BRA 1.2997 BC3 4.8420 FSP 2700 SG1 4942.6 SG2 903.3 THA 44.80 EL1 73.1 EL2 16.9 ALF 52.01

LAUNCH DATE AUG 17 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

DISTANCE 528.900

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.899 GAL 2.82 AZL 85.85 HCA 155.26 SMA 198.01 ECC .23996 INC 4.1544 V1 29.418  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.398 GAP 3.14 AZP 93.77 TAL 14.87 TAP 169.93 RCA 150.50 APO 245.52 V2 22.452  
 RC 273.957 GL 31.52 GP -36.50 ZAL 64.64 ZAP 85.18 ETS 178.51 ZAE 111.14 ETE 199.33 ZAC 51.74 ETC 287.91 LVI 14.37

PLANETOCENTRIC CONIC

C3 20.733 VHL 4.553 DLA 38.06 RAL 7.84 RAD 6643.2 VEL 11.863 PTH 6.88 VHP 2.633 DPA -25.12 RAP 36.94 ECC 1.3412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 6 23 3974.31 -43.77 172.33 261.05 69.11 8 12 37 2974.3 -47.38 137.92  
 60.00 6 19 23 4100.34 -31.48 176.78 254.24 63.42 7 27 44 3100.3 -39.39 148.75  
 63.40 5 5 20 4313.09 -21.36 188.09 247.89 57.73 6 17 13 3313.1 -32.70 164.22  
 63.40 5 5 20 4313.09 -21.36 188.09 247.89 57.73 6 17 13 3313.1 -32.70 164.22  
 63.40 5 5 20 4313.09 -21.36 188.09 247.89 57.73 6 17 13 3313.1 -32.70 164.22  
 63.40 5 5 20 4313.09 -21.36 188.09 247.89 57.73 6 17 13 3313.1 -32.70 164.22  
 63.40 5 5 20 4313.09 -21.36 188.09 247.89 57.73 6 17 13 3313.1 -32.70 164.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6579 TRA-1.2477 TC3-3.3251 BAU 1.3658 SGT 3718.9 SGR 3824.4 SG3 1517.2 ST 51.3 SR 62.9 SS 87.8  
 RDE .9774 RRA -.5075 RC3-3.6363 FAU .39859 RRT .9395 RRF .9937 RTF .9393 CRT .9094 CRS -.9997 CBT -.9023  
 FDE 6.0270 FRA-2.8760 FC-16.6435 BSP 8732 SGB 5193.0 R23 .1611 R13 .9807 LSA 117.9 MSA 20.0 SSA 1.0  
 BDE 1.1782 BRA 1.3470 BC3 4.9274 FSP 2624 SG1 5113.8 SG2 903.3 THA 44.22 EL1 79.4 EL2 16.9 ALF 51.37

LAUNCH DATE AUG 17 1973 FLIGHT TIME 242.00 ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC  
 RL 151.48 LAL -.00 LOL 323.95 VL 32.901 GAL 2.79 AZL 85.67 HCA 156.17 SMA 198.06 ECC .24001 INC 4.3270 V1 29.418  
 RP 244.56 LAP 1.75 LOP 120.17 VP 20.377 GAP 2.92 AZP 93.96 TAL 14.48 TAP 170.85 RCA 150.32 APO 245.59 V2 22.430  
 RC 276.623 GL 32.66 GP -37.36 ZAL 65.16 ZAP 84.17 ETS 177.63 ZAE 109.68 ETE 198.51 ZAC 51.01 ETC 288.12 LVI 15.15

DISTANCE 532.679 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.111 VML 4.595 DLA 39.15 RAL 7.38 RAD 6643.3 VEL 11.879 PTH 6.89 VHP 2.670 DPA -26.04 RAP 37.00 ECC 1.3474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 54 57 4010.55 -42.85 175.32 261.33 66.95 8 1 47 3010.5 -47.53 141.41  
 60.00 5 52 9 4179.47 -28.95 181.95 252.92 60.64 7 1 48 3179.5 -38.32 155.20  
 61.71 4 55 18 4340.97 -21.75 190.67 248.06 56.60 6 7 39 3341.0 -33.49 166.89  
 61.71 4 55 18 4340.97 -21.75 190.67 248.06 56.60 6 7 39 3341.0 -33.49 166.89  
 61.71 4 55 18 4340.97 -21.75 190.67 248.06 56.60 6 7 39 3341.0 -33.49 166.89  
 61.71 4 55 18 4340.97 -21.75 190.67 248.06 56.60 6 7 39 3341.0 -33.49 166.89  
 61.71 4 55 18 4340.97 -21.75 190.67 248.06 56.60 6 7 39 3341.0 -33.49 166.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .7403 TRA-1.2888 TC3-3.4165 BAU 1.4116 SGT 3873.5 GCR 3708.2 GC3 1470.6 ST 55.9 SR 67.3 SS 88.7  
 RDE 1.0564 RRA -.5376 RC3-3.6530 FAU .38619 RRT .9431 RRF .9942 RTF .9424 CRT .9222 CR8 -.9997 CST -.9160  
 FDE 6.0548 FRA-2.8431 FC-15.8378 B8P 9037 SGB 5362.4 R23 .1810 R13 .9812 LSA 122.9 MSA 20.0 S8A .9  
 BDE 1.2900 BRA 1.3965 BC3 5.0017 F8P 2543 SGI 5285.7 SG2 903.7 THA 43.68 EL1 85.8 EL2 16.9 ALF 50.76

LAUNCH DATE AUG 17 1973 FLIGHT TIME 244.00 ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.904 GAL 2.75 AZL 85.49 HCA 157.07 SMA 198.10 ECC .24008 INC 4.5120 V1 29.418  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.357 GAP 2.71 AZP 94.16 TAL 14.30 TAP 171.36 RCA 150.54 APO 245.66 V2 22.407  
 RC 279.268 GL 33.86 GP -38.25 ZAL 65.69 ZAP 83.21 ETS 176.74 ZAE 108.25 ETE 197.70 ZAC 50.24 ETC 286.33 LVI 15.97

DISTANCE 536.456 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.539 VML 4.641 DLA 40.30 RAL 6.86 RAD 6643.5 VEL 11.897 PTH 6.91 VHP 2.713 DPA -26.98 RAP 37.12 ECC 1.3545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 42 2 4050.38 -41.74 178.50 261.44 64.70 7 49 33 3050.4 -47.57 145.26  
 60.00 4 49 35 4356.25 -22.58 192.56 248.59 55.69 6 2 11 3356.3 -34.61 168.72  
 60.01 4 45 20 4368.16 -22.12 193.23 248.24 55.42 5 58 9 3368.2 -34.29 169.58  
 60.01 4 45 20 4368.16 -22.12 193.23 248.24 55.42 5 58 9 3368.2 -34.29 169.58  
 60.01 4 45 20 4368.16 -22.12 193.23 248.24 55.42 5 58 9 3368.2 -34.29 169.58  
 60.01 4 45 20 4368.16 -22.12 193.23 248.24 55.42 5 58 9 3368.2 -34.29 169.58  
 60.01 4 45 20 4368.16 -22.12 193.23 248.24 55.42 5 58 9 3368.2 -34.29 169.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .8275 TRA-1.3323 TC3-3.4982 BAU 1.4577 SGT 4028.1 GCR 3792.7 GC3 1420.6 ST 60.7 SR 72.0 SS 89.4  
 RDE 1.1408 RRA -.5707 RC3-3.6610 FAU .37287 RRT .9464 RRF .9946 RTF .9453 CRT .9326 CR8 -.9998 CST -.9270  
 FDE 6.0692 FRA-2.8099 FC-14.9868 B8P 9333 SGB 5532.7 R23 .1609 R13 .9816 LSA 128.2 MSA 20.1 S8A .9  
 BDE 1.4093 BRA 1.4494 BC3 5.0623 F8P 2453 SGI 5458.3 SG2 903.9 THA 43.18 EL1 92.6 EL2 17.0 ALF 50.21

LAUNCH DATE AUG 17 1973 FLIGHT TIME 246.00 ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.906 GAL 2.72 AZL 85.29 HCA 157.97 SMA 198.16 ECC .24016 INC 4.7111 V1 29.418  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.338 GAP 2.49 AZP 94.37 TAL 14.10 TAP 172.07 RCA 150.57 APO 245.75 V2 22.386  
 RC 281.893 GL 35.11 GP -39.17 ZAL 66.26 ZAP 82.32 ETS 175.83 ZAE 106.85 ETE 196.90 ZAC 49.44 ETC 288.59 LVI 16.83

DISTANCE 540.233 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.027 VML 4.693 DLA 41.49 RAL 6.28 RAD 6643.7 VEL 11.917 PTH 6.92 VHP 2.760 DPA -27.94 RAP 37.28 ECC 1.3625  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 27 15 4094.68 -40.39 181.90 261.31 62.35 7 35 29 3094.7 -47.45 149.54  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29  
 58.28 4 35 23 4394.82 -22.47 195.79 248.42 54.16 5 48 38 3394.8 -35.10 172.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .9201 TRA-1.3769 TC3-3.5822 BAU 1.5043 SGT 4180.6 GCR 3878.0 GC3 1367.1 ST 65.7 SR 76.7 SS 89.8  
 RDE 1.2307 RRA -.6049 RC3-3.6811 FAU .35881 RRT .9493 RRF .9951 RTF .9477 CRT .9411 CR8 -.9998 CST -.9361  
 FDE 6.0863 FRA-2.7655 FC-14.1020 B8P 9846 SGB 5702.3 R23 .1608 R13 .9820 LSA 133.7 MSA 20.1 S8A .8  
 BDE 1.5366 BRA 1.5039 BC3 5.1081 F8P 2363 SGI 5630.0 SG2 905.2 THA 42.74 EL1 99.8 EL2 17.1 ALF 49.72

LAUNCH DATE AUG 17 1973 FLIGHT TIME 248.00 ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC  
 RL 151.45 LAL -.00 LOL 323.95 VL 32.909 GAL 2.68 AZL 85.07 HCA 158.87 SMA 198.21 ECC .24026 INC 4.9258 V1 29.418  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.319 GAP 2.27 AZP 94.60 TAL 13.90 TAP 172.77 RCA 150.59 APO 245.84 V2 22.365  
 RC 284.497 GL 36.44 GP -40.12 ZAL 66.84 ZAP 81.48 ETS 174.92 ZAE 105.50 ETE 196.10 ZAC 48.60 ETC 288.86 LVI 17.73

DISTANCE 544.008 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.585 VML 4.752 DLA 42.73 RAL 5.62 RAD 6644.0 VEL 11.940 PTH 6.94 VHP 2.812 DPA -28.91 RAP 37.51 ECC 1.3717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 58 4144.77 -38.75 185.56 260.85 59.88 7 19 3 3144.8 -47.11 154.33  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04  
 56.52 4 25 22 4421.09 -22.80 198.36 248.58 52.82 5 39 4 3421.1 -35.92 175.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.0171 TRA-1.4242 TC3-3.6136 BAU 1.5509 SGT 4331.9 GCR 3963.1 GC3 1310.0 ST 70.8 SR 81.6 SS 90.1  
 RDE 1.3251 RRA -.6434 RC3-3.6504 FAU .34381 RRT .9521 RRF .9954 RTF .9500 CRT .9483 CR8 -.9998 CST -.9436  
 FDE 6.0396 FRA-2.7226 FC-13.1788 B8P 9944 SGB 5871.2 R23 .1806 R13 .9824 LSA 139.2 MSA 20.1 S8A .7  
 BDE 1.6705 BRA 1.5628 BC3 5.1365 F8P 2261 SGI 5801.0 SG2 905.3 THA 42.33 EL1 106.7 EL2 17.2 ALF 49.26



LAUNCH DATE AUG 17 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 547.701

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.912 GAL 2.64 AZL 84.84 HCA 189.77 SMA 198.27 ECC .24036 INC 5.1582 V1 29.418  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.301 GAP 2.06 AZP 94.84 TAL 13.70 TAP 173.47 RCA 150.62 APO 245.93 V2 22.344  
 RC 287.079 GL 37.83 GP -41.12 ZAL 67.46 ZAP 80.70 ETS 173.98 ZAE 104.18 ETE 193.32 ZAC 47.71 ETC 289.14 LVI 18.67

PLANETOCENTRIC CONIC

C3 23.225 VHL 4.019 DLA 44.03 RAL 4.88 RAD 6644.2 VEL 11.967 PTH 6.97 VHP 2.870 DPA -29.80 RAP 37.79 ECC 1.3822  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 49 9 4203.01 -38.68 189.59 259.91 57.26 6 59 12 3203.0 -46.44 159.79  
 54.72 4 18 14 4447.15 -23.09 200.94 248.73 51.40 5 29 21 3447.1 -36.73 177.85  
 54.72 4 15 14 4447.15 -23.09 200.94 248.73 51.40 5 29 21 3447.1 -36.73 177.85  
 54.72 4 15 14 4447.15 -23.09 200.94 248.73 51.40 5 29 21 3447.1 -36.73 177.85  
 54.72 4 15 14 4447.15 -23.09 200.94 248.73 51.40 5 29 21 3447.1 -36.73 177.85  
 54.72 4 15 14 4447.15 -23.09 200.94 248.73 51.40 5 29 21 3447.1 -36.73 177.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1186 TRA-1.4748 TC3-3.6508 BAU 1.5989 SGT 4483.2 SGR 4051.5 SG3 1250.5 ST 76.1 SR 86.6 SS 90.0  
 RDE 1.4263 RRA -.6854 RC3-3.6319 FAU .32028 RRT .9545 RRF .9957 RTF .9520 CRT .9540 CRS -.9998 CST -.9496  
 FDE 5.9943 FRA-2.6750 FC-12.2369 BSP 10254 SGB 6042.7 R23 .1608 R13 .9827 LSA 144.9 MSA 20.2 SSA .7  
 BDE 1.8127 BRA 1.6263 BC3 5.1497 FSP 2160 SGI 5974.3 SG2 906.4 THA 41.97 EL1 114.0 EL2 17.3 ALF 48.89

LAUNCH DATE AUG 17 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 551.553

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.916 GAL 2.60 AZL 84.59 HCA 160.66 SMA 198.34 ECC .24048 INC 5.4109 V1 29.418  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.285 GAP 1.84 AZP 95.11 TAL 13.50 TAP 174.16 RCA 150.64 APO 246.03 V2 22.324  
 RC 289.637 GL 39.30 GP -42.13 ZAL 68.10 ZAP 80.00 ETS 173.04 ZAE 102.91 ETE 194.34 ZAC 46.79 ETC 289.45 LVI 19.65

PLANETOCENTRIC CONIC

C3 23.961 VHL 4.895 DLA 45.39 RAL 4.04 RAD 6644.6 VEL 11.998 PTH 6.99 VHP 2.935 DPA -30.91 RAP 38.13 ECC 1.3943  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 22 40 4274.36 -33.95 194.22 258.20 54.41 6 33 54 3274.4 -45.25 166.26  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74  
 52.89 4 4 52 4473.10 -23.35 203.55 248.85 49.90 5 19 25 3473.1 -37.53 180.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2253 TRA-1.5280 TC3-3.6692 BAU 1.6466 SGT 4631.0 SGR 4139.2 SG3 1187.3 ST 81.4 SR 91.8 SS 89.6  
 RDE 1.5347 RRA -.7314 RC3-3.5998 FAU .31175 RRT .9568 RRF .9960 RTF .9537 CRT .9587 CRS -.9998 CST -.9545  
 FDE 5.9272 FRA-2.6218 FC-11.2639 BSP 10569 SGB 6211.2 R23 .1607 R13 .9830 LSA 150.6 MSA 20.2 SSA .6  
 BDE 1.9639 BRA 1.6940 BC3 5.1402 FSP 2054 SGI 6144.6 SG2 907.2 THA 41.65 EL1 121.5 EL2 17.5 ALF 48.58

LAUNCH DATE AUG 17 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 555.324

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.919 GAL 2.57 AZL 84.31 HCA 161.55 SMA 198.40 ECC .24062 INC 5.6865 V1 29.418  
 RP 245.83 LAP 1.80 LOP 125.59 VP 20.289 GAP 1.63 AZP 95.40 TAL 13.29 TAP 174.85 RCA 150.67 APO 246.14 V2 22.305  
 RC 292.172 GL 40.86 GP -43.23 ZAL 68.77 ZAP 79.36 ETS 172.10 ZAE 101.69 ETE 193.76 ZAC 45.81 ETC 289.79 LVI 20.69

PLANETOCENTRIC CONIC

C3 24.813 VHL 4.981 DLA 46.80 RAL 3.08 RAD 6644.9 VEL 12.033 PTH 7.02 VHP 3.008 DPA -31.94 RAP 38.55 ECC 1.4084  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 43 36 4375.22 -29.78 200.23 254.83 51.01 5 58 31 3375.2 -42.92 174.83  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73  
 51.02 3 54 12 4499.15 -23.56 206.19 248.93 48.31 5 9 11 3499.2 -38.31 183.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3335 TRA-1.9867 TC3-3.6726 BAU 1.6988 SGT 4779.9 SGR 4232.2 SG3 1122.1 ST 86.7 SR 97.0 SS 88.8  
 RDE 1.6481 RRA -.7848 RC3-3.8604 FAU .29494 RRT .9589 RRF .9963 RTF .9583 CRT .9625 CRS -.9998 CST -.9583  
 FDE 5.8273 FRA-2.5699 FC-10.2907 BSP 10844 SGB 6384.3 R23 .1606 R13 .9832 LSA 156.2 MSA 20.3 SSA .8  
 BDE 2.1200 BRA 1.7699 BC3 5.1151 FSP 1935 SGI 6319.4 SG2 907.9 THA 41.37 EL1 128.8 EL2 17.7 ALF 48.33

LAUNCH DATE AUG 17 1973

FLIGHT TIME 256.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

DISTANCE 559.095

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.923 GAL 2.53 AZL 84.01 HCA 162.45 SMA 198.47 ECC .24076 INC 5.9888 V1 29.418  
 RP 246.02 LAP 1.80 LOP 126.48 VP 20.254 GAP 1.42 AZP 95.71 TAL 13.08 TAP 175.53 RCA 150.69 APO 246.26 V2 22.286  
 RC 294.682 GL 42.50 GP -44.35 ZAL 69.47 ZAP 78.80 ETS 171.15 ZAE 100.52 ETE 193.00 ZAC 44.78 ETC 290.17 LVI 21.77

PLANETOCENTRIC CONIC

C3 25.805 VHL 5.080 DLA 48.27 RAL 1.98 RAD 6645.3 VEL 12.074 PTH 7.05 VHP 3.090 DPA -32.99 RAP 39.03 ECC 1.4247  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81  
 49.10 3 43 9 4525.36 -23.70 208.87 248.94 46.63 4 58 34 3525.4 -39.05 186.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4416 TRA-1.6517 TC3-3.6581 BAU 1.7531 SGT 4928.3 SGR 4344.0 SG3 1058.3 ST 91.7 SR 101.6 SS 87.1  
 RDE 1.7566 RRA -.8558 RC3-3.5272 FAU .27918 RRT .9621 RRF .9965 RTF .9583 CRT .9663 CRS -.9998 CST -.9620  
 FDE 5.6624 FRA-2.5513 FC3-9.3664 BSP 11000 SGB 6569.5 R23 .1564 R13 .9842 LSA 160.9 MSA 20.1 SSA .6  
 BDE 2.2724 BRA 1.8602 BC3 5.0816 FSP 1774 SGI 6508.1 SG2 896.6 THA 41.25 EL1 135.7 EL2 17.1 ALF 48.03

LAUNCH DATE AUG 17 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 191.45 LAL -.00 LOL 323.95 VL 32.928 GAL 2.49 AZL 83.68 HCA 163.34 SMA 198.55 ECC .24092 INC 6.3217 V1 29.418  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.240 GAP 1.20 AZP 96.06 TAL 12.86 TAP 176.20 RCA 150.71 APO 246.30 V2 22.227  
 RC 297.167 GL 44.23 GP -45.52 ZAL 70.20 ZAP 78.32 ETS 170.20 ZAE 99.40 ETE 192.25 ZAC 43.70 ETC 290.58 LVI 22.91

DISTANCE 562.861

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.964 VHL 5.193 DLA 49.00 RAL .71 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 3.182 DPA -34.07 RAP 39.60 ECC 1.4438  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03  
 47.14 3 31 34 4551.99 -23.77 211.59 248.87 44.85 4 47 26 3552.0 -39.75 190.03

DIFFERENTIAL CORRECTIONS

TDE 1.5555 TRA-1.7182 TC3-3.6184 BAU 1.8034  
 RDE 1.8893 RRA -.9180 RC3-3.4545 FAU .26036  
 FDE 5.5182 FRA-2.4733 FC3-8.3592 BSP 11327  
 BDE 2.4473 BRA 1.9480 BC3 5.0027 FSP 1665

MID-COURSE EXECUTION ACCURACY

SGT 5088.9 SGR 4436.2 SG3 986.3  
 RRT .9636 RRF .9967 RTF .9590  
 SGB 6736.0 R23 .1579 R13 .9841  
 SG1 6675.6 SG2 900.1 THA 41.05

ORBIT DETERMINATION ACCURACY

ST 96.6 SR 107.0 SS 85.6  
 CRT .9684 CR8 -.9998 CST -.9840  
 LSA 166.4 MSA 20.4 SSA .5  
 EL1 143.0 EL2 18.0 ALF 48.01

LAUNCH DATE AUG 17 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 191.45 LAL -.00 LOL 323.95 VL 32.930 GAL 2.45 AZL 83.31 HCA 164.22 SMA 198.62 ECC .24108 INC 6.6905 V1 29.418  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.226 GAP .99 AZP 96.44 TAL 12.65 TAP 176.87 RCA 150.74 APO 246.51 V2 22.249  
 RC 299.628 GL 46.07 GP -46.74 ZAL 70.97 ZAP 77.92 ETS 169.26 ZAE 98.34 ETE 191.51 ZAC 42.56 ETC 291.05 LVI 24.11

DISTANCE 566.626

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.331 VHL 5.323 DLA 51.38 RAL 359.24 RAD 6646.3 VEL 12.177 PTH 7.14 VHP 3.286 DPA -35.17 RAP 40.25 ECC 1.4663  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38  
 45.13 3 19 20 4579.18 -23.74 214.36 248.69 42.98 4 35 40 3579.2 -40.38 193.38

DIFFERENTIAL CORRECTIONS

TDE 1.6698 TRA-1.7894 TC3-3.5548 BAU 1.8547  
 RDE 2.0304 RRA -.9888 RC3-3.3677 FAU .24101  
 FDE 5.3392 FRA-2.3903 FC3-7.3647 BSP 11665  
 BDE 2.6288 BRA 2.0444 BC3 4.8967 FSP 1550

MID-COURSE EXECUTION ACCURACY

SGT 5203.5 SGR 4531.9 SG3 912.3  
 RRT .9651 RRF .9968 RTF .9596  
 SGB 6900.4 R23 .1593 R13 .9840  
 SG1 6641.0 SG2 902.7 THA 40.91

ORBIT DETERMINATION ACCURACY

ST 101.3 SR 112.4 SS 83.5  
 CRT .9700 CR8 -.9998 CST -.9654  
 LSA 171.5 MSA 20.6 SSA .5  
 EL1 150.1 EL2 18.4 ALF 48.07

LAUNCH DATE AUG 17 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

RL 191.45 LAL -.00 LOL 323.95 VL 32.934 GAL 2.41 AZL 82.90 HCA 165.11 SMA 198.70 ECC .24126 INC 7.1014 V1 29.418  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.214 GAP .78 AZP 96.87 TAL 12.43 TAP 177.54 RCA 150.76 APO 246.64 V2 22.232  
 RC 302.065 GL 48.01 GP -48.02 ZAL 71.77 ZAP 77.61 ETS 168.33 ZAE 97.34 ETE 190.80 ZAC 41.36 ETC 291.57 LVI 25.36

DISTANCE 570.388

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.954 VHL 5.473 DLA 53.02 RAL 357.52 RAD 6647.0 VEL 12.243 PTH 7.19 VHP 3.404 DPA -36.30 RAP 40.99 ECC 1.4930  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88  
 43.08 3 8 18 4607.10 -23.59 217.16 248.34 41.02 4 23 5 3607.1 -40.91 196.88

DIFFERENTIAL CORRECTIONS

TDE 1.7776 TRA-1.8682 TC3-3.4687 BAU 1.9083  
 RDE 2.1773 RRA-1.0715 RC3-3.2672 FAU .22128  
 FDE 5.1172 FRA-2.3040 FC3-6.3954 BSP 11989  
 BDE 2.8108 BRA 2.1537 BC3 4.7852 FSP 1429

MID-COURSE EXECUTION ACCURACY

SGT 5334.0 SGR 4632.9 SG3 836.7  
 RRT .9665 RRF .9969 RTF .9600  
 SGB 7065.1 R23 .1609 R13 .9839  
 SG1 7006.9 SG2 905.1 THA 40.84

ORBIT DETERMINATION ACCURACY

ST 105.2 SR 117.5 SS 80.8  
 CRT .9709 CR8 -.9998 CST -.9659  
 LSA 175.9 MSA 21.0 SSA .4  
 EL1 156.6 EL2 18.9 ALF 48.25

LAUNCH DATE AUG 17 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 191.45 LAL -.00 LOL 323.95 VL 32.938 GAL 2.36 AZL 82.44 HCA 165.99 SMA 198.78 ECC .24145 INC 7.5624 V1 29.418  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.202 GAP .57 AZP 97.34 TAL 12.20 TAP 178.20 RCA 150.79 APO 246.78 V2 22.215  
 RC 304.476 GL 50.07 GP -49.35 ZAL 72.60 ZAP 77.39 ETS 167.43 ZAE 96.41 ETE 190.10 ZAC 40.10 ETC 292.15 LVI 26.87

DISTANCE 574.148

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.900 VHL 5.648 DLA 54.71 RAL 355.51 RAD 6647.7 VEL 12.322 PTH 7.25 VHP 3.539 DPA -37.44 RAP 41.84 ECC 1.5250  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53  
 41.00 2 52 14 4636.01 -23.30 220.00 247.78 38.98 4 9 30 3636.0 -41.32 200.53

DIFFERENTIAL CORRECTIONS

TDE 1.8738 TRA-1.9544 TC3-3.3590 BAU 1.9650  
 RDE 2.3283 RRA-1.1669 RC3-3.1537 FAU .20132  
 FDE 4.8485 FRA-2.2097 FC3-5.4635 BSP 12294  
 BDE 2.9886 BRA 2.2763 BC3 4.6075 FSP 1300

MID-COURSE EXECUTION ACCURACY

SGT 5457.8 SGR 4740.0 SG3 759.8  
 RRT .9678 RRF .9969 RTF .9601  
 SGB 7228.8 R23 .1628 R13 .9837  
 SG1 7171.6 SG2 907.4 THA 40.84

ORBIT DETERMINATION ACCURACY

ST 108.2 SR 122.1 SS 77.3  
 CRT .9709 CR8 -.9997 CST -.9653  
 LSA 179.3 MSA 21.5 SSA .4  
 EL1 162.0 EL2 19.5 ALF 48.56

LAUNCH DATE AUG 17 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

DISTANCE 577.906

EARTH TO MARS

RL 131.45 LAL -.00 LOL 323.95 VL 32.943 GAL 2.32 AZL 81.92 HCA 166.87 SMA 198.86 ECC .24165 INC 8.0834 V1 29.418  
 RP 246.90 LAP 1.83 LOP 130.95 VP 20.191 GAP .37 AZP 97.88 TAL 11.98 TAP 178.85 RCA 150.81 APO 246.92 V2 22.199  
 RC 306.863 GL 52.26 GP -50.73 ZAL 73.47 ZAP 77.27 ETS 166.56 ZAE 93.55 ETE 189.44 ZAC 38.78 ETC 292.80 LVI 28.05

PLANETOCENTRIC CONIC

C3 34.256 VHL 5.853 DLA 56.43 RAL 353.12 RAD 6648.6 VEL 12.416 PTH 7.32 VHP 3.695 DPA -38.61 RAP 42.79 ECC 1.5638  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31  
 38.89 2 36 52 4666.17 -22.84 222.86 246.91 36.86 3 54 39 3666.2 -41.56 204.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9492 TRA-2.0513 TC3-3.2249 BAU 2.0252 SGT 5575.2 SGR 4856.8 SG3 682.2 ST 110.0 SR 126.2 SS 73.1  
 RDE 2.4810 RRA-1.2810 RC3-3.0258 FAU .18109 RRT .9692 RRF .9968 RTF .9600 CRT .9700 CRS -.9996 CST -.9634  
 FDE 4.5318 FRA-2.1111 FC3-4.5766 BSP 12585 SGB 7394.0 R23 .1651 R13 .9833 LSA 181.3 MSA 22.1 SSA .4  
 BDE 3.1951 BRA 2.4185 BC3 4.4221 F3P 1167 SGI 7337.9 SGI 909.1 TMA 40.94 EL1 166.2 EL2 20.3 ALF 49.05

LAUNCH DATE AUG 17 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 581.661

EARTH TO MARS

RL 151.45 LAL -.00 LOL 323.95 VL 32.947 GAL 2.28 AZL 81.32 HCA 167.75 SMA 198.95 ECC .24185 INC 8.6771 V1 29.418  
 RP 247.06 LAP 1.83 LOP 131.84 VP 20.181 GAP .16 AZP 98.48 TAL 11.75 TAP 179.50 RCA 150.83 APO 247.07 V2 22.183  
 RC 309.224 GL 54.58 GP -52.17 ZAL 74.38 ZAP 77.25 ETS 165.75 ZAE 94.77 ETE 188.83 ZAC 37.39 ETC 293.54 LVI 29.48

PLANETOCENTRIC CONIC

C3 37.142 VHL 6.094 DLA 58.18 RAL 350.29 RAD 6649.7 VEL 12.531 PTH 7.41 VHP 3.876 DPA -39.79 RAP 43.86 ECC 1.6113  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21  
 36.78 2 19 56 4697.83 -22.17 225.72 245.66 34.70 3 38 13 3697.8 -41.59 208.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9928 TRA-2.1564 TC3-3.0638 BAU 2.0883 SGT 5678.1 SGR 4979.1 SG3 603.6 ST 110.2 SR 129.4 SS 66.0  
 RDE 2.6315 RRA-1.4122 RC3-2.8809 FAU .16050 RRT .9702 RRF .9966 RTF .9593 CRT .9675 CRS -.9995 CST -.9594  
 FDE 4.1663 FRA-1.9957 FC3-3.7411 BSP 12915 SGB 7552.0 R23 .1689 R13 .9827 LSA 181.6 MSA 23.0 SSA .3  
 BDE 3.3009 BRA 2.5776 BC3 4.2055 F3P 1034 SGI 7496.5 SGI 913.2 TMA 41.13 EL1 168.6 EL2 21.4 ALF 49.76

LAUNCH DATE AUG 18 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 24 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 35.385 GAL 2.62 AZL 90.02 HCA 83.79 SMA 265.00 ECC .43058 INC .0156 V1 29.424
RP 220.00 LAP -.02 LOP 48.70 VP 26.565 GAP 23.87 AZP 90.00 TAL 8.70 TAP 92.50 RCA 150.90 APO 379.11 V2 24.985
RC 82.809 GL -.12 GP -5.27 ZAL 71.77 ZAP 173.47 ETS 235.93 ZAE 159.62 ETE 345.38 ZAC 77.71 ETC 282.55 LVI -11.18

DISTANCE 273.281

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.929 VHL 6.239 DLA 13.64 RAL 34.39 RAD 6650.3 VEL 12.602 PTH 7.46 VHP 8.556 DPA 11.16 RAP 44.16 ECC 1.6407
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 59 27 3572.66 -47.12 134.91 281.37 97.52 11 59 0 2572.7 -38.79 103.65
60.00 11 23 50 3507.78 -40.17 130.00 282.29 93.54 12 22 17 2507.8 -34.38 100.51
70.00 11 58 48 3404.89 -34.15 121.93 282.56 90.49 12 55 32 2404.9 -30.38 93.85
80.00 12 50 56 3241.51 -29.82 109.49 282.51 88.45 13 44 58 2241.5 -27.43 82.32
90.00 14 5 10 3001.91 -28.19 91.82 282.45 87.70 14 55 12 2001.9 -26.31 64.97
100.00 15 33 48 2715.98 -29.82 70.86 282.51 88.45 16 19 4 1716.0 -27.43 43.69
110.00 16 58 14 2451.71 -34.15 50.85 282.56 90.49 17 39 6 1451.7 -30.38 22.77

DIFFERENTIAL CORRECTIONS

TDE -.3055 TRA -.8579 TC3 .3230 BAU .1737
RDE -.6276 RRA .2316 RC3 -.0845 FAU .05494
FDE .1675 FRA .2247 FC3-1.2219 BSP 1264
BDE .6980 BRA .8686 BC3 .3338 F8P 160

MID-COURSE EXECUTION ACCURACY

SGT 947.7 SGR 625.4 SG3 133.7
RRR -.0982 RRF .1225 RTF -.5659
SGB 1135.5 R23 -.0254 R13 .5693
SG1 951.2 SG2 620.1 THA 173.53

ORBIT DETERMINATION ACCURACY

ST 18.6 SR 29.0 SS 6.4
CRT .6761 CRS .8419 CST .9230
LSA 32.7 MSA 12.5 SSA 1.5
EL1 32.2 EL2 12.3 ALF 62.13

LAUNCH DATE AUG 18 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 35.236 GAL 2.66 AZL 89.98 HCA 84.91 SMA 259.58 ECC .41875 INC .0000 V1 29.424
RP 220.38 LAP .02 LOP 49.82 VP 26.327 GAP 23.27 AZP 90.00 TAL 9.02 TAP 93.93 RCA 150.87 APO 368.25 V2 24.944
RC 84.610 GL .09 GP -5.40 ZAL 71.16 ZAP 172.85 ETS 230.71 ZAE 159.27 ETE 345.06 ZAC 77.53 ETC 282.92 LVI -10.97

DISTANCE 275.692

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 37.252 VHL 6.103 DLA 13.63 RAL 33.72 RAD 6649.7 VEL 12.535 PTH 7.41 VHP 8.289 DPA 11.13 RAP 44.48 ECC 1.6131
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 56 50 3561.41 -47.01 133.84 279.59 98.34 11 56 11 2561.4 -38.40 102.85
60.00 11 21 13 3496.51 -40.12 129.04 280.64 94.18 12 19 29 2496.5 -34.09 99.71
70.00 11 56 11 3393.59 -34.14 121.05 280.98 91.01 12 52 44 2393.6 -30.16 93.04
80.00 12 48 20 3230.18 -29.84 108.65 280.97 88.89 13 42 10 2230.2 -27.26 81.52
90.00 14 2 35 2990.56 -28.22 90.99 280.92 88.11 14 52 25 1990.6 -26.16 64.17
100.00 15 31 12 2704.65 -29.84 70.02 280.97 88.89 16 16 17 1704.7 -27.26 42.89
110.00 16 55 37 2440.41 -34.14 49.97 280.98 91.01 17 36 18 1440.4 -30.16 21.96

DIFFERENTIAL CORRECTIONS

TDE -.3083 TRA -.8471 TC3 .3536 BAU .1821
RDE -.6176 RRA .2299 RC3 -.0935 FAU .05745
FDE .1761 FRA .2188 FC3-1.3351 BSP 1308
BDE .6894 BRA .8777 BC3 .3657 F8P 174

MID-COURSE EXECUTION ACCURACY

SGT 968.7 SGR 631.3 SG3 142.7
RRR -.1051 RRF .1316 RTF -.5774
SGB 1156.3 R23 -.0277 R13 .5811
SG1 972.6 SG2 625.3 THA 173.31

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 29.2 SS 6.6
CRT .6809 CRS .8530 CST .9172
LSA 33.0 MSA 12.6 SSA 1.6
EL1 32.5 EL2 12.4 ALF 61.65

LAUNCH DATE AUG 18 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 28 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 35.096 GAL 2.70 AZL 89.95 HCA 86.03 SMA 254.65 ECC .40765 INC .0490 V1 29.424
RP 220.76 LAP .05 LOP 50.94 VP 26.100 GAP 22.88 AZP 90.00 TAL 9.35 TAP 95.37 RCA 150.84 APO 358.46 V2 24.902
RC 86.480 GL .30 GP -5.53 ZAL 70.54 ZAP 172.18 ETS 226.68 ZAE 158.97 ETE 344.69 ZAC 77.35 ETC 282.49 LVI -10.77

DISTANCE 278.243

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.719 VHL 5.977 DLA 13.62 RAL 33.05 RAD 6649.2 VEL 12.475 PTH 7.37 VHP 8.032 DPA 11.09 RAP 44.78 ECC 1.5878
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 54 10 3550.70 -46.90 132.83 277.87 99.11 11 53 20 2550.7 -38.03 102.10
60.00 11 18 33 3485.78 -40.06 128.14 279.02 94.79 12 16 39 2485.8 -33.80 98.94
70.00 11 53 32 3382.84 -34.12 120.21 279.43 91.51 12 49 55 2382.8 -29.95 92.26
80.00 12 45 41 3219.41 -29.85 107.85 279.46 89.31 13 39 21 2219.4 -27.10 80.77
90.00 13 59 56 2979.79 -28.24 90.21 279.43 88.51 14 49 36 1979.8 -26.01 63.42
100.00 15 28 33 2693.89 -29.85 69.22 279.46 89.31 16 13 27 1693.9 -27.10 42.13
110.00 16 52 58 2429.66 -34.12 49.13 279.43 91.51 17 33 28 1429.7 -29.95 21.20

DIFFERENTIAL CORRECTIONS

TDE -.3089 TRA -.8364 TC3 .3893 BAU .1905
RDE -.6080 RRA .2281 RC3 -.1033 FAU .06011
FDE .1848 FRA .2110 FC3-1.4569 BSP 1350
BDE .6811 BRA .8670 BC3 .3989 F8P 188

MID-COURSE EXECUTION ACCURACY

SGT 989.6 SGR 636.9 SG3 152.3
RRR -.1127 RRF .1414 RTF -.5580
SGB 1176.9 R23 -.0300 R13 .5921
SG1 994.0 SG2 630.1 THA 173.04

ORBIT DETERMINATION ACCURACY

ST 19.2 SR 29.3 SS 6.8
CRT .6854 CRS .8639 CST .9105
LSA 33.4 MSA 12.7 SSA 1.6
EL1 32.8 EL2 12.5 ALF 61.20

LAUNCH DATE AUG 18 1973

FLIGHT TIME 104.00

ARRIVAL DATE NOV 30 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 34.984 GAL 2.75 AZL 89.91 HCA 87.14 SMA 250.20 ECC .39724 INC .0862 V1 29.424
RP 221.14 LAP .09 LOP 52.05 VP 25.862 GAP 22.49 AZP 90.00 TAL 9.67 TAP 96.81 RCA 150.81 APO 349.59 V2 24.861
RC 88.418 GL .52 GP -5.67 ZAL 69.92 ZAP 171.47 ETS 223.29 ZAE 158.73 ETE 344.29 ZAC 77.17 ETC 282.47 LVI -10.59

DISTANCE 280.918

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.316 VHL 5.858 DLA 13.62 RAL 32.37 RAD 6648.6 VEL 12.419 PTH 7.33 VHP 7.785 DPA 11.04 RAP 45.08 ECC 1.5648
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 51 28 3540.53 -46.79 131.88 276.20 99.84 11 50 29 2540.5 -37.67 101.39
80.00 11 15 51 3475.61 -40.00 127.28 277.44 95.37 12 13 47 2475.6 -33.52 98.22
70.00 11 50 50 3372.86 -34.10 119.41 277.92 91.98 12 47 3 2372.7 -29.74 91.56
80.00 12 43 0 3209.22 -29.86 107.09 277.99 89.71 13 36 29 2209.2 -26.94 80.05
90.00 13 57 15 2969.59 -28.26 89.46 277.97 88.88 14 46 44 1969.6 -25.87 62.71
100.00 15 25 52 2683.69 -29.86 68.46 277.99 89.71 16 10 36 1683.7 -26.94 41.42
110.00 16 50 17 2419.48 -34.10 48.33 277.92 91.98 17 30 36 1419.5 -29.74 20.48

DIFFERENTIAL CORRECTIONS

TDE -.3070 TRA -.8254 TC3 .4178 BAU .1988
RDE -.5987 RRA .2264 RC3 -.1139 FAU .06293
FDE .1938 FRA .2023 FC3-1.5878 BSP 1394
BDE .6729 BRA .8558 BC3 .4329 F8P 204

MID-COURSE EXECUTION ACCURACY

SGT 1009.7 SGR 642.4 SG3 182.5
RRR -.1213 RRF .1518 RTF -.5983
SGB 1196.7 R23 -.0321 R13 .6028
SG1 1014.7 SG2 634.5 THA 172.73

ORBIT DETERMINATION ACCURACY

ST 19.5 SR 29.5 SS 7.0
CRT .6895 CRS .8742 CST .9034
LSA 33.7 MSA 12.7 SSA 1.7
EL1 33.0 EL2 12.6 ALF 60.79



LAUNCH DATE AUG 18 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 10 1973

HELIOCENTRIC CONIC												DISTANCE 298.711		EARTH TO MARS											
RL	131.42	LAL	-.00	LOL	324.91	VL	34.406	GAL	2.98	AZL	89.74	HCA	92.63	SMA	233.19	ECC	.35396	INC	.2636	V1	29.424				
RP	223.06	LAP	.26	LOP	57.54	VP	24.917	GAP	20.59	AZP	90.01	TAL	11.36	TAP	103.99	RCA	150.65	APO	315.72	V2	24.652				
RC	98.976	GL	1.89	GP	-6.45	ZAL	66.83	ZAP	167.49	ETS	212.49	ZAE	158.36	ETE	341.53	ZAC	76.19	ETC	282.36	LVI	-9.47				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY											
C3	28.875	VHL	5.374	DLA	13.66	RAL	28.97	RAD	6646.6	VEL	12.199	PTH	7.16	VHP	6.879	DPA	10.65	RAP	46.43	ECC	1.4782				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	37	44	3497.89	-46.22	127.92	268.62	102.64	11	36	2	2497.9	-36.11	98.50											
60.00	11	2	4	3433.09	-39.87	123.71	270.24	97.77	11	59	18	2433.1	-32.31	95.27											
70.00	11	37	0	3330.30	-33.95	116.12	270.97	93.92	12	32	30	2330.3	-28.83	88.60											
80.00	12	29	7	3167.03	-29.83	103.96	271.20	91.35	13	21	54	2167.0	-26.24	77.11											
90.00	13	43	20	2927.48	-28.28	86.38	271.22	90.42	14	32	7	1927.5	-25.25	59.78											
100.00	15	11	59	2641.50	-29.83	65.33	271.20	91.35	15	56	0	1641.5	-26.24	38.48											
110.00	16	36	26	2377.12	-33.85	45.03	270.97	93.92	17	16	4	1377.1	-28.83	17.32											
TDE	-.3011	TRA	-.7602	TC3	.6025	BAU	.2426	SGT	1103.7	SGR	667.5	SG3	222.7	ST	20.4	SR	29.9	SS	8.2						
RDE	-.5564	RRA	.2172	RC3	-.1785	FAU	.07943	RRT	-.1800	RRF	.2135	RTF	-.6574	CRT	.7081	CR8	.9205	C8T	.6594						
FDE	.2528	FRA	.1367	FC3	-2.3814	BSP	1479	SG8	1289.9	R23	-.0325	R13	.6637	L8A	34.8	M8A	12.7	88A	2.1						
BDE	.6326	BRA	.7907	BC3	.6284	F8P	301	SG1	1113.7	SG2	650.7	THA	170.53	EL1	33.9	EL2	12.7	ALF	59.49						

LAUNCH DATE AUG 18 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC												DISTANCE 298.887		EARTH TO MARS											
RL	131.42	LAL	-.00	LOL	324.91	VL	34.312	GAL	3.00	AZL	89.70	HCA	93.72	SMA	230.58	ECC	.34681	INC	.2986	V1	29.424				
RP	223.44	LAP	.30	LOP	58.63	VP	24.746	GAP	20.22	AZP	90.02	TAL	11.70	TAP	105.41	RCA	150.61	APO	310.55	V2	24.611				
RC	101.244	GL	1.93	GP	-6.62	ZAL	66.23	ZAP	166.63	ETS	211.11	ZAE	158.45	ETE	340.81	ZAC	75.99	ETC	282.34	LVI	-9.24				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY											
C3	28.040	VHL	5.295	DLA	13.88	RAL	28.30	RAD	6646.2	VEL	12.165	PTH	7.13	VHP	6.481	DPA	10.54	RAP	46.66	ECC	1.4615				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	34	58	3490.99	-46.11	127.29	267.27	103.31	11	33	9	2491.0	-35.85	98.05											
60.00	10	59	18	3426.26	-39.61	123.14	268.95	98.16	11	56	24	2426.3	-32.11	94.80											
70.00	11	34	11	3323.56	-33.92	115.59	269.72	94.23	12	29	35	2323.6	-28.68	88.14											
80.00	12	26	16	3160.39	-29.82	103.47	269.96	91.61	13	18	56	2160.4	-26.13	76.65											
90.00	13	40	28	2920.89	-28.27	85.90	270.00	90.66	14	29	9	1920.9	-25.15	59.32											
100.00	15	9	8	2634.86	-29.82	64.84	269.96	91.61	15	53	3	1634.9	-26.13	38.02											
110.00	16	33	38	2370.38	-33.92	44.51	269.72	94.23	17	13	8	1370.4	-28.68	17.05											
TDE	-.3061	TRA	-.7530	TC3	.6325	BAU	.2480	SGT	1123.1	SGR	672.5	SG3	237.2	ST	20.8	SR	29.9	SS	8.4						
RDE	-.5487	RRA	.2131	RC3	-.1943	FAU	.08339	RRT	-.1880	RRF	.2287	RTF	-.6594	CRT	.7166	CR8	.9278	C8T	.8512						
FDE	.2637	FRA	.1191	FC3	-2.5746	BSP	1566	SG8	1309.1	R23	-.0416	R13	.6666	L8A	35.1	M8A	12.7	88A	2.1						
BDE	.6283	BRA	.7831	BC3	.6616	F8P	323	SG1	1133.9	SG2	654.3	THA	170.33	EL1	34.1	EL2	12.7	ALF	58.86						

LAUNCH DATE AUG 18 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC												DISTANCE 302.120		EARTH TO MARS											
RL	131.42	LAL	-.00	LOL	324.91	VL	34.224	GAL	3.04	AZL	89.67	HCA	94.80	SMA	226.18	ECC	.34009	INC	.3337	V1	29.424				
RP	223.83	LAP	.33	LOP	59.71	VP	24.581	GAP	19.85	AZP	90.03	TAL	12.03	TAP	106.83	RCA	150.58	APO	305.79	V2	24.569				
RC	103.560	GL	2.19	GP	-6.80	ZAL	65.64	ZAP	165.75	ETS	209.89	ZAE	158.58	ETE	340.02	ZAC	75.78	ETC	282.33	LVI	-9.02				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY											
C3	27.272	VHL	5.222	DLA	13.71	RAL	27.63	RAD	6645.9	VEL	12.134	PTH	7.10	VHP	6.291	DPA	10.42	RAP	46.89	ECC	1.4488				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	32	13	3484.62	-46.01	126.71	265.97	103.75	11	30	18	2484.6	-35.61	97.63											
60.00	10	56	31	3419.98	-39.54	122.62	267.70	98.51	11	53	31	2420.0	-31.93	94.37											
70.00	11	31	22	3317.39	-33.89	115.11	268.50	94.51	12	26	39	2317.4	-28.54	87.71											
80.00	12	23	25	3154.34	-29.81	103.02	268.77	91.85	13	15	59	2154.3	-26.02	76.23											
90.00	13	37	36	2914.89	-28.27	85.46	268.61	90.88	14	26	11	1914.9	-25.06	58.91											
100.00	15	6	16	2628.81	-29.81	64.39	268.77	91.85	15	50	5	1628.8	-26.02	37.60											
110.00	16	30	48	2364.21	-33.89	44.03	268.50	94.51	17	10	13	1364.2	-28.54	16.63											
TDE	-.3094	TRA	-.7440	TC3	.6831	BAU	.2537	SGT	1140.5	SGR	677.5	SG3	252.3	ST	21.2	SR	29.9	SS	8.7						
RDE	-.5413	RRA	.2128	RC3	-.2110	FAU	.08752	RRT	-.1979	RRF	.2449	RTF	-.6526	CRT	.7237	CR8	.9340	C8T	.8422						
FDE	.2788	FRA	.0979	FC3	-2.7784	BSP	1635	SG8	1326.6	R23	-.0493	R13	.6708	L8A	35.4	M8A	12.7	88A	2.2						
BDE	.6235	BRA	.7738	BC3	.6959	F8P	348	SG1	1152.3	SG2	657.4	THA	170.01	EL1	34.4	EL2	12.7	ALF	58.00						

LAUNCH DATE AUG 18 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC												DISTANCE 305.402		EARTH TO MARS											
RL	131.42	LAL	-.00	LOL	324.91	VL	34.141	GAL	3.08	AZL	89.63	HCA	95.88	SMA	225.97	ECC	.33378	INC	.3886	V1	29.424				
RP	224.22	LAP	.37	LOP	60.79	VP	24.423	GAP	19.49	AZP	90.04	TAL	12.36	TAP	108.24	RCA	150.55	APO	301.39	V2	24.527				
RC	105.921	GL	2.44	GP	-6.99	ZAL	65.08	ZAP	164.85	ETS	208.81	ZAE	158.75	ETE	339.15	ZAC	75.56	ETC	282.32	LVI	-8.79				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY											
C3	26.566	VHL	5.154	DLA	13.74	RAL	26.98	RAD	6645.6	VEL	12.105	PTH	7.08	VHP	6.107	DPA	10.29	RAP	47.10	ECC	1.4372				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	29	29	3478.78	-45.92	126.17	264.72	104.15	11	27	28	2478.8	-35.39	97.25											
60.00	10	53	44	3414.23	-39.48	122.14	266.50	98.82	11	50	38	2414.2	-31.75	93.98											
70.00	11	28	32	3311.78	-33.86	114.68	267.34	94.77	12	23	44	2311.8	-28.41	87.32											
80.00	12	20	32	3148.88	-29.79	102.61	267.62	92.06	13	13	1	2148.9	-25.92	75.86											
90.00	13	34	43	2909.50	-28.26	85.06	267.67	91.08	14	23	13	1909.5	-24.97	58.53											
100.00	15	3	24	2623.35	-29.79	63.98	267.62	92.06	15	47	7	1623.3	-25.92	37.23											
110.00	16	27	59	2358.60	-33.86	43.60	267.34	94.77	17	7	17	1358.6	-28.41	16.24											
TDE	-.3125	TRA	-.7348	TC3	.6948	BAU	.2598	SGT	1157.9	SGR	682.6	SG3	268.4	ST	21.5	SR	29.9	SS	9.0						
RDE	-.5340	RRA	.2105	RC3	-.2288	FAU	.09192	RRT	-.2090	RRF	.2617	RTF	-.6885	CRT	.7306	CR8	.9399	C8T	.8333						
FDE	.2940	FRA	.0751	FC3	-2.9954	BSP	1693	SG8	1344.1	R23	-.0562	R13	.6758	L8A	35.6	M8A	12.7	88A	2.3						
BDE	.6187	BRA	.7644	BC3	.7315	F8P	371	SG1	1170.8	SG2	660.2	THA	169.65	EL1	34.6	EL2	12.7	ALF	57.36						

LAUNCH DATE AUG 18 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC

DISTANCE 308.731

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 34.062 GAL 3.12 AZL 89.60 HCA 96.96 SMA 223.92 ECC .32784 INC .4038 V1 29.424
RP 224.61 LAP .40 LOP 61.87 VP 24.270 GAP 19.14 AZP 50.05 TAL 12.69 TAP 109.65 RCA 150.51 APO 297.33 V2 24.485
RC 108.326 GL 2.70 GP -7.19 ZAL 64.50 ZAP 163.94 ETS 207.85 ZAE 158.96 ETE 338.20 ZAC 75.34 ETC 282.31 LVI -8.56

PLANETOCENTRIC CONIC

C3 25.916 VHL 5.091 DLA 13.78 RAL 26.33 RAD 6645.4 VEL 12.078 PTH 7.06 VHP 5.930 DPA 10.15 RAP 47.30 ECC 1.4265
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 26 46 3473.41 -45.82 125.69 263.53 104.52 11 24 39 2473.4 -35.18 96.90
60.00 10 50 57 3409.00 -39.43 121.71 265.35 99.11 11 47 46 2409.0 -31.60 93.63
70.00 11 25 43 3306.72 -33.83 114.29 266.21 95.00 12 20 49 2306.7 -28.29 86.98
80.00 12 17 39 3143.99 -29.78 102.25 266.52 92.25 13 10 3 2144.0 -25.83 75.52
90.00 13 31 47 2904.70 -28.25 84.72 266.57 91.25 14 20 12 1904.7 -24.89 58.21
100.00 15 0 31 2618.47 -29.78 63.62 266.52 92.25 15 44 9 1618.5 -25.83 36.89
110.00 16 25 9 2353.54 -33.83 43.21 266.21 95.00 17 4 23 1353.5 -26.29 15.90

DIFFERENTIAL CORRECTIONS

TDE -.3148 TRA -.7245 TC3 .7265 BAU .2659
RDE -.5267 RRA .2080 RC3 -.2475 FAU .09648
FDE .3109 FRA .0501 FC3-3.2229 BSP 1744
BDE .6136 BRA .7537 BC3 .7675 FSP 398

MID-COURSE EXECUTION ACCURACY

SGT 1173.6 SGR 687.8 SG3 285.2
RRT -.2213 RRF .2790 RTF -.6712
SGB 1360.3 R23 -.0621 R13 .6815
SG1 1188.1 SG2 662.6 THA 169.22

ORBIT DETERMINATION ACCURACY

ST 21.8 SR 29.9 SS 9.3
CRT .7372 CR8 .9452 CST .8241
LSA 35.9 MSA 12.7 SSA 2.4
EL1 34.7 EL2 12.6 ALF 56.79

LAUNCH DATE AUG 18 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC

DISTANCE 312.101

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.987 GAL 3.16 AZL 89.56 HCA 98.03 SMA 222.02 ECC .32225 INC .4389 V1 29.424
RP 225.00 LAP .43 LOP 62.94 VP 24.123 GAP 18.78 AZP 90.06 TAL 13.01 TAP 111.04 RCA 150.48 APO 293.57 V2 24.443
RC 110.773 GL 2.96 GP -7.39 ZAL 63.94 ZAP 163.00 ETS 206.98 ZAE 159.22 ETE 337.18 ZAC 75.12 ETC 282.31 LVI -8.32

PLANETOCENTRIC CONIC

C3 25.318 VHL 5.032 DLA 13.82 RAL 25.70 RAD 6645.1 VEL 12.053 PTH 7.04 VHP 5.759 DPA 9.99 RAP 47.48 ECC 1.4167
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 24 3 3468.56 -45.74 125.25 262.40 104.84 11 21 52 2468.6 -35.00 96.59
60.00 10 48 12 3404.30 -39.38 121.32 264.25 99.37 11 44 56 2404.3 -31.45 93.31
70.00 11 22 53 3302.22 -33.80 113.94 265.14 95.20 12 17 55 2302.2 -28.19 86.67
80.00 12 14 45 3139.69 -29.77 101.93 265.45 92.42 13 7 5 2139.7 -25.75 75.23
90.00 13 28 52 2900.50 -28.25 84.41 265.51 91.41 14 17 12 1900.5 -24.82 57.92
100.00 14 57 37 2614.16 -29.77 63.30 265.45 92.42 15 41 11 1614.2 -25.75 36.60
110.00 16 22 19 2349.04 -33.80 42.86 265.14 95.20 17 1 28 1349.0 -28.19 15.59

DIFFERENTIAL CORRECTIONS

TDE -.3185 TRA -.7144 TC3 .7576 BAU .2719
RDE -.5197 RRA .2054 RC3 -.2674 FAU .10133
FDE .3262 FRA .0239 FC3-3.4649 BSP 1784
BDE .6085 BRA .7433 BC3 .8034 FSP 426

MID-COURSE EXECUTION ACCURACY

SGT 1188.7 SGR 693.3 SG3 303.0
RRT -.2350 RRF .2977 RTF -.6757
SGB 1376.1 R23 -.0682 R13 .6872
SG1 1204.8 SG2 664.8 THA 168.72

ORBIT DETERMINATION ACCURACY

ST 22.0 SR 29.8 SS 9.7
CRT .7431 CR8 .9493 CST .8150
LSA 36.1 MSA 12.6 SSA 2.5
EL1 34.8 EL2 12.6 ALF 56.27

LAUNCH DATE AUG 18 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC

DISTANCE 315.508

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.917 GAL 3.20 AZL 89.53 HCA 99.10 SMA 220.27 ECC .31700 INC .4740 V1 29.424
RP 225.39 LAP .47 LOP 64.01 VP 23.982 GAP 18.44 AZP 90.07 TAL 13.33 TAP 112.43 RCA 150.44 APO 290.09 V2 24.401
RC 113.259 GL 3.23 GP -7.60 ZAL 63.41 ZAP 162.05 ETS 206.20 ZAE 159.51 ETE 336.01 ZAC 74.89 ETC 282.30 LVI -8.09

PLANETOCENTRIC CONIC

C3 24.767 VHL 4.977 DLA 13.87 RAL 25.08 RAD 6644.9 VEL 12.031 PTH 7.02 VHP 5.594 DPA 9.82 RAP 47.65 ECC 1.4076
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 21 22 3464.20 -45.66 124.86 261.31 105.14 11 19 6 2464.2 -34.83 96.31
60.00 10 45 26 3400.11 -39.33 120.97 263.20 99.60 11 42 7 2400.1 -31.32 93.03
70.00 11 20 3 3296.25 -33.78 113.63 264.10 95.38 12 15 1 2298.3 -28.09 86.40
80.00 12 11 51 3135.97 -29.76 101.65 264.43 92.57 13 4 7 2136.0 -25.68 74.97
90.00 13 25 55 2896.89 -28.24 84.15 264.50 91.54 14 14 12 1896.9 -24.76 57.67
100.00 14 54 43 2610.44 -29.76 63.02 264.43 92.57 15 38 13 1610.4 -25.68 36.34
110.00 16 19 29 2345.07 -33.78 42.55 264.10 95.38 16 58 35 1345.1 -28.09 15.32

DIFFERENTIAL CORRECTIONS

TDE -.3183 TRA -.7040 TC3 .7879 BAU .2778
RDE -.5127 RRA .2026 RC3 -.2884 FAU .10640
FDE .3475 FRA -.0056 FC3-3.7191 BSP 1826
BDE .6034 BRA .7326 BC3 .8390 FSP 457

MID-COURSE EXECUTION ACCURACY

SGT 1202.6 SGR 698.9 SG3 321.7
RRT -.2491 RRF .3169 RTF -.6798
SGB 1391.0 R23 -.0743 R13 .6927
SG1 1220.7 SG2 666.9 THA 168.19

ORBIT DETERMINATION ACCURACY

ST 22.2 SR 29.7 SS 10.0
CRT .7492 CR8 .9531 CST .8058
LSA 36.3 MSA 12.6 SSA 2.6
EL1 34.9 EL2 12.5 ALF 55.75

LAUNCH DATE AUG 18 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC

DISTANCE 318.950

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.851 GAL 3.23 AZL 89.49 HCA 100.16 SMA 218.63 ECC .31206 INC .5091 V1 29.424
RP 225.78 LAP .50 LOP 65.07 VP 23.845 GAP 18.09 AZP 90.09 TAL 13.64 TAP 113.81 RCA 150.41 APO 286.86 V2 24.359
RC 115.782 GL 3.50 GP -7.82 ZAL 62.89 ZAP 161.08 ETS 205.50 ZAE 159.84 ETE 334.75 ZAC 74.66 ETC 282.30 LVI -7.85

PLANETOCENTRIC CONIC

C3 24.280 VHL 4.925 DLA 13.93 RAL 24.47 RAD 6644.7 VEL 12.010 PTH 7.00 VHP 5.435 DPA 9.64 RAP 47.81 ECC 1.3993
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 18 42 3460.32 -45.59 124.51 260.28 105.40 11 16 22 2460.3 -34.68 96.06
60.00 10 42 42 3396.43 -39.29 120.67 262.19 99.81 11 39 19 2396.4 -31.21 92.78
70.00 11 17 13 3294.82 -33.76 113.37 263.12 95.54 12 12 8 2294.8 -28.01 86.17
80.00 12 8 56 3132.81 -29.75 101.42 263.46 92.69 13 1 9 2132.8 -25.63 74.76
90.00 13 22 58 2893.86 -28.24 83.92 263.52 91.65 14 11 12 1893.9 -24.71 57.47
100.00 14 51 48 2607.28 -29.75 62.79 263.46 92.69 15 35 13 1607.3 -25.63 36.12
110.00 16 16 40 2341.64 -33.76 42.28 263.12 95.54 16 55 41 1341.6 -28.01 15.08

DIFFERENTIAL CORRECTIONS

TDE -.3200 TRA -.6936 TC3 .8170 BAU .2635
RDE -.5057 RRA .1997 RC3 -.3106 FAU .11174
FDE .3680 FRA -.0370 FC3-3.9875 BSP 1861
BDE .5985 BRA .7217 BC3 .8741 FSP 490

MID-COURSE EXECUTION ACCURACY

SGT 1215.5 SGR 705.0 SG3 341.4
RRT -.2639 RRF .3372 RTF -.6837
SGB 1405.1 R23 -.0807 R13 .6981
SG1 1235.7 SG2 668.8 THA 167.62

ORBIT DETERMINATION ACCURACY

ST 22.4 SR 29.6 SS 10.4
CRT .7553 CR8 .9560 CST .7971
LSA 36.4 MSA 12.5 SSA 2.7
EL1 35.0 EL2 12.4 ALF 55.23

LAUNCH DATE AUG 18 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -0.00 LOL 384.81 VL 33.788 GAL 3.27 AZL 89.46 MCA 101.22 SMA 217.12 ECC .30741 INC .5446 V1 29.424
RP 226.17 LAP .53 LOP 66.13 VP 23.713 GAP 17.75 AZP 90.11 TAL 13.95 TAP 115.17 RCA 150.37 APO 263.86 V2 24.318
RC 118.341 GL 3.77 GP -8.05 ZAL 62.38 ZAP 180.09 ETS 204.86 ZAE 180.20 ETE 333.37 ZAC 74.42 ETC 282.31 LVI -7.61

PLANETOCENTRIC CONIC

C3 23.791 VHL 4.078 DLA 14.00 RAL 23.87 RAD 6644.5 VEL 11.990 PTH 6.99 VHP 5.281 DPA 9.45 RAP 47.94 ECC 1.3915
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 16 3 3456.91 -48.53 124.21 259.30 105.63 11 13 40 2456.9 -34.54 95.85
60.00 10 39 59 3393.24 -39.25 120.41 261.23 99.98 11 36 32 2393.2 -31.11 92.57
70.00 11 14 24 3291.93 -33.74 113.14 262.17 95.67 12 9 16 2291.9 -27.94 85.97
80.00 12 6 1 3130.22 -29.74 101.23 262.52 92.79 12 58 11 2130.2 -25.58 74.58
90.00 13 20 0 2891.42 -28.23 83.75 262.59 91.74 14 8 11 1891.4 -24.67 57.30
100.00 14 48 52 2604.69 -29.74 62.60 262.52 92.79 15 32 17 1604.7 -25.58 35.95
110.00 16 13 50 2338.74 -33.74 42.08 262.17 95.67 16 52 49 1338.7 -27.94 14.89

DIFFERENTIAL CORRECTIONS

TDE -.3217 TRA -.6833 TC3 .8445 BAW .2688
RDE -.4988 RRA .1966 RC3 -.3340 FAU .11734
FDE .3899 FRA -.0707 FC3-4.2697 BSP 1895
BDE .5936 BRA .7110 BC3 .9081 FSP 524

MID-COURSE EXECUTION ACCURACY

SGT 1227.1 SGR 711.4 SG3 362.1
RRT -.2793 RRF .3583 RTF -.6871
SG8 1418.4 R23 -.0875 R13 .7032
SG1 1249.8 S62 670.7 THA 167.00

ORBIT DETERMINATION ACCURACY

ST 22.6 SR 29.5 S8 10.8
CRT .7612 CRS .9583 CST .7888
LSA 36.6 MSA 12.4 S8A 2.8
EL1 35.1 EL2 12.4 ALF 54.71

LAUNCH DATE AUG 18 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -0.00 LOL 324.91 VL 33.729 GAL 3.30 AZL 89.42 MCA 102.28 SMA 215.71 ECC .30304 INC .5800 V1 29.424
RP 226.56 LAP .57 LOP 67.19 VP 23.586 GAP 17.41 AZP 90.12 TAL 14.25 TAP 116.93 RCA 150.34 APO 281.08 V2 24.276
RC 120.933 GL 4.05 GP -8.29 ZAL 61.89 ZAP 159.08 ETS 204.27 ZAE 160.59 ETE 331.84 ZAC 74.16 ETC 282.31 LVI -7.37

PLANETOCENTRIC CONIC

C3 23.360 VHL 4.833 DLA 14.07 RAL 23.29 RAD 6644.3 VEL 11.973 PTH 6.97 VHP 5.133 DPA 9.24 RAP 48.07 ECC 1.3844
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 13 26 3453.98 -48.48 123.94 258.37 105.82 11 11 0 2454.0 -34.43 95.66
60.00 10 37 16 3390.53 -39.22 120.16 260.32 100.13 11 33 47 2390.5 -31.03 92.39
70.00 11 11 35 3289.55 -33.72 112.96 261.27 95.78 12 6 24 2289.5 -27.89 85.81
80.00 12 3 5 3128.19 -29.73 101.08 261.63 92.87 12 55 13 2128.2 -25.54 74.44
90.00 13 17 1 2889.55 -28.23 83.61 261.70 91.81 14 5 10 1889.6 -24.64 57.17
100.00 14 45 57 2602.66 -29.73 62.45 261.63 92.87 15 29 19 1602.7 -25.54 35.81
110.00 16 11 1 2336.37 -33.72 41.88 261.27 95.78 16 49 57 1336.4 -27.89 14.72

DIFFERENTIAL CORRECTIONS

TDE -.3232 TRA -.6731 TC3 .8706 BAW .2941
RDE -.4919 RRA .1932 RC3 -.3588 FAU .12324
FDE .4143 FRA -.1070 FC3-4.5675 BSP 1921
BDE .5886 BRA .7003 BC3 .9416 FSP 560

MID-COURSE EXECUTION ACCURACY

SGT 1237.7 SGR 718.4 SG3 384.0
RRT -.2954 RRF .3802 RTF -.6902
SG8 1431.1 R23 -.0944 R13 .7082
SG1 1263.2 S62 672.4 THA 166.32

ORBIT DETERMINATION ACCURACY

ST 22.8 SR 29.4 S8 11.3
CRT .7670 CRS .9601 CST .7808
LSA 36.7 MSA 12.4 S8A 2.9
EL1 35.1 EL2 12.2 ALF 54.20

LAUNCH DATE AUG 18 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC

RL 151.42 LAL -0.00 LOL 324.91 VL 33.673 GAL 3.33 AZL 89.38 MCA 103.33 SMA 214.40 ECC .29893 INC .6156 V1 29.424
RP 226.95 LAP .60 LOP 68.24 VP 23.463 GAP 17.08 AZP 90.14 TAL 14.54 TAP 117.87 RCA 150.31 APO 278.49 V2 24.234
RC 123.556 GL 4.32 GP -8.53 ZAL 61.42 ZAP 158.05 ETS 203.73 ZAE 161.00 ETE 330.16 ZAC 73.93 ETC 282.32 LVI -7.13

PLANETOCENTRIC CONIC

C3 22.962 VHL 4.792 DLA 14.16 RAL 22.72 RAD 6644.1 VEL 11.956 PTH 6.96 VHP 4.991 DPA 9.01 RAP 48.17 ECC 1.3779
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 51 3451.46 -48.43 123.72 257.48 105.99 11 8 22 2451.5 -34.33 95.50
60.00 10 34 34 3368.31 -39.19 120.00 259.45 100.25 11 31 3 2388.3 -30.96 92.24
70.00 11 8 46 3287.69 -33.71 112.82 260.41 95.86 12 3 33 2287.7 -27.84 85.68
80.00 12 0 8 3126.71 -29.73 100.97 260.77 92.92 12 52 15 2126.7 -25.31 74.34
90.00 13 14 1 2888.26 -28.22 83.52 260.85 91.85 14 2 9 1888.3 -24.62 57.08
100.00 14 43 0 2601.18 -29.73 62.34 260.77 92.92 15 26 21 1601.2 -25.51 35.71
110.00 16 8 12 2334.51 -33.71 41.73 260.41 95.86 16 47 7 1334.5 -27.84 14.80

DIFFERENTIAL CORRECTIONS

TDE -.3248 TRA -.6631 TC3 .8948 BAW .2990
RDE -.4890 RRA .1897 RC3 -.3849 FAU .12944
FDE .4399 FRA -.1484 FC3-4.6802 BSP 1952
BDE .5837 BRA .6897 BC3 .9740 FSP 599

MID-COURSE EXECUTION ACCURACY

SGT 1247.0 SGR 728.0 SG3 406.9
RRT -.3119 RRF .4030 RTF -.6123
SG8 1442.9 R23 -.1020 R13 .7127
SG1 1275.7 S62 674.3 THA 169.61

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 29.2 S8 11.8
CRT .7728 CRS .9614 CST .7732
LSA 36.9 MSA 12.4 S8A 3.0
EL1 35.1 EL2 12.1 ALF 53.66

LAUNCH DATE AUG 18 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -0.00 LOL 324.91 VL 33.621 GAL 3.36 AZL 89.35 MCA 104.38 SMA 213.18 ECC .29506 INC .6515 V1 29.424
RP 227.34 LAP .63 LOP 69.29 VP 23.345 GAP 16.75 AZP 90.16 TAL 14.82 TAP 119.20 RCA 150.28 APO 276.08 V2 24.193
RC 126.208 GL 4.61 GP -8.79 ZAL 60.97 ZAP 157.01 ETS 203.24 ZAE 161.43 ETE 328.30 ZAC 73.68 ETC 282.33 LVI -6.88

PLANETOCENTRIC CONIC

C3 22.594 VHL 4.753 DLA 14.25 RAL 22.17 RAD 6644.0 VEL 11.941 PTH 6.94 VHP 4.853 DPA 8.77 RAP 48.26 ECC 1.3718
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 8 17 3449.40 -48.39 123.54 256.65 106.13 11 5 47 2449.4 -34.25 95.37
60.00 10 31 54 3386.55 -39.17 119.86 258.63 100.35 11 28 20 2386.6 -30.90 92.13
70.00 11 5 57 3286.33 -33.70 112.71 259.60 95.92 12 0 43 2286.3 -27.81 85.59
80.00 11 57 11 3125.78 -29.72 100.90 259.96 92.96 12 49 17 2125.8 -25.49 74.27
90.00 13 11 0 2887.54 -28.22 83.46 260.03 91.88 13 59 8 1887.5 -24.61 57.03
100.00 14 40 3 2600.25 -29.72 62.27 259.96 92.96 15 23 24 1600.3 -25.49 35.64
110.00 16 5 23 2333.15 -33.70 41.63 259.60 95.92 16 44 16 1333.2 -27.81 14.51

DIFFERENTIAL CORRECTIONS

TDE -.3266 TRA -.6533 TC3 .9189 BAW .3037
RDE -.4780 RRA .1859 RC3 -.4124 FAU .13593
FDE .4682 FRA -.1685 FC3-5.2084 BSP 1975
BDE .5789 BRA .6792 BC3 1.0054 FSP 640

MID-COURSE EXECUTION ACCURACY

SGT 1254.9 SGR 734.3 SG3 431.0
RRT -.3286 RRF .4264 RTF -.6944
SG8 1454.0 R23 -.1100 R13 .7171
SG1 1287.2 S62 676.1 THA 164.84

ORBIT DETERMINATION ACCURACY

ST 23.2 SR 29.0 S8 12.3
CRT .7787 CRS .9622 CST .7664
LSA 37.0 MSA 12.3 S8A 3.1
EL1 35.2 EL2 12.0 ALF 53.10



LAUNCH DATE AUG 18 1973

FLIGHT TIME 139.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC

DISTANCE 336.576

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.01 VL 33.971 GAL 3.39 AZL 89.31 HCA 109.43 SMA 212.04 ECC .29142 INC .6874 V1 29.424
RP 227.73 LAP .66 LOP 70.34 VP 23.230 GAP 16.42 AZP 90.18 TAL 15.09 TAP 120.32 RCA 150.25 APO 273.83 V2 24.152
RC 128.887 GL 4.89 GP -9.05 ZAL 60.54 ZAP 155.94 ETS 202.78 ZAE 161.88 ETE 326.25 ZAC 73.42 ETC 282.35 LVI -6.64

PLANETOCENTRIC CONIC

C3 22.254 VHL 4.717 DLA 14.35 RAL 21.64 RAD 6643.8 VEL 11.927 PTH 6.93 VHP 4.721 DPA 8.52 RAP 48.34 ECC 1.3662
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 5 45 3447.77 -45.36 123.39 255.86 106.23 11 3 13 2447.8 -34.19 95.27
60.00 10 29 14 3385.26 -39.15 119.75 257.85 100.42 11 25 40 2385.3 -30.86 92.04
70.00 11 3 8 3285.48 -33.69 112.64 258.82 95.96 11 57 54 2285.5 -27.79 85.53
80.00 11 54 14 3125.40 -29.72 100.87 259.19 92.98 12 46 19 2125.4 -25.49 74.25
90.00 13 7 58 2887.38 -28.22 83.45 259.26 91.89 13 56 6 1887.4 -24.60 57.02
100.00 14 37 6 2599.87 -29.72 62.24 259.19 92.98 15 20 26 1599.9 -25.49 35.62
110.00 16 2 35 2332.30 -33.69 41.56 258.82 95.96 16 41 27 1332.3 -27.79 14.45

DIFFERENTIAL CORRECTIONS

TDE -.3283 TRA -.6441 TC3 .9359 BAU .3079
RDE -.4710 RRA .1818 RC3 -.4414 FAU .14271
FDE .4978 FRA -.2332 FC3-5.9517 BSP 2001
BDE .5741 BRA .6693 BC3 1.0347 FSP 682

MID-COURSE EXECUTION ACCURACY

SGT 1261.2 SGR 743.4 SG3 456.3
RRT -.3453 RRF .4506 RTF -.6952
SGB 1464.0 R23 -.1190 R13 .7207
SG1 1297.4 SG2 678.2 THA 164.02

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 28.8 SS 12.9
CRT .7843 CRS .9625 CST .7598
LSA 37.2 MSA 12.2 SSA 3.2
EL1 35.1 EL2 11.9 ALF 92.54

LAUNCH DATE AUG 18 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC

DISTANCE 340.169

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.524 GAL 3.41 AZL 89.28 HCA 106.47 SMA 210.98 ECC .28800 INC .7238 V1 29.424
RP 228.12 LAP .69 LOP 71.38 VP 23.119 GAP 16.09 AZP 90.21 TAL 15.35 TAP 121.82 RCA 150.22 APO 271.74 V2 24.110
RC 131.592 GL 5.18 GP -9.32 ZAL 60.13 ZAP 154.85 ETS 202.35 ZAE 162.33 ZAE 323.99 ZAC 73.16 ETC 282.37 LVI -6.38

PLANETOCENTRIC CONIC

C3 21.941 VHL 4.684 DLA 14.46 RAL 21.12 RAD 6643.7 VEL 11.914 PTH 6.92 VHP 4.993 DPA 8.25 RAP 48.39 ECC 1.3611
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 3 15 3446.56 -45.34 123.28 255.12 106.31 11 0 42 2446.6 -34.14 95.19
60.00 10 26 36 3384.41 -39.14 119.68 257.11 100.46 11 23 0 2384.4 -30.84 91.99
70.00 11 0 20 3285.12 -33.69 112.62 258.09 95.98 11 55 5 2285.1 -27.78 85.51
80.00 11 51 16 3125.55 -29.72 100.88 258.46 92.97 12 43 21 2125.5 -25.49 74.26
90.00 13 4 55 2887.79 -28.22 83.48 258.53 91.87 13 53 3 1887.8 -24.61 57.05
100.00 14 34 7 2600.02 -29.72 62.25 258.46 92.97 15 17 27 1600.0 -25.49 35.63
110.00 15 59 46 2331.94 -33.69 41.53 258.09 95.98 16 38 38 1331.9 -27.78 14.42

DIFFERENTIAL CORRECTIONS

TDE -.3298 TRA -.6351 TC3 .9526 BAU .3118
RDE -.4639 RRA .1776 RC3 -.4719 FAU .14980
FDE .5298 FRA -.2803 FC3-5.9110 BSP 2024
BDE .5692 BRA .6595 BC3 1.0631 FSP 728

MID-COURSE EXECUTION ACCURACY

SGT 1266.0 SGR 753.5 SG3 482.7
RRT -.3623 RRF .4754 RTF -.6955
SGB 1473.2 R23 -.1283 R13 .7244
SG1 1306.7 SG2 680.4 THA 163.13

ORBIT DETERMINATION ACCURACY

ST 23.5 SR 28.6 SS 13.4
CRT .7896 CRS .9626 CST .7540
LSA 37.3 MSA 12.2 SSA 3.3
EL1 35.1 EL2 11.8 ALF 91.96

LAUNCH DATE AUG 18 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC

DISTANCE 343.780

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.480 GAL 3.44 AZL 89.24 HCA 107.51 SMA 209.99 ECC .28478 INC .7603 V1 29.424
RP 228.51 LAP .73 LOP 72.42 VP 23.012 GAP 15.77 AZP 90.23 TAL 15.60 TAP 123.12 RCA 150.19 APO 269.79 V2 24.069
RC 134.321 GL 5.47 GP -9.61 ZAL 59.74 ZAP 153.74 ETS 201.95 ZAE 162.78 ETE 321.50 ZAC 72.89 ETC 282.40 LVI -6.13

PLANETOCENTRIC CONIC

C3 21.651 VHL 4.653 DLA 14.58 RAL 20.61 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 4.470 DPA 7.96 RAP 48.43 ECC 1.3563
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 0 48 3445.76 -45.32 123.21 254.43 106.37 10 58 12 2445.8 -34.11 95.14
60.00 10 23 58 3384.01 -39.14 119.65 256.42 100.49 11 20 22 2384.0 -30.83 91.96
70.00 10 57 32 3285.24 -33.69 112.63 257.40 95.97 11 52 17 2285.2 -27.78 85.51
80.00 11 48 16 3126.23 -29.73 100.93 257.76 92.94 12 40 23 2126.2 -25.50 74.31
90.00 13 1 51 2888.74 -28.23 83.55 257.83 91.84 13 50 0 1888.7 -24.63 57.12
100.00 14 31 8 2600.71 -29.73 62.30 257.76 92.94 15 14 29 1600.7 -25.50 38.87
110.00 15 56 58 2332.06 -33.69 41.54 257.40 95.97 16 35 50 1332.1 -27.78 14.43

DIFFERENTIAL CORRECTIONS

TDE -.3313 TRA -.6282 TC3 .9870 BAU .3157
RDE -.4588 RRA .1730 RC3 -.5041 FAU .15726
FDE .5650 FRA -.3315 FC3-6.2883 BSP 2040
BDE .5642 BRA .6496 BC3 1.0905 FSP 775

MID-COURSE EXECUTION ACCURACY

SGT 1269.3 SGR 764.6 SG3 510.8
RRT -.3792 RRF .5006 RTF -.6553
SGB 1481.8 R23 -.1381 R13 .7279
SG1 1315.1 SG2 682.9 THA 162.18

ORBIT DETERMINATION ACCURACY

ST 23.7 SR 28.3 SS 14.1
CRT .7932 CRS .9823 CST .7488
LSA 37.4 MSA 12.2 SSA 3.4
EL1 35.0 EL2 11.8 ALF 91.38

LAUNCH DATE AUG 18 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC

DISTANCE 347.407

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.438 GAL 3.46 AZL 89.20 HCA 108.55 SMA 208.06 ECC .28176 INC .7971 V1 29.424
RP 228.90 LAP .78 LOP 73.46 VP 22.908 GAP 15.46 AZP 90.25 TAL 15.84 TAP 124.39 RCA 150.16 APO 267.97 V2 24.028
RC 137.073 GL 5.76 GP -9.90 ZAL 59.37 ZAP 152.61 ETS 201.57 ZAE 163.23 ETE 318.75 ZAC 72.62 ETC 282.42 LVI -5.87

PLANETOCENTRIC CONIC

C3 21.383 VHL 4.624 DLA 14.70 RAL 20.13 RAD 6643.4 VEL 11.890 PTH 6.90 VHP 4.351 DPA 7.66 RAP 48.45 ECC 1.3519
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 58 19 3445.36 -45.32 123.18 253.78 106.39 10 55 45 2445.4 -34.09 95.12
60.00 10 21 21 3384.05 -39.14 119.65 255.77 100.48 11 17 45 2384.0 -30.83 91.96
70.00 10 54 43 3285.85 -33.69 112.67 256.74 95.94 11 49 29 2285.8 -27.80 85.56
80.00 11 45 16 3127.45 -29.73 101.02 257.10 92.90 12 37 24 2127.4 -25.53 74.39
90.00 12 58 46 2890.25 -28.23 83.66 257.17 91.78 13 48 56 1890.3 -24.65 57.22
100.00 14 28 8 2601.92 -29.73 62.39 257.10 92.90 15 11 30 1601.9 -25.53 35.76
110.00 15 54 10 2332.67 -33.69 41.59 256.74 95.94 16 33 2 1332.7 -27.80 14.47

DIFFERENTIAL CORRECTIONS

TDE -.3329 TRA -.6180 TC3 .9774 BAU .3189
RDE -.4492 RRA .1880 RC3 -.5378 FAU .16498
FDE .5591 FRA -.3858 FC3-6.6796 BSP 2058
BDE .5591 BRA .6404 BC3 1.1156 FSP 825

MID-COURSE EXECUTION ACCURACY

SGT 1270.4 SGR 776.9 SG3 539.3
RRT -.3956 RRF .5261 RTF -.6937
SGB 1489.1 R23 -.1489 R13 .7308
SG1 1321.8 SG2 685.8 THA 161.15

ORBIT DETERMINATION ACCURACY

ST 23.8 SR 28.0 SS 14.7
CRT .8003 CRS .9617 CST .7436
LSA 37.5 MSA 12.2 SSA 3.5
EL1 35.0 EL2 11.5 ALF 90.74

LAUNCH DATE AUG 18 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC

DISTANCE 351.081

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.308 GAL 3.49 AZL 89.17 HCA 109.88 SMA 208.20 ECC .27800 INC .8343 V1 29.424
RP 229.28 LAP .78 LOP 74.49 VP 22.808 GAP 15.14 AZP 90.28 TAL 16.08 TAP 125.86 RCA 130.13 APO 266.27 V2 23.988
RC 139.847 GL 6.06 GP -10.21 ZAL 59.01 ZAP 151.46 ETS 201.21 ZAE 163.66 ETE 315.71 ZAC 72.33 ETC 282.44 LVI -8.62

PLANETOCENTRIC CONIC

C3 21.135 VHL 4.597 DLA 14.84 RAL 19.66 RAD 6643.3 VEL 11.080 PTH 6.89 VHP 4.237 DPA 7.34 RAP 48.44 ECC 1.3478
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 55 33 3448.34 -45.32 123.17 253.16 106.39 10 53 19 2445.3 -34.09 95.12
60.00 10 16 45 3384.46 -39.13 119.89 255.15 100.46 11 15 10 2384.5 -30.84 91.89
70.00 10 31 34 3286.90 -33.70 112.75 256.12 95.90 11 46 41 2286.9 -27.82 85.63
80.00 11 42 15 3129.15 -29.74 101.15 256.48 92.83 12 34 24 2129.2 -25.56 74.51
90.00 12 55 38 2892.27 -26.23 83.81 256.53 91.71 13 43 51 1892.3 -24.69 87.36
100.00 14 25 7 2603.62 -29.74 62.92 256.48 92.83 15 8 31 1603.6 -25.56 35.87
110.00 15 51 21 2333.71 -33.70 41.67 256.12 95.90 16 30 15 1333.7 -27.82 14.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3220 TRA -.5975 TC3 1.0093 BAU .3281 SGT 1271.1 SGR 791.3 SG3 570.6 ST 23.2 SR 27.7 SS 15.3
RDE -.4421 RRA .1624 RC3 -.5743 FAU .17341 RRT -.4277 RRF .5532 RTF -.7066 CRT .8010 CRS .9598 CST .7314
FDE .6352 FRA -.4500 FC3-7.1029 B8P 1921 SGB 1497.3 R23 -.1399 R13 .7462 LSA 37.2 MSA 12.1 SSA 3.6
BDE .5469 BRA .6191 BC3 1.1613 F8P 869 SG1 1332.9 SG2 682.2 THA 159.50 EL1 34.4 EL2 11.2 ALF 51.32

LAUNCH DATE AUG 18 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC

DISTANCE 354.707

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.361 GAL 3.51 AZL 89.13 HCA 110.61 SMA 207.40 ECC .27623 INC .8718 V1 29.424
RP 229.67 LAP .82 LOP 75.52 VP 22.711 GAP 14.83 AZP 90.31 TAL 16.30 TAP 126.91 RCA 150.11 APO 264.68 V2 23.947
RC 142.841 GL 6.36 GP -10.52 ZAL 58.69 ZAP 150.29 ETS 200.87 ZAE 164.06 ETE 312.39 ZAC 72.05 ETC 282.49 LVI -5.33

PLANETOCENTRIC CONIC

C3 20.906 VHL 4.572 DLA 14.98 RAL 19.20 RAD 6643.2 VEL 11.070 PTH 6.88 VHP 4.127 DPA 7.01 RAP 48.42 ECC 1.3441
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 53 30 3445.74 -45.32 123.21 252.60 106.37 10 50 55 2445.7 -34.11 95.14
60.00 10 16 10 3385.38 -39.16 119.76 254.58 100.41 11 12 35 2385.4 -30.87 92.05
70.00 10 49 6 3288.46 -33.71 112.87 255.55 95.83 11 43 54 2288.5 -27.86 85.73
80.00 11 39 13 3131.43 -29.74 101.32 255.90 92.74 12 31 24 2131.4 -25.60 74.66
90.00 12 52 30 2894.90 -26.24 84.00 255.96 91.61 13 40 44 1894.9 -24.73 57.54
100.00 14 22 5 2605.90 -29.74 62.69 255.90 92.74 15 5 30 1605.9 -25.60 36.03
110.00 15 48 32 2335.28 -33.71 41.79 255.55 95.83 16 27 27 1335.3 -27.86 14.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3288 TRA -.5951 TC3 1.0043 BAU .3286 SGT 1268.5 SGR 806.1 SG3 601.8 ST 23.7 SR 27.4 SS 16.1
RDE -.4340 RRA -.1570 RC3 -.6114 FAU .18172 RRT -.4367 RRF .5785 RTF -.6975 CRT .8080 CRS .9594 CST .7313
FDE .6818 FRA -.5081 FC3-7.5251 B8P 1994 SGB 1503.0 R23 -.1598 R13 .7441 LSA 37.5 MSA 12.1 SSA 3.7
BDE .5445 BRA .6154 BC3 1.1758 F8P 927 SG1 1336.0 SG2 683.6 THA 158.52 EL1 34.5 EL2 11.1 ALF 50.12

LAUNCH DATE AUG 18 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

DISTANCE 358.377

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.327 GAL 3.53 AZL 89.09 HCA 111.64 SMA 206.64 ECC .27372 INC .9097 V1 29.424
RP 230.05 LAP .85 LOP 76.55 VP 22.617 GAP 14.52 AZP 90.34 TAL 16.51 TAP 128.14 RCA 150.08 APO 263.21 V2 23.907
RC 145.456 GL 6.67 GP -10.65 ZAL 58.38 ZAP 149.09 ETS 200.55 ZAE 164.43 ETE 308.76 ZAC 71.75 ETC 282.53 LVI -5.09

PLANETOCENTRIC CONIC

C3 20.694 VHL 4.549 DLA 15.14 RAL 18.77 RAD 6643.1 VEL 11.862 PTH 6.88 VHP 4.022 DPA 6.65 RAP 48.38 ECC 1.3406
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 51 7 3446.51 -45.34 123.28 252.08 106.32 10 48 34 2446.5 -34.14 95.19
60.00 10 13 38 3386.69 -39.17 119.87 254.05 100.34 11 10 2 2386.7 -30.91 92.14
70.00 10 46 17 3290.48 -33.73 113.03 255.01 95.74 11 41 7 2290.5 -27.91 85.87
80.00 11 36 9 3134.22 -29.75 101.52 255.35 92.63 12 28 23 2134.2 -25.65 74.85
90.00 12 49 19 2898.07 -26.24 84.23 255.41 91.50 13 37 37 1898.1 -24.78 57.75
100.00 14 19 1 2608.69 -29.75 62.89 255.35 92.63 15 2 29 1608.7 -25.65 36.22
110.00 15 45 43 2337.30 -33.73 41.95 255.01 95.74 16 24 40 1337.3 -27.91 14.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3332 TRA -.5915 TC3 .9988 BAU .3297 SGT 1265.8 SGR 822.8 SG3 634.3 ST 24.0 SR 27.0 SS 16.8
RDE -.4258 RRA .1512 RC3 -.6503 FAU .19038 RRT -.4470 RRF .6040 RTF -.6592 CRT .8137 CRS .9586 CST .7295
FDE .7288 FRA -.5701 FC3-7.9636 B8P 2042 SGB 1807.9 R23 -.1775 R13 .7436 LSA 37.8 MSA 12.2 SSA 3.7
BDE .5407 BRA .6103 BC3 1.1917 F8P 986 SG1 1338.3 SG2 684.9 THA 157.36 EL1 34.4 EL2 10.9 ALF 48.12

LAUNCH DATE AUG 18 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

DISTANCE 362.059

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.294 GAL 3.54 AZL 89.05 HCA 112.66 SMA 205.94 ECC .27135 INC .9480 V1 29.424
RP 230.44 LAP .87 LOP 77.57 VP 22.526 GAP 14.22 AZP 90.37 TAL 16.70 TAP 129.36 RCA 150.06 APO 261.83 V2 23.867
RC 148.289 GL 6.99 GP -11.18 ZAL 58.09 ZAP 147.87 ETS 200.23 ZAE 164.75 ETE 304.81 ZAC 71.45 ETC 282.58 LVI -4.82

PLANETOCENTRIC CONIC

C3 20.498 VHL 4.527 DLA 15.31 RAL 18.55 RAD 6643.1 VEL 11.853 PTH 6.87 VHP 3.920 DPA 6.28 RAP 48.32 ECC 1.3373
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 48 46 3447.66 -45.36 123.38 251.59 106.24 10 46 14 2447.7 -34.18 95.26
60.00 10 11 2 3386.41 -39.19 120.01 253.55 100.25 11 7 30 2386.4 -30.96 92.25
80.00 11 33 3 3137.53 -29.76 101.77 254.83 92.50 12 25 21 2137.5 -25.71 75.08
90.00 12 46 6 2901.78 -26.25 84.50 254.89 91.36 13 34 28 1901.8 -24.84 58.01
100.00 14 15 35 2612.00 -29.76 63.14 254.83 92.50 14 59 27 1612.0 -25.71 36.45
110.00 15 42 54 2339.78 -33.74 42.14 254.50 95.82 16 21 53 1339.8 -27.97 14.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3367 TRA -.5872 TC3 .9918 BAU .3313 SGT 1257.7 SGR 840.9 SG3 668.3 ST 24.3 SR 26.8 SS 17.7
RDE -.4174 RRA .1450 RC3 -.6913 FAU .19940 RRT -.4574 RRF .6293 RTF -.6812 CRT .8189 CRS .9578 CST .7282
FDE .7806 FRA -.6358 FC3-8.4210 B8P 2072 SGB 1512.9 R23 -.1937 R13 .7444 LSA 38.0 MSA 12.3 SSA 3.8
BDE .5363 BRA .6049 BC3 1.2090 F8P 1046 SG1 1340.3 SG2 701.8 THA 158.06 EL1 34.3 EL2 10.8 ALF 48.17

LAUNCH DATE AUG 18 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

DISTANCE 365.751

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.263 GAL 3.56 AZL 89.01 MCA 113.68 SMA 205.29 ECC .26913 INC .9867 V1 29.424
RP 230.82 LAP .90 LOP 78.59 VP 22.438 GAP 13.92 AZP 90.40 TAL 16.89 TAP 130.57 RCA 150.04 APO 260.54 V2 23.627
RC 151.140 GL 7.29 GP -11.53 ZAL 57.82 ZAP 146.63 ETS 199.93 ZAE 165.00 ETE 300.55 ZAC 71.15 ETC 262.63 LVI -4.55

PLANETOCENTRIC CONIC

C3 20.316 VHL 4.507 DLA 15.49 RAL 17.94 RAD 6643.0 VEL 11.846 PTH 6.86 VHP 3.822 DPA 5.89 RAP 48.24 ECC 1.3344
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 48 26 3449.17 -45.39 123.51 251.15 106.14 10 43 55 2449.2 -34.24 95.36
60.00 10 8 28 3390.53 -39.22 120.18 253.10 100.13 11 4 58 2390.5 -31.03 92.39
70.00 10 40 37 3295.90 -33.76 113.45 254.03 95.49 11 35 33 2295.9 -28.04 86.24
80.00 11 29 56 3141.35 -29.77 102.05 254.35 92.36 12 22 18 2141.3 -25.78 75.34
90.00 12 42 30 2906.04 -28.26 84.81 254.40 91.20 13 31 16 1906.0 -24.91 58.30
100.00 14 12 48 2615.82 -29.77 63.42 254.35 92.36 14 56 24 1615.8 -25.78 36.71
110.00 15 40 3 2342.72 -33.76 42.37 254.03 95.49 16 19 6 1342.7 -28.04 15.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3389 TRA -.5831 TC3 .9821 BAU .3331 SGT 1249.4 SGR 861.1 S63 703.5 ST 24.5 SR 26.1 SS 18.5
RDE -.4087 RRA .1386 RC3 -.7343 FAU .20874 RRT -.4674 RRF .6543 RTF -.6727 CRT .8232 CRS .9568 CST .7264
FDE .8348 FRA -.7039 FC3-8.8952 BSP 2090 SGB 1517.4 R23 -.2091 R13 .7460 LSA 38.2 MSA 12.4 SSA 3.8
BDE .5309 BRA .5993 BC3 1.2263 FSP 1109 SG1 1341.6 S62 708.9 THA 154.59 EL1 34.2 EL2 10.6 ALF 47.29

LAUNCH DATE AUG 18 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 369.453

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.234 GAL 3.57 AZL 88.97 MCA 114.69 SMA 204.88 ECC .26704 INC 1.0259 V1 29.424
RP 231.20 LAP .93 LOP 79.61 VP 22.353 GAP 13.62 AZP 90.43 TAL 17.07 TAP 131.76 RCA 150.02 APO 259.33 V2 23.787
RC 154.006 GL 7.60 GP -11.89 ZAL 57.57 ZAP 145.37 ETS 199.64 ZAE 165.18 ETE 296.01 ZAC 70.84 ETC 262.68 LVI -4.27

PLANETOCENTRIC CONIC

C3 20.148 VHL 4.489 DLA 15.67 RAL 17.55 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 3.729 DPA 5.48 RAP 48.14 ECC 1.3316
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 44 8 3451.04 -45.42 123.68 250.75 106.02 10 41 39 2451.0 -34.31 95.48
60.00 10 5 55 3393.05 -39.25 120.39 252.67 99.99 11 2 28 2393.1 -31.11 92.56
70.00 10 37 46 3299.30 -33.78 113.71 253.59 95.34 11 32 45 2299.3 -28.12 86.47
80.00 11 26 47 3145.69 -29.78 102.38 253.90 92.19 12 19 13 2145.7 -25.86 75.64
90.00 12 39 32 2910.84 -28.26 85.17 253.95 91.03 13 28 3 1910.8 -24.99 58.63
100.00 14 9 39 2620.16 -29.78 63.74 253.90 92.19 14 53 19 1620.2 -25.86 37.01
110.00 15 37 12 2346.11 -33.78 42.63 253.59 95.34 16 16 18 1346.1 -28.12 15.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3408 TRA -.5786 TC3 .9693 BAU .3350 SGT 1238.9 SGR 883.3 S63 740.0 ST 24.6 SR 25.7 SS 19.5
RDE -.3996 RRA .1316 RC3 -.7794 FAU .21845 RRT -.4759 RRF .6787 RTF -.6632 CRT .8275 CRS .9556 CST .7246
FDE .8927 FRA -.7771 FC3-9.3862 BSP 2105 SGB 1521.5 R23 -.2237 R13 .7485 LSA 38.4 MSA 12.6 SSA 3.9
BDE .5252 BRA .5934 BC3 1.2438 FSP 1176 SG1 1341.9 S62 717.2 THA 152.96 EL1 34.0 EL2 10.4 ALF 46.40

LAUNCH DATE AUG 18 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

DISTANCE 373.165

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.208 GAL 3.59 AZL 88.93 MCA 115.70 SMA 204.10 ECC .26508 INC 1.0657 V1 29.424
RP 231.58 LAP .96 LOP 80.82 VP 22.270 GAP 13.32 AZP 90.46 TAL 17.23 TAP 132.94 RCA 150.00 APO 256.21 V2 23.748
RC 156.890 GL 7.92 GP -12.26 ZAL 57.35 ZAP 144.08 ETS 199.35 ZAE 165.28 ETE 291.21 ZAC 70.52 ETC 262.74 LVI -3.99

PLANETOCENTRIC CONIC

C3 19.993 VHL 4.471 DLA 15.87 RAL 17.18 RAD 6642.8 VEL 11.832 PTH 6.85 VHP 3.639 DPA 5.06 RAP 48.02 ECC 1.3290
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 41 50 3453.27 -45.47 123.88 250.38 105.87 10 39 23 2453.3 -34.40 95.62
60.00 10 3 21 3395.97 -39.28 120.83 252.29 99.83 10 59 57 2396.0 -31.20 92.75
70.00 10 34 53 3303.14 -33.81 114.01 253.18 95.16 11 29 57 2303.1 -28.21 86.73
80.00 11 23 35 3150.94 -29.80 102.74 253.48 92.00 12 16 6 2150.5 -25.95 75.97
90.00 12 36 11 2916.20 -28.27 85.58 253.52 90.83 13 24 48 1916.2 -25.08 59.00
100.00 14 6 27 2625.02 -29.80 64.10 253.48 92.00 14 50 12 1625.0 -25.95 37.34
110.00 15 34 20 2349.96 -33.81 42.93 253.18 95.16 16 13 30 1350.0 -28.21 15.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3423 TRA -.5749 TC3 .9525 BAU .3371 SGT 1226.6 SGR 907.6 S63 777.8 ST 24.8 SR 25.1 SS 20.4
RDE -.3901 RRA .1243 RC3 -.8266 FAU .22844 RRT -.4826 RRF .7024 RTF -.6523 CRT .8314 CRS .9545 CST .7233
FDE .9558 FRA -.8521 FC3-9.8917 BSP 2112 SGB 1525.8 R23 -.2379 R13 .7515 LSA 38.6 MSA 12.7 SSA 3.9
BDE .5190 BRA .5882 BC3 1.2612 FSP 1243 SG1 1341.7 S62 726.7 THA 151.18 EL1 33.8 EL2 10.3 ALF 45.48

LAUNCH DATE AUG 18 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

DISTANCE 378.884

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.181 GAL 3.60 AZL 88.89 MCA 116.71 SMA 203.57 ECC .26324 INC 1.1060 V1 29.424
RP 231.95 LAP .99 LOP 81.63 VP 22.190 GAP 13.03 AZP 90.50 TAL 17.38 TAP 134.10 RCA 149.98 APO 257.16 V2 23.708
RC 159.785 GL 8.25 GP -12.64 ZAL 57.14 ZAP 142.77 ETS 199.06 ZAE 165.27 ETE 286.22 ZAC 70.19 ETC 262.80 LVI -3.71

PLANETOCENTRIC CONIC

C3 19.849 VHL 4.455 DLA 16.08 RAL 16.82 RAD 6642.8 VEL 11.826 PTH 6.85 VHP 3.553 DPA 4.61 RAP 47.88 ECC 1.3267
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 39 33 3455.86 -45.51 124.11 250.03 105.70 10 37 9 2455.9 -34.50 95.78
60.00 10 0 48 3399.29 -39.32 120.91 251.93 99.65 10 57 27 2399.3 -31.30 92.98
70.00 10 32 0 3307.44 -33.83 114.34 252.81 94.97 11 27 7 2307.4 -28.31 87.03
80.00 11 20 21 3155.93 -29.81 103.14 253.09 91.79 12 12 57 2155.9 -26.05 76.34
90.00 12 32 47 2922.12 -28.27 85.99 253.12 90.62 13 21 29 1922.1 -25.17 59.41
100.00 14 3 13 2630.40 -29.81 64.50 253.09 91.79 14 47 3 1630.4 -26.05 37.71
110.00 15 31 26 2354.26 -33.83 43.26 252.81 94.97 16 10 40 1354.3 -28.31 15.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3432 TRA -.5718 TC3 .9313 BAU .3392 SGT 1212.0 SGR 934.0 S63 816.6 ST 24.9 SR 24.6 SS 21.4
RDE -.3802 RRA .1166 RC3 -.8758 FAU .23868 RRT -.4869 RRF .7252 RTF -.6394 CRT .8348 CRS .9532 CST .7215
FDE 1.0218 FRA -.8308 FC-10.4102 BSP 2114 SGB 1530.1 R23 -.2511 R13 .7552 LSA 38.7 MSA 12.9 SSA 3.9
BDE .5122 BRA .5835 BC3 1.2784 FSP 1312 SG1 1340.6 S62 737.5 THA 149.21 EL1 33.5 EL2 10.1 ALF 44.56

LAUNCH DATE AUG 18 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 33.157 GAL 3.61 AZL 88.65 HCA 117.72 SMA 203.07 ECC .26151 INC 1.1469 V1 29.424
RP 232.33 LAP 1.02 LOP 82.83 VP 22.112 GAP 12.74 AZP 90.53 TAL 17.82 TAP 135.24 RCA 149.07 APO 236.18 V2 23.670
RC 162.693 GL 6.38 GP -13.03 ZAL 56.95 ZAP 141.43 ETS 198.78 ZAE 165.15 ETE 281.10 ZAC 69.86 ETC 282.07 LVI -3.42

PLANETOCENTRIC CONIC

C3 19.717 VHL 4.440 DLA 16.30 RAL 16.48 RAD 6642.7 VEL 11.821 PTH 6.84 VHP 3.470 DPA 4.15 RAP 47.72 ECC 1.3245
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 37 17 3458.79 -45.57 124.37 249.73 103.50 10 34 55 2458.8 -34.62 93.97
60.00 9 56 14 3402.89 -39.36 121.21 251.61 99.45 10 34 57 2403.0 -31.41 93.22
70.00 10 29 5 3312.20 -33.86 114.71 252.47 94.75 11 24 17 2312.2 -26.42 87.35
80.00 11 17 4 3161.83 -29.82 103.57 252.73 91.56 12 9 45 2161.8 -26.15 76.75
90.00 12 29 19 2928.61 -28.28 86.46 252.76 90.38 13 18 8 1928.6 -25.27 59.86
100.00 13 59 56 2636.31 -29.82 64.94 252.73 91.56 14 43 52 1636.3 -26.15 38.12
110.00 15 28 31 2359.02 -33.86 43.63 252.47 94.75 16 7 50 1359.0 -28.42 16.27

DIFFERENTIAL CORRECTIONS

TDE -.3438 TRA -.5892 TC3 .9080 BAU .3418
RDE -.3698 RRA .1084 RC3 -.9275 FAU .24930
FDE 1.0926 FRA -1.0127 FC-10.9466 B8P 2115
BDE .5049 BRA .3794 BC3 1.2966 F8P 1384

MID-COURSE EXECUTION ACCURACY

SGT 1195.7 SGR 963.0 SG3 856.8
RRT -.4885 RRF .7472 RTF -.6245
SG8 1535.3 R23 -.2631 R13 .7600
SG1 1339.6 SG2 750.0 THA 147.03

ORBIT DETERMINATION ACCURACY

ST 25.0 SR 24.0 S8 22.4
CRT .8379 CR8 .9517 C8T .7199
LSA 39.0 MSA 13.1 S8A 3.9
EL1 33.2 EL2 9.9 ALF 43.59

LAUNCH DATE AUG 18 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 33.134 GAL 3.61 AZL 88.81 HCA 118.72 SMA 202.81 ECC .25989 INC 1.1684 V1 29.424
RP 232.70 LAP 1.04 LOP 83.64 VP 22.037 GAP 12.45 AZP 90.57 TAL 17.85 TAP 136.37 RCA 149.95 APO 235.26 V2 23.631
RC 165.610 GL 8.91 GP -13.44 ZAL 56.78 ZAP 140.07 ETS 198.49 ZAE 164.91 ETE 275.95 ZAC 69.53 ETC 282.94 LVI -3.13

PLANETOCENTRIC CONIC

C3 19.594 VHL 4.427 DLA 16.53 RAL 16.15 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 3.392 DPA 3.66 RAP 47.54 ECC 1.3225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 35 1 3462.07 -45.63 124.67 249.49 105.28 10 32 43 2462.1 -34.75 96.18
60.00 9 55 40 3407.10 -39.41 121.95 251.32 99.22 10 52 27 2407.1 -31.54 93.50
70.00 10 26 8 3317.41 -33.89 115.12 252.15 94.51 11 21 25 2317.4 -28.54 87.71
80.00 11 13 43 3168.28 -29.83 104.05 252.39 91.31 12 6 31 2168.3 -26.26 77.20
90.00 12 25 47 2935.87 -28.28 88.98 252.42 90.12 13 14 43 1935.7 -25.38 60.35
100.00 13 56 35 2642.75 -29.83 65.42 252.39 91.31 14 40 38 1642.7 -26.26 38.57
110.00 15 25 34 2364.23 -33.89 44.03 252.15 94.51 16 4 58 1364.2 -28.54 16.63

DIFFERENTIAL CORRECTIONS

TDE -.3439 TRA -.5875 TC3 .8786 BAU .3445
RDE -.3590 RRA .0988 RC3 -.9812 FAU .28010
FDE 1.1673 FRA -1.0974 FC-11.4924 B8P 2120
BDE .4971 BRA .5762 BC3 1.3151 F8P 1459

MID-COURSE EXECUTION ACCURACY

SGT 1177.4 SGR 994.3 SG3 897.9
RRT -.4888 RRF .7681 RTF -.6068
SG8 1541.1 R23 -.2734 R13 .7657
SG1 1338.3 SG2 764.2 THA 144.61

ORBIT DETERMINATION ACCURACY

ST 25.1 SR 23.4 S8 23.5
CRT .8406 CR8 .9502 C8T .7177
LSA 39.2 MSA 13.3 S8A 3.9
EL1 32.9 EL2 9.6 ALF 42.59

LAUNCH DATE AUG 18 1973

FLIGHT TIME 166.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 33.113 GAL 3.62 AZL 88.77 HCA 119.72 SMA 202.18 ECC .25837 INC 1.2305 V1 29.424
RP 233.07 LAP 1.07 LOP 84.83 VP 21.964 GAP 12.17 AZP 90.61 TAL 17.77 TAP 137.49 RCA 149.94 APO 254.41 V2 23.593
RC 168.537 GL 9.25 GP -13.86 ZAL 56.64 ZAP 138.69 ETS 198.21 ZAE 164.54 ETE 270.85 ZAC 69.18 ETC 283.02 LVI -2.84

PLANETOCENTRIC CONIC

C3 19.481 VHL 4.414 DLA 16.77 RAL 15.83 RAD 6642.6 VEL 11.811 PTH 6.83 VHP 3.316 DPA 3.16 RAP 47.34 ECC 1.3206
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 32 46 3465.70 -45.69 124.99 249.27 105.04 10 30 31 2465.7 -34.89 96.41
60.00 9 53 5 3411.59 -39.46 121.92 251.07 98.97 10 49 57 2411.6 -31.67 93.80
70.00 10 23 9 3323.09 -33.92 115.56 251.87 94.25 11 18 32 2323.1 -28.67 88.10
80.00 11 10 19 3175.26 -29.84 104.57 252.09 91.03 12 3 14 2175.3 -26.38 77.68
90.00 12 22 11 2943.31 -28.28 87.54 252.10 89.84 13 11 14 1943.3 -25.49 60.88
100.00 13 53 11 2649.73 -29.84 65.94 252.09 91.03 14 37 21 1649.7 -26.38 39.03
110.00 15 22 35 2369.91 -33.92 44.47 251.87 94.25 16 2 5 1369.9 -28.67 17.02

DIFFERENTIAL CORRECTIONS

TDE -.3440 TRA -.5868 TC3 .8398 BAU .3475
RDE -.3475 RRA .0988 RC3 -1.0371 FAU .27112
FDE 1.2480 FRA -1.1843 FC-12.0484 B8P 2120
BDE .4880 BRA .3740 BC3 1.3344 F8P 1534

MID-COURSE EXECUTION ACCURACY

SGT 1157.3 SGR 1028.0 SG3 939.8
RRT -.4886 RRF .7877 RTF -.5587
SG8 1547.9 R23 -.2815 R13 .7727
SG1 1336.8 SG2 780.5 THA 141.94

ORBIT DETERMINATION ACCURACY

ST 25.2 SR 22.7 S8 24.6
CRT .8431 CR8 .9488 C8T .7180
LSA 39.4 MSA 13.6 S8A 3.9
EL1 32.5 EL2 9.4 ALF 41.48

LAUNCH DATE AUG 18 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 33.093 GAL 3.63 AZL 88.73 HCA 120.72 SMA 201.77 ECC .25694 INC 1.2734 V1 29.424
RP 233.44 LAP 1.09 LOP 85.83 VP 21.893 GAP 11.89 AZP 90.68 TAL 17.88 TAP 138.60 RCA 149.93 APO 253.61 V2 23.554
RC 171.472 GL 9.60 GP -14.29 ZAL 56.80 ZAP 137.29 ETS 197.92 ZAE 164.05 ETE 265.86 ZAC 68.84 ETC 283.10 LVI -2.54

PLANETOCENTRIC CONIC

C3 19.377 VHL 4.402 DLA 17.02 RAL 15.53 RAD 6642.6 VEL 11.806 PTH 6.83 VHP 3.244 DPA 2.63 RAP 47.12 ECC 1.3189
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 30 30 3469.85 -45.76 125.35 249.08 104.77 10 28 20 2469.7 -35.04 96.66
60.00 9 50 29 3416.45 -39.51 122.33 250.84 98.70 10 47 25 2416.5 -31.82 94.13
70.00 10 20 7 3329.20 -33.95 116.03 251.61 93.97 11 15 37 2329.2 -28.81 88.52
80.00 11 6 51 3182.76 -29.85 105.13 251.81 90.74 11 59 54 2182.8 -26.51 78.20
90.00 12 18 29 2951.51 -28.28 88.14 251.81 89.54 13 7 41 1951.5 -25.62 61.45
100.00 13 49 43 2657.23 -29.85 66.50 251.81 90.74 14 34 0 1657.2 -26.51 39.57
110.00 15 19 34 2376.02 -33.95 44.95 251.61 93.97 15 59 10 1376.0 -28.81 17.44

DIFFERENTIAL CORRECTIONS

TDE -.3326 TRA -.5556 TC3 .8220 BAU .3554
RDE -.3370 RRA .0797 RC3 -1.0988 FAU .28330
FDE 1.3132 FRA -1.2953 FC-12.6572 B8P 2015
BDE .4735 BRA .5813 BC3 1.3721 F8P 1590

MID-COURSE EXECUTION ACCURACY

SGT 1132.7 SGR 1067.5 SG3 985.9
RRT -.4896 RRF .8075 RTF -.5780
SG8 1556.5 R23 -.2690 R13 .7897
SG1 1344.5 SG2 784.2 THA 138.45

ORBIT DETERMINATION ACCURACY

ST 24.5 SR 22.0 S8 25.5
CRT .8434 CR8 .9438 C8T .7043
LSA 39.1 MSA 13.7 S8A 3.9
EL1 31.6 EL2 9.2 ALF 41.47

LAUNCH DATE AUG 18 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC

DISTANCE 399.585

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.075 GAL 3.63 AZL 88.68 HCA 121.71 SMA 201.40 ECC .25560 INC 1.3170 V1 29.424  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.824 GAP 11.61 AZP 90.69 TAL 17.97 TAP 139.68 RCA 149.92 APO 252.87 V2 23.517  
 RC 174.413 GL 9.95 GP -14.73 ZAL 56.40 ZAP 135.88 ETS 197.82 ZAE 163.43 ETE 261.08 ZAC 68.48 ETC 283.19 LVI -2.23

PLANETOCENTRIC CONIC

C3 19.281 VHL 4.391 DLA 17.29 RAL 15.24 RAD 6642.5 VEL 11.802 PTH 6.82 VHP 3.178 DPA 2.09 RAP 46.88 ECC 1.3173  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 28 15 3473.99 -45.83 125.74 248.92 104.48 10 26 9 2474.0 -35.21 96.94  
 60.00 9 47 52 3421.76 -39.56 122.77 250.65 98.41 10 44 54 2421.8 -31.98 94.49  
 70.00 10 17 3 3335.83 -33.98 116.55 251.38 93.67 11 12 39 2335.8 -28.95 88.98  
 80.00 11 3 18 3190.88 -29.86 105.73 251.56 90.42 11 56 29 2190.9 -26.64 78.77  
 90.00 12 14 43 2960.39 -28.27 88.79 251.55 89.21 13 4 3 1960.4 -25.74 62.06  
 100.00 13 46 10 2665.35 -29.86 67.10 251.56 90.42 14 30 36 1665.4 -26.64 40.14  
 110.00 15 16 30 2382.64 -33.98 45.46 251.38 93.67 15 56 12 1382.6 -28.95 17.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3399 TRA -.5650 TC3 .7593 BAU .3567 SGT 1112.4 SGR 1104.4 SG3 1027.5 ST 25.0 SR 21.2 SS 27.0  
 RDE -.3232 RRA .0710 RC3-1.1570 FAU .29408 RRT -.4602 RRF .8239 RTF -.5372 CRT .8467 CRS .9440 CST .7088  
 FDE 1.4187 FRA-1.3716 FC-13.2047 BSP 2104 SGB 1567.5 R23 -.2815 R13 .7945 LSA 39.9 MSA 14.1 SSA 3.8  
 BDE .4690 BRA .5694 BC3 1.3839 FSP 1684 SG1 1339.4 SG2 814.4 THA 135.45 EL1 31.6 EL2 8.9 ALF 39.40

LAUNCH DATE AUG 18 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

DISTANCE 399.341

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.057 GAL 3.63 AZL 88.64 HCA 122.70 SMA 201.05 ECC .25435 INC 1.3615 V1 29.424  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.758 GAP 11.33 AZP 90.74 TAL 18.06 TAP 140.75 RCA 149.91 APO 252.18 V2 23.479  
 RC 177.360 GL 10.31 GP -15.18 ZAL 56.30 ZAP 134.42 ETS 197.33 ZAE 162.70 ETE 256.55 ZAC 68.12 ETC 283.28 LVI -1.93

PLANETOCENTRIC CONIC

C3 19.193 VHL 4.361 DLA 17.56 RAL 14.96 RAD 6642.5 VEL 11.799 PTH 6.82 VHP 3.111 DPA 1.53 RAP 46.63 ECC 1.3159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 26 0 3478.66 -45.91 126.16 248.80 104.16 10 23 58 2478.7 -35.38 97.24  
 60.00 9 45 14 3427.44 -39.62 123.24 250.48 98.09 10 42 21 2427.4 -32.15 94.88  
 70.00 10 13 56 3342.92 -34.01 117.10 251.18 93.35 11 9 39 2342.9 -29.11 89.48  
 80.00 10 59 41 3199.56 -29.86 106.38 251.33 90.08 11 53 0 2199.6 -26.79 79.37  
 90.00 12 10 50 2969.88 -28.26 89.48 251.31 88.87 13 0 20 1969.9 -25.88 62.73  
 100.00 13 42 33 2674.03 -29.86 67.74 251.33 90.08 14 27 7 1674.0 -26.79 40.74  
 110.00 15 13 23 2389.74 -34.01 46.02 251.18 93.35 15 53 12 1389.7 -29.11 18.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3410 TRA -.5695 TC3 .7022 BAU .3610 SGT 1089.9 SGR 1145.2 SG3 1070.9 ST 25.2 SR 20.3 SS 28.3  
 RDE -.3095 RRA .0610 RC3-1.2190 FAU .30538 RRT -.4342 RRF .8397 RTF -.4994 CRT .8486 CRS .9422 CST .7077  
 FDE 1.5190 FRA-1.4606 FC-13.7749 BSP 2144 SGB 1581.0 R23 -.2790 R13 .8060 LSA 40.4 MSA 14.4 SSA 3.8  
 BDE .4605 BRA .5728 BC3 1.4068 FSP 1771 SG1 1339.9 SG2 839.2 THA 131.74 EL1 31.2 EL2 8.7 ALF 37.86

LAUNCH DATE AUG 18 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC

DISTANCE 403.102

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.041 GAL 3.63 AZL 88.59 HCA 123.68 SMA 200.72 ECC .25318 INC 1.4067 V1 29.424  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.693 GAP 11.06 AZP 90.78 TAL 18.13 TAP 141.81 RCA 149.90 APO 251.54 V2 23.442  
 RC 180.313 GL 10.67 GP -15.64 ZAL 56.23 ZAP 132.95 ETS 197.02 ZAE 161.85 ETE 252.30 ZAC 67.76 ETC 283.37 LVI -1.61

PLANETOCENTRIC CONIC

C3 19.112 VHL 4.372 DLA 17.85 RAL 14.70 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 3.049 DPA .96 RAP 46.35 ECC 1.3145  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 23 44 3483.67 -46.00 126.62 248.71 103.82 10 21 47 2483.7 -35.58 97.57  
 60.00 9 42 34 3433.53 -39.67 123.75 250.35 97.75 10 39 47 2433.5 -32.33 95.30  
 70.00 10 10 46 3390.49 -34.04 117.69 251.01 93.00 11 6 38 2390.5 -29.27 90.01  
 80.00 10 55 58 3208.82 -29.86 107.06 251.13 89.72 11 49 27 2208.8 -26.93 80.02  
 90.00 12 6 51 2980.02 -28.24 90.22 251.10 88.50 12 56 31 1980.0 -26.02 63.43  
 100.00 13 38 50 2683.29 -29.86 68.43 251.13 89.72 14 23 33 1683.3 -26.93 41.39  
 110.00 15 10 12 2397.31 -34.04 46.80 251.01 93.00 15 50 10 1397.3 -29.27 18.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3395 TRA -.5731 TC3 .6441 BAU .3670 SGT 1086.7 SGR 1189.5 SG3 1115.5 ST 25.2 SR 19.5 SS 29.6  
 RDE -.2954 RRA .0502 RC3-1.2839 FAU .31698 RRT -.4055 RRF .8545 RTF -.4493 CRT .8498 CRS .9395 CST .7043  
 FDE 1.6201 FRA-1.5546 FC-14.3586 BSP 2187 SGB 1597.7 R23 -.2661 R13 .8213 LSA 40.8 MSA 14.7 SSA 3.7  
 BDE .4500 BRA .5753 BC3 1.4364 FSP 1854 SG1 1345.1 SG2 862.3 THA 127.47 EL1 30.7 EL2 8.4 ALF 36.43

LAUNCH DATE AUG 18 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

DISTANCE 408.867

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 33.028 GAL 3.63 AZL 88.55 HCA 124.67 SMA 200.42 ECC .25208 INC 1.4930 V1 29.424  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.630 GAP 10.78 AZP 90.83 TAL 18.19 TAP 142.86 RCA 149.90 APO 250.95 V2 23.405  
 RC 183.270 GL 11.04 GP -16.11 ZAL 56.18 ZAP 131.46 ETS 196.70 ZAE 160.89 ETE 248.35 ZAC 67.38 ETC 283.47 LVI -1.29

PLANETOCENTRIC CONIC

C3 19.039 VHL 4.363 DLA 18.15 RAL 14.45 RAD 6642.4 VEL 11.792 PTH 6.82 VHP 2.991 DPA .36 RAP 46.06 ECC 1.3133  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 27 3489.04 -46.08 127.11 248.65 103.45 10 19 36 2489.0 -35.78 97.92  
 60.00 9 39 51 3440.02 -39.73 124.29 250.24 97.39 10 37 11 2440.0 -32.52 95.74  
 70.00 10 7 32 3358.55 -34.06 118.32 250.86 92.63 11 3 30 2358.6 -29.45 90.57  
 80.00 10 52 9 3218.69 -29.85 107.80 250.95 89.34 11 45 48 2218.7 -27.09 80.71  
 90.00 12 2 45 2990.82 -28.22 91.01 250.90 88.10 12 52 35 1990.8 -26.16 64.19  
 100.00 13 35 1 2693.16 -29.85 69.17 250.95 89.34 14 19 54 1693.2 -27.09 42.08  
 110.00 15 6 58 2405.37 -34.06 47.23 250.86 92.63 15 47 3 1405.4 -29.45 19.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3370 TRA -.5771 TC3 .5815 BAU .3744 SGT 1043.7 SGR 1236.5 SG3 1160.6 ST 25.2 SR 18.5 SS 31.0  
 RDE -.2805 RRA .0390 RC3-1.3512 FAU .32867 RRT -.3706 RRF .8662 RTF -.4138 CRT .8508 CRS .9362 CST .6999  
 FDE 1.7273 FRA-1.6515 FC-14.9455 BSP 2190 SGB 1618.1 R23 -.2438 R13 .8391 LSA 41.2 MSA 15.1 SSA 3.7  
 BDE .4384 BRA .5784 BC3 1.4710 FSP 1936 SG1 1354.8 SG2 884.7 THA 122.66 EL1 30.2 EL2 8.1 ALF 34.95

LAUNCH DATE AUG 18 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 33.012 GAL 3.63 AZL 88.90 HCA 125.65 SMA 200.14 ECC .29106 INC 1.5001 V1 29.424
RP 235.24 LAP 1.22 LOP 90.57 VP 21.589 GAP 10.51 AZP 90.87 TAL 18.24 TAP 143.89 RCA 149.90 APO 250.39 V2 23.389
RC 186.232 GL 11.42 GP -16.60 ZAL 56.14 ZAP 129.95 ETS 196.36 ZAE 159.84 ETE 244.69 ZAC 87.01 ETC 283.57 LVI -.67

PLANETOCENTRIC CONIC

C3 18.972 VHL 4.356 DLA 18.47 RAL 14.21 RAD 6642.4 VEL 11.789 PTH 6.81 VHP 2.935 DPA -.26 RAP 45.75 ECC 1.3122
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 19 9 3494.76 -46.17 127.63 248.62 103.05 10 17 24 2494.8 -36.00 98.30
60.00 9 37 7 3446.93 -39.79 124.87 250.16 97.00 10 34 34 2446.9 -32.72 96.22
70.00 10 4 13 3367.13 -34.09 118.98 250.73 92.23 11 0 20 2367.1 -29.63 91.17
80.00 10 48 14 3229.18 -29.84 108.58 250.79 88.93 11 42 3 2229.2 -27.25 81.45
90.00 11 58 30 3002.33 -28.19 91.85 250.73 87.68 12 48 33 2002.3 -26.31 65.00
100.00 13 31 6 2703.66 -29.84 69.95 250.79 88.93 14 16 9 1703.7 -27.25 42.82
110.00 15 3 40 2413.95 -34.09 47.90 250.73 92.23 15 43 54 1413.9 -29.63 20.09

DIFFERENTIAL CORRECTIONS

TDE -.3332 TRA -.5816 TC3 .5142 BAU .3633
RDE -.2649 RRA .0271 RC3-1.4209 FAU .34042
FDE 1.6377 FRA-1.7502 FC-15.5345 BSP 2220
BDE .4257 BRA .5924 BC3 1.5111 F8P 2018

MID-COURSE EXECUTION ACCURACY

SGT 1021.6 SGR 1286.5 SG3 1206.1
RRT -.3287 RRF .0808 RTF -.3620
SGB 1642.8 R23 -.2123 R13 .8582
SG1 1370.6 SG2 905.6 THA 117.36

ORBIT DETERMINATION ACCURACY

ST 25.0 SR 17.5 SS 32.4
CRT .8513 CR8 .9319 CST .6939
LSA 41.7 M8A 15.4 S8A 3.6
EL1 29.6 EL2 7.8 ALF 33.42

LAUNCH DATE AUG 18 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.999 GAL 3.63 AZL 88.45 HCA 126.63 SMA 199.88 ECC .25010 INC 1.5483 V1 29.424
RP 235.59 LAP 1.24 LOP 91.55 VP 21.510 GAP 10.25 AZP 90.92 TAL 18.28 TAP 144.91 RCA 149.89 APO 249.88 V2 23.332
RC 189.197 GL 11.81 GP -17.09 ZAL 56.12 ZAP 129.43 ETS 196.04 ZAE 158.69 ETE 241.32 ZAC 66.63 ETC 283.66 LVI -.64

PLANETOCENTRIC CONIC

C3 18.912 VHL 4.349 DLA 18.79 RAL 13.97 RAD 6642.3 VEL 11.787 PTH 6.81 VHP 2.883 DPA -.89 RAP 45.43 ECC 1.3112
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 16 50 3500.83 -46.26 128.19 248.62 102.63 10 15 11 2500.8 -36.22 98.70
60.00 9 34 20 3454.26 -39.85 125.48 250.11 96.58 10 31 54 2454.3 -32.93 96.73
70.00 10 0 50 3376.21 -34.11 119.69 250.63 91.82 10 57 6 2376.2 -29.81 91.81
80.00 10 44 11 3240.32 -29.82 109.41 250.65 88.49 11 38 12 2240.3 -27.41 82.24
90.00 11 54 8 3014.55 -28.16 92.75 250.57 87.24 12 44 22 2014.6 -26.46 65.86
100.00 13 27 3 2714.80 -29.82 70.77 250.65 88.49 14 12 18 1714.8 -27.41 43.61
110.00 15 0 16 2423.03 -34.11 48.61 250.63 91.82 15 40 40 1423.0 -29.81 20.73

DIFFERENTIAL CORRECTIONS

TDE -.3253 TRA -.5843 TC3 .4480 BAU .3945
RDE -.2494 RRA .0140 RC3-1.4944 FAU .35257
FDE 1.9422 FRA-1.8594 FC-16.1397 BSP 2232
BDE .4099 BRA .5845 BC3 1.5601 F8P 2087

MID-COURSE EXECUTION ACCURACY

SGT 998.5 SGR 1340.8 SG3 1292.9
RRT -.2850 RRF .0925 RTF -.3082
SGB 1671.7 R23 -.1729 R13 .8774
SG1 1396.6 SG2 916.8 THA 111.81

ORBIT DETERMINATION ACCURACY

ST 24.7 SR 16.5 SS 33.7
CRT .8511 CR8 .9253 CST .6831
LSA 41.9 M8A 15.7 S8A 3.5
EL1 28.8 EL2 7.5 ALF 32.15

LAUNCH DATE AUG 18 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.987 GAL 3.62 AZL 88.40 HCA 127.60 SMA 199.85 ECC .24921 INC 1.5976 V1 29.424
RP 235.94 LAP 1.27 LOP 92.52 VP 21.453 GAP 9.98 AZP 90.97 TAL 18.31 TAP 145.91 RCA 149.89 APO 249.40 V2 23.297
RC 192.165 GL 12.20 GP -17.60 ZAL 56.12 ZAP 126.89 ETS 195.70 ZAE 157.47 ETE 236.22 ZAC 66.24 ETC 283.76 LVI -.30

PLANETOCENTRIC CONIC

C3 18.858 VHL 4.343 DLA 19.13 RAL 13.75 RAD 6642.3 VEL 11.785 PTH 6.81 VHP 2.834 DPA -.54 RAP 45.09 ECC 1.3103
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 14 30 3507.28 -46.36 128.78 248.66 102.18 10 12 57 2507.3 -36.46 99.13
60.00 9 31 30 3462.03 -39.91 126.14 250.08 96.14 10 29 12 2462.0 -33.14 97.27
70.00 9 57 22 3383.86 -34.13 120.44 250.96 91.37 10 53 48 2383.9 -30.01 92.50
80.00 10 40 1 3252.18 -29.80 110.29 250.93 88.03 11 34 13 2252.2 -27.58 83.08
90.00 11 49 35 3027.58 -28.11 93.70 250.44 86.76 12 40 3 2027.6 -26.62 66.79
100.00 13 22 92 2726.65 -29.80 71.65 250.53 88.03 14 8 19 1726.6 -27.58 44.45
110.00 14 56 48 2432.68 -34.13 49.36 250.96 91.37 15 37 21 1432.7 -30.01 21.41

DIFFERENTIAL CORRECTIONS

TDE -.3250 TRA -.5981 TC3 .3586 BAU .4049
RDE -.2308 RRA .0024 RC3-1.5657 FAU .36350
FDE 2.0785 FRA-1.9454 FC-16.6678 BSP 2320
BDE .3986 BRA .5981 BC3 1.6082 F8P 2183

MID-COURSE EXECUTION ACCURACY

SGT 986.9 SGR 1393.5 SG3 1295.9
RRT -.2151 RRF .9026 RTF -.2216
SGB 1707.6 R23 -.1279 R13 .8943
SG1 1423.1 SG2 943.8 THA 105.72

ORBIT DETERMINATION ACCURACY

ST 24.8 SR 15.4 SS 35.4
CRT .8521 CR8 .9203 CST .6798
LSA 42.8 M8A 16.1 S8A 3.4
EL1 28.3 EL2 7.0 ALF 29.88

LAUNCH DATE AUG 18 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.976 GAL 3.62 AZL 88.35 HCA 128.57 SMA 199.43 ECC .24837 INC 1.6480 V1 29.424
RP 236.29 LAP 1.29 LOP 93.49 VP 21.397 GAP 9.72 AZP 91.03 TAL 18.33 TAP 146.91 RCA 149.89 APO 248.96 V2 23.281
RC 195.134 GL 12.61 GP -18.11 ZAL 56.14 ZAP 125.33 ETS 195.33 ZAE 156.17 ETE 235.38 ZAC 65.85 ETC 283.90 LVI .04

PLANETOCENTRIC CONIC

C3 18.810 VHL 4.337 DLA 19.49 RAL 13.54 RAD 6642.3 VEL 11.783 PTH 6.81 VHP 2.788 DPA -.21 RAP 44.74 ECC 1.3096
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 12 8 3514.10 -46.45 129.41 248.72 101.71 10 10 42 2514.1 -36.71 99.59
60.00 9 28 36 3470.24 -39.97 126.83 250.08 95.68 10 26 26 2470.2 -33.37 97.84
70.00 9 53 48 3396.05 -34.14 121.24 250.50 90.90 10 50 24 2396.0 -30.21 93.22
80.00 10 35 41 3264.73 -29.77 111.22 250.43 87.54 11 30 6 2264.7 -27.75 83.97
90.00 11 44 52 3041.41 -28.05 94.70 250.32 86.26 12 35 33 2041.4 -26.78 67.77
100.00 13 18 33 2739.20 -29.77 72.59 250.43 87.54 14 4 12 1739.2 -27.75 45.34
110.00 14 53 14 2442.87 -34.14 50.16 250.50 90.90 15 33 57 1442.9 -30.21 22.14

DIFFERENTIAL CORRECTIONS

TDE -.3192 TRA -.6049 TC3 .2722 BAU .4182
RDE -.2125 RRA -.0104 RC3-1.6406 FAU .37471
FDE 2.2044 FRA-2.0414 FC-17.2463 BSP 2389
BDE .3835 BRA .6050 BC3 1.6630 F8P 2286

MID-COURSE EXECUTION ACCURACY

SGT 975.7 SGR 1450.6 SG3 1339.8
RRT -.1450 RRF .9119 RTF -.1543
SGB 1748.2 R23 -.0803 R13 .9087
SG1 1462.7 SG2 957.4 THA 99.80

ORBIT DETERMINATION ACCURACY

ST 24.6 SR 14.2 SS 37.0
CRT .8522 CR8 .9117 CST .6702
LSA 43.5 M8A 16.4 S8A 3.4
EL1 27.6 EL2 6.6 ALF 27.91

LAUNCH DATE AUG 18 1973 FLIGHT TIME 186.00 ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC DISTANCE 425.737 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.966 GAL 3.61 AZL 88.30 HCA 129.34 SMA 199.22 ECC .24760 INC 1.6897 V1 29.424  
 RP 236.63 LAP 1.31 LOP 94.46 VP 21.343 GAP 9.46 AZP 91.08 TAL 18.34 TAP 147.88 RCA 149.90 APO 244.55 V2 23.226  
 RC 198.104 GL 13.02 GP -18.64 ZAL 56.17 ZAP 123.76 ETS 194.98 ZAE 154.80 ETE 232.78 ZAC 65.46 ETC 284.01 LVI .39

PLANETOCENTRIC CONIC  
 C3 18.768 VHL 4.332 DLA 19.65 RAL 13.34 RAD 6642.3 VEL 11.781 PTH 6.81 VHP 2.745 DPA -2.89 RAP 44.37 ECC 1.3089  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 43 3521.30 -46.55 130.08 248.81 101.20 10 8 25 2521.3 -36.98 100.07  
 60.00 9 25 39 3478.90 -40.02 127.56 250.11 95.19 10 23 38 2478.9 -33.61 98.45  
 70.00 9 50 7 3406.82 -34.15 122.08 250.46 90.40 10 46 54 2406.8 -30.42 93.99  
 80.00 10 31 12 3278.04 -29.72 112.20 250.35 87.02 11 25 50 2278.0 -27.93 84.92  
 90.00 11 39 57 3056.11 -27.98 95.77 250.22 85.73 12 30 53 2056.1 -26.94 68.81  
 100.00 13 14 4 2752.52 -29.72 73.57 250.35 87.02 13 59 57 1752.5 -27.93 46.29  
 110.00 14 49 34 2453.64 -34.15 51.00 250.46 90.40 15 30 27 1453.6 -30.42 22.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3126 TRA -.6146 TC3 .1799 BAU .4332 SGT 970.7 SGR 1509.9 SG3 1383.0 ST 24.4 SR 13.0 SS 36.6  
 RDE -.1929 RRA -.0239 RC3-1.7171 FAU .38567 RRT -.0665 RRF .9204 RTF -.0697 CRT .8529 CRS .9002 CST .6593  
 FDE 2.3393 FRA-2.1379 FC-17.7903 BSP 2470 SGB 1795.0 R23 -.0340 R13 .9198 LSA 44.3 HSA 16.8 SSA 3.3  
 BDE .3673 BRA .6151 BC3 1.7265 FSP 2347 SG1 1512.2 SG2 .967.1 THA 94.14 EL1 26.9 EL2 6.1 ALF 25.80

LAUNCH DATE AUG 18 1973 FLIGHT TIME 186.00 ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC DISTANCE 429.519 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.956 GAL 3.60 AZL 88.25 HCA 130.51 SMA 199.04 ECC .24688 INC 1.7526 V1 29.424  
 RP 236.98 LAP 1.33 LOP 95.43 VP 21.291 GAP 9.20 AZP 91.14 TAL 18.34 TAP 148.85 RCA 149.90 APO 248.18 V2 23.191  
 RC 201.073 GL 13.44 GP -19.17 ZAL 56.22 ZAP 122.18 ETS 194.57 ZAE 153.38 ETE 230.36 ZAC 65.06 ETC 284.13 LVI .74

PLANETOCENTRIC CONIC  
 C3 18.732 VHL 4.328 DLA 20.24 RAL 13.15 RAD 6642.3 VEL 11.779 PTH 6.80 VHP 2.705 DPA -3.59 RAP 44.00 ECC 1.3083  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 7 17 3528.89 -46.65 130.79 248.94 100.66 10 6 5 2528.9 -37.25 100.59  
 60.00 9 22 37 3488.03 -40.08 128.33 250.16 94.67 10 20 45 2488.0 -33.86 99.10  
 70.00 9 46 20 3418.19 -34.15 122.97 250.45 89.88 10 43 18 2418.2 -30.63 94.81  
 80.00 10 26 32 3292.15 -29.67 113.25 250.28 86.48 11 21 24 2292.2 -28.11 85.93  
 90.00 11 34 49 3071.73 -27.90 96.91 250.13 85.17 12 26 1 2071.7 -27.10 68.93  
 100.00 13 9 24 2766.62 -29.67 74.62 250.28 86.48 13 55 31 1766.6 -28.11 47.30  
 110.00 14 45 48 2465.01 -34.15 51.89 250.45 89.88 15 26 52 1465.0 -30.63 23.72

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3047 TRA -.6258 TC3 .0827 BAU .4502 SGT 973.3 SGR 1572.2 SG3 1425.6 ST 24.1 SR 11.7 SS 40.2  
 RDE -.1727 RRA -.0376 RC3-1.7959 FAU .39649 RRT .0182 RRF .9282 RTF .0203 CRT .8536 CRS .8839 CST .6452  
 FDE 2.4728 FRA-2.2324 FC-18.3249 BSP 2564 SGB 1849.1 R23 .0071 R13 .9281 LSA 45.1 HSA 17.1 SSA 3.2  
 BDE .3502 BRA .6269 BC3 1.7978 FSP 2425 SG1 1572.3 SG2 973.0 THA 88.95 EL1 26.2 EL2 5.6 ALF 23.62

LAUNCH DATE AUG 18 1973 FLIGHT TIME 190.00 ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC DISTANCE 433.302 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.948 GAL 3.59 AZL 88.19 HCA 131.47 SMA 198.87 ECC .24621 INC 1.8070 V1 29.424  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.240 GAP 8.94 AZP 91.20 TAL 18.33 TAP 149.80 RCA 149.91 APO 247.83 V2 23.157  
 RC 204.040 GL 13.67 GP -19.71 ZAL 56.29 ZAP 120.58 ETS 194.16 ZAE 151.90 ETE 228.14 ZAC 64.66 ETC 284.25 LVI 1.11

PLANETOCENTRIC CONIC  
 C3 18.702 VHL 4.325 DLA 20.63 RAL 12.96 RAD 6642.3 VEL 11.778 PTH 6.80 VHP 2.668 DPA -4.30 RAP 43.61 ECC 1.3078  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 47 3536.88 -46.75 131.53 249.09 100.10 10 3 44 2536.9 -37.54 101.14  
 60.00 9 19 31 3497.65 -40.13 129.14 250.23 94.12 10 17 48 2497.7 -34.12 99.79  
 70.00 9 42 25 3430.19 -34.15 123.91 250.46 89.32 10 39 35 2430.2 -30.86 95.67  
 80.00 10 21 41 3307.11 -29.60 114.36 250.23 85.90 11 16 48 2307.1 -28.29 87.01  
 90.00 11 29 26 3088.35 -27.80 98.11 250.06 84.57 12 20 55 2088.4 -27.26 71.12  
 100.00 13 4 32 2781.58 -29.60 75.72 250.23 85.90 13 50 54 1781.6 -28.29 48.38  
 110.00 14 41 51 2477.01 -34.15 52.82 250.46 89.32 15 23 8 1477.0 -30.86 24.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2952 TRA -.6375 TC3 -.0193 BAU .4691 SGT 983.8 SGR 1636.8 SG3 1487.2 ST 23.8 SR 10.4 SS 41.8  
 RDE -.1913 RRA -.0520 RC3-1.8762 FAU .40698 RRT .0188 RRF .9351 RTF .1333 CRT .8553 CRS .8601 CST .6284  
 FDE 2.6128 FRA-2.3275 FC-18.8398 BSP 2671 SGB 1909.7 R23 .0417 R13 .9343 LSA 46.0 HSA 17.4 SSA 3.1  
 BDE .3317 BRA .6397 BC3 1.8763 FSP 2500 SG1 1642.0 SG2 975.1 THA 84.32 EL1 25.5 EL2 5.0 ALF 21.32

LAUNCH DATE AUG 18 1973 FLIGHT TIME 192.00 ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC DISTANCE 437.086 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.940 GAL 3.58 AZL 88.14 HCA 132.43 SMA 198.71 ECC .24559 INC 1.8629 V1 29.424  
 RP 237.65 LAP 1.38 LOP 97.36 VP 21.191 GAP 8.68 AZP 91.26 TAL 18.31 TAP 150.79 RCA 149.91 APO 247.51 V2 23.123  
 RC 207.005 GL 14.32 GP -20.26 ZAL 56.37 ZAP 118.98 ETS 193.74 ZAE 150.37 ETE 226.09 ZAC 64.26 ETC 284.37 LVI 1.47

PLANETOCENTRIC CONIC  
 C3 18.677 VHL 4.322 DLA 21.04 RAL 12.78 RAD 6642.2 VEL 11.777 PTH 6.80 VHP 2.633 DPA -5.03 RAP 43.22 ECC 1.3074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 14 3545.29 -46.84 132.32 249.28 99.50 10 1 19 2545.3 -37.84 101.72  
 60.00 9 16 19 3507.77 -40.17 130.00 250.33 93.54 10 14 47 2507.8 -34.38 100.51  
 70.00 9 38 22 3442.86 -34.13 124.89 250.48 88.74 10 35 44 2442.9 -31.08 96.59  
 80.00 10 16 36 3322.98 -29.52 115.53 250.20 85.29 11 11 59 2323.0 -28.47 88.15  
 90.00 11 23 47 3106.04 -27.68 99.39 250.00 83.94 12 15 33 2106.0 -27.42 72.39  
 100.00 12 59 27 2797.45 -29.52 76.90 250.20 85.29 13 46 5 1797.4 -28.47 49.52  
 110.00 14 37 48 2489.67 -34.13 53.81 250.48 88.74 15 19 18 1489.7 -31.08 25.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2842 TRA -.6502 TC3 -.1262 BAU .4899 SGT 1003.4 SGR 1703.5 SG3 1507.3 ST 23.4 SR 9.0 SS 43.6  
 RDE -.1288 RRA -.0668 RC3-1.9570 FAU .41705 RRT .1969 RRF .9414 RTF .2069 CRT .8580 CRS .8238 CST .6082  
 FDE 2.7553 FRA-2.4203 FC-19.3310 BSP 2788 SGB 1977.0 R23 .0696 R13 .9391 LSA 46.9 HSA 17.7 SSA 3.0  
 BDE .3121 BRA .6536 BC3 1.9619 FSP 2568 SG1 1720.4 SG2 974.1 THA 80.22 EL1 24.7 EL2 4.4 ALF 18.94

LAUNCH DATE AUG 18 1973

FLIGHT TIME 194.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.932 GAL 3.57 AZL 88.08 HCA 133.39 SMA 198.57 ECC .24501 INC 1.9203 V1 29.424
RP 237.98 LAP 1.40 LOP 98.31 VP 21.143 GAP 6.43 AZP 91.32 TAL 18.29 TAP 151.68 RCA 149.92 APO 247.22 V2 23.090
RC 209.965 GL 14.77 GP -20.82 ZAL 56.47 ZAP 117.38 ETS 193.30 ZAE 148.80 ETE 224.18 ZAC 63.85 ETC 284.50 LVI 1.88

DISTANCE 440.873

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.659 VHL 4.320 DLA 21.47 RAL 12.60 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 2.602 DPA -5.77 RAP 42.82 ECC 1.3071
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 59 37 3554.11 -48.94 133.15 249.49 98.86 9 58 52 2554.1 -38.15 102.33
60.00 9 13 2 3518.42 -40.21 130.90 250.45 92.93 10 11 40 2518.4 -34.66 101.28
70.00 9 34 9 3456.21 -34.11 125.94 250.52 88.12 10 31 45 2456.2 -31.31 97.56
80.00 10 11 16 3339.82 -29.42 116.77 250.17 84.64 11 6 56 2339.8 -28.65 89.37
90.00 11 17 50 3124.91 -27.53 100.75 249.95 83.28 12 9 55 2124.9 -27.57 73.75
100.00 12 54 8 2814.29 -29.42 78.14 250.17 84.64 13 41 2 1814.3 -28.65 50.74
110.00 14 33 35 2503.03 -34.11 54.85 250.52 88.12 15 15 18 1503.0 -31.31 26.48

DIFFERENTIAL CORRECTIONS

TDE -.2705 TRA -.6625 TC3 -.2349 BAW .5128
RDE -.1060 RRA -.0828 RC3-2.0422 FAU .42702
FDE 2.8928 FRA -2.5200 FC-19.8126 BSP 2914
BDE .2905 BRA .8677 BC3 2.0557 FSP 2624

MID-COURSE EXECUTION ACCURACY

SGT 1030.3 SGR 1775.8 SG3 1547.0
RRT .2845 RRF .9472 RTF .2975
SGB 2051.4 R23 .0896 R13 .9434
SG1 1808.0 SG2 969.1 THA 76.75

ORBIT DETERMINATION ACCURACY

ST 22.9 SR 7.7 SB 45.2
CRT .8616 CRS .7645 CST .5815
LSA 47.8 MSA 18.0 SSA 2.9
EL1 23.8 EL2 3.8 ALF 16.65

LAUNCH DATE AUG 18 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.926 GAL 3.58 AZL 88.02 HCA 134.34 SMA 198.44 ECC .24448 INC 1.9794 V1 29.424
RP 238.30 LAP 1.42 LOP 99.27 VP 21.096 GAP 6.18 AZP 91.38 TAL 18.25 TAP 152.59 RCA 149.93 APO 246.96 VE 23.058
RC 212.919 GL 15.24 GP -21.38 ZAL 56.59 ZAP 115.77 ETS 192.84 ZAE 147.20 ETE 222.40 ZAC 63.44 ETC 284.63 LVI 2.23

DISTANCE 444.660

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.647 VHL 4.318 DLA 21.91 RAL 12.43 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 2.573 DPA -6.52 RAP 42.41 ECC 1.3069
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 56 57 3563.58 -47.03 134.03 249.74 98.19 9 56 20 2563.4 -38.47 102.99
60.00 9 9 38 3529.60 -40.25 131.85 250.59 92.28 10 8 27 2529.6 -34.94 102.10
70.00 9 29 46 3470.30 -34.07 127.03 250.58 87.47 10 27 36 2470.3 -31.54 98.59
80.00 10 5 40 3357.70 -29.30 118.08 250.16 83.96 11 1 38 2357.7 -28.83 90.67
90.00 11 11 32 3145.05 -27.36 102.20 249.90 82.57 12 3 57 2145.1 -27.72 75.20
100.00 12 48 32 2832.17 -29.30 79.45 250.16 83.96 13 35 44 1832.2 -28.83 52.04
110.00 14 29 12 2517.11 -34.07 55.95 250.58 87.47 15 11 9 1517.1 -31.54 27.51

DIFFERENTIAL CORRECTIONS

TDE -.2519 TRA -.6727 TC3 -.3418 BAW .5380
RDE -.0839 RRA -.1009 RC3-2.1309 FAU .43722
FDE 3.0137 FRA -2.6332 FC-20.2991 BSP 3044
BDE .2655 BRA .6802 BC3 2.1581 FSP 2650

MID-COURSE EXECUTION ACCURACY

SGT 1060.3 SGR 1849.3 SG3 1587.3
RRT .3666 RRF .9525 RTF .3829
SGB 2131.8 R23 .1004 R13 .9479
SG1 1904.4 SG2 958.0 THA 73.97

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 6.6 SB 46.6
CRT .8635 CRS .6665 CST .5437
LSA 48.6 MSA 18.2 SSA 2.9
EL1 22.8 EL2 3.2 ALF 14.73

LAUNCH DATE AUG 18 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.920 GAL 3.54 AZL 87.96 HCA 135.30 SMA 198.33 ECC .24399 INC 2.0403 V1 29.424
RP 236.83 LAP 1.44 LOP 100.22 VP 21.051 GAP 7.93 AZP 91.45 TAL 18.20 TAP 153.50 RCA 149.94 APO 246.72 VE 23.024
RC 215.866 GL 15.72 GP -21.95 ZAL 56.72 ZAP 114.16 ETS 192.73 ZAE 145.57 ETE 220.75 ZAC 63.02 ETC 284.75 LVI 2.62

DISTANCE 448.447

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.640 VHL 4.317 DLA 22.37 RAL 12.27 RAD 6642.2 VEL 11.775 PTH 6.80 VHP 2.547 DPA -7.28 RAP 42.01 ECC 1.3068
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 54 12 3573.14 -47.12 134.95 250.01 97.49 9 53 45 2573.1 -38.81 103.68
60.00 9 6 7 3541.40 -40.27 132.85 250.77 91.60 10 3 8 2541.4 -35.23 102.96
70.00 9 25 11 3483.23 -34.02 128.20 250.85 86.79 10 23 16 2483.2 -31.78 99.69
80.00 9 59 45 3376.83 -29.15 119.49 250.16 83.24 10 56 1 2376.8 -29.01 92.06
90.00 11 4 49 3166.73 -27.16 103.76 249.86 81.81 11 57 36 2166.7 -27.86 76.77
100.00 12 42 36 2851.30 -29.15 80.86 250.16 83.24 13 30 8 1851.3 -29.01 53.43
110.00 14 24 37 2532.05 -34.02 57.12 250.65 86.79 15 6 49 1532.0 -31.78 28.61

DIFFERENTIAL CORRECTIONS

TDE -.2463 TRA -.6991 TC3 -.4899 BAW .5624
RDE -.0528 RRA -.1115 RC3-2.2040 FAU .44312
FDE 3.2179 FRA -2.6615 FC-20.5809 BSP 3255
BDE .2518 BRA .7080 BC3 2.2569 FSP 2776

MID-COURSE EXECUTION ACCURACY

SGT 1135.6 SGR 1911.1 SG3 1613.2
RRT .4525 RRF .9965 RTF .4066
SGB 2223.0 R23 .1272 R13 .9488
SG1 2001.8 SG2 968.8 THA 70.13

ORBIT DETERMINATION ACCURACY

ST 22.2 SR 5.1 SB 49.0
CRT .8369 CRS .4690 CST .5275
LSA 50.7 MSA 18.8 SSA 2.7
EL1 22.6 EL2 2.7 ALF 11.07

LAUNCH DATE AUG 18 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.915 GAL 3.53 AZL 87.90 HCA 136.25 SMA 198.22 ECC .24384 INC 2.1030 V1 29.424
RP 238.95 LAP 1.45 LOP 101.17 VP 21.008 GAP 7.68 AZP 91.52 TAL 18.15 TAP 154.39 RCA 149.95 APO 246.50 V2 22.991
RC 218.810 GL 16.22 GP -22.53 ZAL 56.87 ZAP 112.55 ETS 191.87 ZAE 145.90 ETE 219.20 ZAC 62.60 ETC 284.88 LVI 3.02

DISTANCE 452.235

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.640 VHL 4.317 DLA 22.84 RAL 12.11 RAD 6642.2 VEL 11.775 PTH 6.80 VHP 2.524 DPA -8.05 RAP 41.80 ECC 1.3068
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 51 21 3583.35 -47.21 135.93 250.32 96.74 9 51 5 2583.4 -39.15 104.41
60.00 9 2 28 3553.78 -40.29 133.91 250.95 90.89 10 1 41 2553.8 -35.53 103.88
70.00 9 20 23 3500.96 -33.95 129.42 250.74 86.07 10 18 44 2501.0 -32.02 100.85
80.00 9 53 29 3397.18 -28.98 120.97 250.18 82.47 10 50 8 2397.2 -29.18 93.55
90.00 10 57 39 3189.99 -26.93 105.42 249.82 81.02 11 50 49 2190.0 -27.99 78.48
100.00 12 36 20 2871.65 -28.98 82.34 250.16 82.47 13 24 12 1871.7 -29.18 54.92
110.00 14 19 50 2547.78 -33.95 58.34 250.74 86.07 15 2 17 1547.8 -32.02 29.77

DIFFERENTIAL CORRECTIONS

TDE -.2300 TRA -.7173 TC3 -.6144 BAW .5902
RDE -.0281 RRA -.1275 RC3-2.2875 FAU .45065
FDE 3.3744 FRA -2.7384 FC-20.9310 BSP 3434
BDE .2314 BRA .7285 BC3 2.3688 FSP 2833

MID-COURSE EXECUTION ACCURACY

SGT 1200.6 SGR 1984.0 SG3 1644.4
RRT .5238 RRF .9606 RTF .5380
SGB 2319.0 R23 .1380 R13 .9515
SG1 2110.3 SG2 961.8 THA 67.50

ORBIT DETERMINATION ACCURACY

ST 21.8 SR 4.4 SB 50.9
CRT .7401 CRS .1275 CST .4886
LSA 52.1 MSA 18.8 SSA 2.7
EL1 22.0 EL2 2.9 ALF 8.61



LAUNCH DATE AUG 18 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

DISTANCE 456.029

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.910 GAL 3.51 AZL 87.83 HCA 137.19 SMA 198.13 ECC .24313 INC 2.1679 V1 29.424  
 RP 239.28 LAP 1.47 LOP 102.12 VP 20.965 GAP 7.44 AZP 91.59 TAL 18.08 TAP 155.28 RCA 149.96 APO 246.31 V2 22.860  
 RC 221.744 GL 16.72 GP -23.12 ZAL 57.03 ZAP 110.95 ETS 191.56 ZAE 142.22 ETE 217.74 ZAC 62.18 ETC 285.01 LVI 3.43

PLANETOCENTRIC CONIC

C3 18.648 VHL 4.318 DLA 23.33 RAL 11.93 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 2.504 DPA -8.83 RAP 41.19 ECC 1.3069  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 25 3594.07 -47.29 136.95 250.65 95.96 9 48 20 2594.1 -39.51 103.19  
 60.00 8 58 40 3566.79 -40.30 135.01 251.16 90.14 9 58 7 2566.8 -35.83 104.85  
 70.00 9 15 21 3517.61 -33.87 130.71 250.84 85.31 10 13 59 2517.6 -32.26 102.09  
 80.00 9 46 48 3418.96 -28.77 122.56 250.16 81.66 10 43 47 2419.0 -29.34 95.15  
 90.00 10 49 57 3215.10 -26.85 107.20 249.78 80.16 11 43 32 2215.1 -28.10 80.29  
 100.00 12 29 40 2893.43 -28.77 83.93 250.16 81.66 13 17 54 1893.4 -29.34 56.52  
 110.00 14 14 48 2564.43 -33.87 59.63 250.84 85.31 14 57 32 1564.4 -32.26 31.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2120 TRA -.7367 TC3 -.7469 BAW .6196 SGT 1276.1 SGR 2057.9 SG3 1672.6 ST 21.3 SR 4.4 S8 52.7  
 RDE .0040 RRA -.1433 RC3-2.3708 FAU .45738 RRT .5863 RRF .9642 RTF .6003 CRT .5245 CR8 -.3141 CST .4427  
 FDE 3.5328 FRA-2.8064 FC-21.2364 B8P 3629 SGB 2421.5 R23 .1462 R13 .9541 LSA 53.7 MSA 19.1 S8A 2.6  
 BDE .2120 BRA .7505 BC3 2.4857 F8P 2887 SG1 2224.6 S62 936.3 THA 65.12 EL1 21.4 EL2 3.7 ALF 8.34

LAUNCH DATE AUG 18 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

DISTANCE 459.814

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.906 GAL 3.49 AZL 87.77 HCA 138.14 SMA 198.05 ECC .24276 INC 2.2349 V1 29.424  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.924 GAP 7.19 AZP 91.66 TAL 18.01 TAP 156.15 RCA 149.97 APO 246.13 V2 22.928  
 RC 224.672 GL 17.25 GP -23.71 ZAL 57.21 ZAP 109.35 ETS 190.83 ZAE 140.92 ETE 216.36 ZAC 61.75 ETC 285.14 LVI 3.84

PLANETOCENTRIC CONIC

C3 18.659 VHL 4.320 DLA 23.84 RAL 11.79 RAD 6642.2 VEL 11.776 PTH 6.80 VHP 2.486 DPA -9.62 RAP 40.79 ECC 1.3071  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 23 3605.32 -47.37 138.03 251.01 95.13 9 45 28 2605.3 -39.88 106.02  
 60.00 8 54 42 3580.49 -40.30 136.18 251.39 89.35 9 54 23 2580.5 -36.14 105.88  
 70.00 9 10 4 3535.23 -33.76 132.08 250.96 84.51 10 8 59 2535.2 -32.50 103.41  
 80.00 9 39 41 3442.33 -28.53 124.26 250.17 80.80 10 37 3 2442.3 -29.49 96.87  
 90.00 10 41 36 3242.37 -26.32 109.13 249.73 79.25 11 35 38 2242.4 -28.19 82.28  
 100.00 12 22 33 2916.81 -28.53 85.62 250.17 80.80 13 11 9 1916.8 -29.49 58.24  
 110.00 14 9 30 2582.05 -33.76 61.00 250.96 84.51 14 52 32 1582.0 -32.50 32.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1917 TRA -.7570 TC3 -.8831 BAW .6505 SGT 1360.8 SGR 2132.9 SG3 1697.9 ST 20.8 SR 5.2 S8 54.6  
 RDE .0342 RRA -.1597 RC3-2.4537 FAU .46330 RRT .6408 RRF .9675 RTF .6542 CRT .2942 CR8 -.6477 CST .3874  
 FDE 3.6894 FRA-2.8721 FC-21.4962 B8P 3834 SGB 2530.0 R23 .1522 R13 .9565 LSA 55.3 MSA 19.3 S8A 2.5  
 BDE .1948 BRA .7736 BC3 2.6078 F8P 2934 SG1 2344.8 S62 950.3 THA 62.97 EL1 20.9 EL2 5.0 ALF 4.47

LAUNCH DATE AUG 18 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

DISTANCE 463.604

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.902 GAL 3.47 AZL 87.70 HCA 139.08 SMA 197.98 ECC .24241 INC 2.3042 V1 29.424  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.885 GAP 6.95 AZP 91.74 TAL 17.93 TAP 157.02 RCA 149.99 APO 245.98 V2 22.897  
 RC 227.591 GL 17.79 GP -24.30 ZAL 57.41 ZAP 107.76 ETS 190.28 ZAE 138.81 ETE 215.05 ZAC 61.32 ETC 285.27 LVI 4.27

PLANETOCENTRIC CONIC

C3 18.679 VHL 4.322 DLA 24.37 RAL 11.64 RAD 6642.2 VEL 11.777 PTH 6.80 VHP 2.471 DPA -10.41 RAP 40.39 ECC 1.3074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 14 3617.12 -47.43 139.16 251.40 94.28 9 42 31 2617.1 -40.26 106.89  
 60.00 8 50 34 3594.89 -40.28 137.40 251.64 88.51 9 50 29 2594.9 -36.46 106.97  
 70.00 9 4 29 3553.91 -33.63 133.52 231.08 83.66 10 3 43 2533.9 -32.74 104.82  
 80.00 9 32 1 3467.53 -28.24 126.07 250.17 79.89 10 29 48 2467.5 -29.62 98.73  
 90.00 10 32 30 3272.21 -25.92 111.22 249.67 78.28 11 27 2 2272.2 -28.25 84.46  
 100.00 12 14 52 2942.00 -28.24 87.44 250.17 79.89 13 3 54 1942.0 -29.62 60.10  
 110.00 14 3 55 2600.73 -33.63 62.44 251.08 83.66 14 47 16 1600.7 -32.74 33.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1892 TRA -.7779 TC3-1.0218 BAW .6831 SGT 1453.3 SGR 2210.2 SG3 1721.1 ST 20.4 SR 6.7 S8 56.4  
 RDE .0658 RRA -.1770 RC3-2.5375 FAU .46867 RRT .6878 RRF .9705 RTF .7005 CRT .1557 CR8 -.8201 CST .3213  
 FDE 3.8441 FRA-2.9386 FC-21.7216 B8P 4044 SGB 2645.2 R23 .1560 R13 .9590 LSA 57.1 MSA 19.4 S8A 2.4  
 BDE .1815 BRA .7978 BC3 2.7355 F8P 2967 SG1 2471.2 S62 943.8 THA 61.06 EL1 20.4 EL2 6.6 ALF 3.28

LAUNCH DATE AUG 18 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

DISTANCE 467.395

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.899 GAL 3.45 AZL 87.62 HCA 140.02 SMA 197.92 ECC .24210 INC 2.3760 V1 29.424  
 RP 240.18 LAP 1.53 LOP 104.93 VP 20.848 GAP 6.71 AZP 91.82 TAL 17.85 TAP 157.87 RCA 150.00 APO 245.84 V2 22.886  
 RC 230.502 GL 18.35 GP -24.91 ZAL 57.82 ZAP 106.18 ETS 189.71 ZAE 137.08 ETE 213.80 ZAC 60.89 ETC 285.40 LVI 4.70

PLANETOCENTRIC CONIC

C3 18.707 VHL 4.325 DLA 24.92 RAL 11.48 RAD 6642.3 VEL 11.778 PTH 6.80 VHP 2.458 DPA -11.21 RAP 40.00 ECC 1.3079  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 57 3629.49 -47.49 140.35 231.82 93.34 9 39 26 2629.5 -40.65 107.82  
 60.00 8 46 14 3610.05 -40.24 138.69 231.91 87.64 9 46 24 2610.1 -36.78 108.13  
 70.00 8 58 34 3573.74 -33.47 135.05 231.20 82.77 9 58 7 2573.7 -32.97 106.32  
 80.00 9 23 43 3494.82 -27.90 128.03 230.16 78.92 10 21 58 2494.8 -29.73 100.75  
 90.00 10 22 26 3308.15 -25.44 113.52 249.58 77.22 11 17 32 2305.1 -28.28 86.86  
 100.00 12 6 35 2969.29 -27.90 89.40 250.16 78.92 12 56 4 1969.3 -29.73 62.12  
 110.00 13 58 0 2620.56 -33.47 63.96 231.20 82.77 14 41 40 1620.6 -32.97 35.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1418 TRA -.7971 TC3-1.1565 BAW .7177 SGT 1546.5 SGR 2293.7 SG3 1744.6 ST 19.9 SR 8.4 S8 57.9  
 RDE .0954 RRA -.1972 RC3-2.6264 FAU .47433 RRT .7286 RRF .9733 RTF .7414 CRT .1276 CR8 -.8950 CST .2342  
 FDE 3.9704 FRA-3.0235 FC-21.9507 B8P 4249 SGB 2766.3 R23 .1549 R13 .9621 LSA 58.6 MSA 19.5 S8A 2.3  
 BDE .1709 BRA .8211 BC3 2.8698 F8P 2968 SG1 2604.3 S62 932.8 THA 59.52 EL1 19.9 EL2 8.3 ALF 3.72

LAUNCH DATE AUG 18 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.886 GAL 3.43 AZL 87.55 HCA 140.96 SMA 197.87 ECC .24183 INC 2.4505 V1 29.424
RP 240.48 LAP 1.54 LOP 105.89 VP 20.809 GAP 6.47 AZP 91.90 TAL 17.75 TAP 156.71 RCA 150.02 APO 245.72 V2 22.836
RC 233.405 GL 18.92 GP -25.51 ZAL 57.85 ZAP 104.62 ETS 189.12 ZAE 135.36 ETE 212.61 ZAC 60.44 ETC 285.54 LVI 5.15

DISTANCE 471.184

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.743 VHL 4.329 DLA 25.49 RAL 11.33 RAD 6642.3 VEL 11.780 PTH 6.80 VHP 2.448 DPA -12.02 RAP 39.62 ECC 1.3085
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 35 31 3642.50 -47.53 141.81 252.27 92.38 9 36 14 2642.5 -41.05 108.81
60.00 8 41 41 3626.07 -40.19 140.05 252.19 86.72 9 42 7 2626.1 -37.11 109.36
70.00 8 52 16 3594.91 -33.28 136.67 251.33 81.83 9 52 10 2594.9 -33.19 107.93
80.00 9 14 38 3524.67 -27.49 130.15 250.13 77.87 10 13 23 2524.7 -29.81 102.97
90.00 10 11 9 3342.14 -24.86 116.07 249.45 76.07 11 6 51 2342.1 -26.25 89.57
100.00 11 57 30 2999.14 -27.49 91.52 250.13 77.87 12 47 29 1999.1 -29.81 64.34
110.00 13 51 42 2641.73 -33.28 65.59 251.33 81.83 14 35 44 1641.7 -33.19 36.84

DIFFERENTIAL CORRECTIONS

TDE -.1198 TRA -.8253 TC3-1.3120 BAU .7517
RDE .1348 RRA -.2101 RC3-2.6978 FAU .47879
FDE 4.1657 FRA-3.0320 FC-21.9789 BSP 4512
BDE .1801 BRA .8516 BC3 3.0000 FSP 3039

MID-COURSE EXECUTION ACCURACY

SGT 1667.3 BGR 2362.9 SG3 1754.3
RRT .7810 RRF .9755 RTF .7717
SGB 2891.9 R23 .1629 R13 .9629
SG1 2737.0 SG2 933.8 THA 57.53

ORBIT DETERMINATION ACCURACY

ST 19.9 SR 10.6 SS 80.3
CRT .0912 CR8 -.9451 C8T .1639
LSA 61.2 MSA 19.8 S8A 2.2
EL1 19.9 EL2 10.6 ALF 3.68

LAUNCH DATE AUG 18 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.894 GAL 3.41 AZL 87.47 HCA 141.89 SMA 197.83 ECC .24158 INC 2.5279 V1 29.424
RP 240.78 LAP 1.58 LOP 106.83 VP 20.773 GAP 6.23 AZP 91.99 TAL 17.65 TAP 159.54 RCA 150.04 APO 245.62 V2 22.807
RC 236.297 GL 19.52 GP -26.13 ZAL 58.09 ZAP 103.07 ETS 188.51 ZAE 133.62 ETE 211.46 ZAC 60.00 ETC 285.67 LVI 5.60

DISTANCE 474.974

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.787 VHL 4.334 DLA 26.08 RAL 11.17 RAD 6642.3 VEL 11.782 PTH 6.81 VHP 2.441 DPA -12.83 RAP 39.25 ECC 1.3092
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 31 56 3656.16 -47.56 142.93 252.75 91.36 9 32 52 2656.2 -41.46 109.87
60.00 8 36 54 3642.94 -40.11 141.48 252.49 85.75 9 37 37 2642.9 -37.44 110.68
70.00 8 45 32 3617.48 -33.05 138.39 251.46 80.84 9 45 49 2617.5 -33.41 109.85
80.00 9 4 38 3557.52 -27.00 132.47 250.08 76.75 10 3 55 2557.5 -29.85 105.41
90.00 9 58 13 3384.40 -24.14 118.95 249.27 74.80 10 54 38 2384.4 -28.15 92.66
100.00 11 47 30 3031.99 -27.00 93.84 250.08 76.75 12 38 2 2032.0 -29.85 66.78
110.00 13 44 58 2664.30 -33.05 67.31 251.46 80.84 14 29 23 1664.3 -33.41 38.57

DIFFERENTIAL CORRECTIONS

TDE -.0911 TRA -.8499 TC3-1.4592 BAU .7877
RDE .1708 RRA -.2276 RC3-2.7760 FAU .47794
FDE 4.3190 FRA-3.0753 FC-22.0242 BSP 4759
BDE .1936 BRA .8798 BC3 3.1361 FSP 3061

MID-COURSE EXECUTION ACCURACY

SGT 1783.0 BGR 2440.1 SG3 1765.6
RRT .7897 RRF .9777 RTF .7993
SGB 3022.1 R23 .1645 R13 .9647
SG1 2876.1 SG2 928.1 THA 56.00

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 12.9 SS 82.2
CRT .1300 CR8 -.9663 C8T .0889
LSA 63.4 MSA 19.9 S8A 2.1
EL1 19.9 EL2 12.7 ALF 6.17

LAUNCH DATE AUG 18 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.893 GAL 3.38 AZL 87.39 HCA 142.83 SMA 197.79 ECC .24135 INC 2.6084 V1 29.424
RP 241.07 LAP 1.58 LOP 107.76 VP 20.738 GAP 5.99 AZP 92.08 TAL 17.54 TAP 160.37 RCA 150.05 APO 245.53 V2 22.777
RC 239.179 GL 20.14 GP -28.75 ZAL 58.35 ZAP 101.55 ETS 187.69 ZAE 131.89 ETE 210.36 ZAC 59.54 ETC 285.80 LVI 6.07

DISTANCE 478.764

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.841 VHL 4.341 DLA 26.70 RAL 11.01 RAD 6642.3 VEL 11.784 PTH 6.81 VHP 2.436 DPA -13.64 RAP 38.89 ECC 1.3101
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 28 11 3670.51 -47.58 144.32 253.26 90.29 9 29 21 2670.5 -41.88 110.99
80.00 8 31 50 3680.77 -40.01 142.99 252.80 84.74 9 32 51 2660.8 -37.77 112.08
70.00 8 38 19 3641.86 -32.77 140.22 251.58 79.79 9 39 0 2641.7 -33.61 111.51
80.00 8 53 26 3594.17 -26.40 135.03 249.98 75.53 9 53 20 2594.2 -29.84 108.13
90.00 9 42 53 3434.37 -23.21 122.32 249.00 73.37 10 40 8 2434.4 -27.92 96.29
100.00 11 36 18 3086.64 -26.40 96.39 249.98 75.53 12 27 27 2086.6 -29.84 69.50
110.00 13 37 45 2688.48 -32.77 69.14 251.58 79.79 14 22 33 1688.5 -33.61 40.43

DIFFERENTIAL CORRECTIONS

TDE -.0599 TRA -.8756 TC3-1.6081 BAU .8250
RDE .2088 RRA -.2432 RC3-2.8333 FAU .47929
FDE 4.4700 FRA-3.1108 FC-22.0234 BSP 5011
BDE .2172 BRA .9093 BC3 3.2752 FSP 3074

MID-COURSE EXECUTION ACCURACY

SGT 1905.0 BGR 2518.5 SG3 1773.8
RRT .8139 RRF .9796 RTF .8226
SGB 3157.8 R23 .1655 R13 .9665
SG1 3019.8 SG2 925.0 THA 54.58

ORBIT DETERMINATION ACCURACY

ST 19.9 SR 15.3 SS 84.1
CRT .1933 CR8 -.9783 C8T -.0383
LSA 65.8 MSA 20.0 S8A 2.0
EL1 20.4 EL2 14.6 ALF 17.87

LAUNCH DATE AUG 18 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.891 GAL 3.36 AZL 87.31 HCA 143.76 SMA 197.77 ECC .24116 INC 2.6922 V1 29.424
RP 241.36 LAP 1.59 LOP 108.70 VP 20.704 GAP 5.76 AZP 92.17 TAL 17.43 TAP 161.18 RCA 150.07 APO 245.46 V2 22.749
RC 242.049 GL 20.78 GP -27.38 ZAL 58.82 ZAP 100.04 ETS 187.24 ZAE 130.17 ETE 209.30 ZAC 59.08 ETC 285.93 LVI 6.58

DISTANCE 482.553

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 18.904 VHL 4.348 DLA 27.33 RAL 10.85 RAD 6642.3 VEL 11.787 PTH 6.81 VHP 2.434 DPA -14.46 RAP 38.54 ECC 1.3111
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 24 13 3685.60 -47.57 145.78 253.79 89.17 9 25 39 2685.6 -42.31 112.18
80.00 8 26 28 3679.63 -39.88 144.57 253.12 83.67 9 27 47 2679.6 -38.09 113.57
70.00 8 30 31 3667.67 -32.44 142.18 251.69 78.68 9 31 39 2667.7 -33.79 113.52
80.00 8 40 39 3635.84 -25.86 137.90 249.82 74.19 9 41 15 2635.8 -29.75 111.22
90.00 9 23 29 3497.39 -21.92 126.48 248.57 71.67 10 21 46 2497.4 -27.49 100.85
100.00 11 23 31 3110.31 -25.86 99.27 249.82 74.19 12 15 21 2110.3 -29.75 72.59
110.00 13 29 57 2714.49 -32.44 71.09 251.69 78.68 14 15 12 1714.5 -33.79 42.44

DIFFERENTIAL CORRECTIONS

TDE -.0863 TRA -.9024 TC3-1.7579 BAU .8630
RDE .2487 RRA -.2632 RC3-2.9275 FAU .47945
FDE 4.6187 FRA-3.1406 FC-21.9566 BSP 5273
BDE .2501 BRA .9408 BC3 3.4148 FSP 3083

MID-COURSE EXECUTION ACCURACY

SGT 2032.2 BGR 2596.3 SG3 1777.6
RRT .8345 RRF .9813 RTF .8422
SGB 3297.0 R23 .1663 R13 .9681
SG1 3166.6 SG2 918.1 THA 53.26

ORBIT DETERMINATION ACCURACY

ST 20.3 SR 17.8 SS 85.9
CRT .2711 CR8 -.9855 C8T -.1481
LSA 68.3 MSA 20.1 S8A 1.9
EL1 21.7 EL2 16.0 ALF 32.17

LAUNCH DATE AUG 18 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

DISTANCE 486.343

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.890 GAL 3.34 AZL 87.22 HCA 144.68 SMA 197.75 ECC .24099 INC 2.7796 V1 29.424
RP 241.64 LAP 1.61 LOP 109.63 VP 20.671 GAP 5.52 AZP 92.27 TAL 17.30 TAP 161.99 RCA 150.09 APO 245.40 V2 22.720
RC 244.907 GL 21.44 GP -28.02 ZAL 59.91 ZAP 98.56 ETS 186.58 ZAE 126.45 ETE 208.28 ZAC 58.81 ETC 266.07 LVI 7.04

PLANETOCENTRIC CONIC

C3 18.979 VHL 4.358 DLA 27.99 RAL 10.68 RAD 6642.4 VEL 11.790 PTH 6.81 VHP 2.434 DPA -15.26 RAP 38.22 ECC 1.3123
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 20 3 3701.49 -47.54 147.31 254.35 87.99 9 21 45 2701.5 -42.74 113.46
60.00 8 20 45 3699.63 -39.72 146.25 253.45 82.54 9 22 25 2699.6 -38.42 115.17
70.00 8 22 3 3695.81 -32.04 144.27 251.79 77.50 9 23 38 2695.8 -33.95 115.70
80.00 8 25 36 3684.65 -24.72 141.22 249.57 72.69 9 27 0 2684.7 -29.55 114.84
90.00 8 53 59 3592.80 -19.75 132.64 247.72 69.33 9 53 52 2592.8 -26.52 107.66
100.00 11 8 27 3159.12 -24.72 102.58 249.57 72.69 12 1 7 2159.1 -29.55 76.21
110.00 13 21 29 2742.62 -32.04 73.19 251.79 77.50 14 7 12 1742.6 -33.95 44.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0101 TRA -.9302 TC3-1.9081 BAU .9023 SGT 2164.2 SGR 2675.2 SG3 1778.2 ST 20.9 SR 20.5 S8 67.8
RDE .2902 RRA -.2815 RC3-3.0007 FAU .47802 RRT .8520 RRF .9829 RTF .8588 CRT .3572 CR8 -.9901 CST -.2590
FDE 4.7622 FRA-3.1644 FC-21.8415 BSP 5537 SGB 3441.0 R23 .1667 R13 .9696 LSA 71.0 MSA 20.4 S3A 1.8
BDE .2904 BRA .9719 BC3 3.5559 FSP 3081 SG1 3317.4 SG2 913.8 THA 52.04 EL1 24.1 EL2 16.6 ALF 43.18

LAUNCH DATE AUG 18 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

DISTANCE 490.131

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.890 GAL 3.31 AZL 87.13 HCA 145.61 SMA 197.74 ECC .24084 INC 2.8708 V1 29.424
RP 241.92 LAP 1.62 LOP 110.55 VP 20.640 GAP 5.29 AZP 92.37 TAL 17.18 TAP 162.79 RCA 150.11 APO 245.36 V2 22.692
RC 247.751 GL 22.13 GP -28.66 ZAL 59.22 ZAP 97.11 ETS 185.90 ZAE 126.74 ETE 207.29 ZAC 58.13 ETC 266.20 LVI 7.55

PLANETOCENTRIC CONIC

C3 19.065 VHL 4.366 DLA 28.68 RAL 10.50 RAD 6642.4 VEL 11.793 PTH 6.82 VHP 2.437 DPA -16.11 RAP 37.91 ECC 1.3138
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 13 38 3718.23 -47.49 148.93 254.93 86.74 9 17 37 2718.2 -43.18 114.83
60.00 8 14 39 3720.86 -39.52 148.02 253.78 81.35 9 16 40 2720.9 -38.73 116.89
70.00 8 12 46 3726.43 -31.57 146.54 251.85 76.24 9 14 52 2726.4 -34.07 118.09
80.00 8 6 51 3745.04 -23.43 145.24 249.15 70.95 9 9 16 2745.0 -29.14 119.28
85.03 7 36 26 3843.11 -17.02 149.80 246.49 66.57 8 40 29 2843.1 -25.21 125.68
100.00 10 49 43 3219.51 -23.43 106.61 249.15 70.95 11 43 22 2219.5 -29.14 80.65
110.00 13 12 12 2773.25 -31.57 75.45 251.85 76.24 13 58 25 1773.3 -34.07 47.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0489 TRA -.9591 TC3-2.0502 BAU .9422 SGT 2300.6 SGR 2753.6 SG3 1774.5 ST 21.9 SR 23.3 S8 69.7
RDE .3341 RRA -.2998 RC3-3.0703 FAU .47702 RRT .8667 RRF .9844 RTF .8726 CRT .4425 CR8 -.9931 CST -.3645
FDE 4.9050 FRA-3.1775 FC-21.6609 B8P 5808 SGB 3588.1 R23 .1672 R13 .9709 LSA 73.9 MSA 20.3 S3A 1.8
BDE .3377 BRA 1.0048 BC3 3.6964 FSP 3075 SG1 3470.7 SG2 910.5 THA 50.89 EL1 27.2 EL2 16.8 ALF 48.87

LAUNCH DATE AUG 18 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 493.919

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.890 GAL 3.28 AZL 87.03 HCA 146.53 SMA 197.73 ECC .24072 INC 2.9663 V1 29.424
RP 242.19 LAP 1.64 LOP 111.48 VP 20.809 GAP 5.06 AZP 92.48 TAL 17.04 TAP 163.57 RCA 150.13 APO 245.33 V2 22.685
RC 250.580 GL 22.84 GP -29.32 ZAL 59.54 ZAP 95.69 ETS 185.20 ZAE 125.04 ETE 206.32 ZAC 57.64 ETC 266.34 LVI 8.07

PLANETOCENTRIC CONIC

C3 19.165 VHL 4.378 DLA 29.39 RAL 10.32 RAD 6642.5 VEL 11.798 PTH 6.82 VHP 2.443 DPA -16.94 RAP 37.63 ECC 1.3154
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 10 58 3735.89 -47.41 150.63 255.53 85.44 9 13 13 2735.9 -43.63 116.29
60.00 8 8 7 3743.47 -39.27 149.89 254.11 80.11 9 10 31 2743.5 -39.04 118.73
70.00 8 2 30 3780.06 -31.00 148.99 251.87 74.89 9 5 10 2760.1 -34.14 120.71
80.00 7 40 6 3830.66 -21.42 150.80 248.36 68.69 8 43 56 2830.7 -28.29 125.50
81.65 7 8 28 3932.01 -17.38 156.52 246.57 65.92 8 14 0 2932.0 -25.80 132.39
100.00 10 22 58 3305.13 -21.42 112.17 248.36 68.69 11 18 3 2305.1 -28.29 86.88
110.00 13 1 56 2806.88 -31.00 77.91 251.87 74.89 13 48 43 1806.9 -34.14 49.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0910 TRA -.9887 TC3-2.2068 BAU .9826 SGT 2439.9 SGR 2831.4 SG3 1786.5 ST 23.2 SR 26.2 S8 71.5
RDE .3798 RRA -.3185 RC3-3.1364 FAU .47410 RRT .8795 RRF .9857 RTF .8546 CRT .5254 CR8 -.9950 CST -.4631
FDE 5.0363 FRA-3.1882 FC-21.4167 B8P 6086 SGB 3737.7 R23 .1673 R13 .9721 LSA 76.9 MSA 20.4 S3A 1.7
BDE .3903 BRA 1.0388 BC3 3.8350 FSP 3061 SG1 3626.0 SG2 906.8 THA 49.82 EL1 30.7 EL2 16.9 ALF 51.40

LAUNCH DATE AUG 18 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

DISTANCE 497.707

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.890 GAL 3.25 AZL 86.93 HCA 147.46 SMA 197.73 ECC .24062 INC 3.0662 V1 29.424
RP 242.46 LAP 1.65 LOP 112.40 VP 20.580 GAP 4.83 AZP 92.59 TAL 16.90 TAP 164.35 RCA 150.16 APO 245.31 V2 22.638
RC 253.394 GL 23.58 GP -29.98 ZAL 59.89 ZAP 94.30 ETS 184.46 ZAE 123.36 ETE 205.38 ZAC 57.13 ETC 266.48 LVI 8.61

PLANETOCENTRIC CONIC

C3 19.278 VHL 4.391 DLA 30.13 RAL 10.12 RAD 6642.5 VEL 11.802 PTH 6.82 VHP 2.451 DPA -17.77 RAP 37.37 ECC 1.3173
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 5 59 3754.55 -47.29 152.42 256.15 84.06 9 8 33 2754.5 -44.08 117.86
60.00 8 1 5 3767.61 -38.97 151.87 254.43 78.79 9 3 33 2767.6 -39.33 120.72
70.00 7 50 59 3797.43 -30.31 151.68 251.83 73.44 8 54 16 2797.4 -34.15 123.63
79.15 6 48 31 3994.70 -17.75 161.35 246.66 65.25 7 55 5 2994.7 -26.41 137.23
79.15 6 48 31 3994.70 -17.75 161.35 246.66 65.25 7 55 5 2994.7 -26.41 137.23
79.15 6 48 31 3994.70 -17.75 161.35 246.66 65.25 7 55 5 2994.7 -26.41 137.23
110.00 12 50 25 2844.25 -30.31 80.60 251.83 73.44 13 37 50 1844.3 -34.15 52.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1359 TRA -1.0195 TC3-2.3540 BAU 1.0239 SGT 2582.8 SGR 2909.9 SG3 1755.0 ST 24.9 SR 29.2 S8 73.2
RDE .4273 RRA -.3377 RC3-3.2001 FAU .47030 RRT .8904 RRF .9869 RTF .8947 CRT .6000 CR8 -.9964 CST -.5504
FDE 5.1668 FRA-3.1908 FC-21.1201 B8P 6370 SGB 3890.8 R23 .1673 R13 .9732 LSA 80.1 MSA 20.4 S3A 1.6
BDE .4484 BRA 1.0740 BC3 3.9727 FSP 3043 SG1 3784.3 SG2 904.1 THA 48.82 EL1 34.5 EL2 16.9 ALF 52.46

LAUNCH DATE AUG 18 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.890 GAL 3.23 AZL 86.83 HCA 148.38 SMA 197.74 ECC .24093 INC 3.1711 V1 29.424  
 RP 242.73 LAP 1.66 LOP 113.32 VP 20.532 GAP 4.60 AZP 92.70 TAL 16.75 TAP 165.13 RCA 130.18 APO 245.30 V2 22.812  
 RC 256.191 GL 24.35 GP -30.86 ZAL 80.24 ZAP 92.94 ETS 183.74 ZAE 121.69 ETE 204.46 ZAC 56.61 ETC 286.62 LVI 95.17

PLANETOCENTRIC CONIC  
 C3 19.408 VHL 4.405 DLA 30.90 RAL 9.91 RAD 6642.6 VEL 11.808 PTH 6.83 VHP 2.461 DPA -18.61 RAP 37.14 ECC 1.3194  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 40 3774.28 -47.14 194.30 256.78 82.62 9 3 34 2774.3 -44.53 119.55  
 60.00 7 53 28 3793.47 -38.61 153.97 254.73 77.41 8 56 42 2793.5 -39.61 122.86  
 70.00 7 37 50 3839.67 -29.45 154.67 251.70 71.86 8 41 50 2839.7 -34.07 126.92  
 77.01 6 31 55 4046.27 -18.13 165.39 246.76 64.54 7 39 21 3046.3 -27.04 141.28  
 77.01 6 31 55 4046.27 -18.13 165.39 246.76 64.54 7 39 21 3046.3 -27.04 141.28  
 77.01 6 31 55 4046.27 -18.13 165.39 246.76 64.54 7 39 21 3046.3 -27.04 141.28  
 110.00 12 37 16 2886.49 -29.45 83.59 251.70 71.86 13 25 23 1886.5 -34.07 55.84

MID-COURSE EXECUTION ACCURACY  
 SGT 2728.9 SGR 2988.7 SG3 1739.7  
 RRT .8998 RRF .9879 RTF .9035  
 SGB 4047.1 R23 .1674 R13 .9742  
 SG1 3945.3 SG2 901.8 THA 47.89

ORBIT DETERMINATION ACCURACY  
 ST 26.9 SR 32.4 SS 74.9  
 CRT .6650 CR8 -.9973 CST -.6253  
 LSA 83.5 MSA 20.5 S8A 1.5  
 EL1 38.6 EL2 16.9 ALF 52.75

DIFFERENTIAL CORRECTIONS  
 TDE .1839 TRA-1.0515 TC3-2.4994 BAU 1.0680  
 RDE .4770 RRA -.3576 RC3-3.2608 FAU .46555  
 FDE 5.2868 FRA-3.1896 FC-20.7673 BSP 6656  
 BDE .5112 BRA 1.1107 BC3 4.1083 FSP 3016

LAUNCH DATE AUG 18 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.891 GAL 3.20 AZL 86.72 HCA 149.29 SMA 197.76 ECC .24047 INC 3.2814 V1 29.424  
 RP 242.99 LAP 1.68 LOP 114.24 VP 20.524 GAP 4.37 AZP 92.82 TAL 16.60 TAP 165.89 RCA 150.20 APO 245.31 V2 22.586  
 RC 256.972 GL 25.16 GP -31.35 ZAL 60.62 ZAP 91.62 ETS 182.99 ZAE 120.04 ETE 203.56 ZAC 56.08 ETC 286.77 LVI 9.75

PLANETOCENTRIC CONIC  
 C3 19.555 VHL 4.422 DLA 31.70 RAL 9.69 RAD 6642.6 VEL 11.814 PTH 6.83 VHP 2.475 DPA -19.45 RAP 36.94 ECC 1.3218  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 58 3795.20 -46.94 156.28 257.42 81.11 8 58 13 2795.2 -44.97 121.36  
 60.00 7 45 11 3821.29 -38.17 156.21 255.01 75.95 8 48 53 2821.3 -39.65 125.19  
 70.00 7 22 24 3888.68 -28.36 158.07 251.43 70.12 8 27 13 2888.7 -33.85 130.73  
 75.05 6 17 20 4091.13 -18.51 168.97 246.87 63.80 7 25 31 3091.1 -27.69 144.87  
 75.05 6 17 20 4091.13 -18.51 168.97 246.87 63.80 7 25 31 3091.1 -27.69 144.87  
 75.05 6 17 20 4091.13 -18.51 168.97 246.87 63.80 7 25 31 3091.1 -27.69 144.87  
 110.00 12 21 50 2935.50 -28.36 86.98 251.43 70.12 13 10 46 1935.5 -33.85 59.65

MID-COURSE EXECUTION ACCURACY  
 SGT 2878.2 SGR 3066.6 SG3 1720.2  
 RRT .9080 RRF .9889 RTF .9110  
 SGB 4204.4 R23 .1673 R13 .9752  
 SG1 4107.0 SG2 899.6 THA 47.02

ORBIT DETERMINATION ACCURACY  
 ST 29.3 SR 35.6 SS 76.8  
 CRT .7208 CR8 -.9980 CST -.6890  
 LSA 87.1 MSA 20.5 S8A 1.4  
 EL1 43.0 EL2 16.9 ALF 52.63

DIFFERENTIAL CORRECTIONS  
 TDE .2356 TRA-1.0842 TC3-2.6405 BAU 1.1082  
 RDE .5295 RRA -.3781 RC3-3.3162 FAU .45964  
 FDE 5.4016 FRA-3.1824 FC-20.3497 BSP 6945  
 BDE .5795 BRA 1.1482 BC3 4.2390 FSP 2982

LAUNCH DATE AUG 18 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.892 GAL 3.18 AZL 86.60 HCA 150.21 SMA 197.77 ECC .24043 INC 3.3975 V1 29.424  
 RP 243.24 LAP 1.69 LOP 115.16 VP 20.498 GAP 4.15 AZP 92.95 TAL 16.44 TAP 166.85 RCA 150.22 APO 245.33 V2 22.560  
 RC 261.736 GL 25.99 GP -32.05 ZAL 61.02 ZAP 90.34 ETS 182.22 ZAE 118.42 ETE 202.68 ZAC 55.92 ETC 286.92 LVI 10.34

PLANETOCENTRIC CONIC  
 C3 19.721 VHL 4.441 DLA 32.53 RAL 9.45 RAD 6642.7 VEL 11.821 PTH 6.84 VHP 2.491 DPA -20.29 RAP 36.76 ECC 1.3248  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 50 3817.41 -46.68 158.37 258.06 79.52 8 52 28 2817.4 -45.41 123.32  
 60.00 7 36 7 3851.39 -37.65 158.59 255.24 74.41 8 40 18 2851.4 -40.05 127.72  
 70.00 7 3 24 3948.27 -26.91 162.10 250.95 68.13 8 9 12 2948.3 -33.41 135.33  
 73.22 6 4 5 4131.47 -18.90 172.25 247.00 63.02 7 12 56 3131.5 -28.36 148.17  
 73.22 6 4 5 4131.47 -18.90 172.25 247.00 63.02 7 12 56 3131.5 -28.36 148.17  
 73.22 6 4 5 4131.47 -18.90 172.25 247.00 63.02 7 12 56 3131.5 -28.36 148.17  
 110.00 12 2 50 2995.09 -26.91 91.01 250.95 68.13 12 52 45 1995.1 -33.41 64.24

MID-COURSE EXECUTION ACCURACY  
 SGT 3025.7 SGR 3145.7 SG3 1697.3  
 RRT .9152 RRF .9898 RTF .576  
 SGB 4364.7 R23 .1671 R13 .9760  
 SG1 4271.3 SG2 897.8 THA 46.22

ORBIT DETERMINATION ACCURACY  
 ST 32.0 SR 39.0 SS 78.2  
 CRT .7671 CR8 -.9984 CST -.7414  
 LSA 90.8 MSA 20.5 S8A 1.4  
 EL1 47.6 EL2 16.8 ALF 52.32

DIFFERENTIAL CORRECTIONS  
 TDE .2905 TRA-1.1180 TC3-2.7780 BAU 1.1513  
 RDE .3841 RRA -.3994 RC3-3.3691 FAU .45289  
 FDE 5.5052 FRA-3.1709 FC-19.8858 BSP 7233  
 BDE .6524 BRA 1.1872 BC3 4.3667 FSP 2938

LAUNCH DATE AUG 18 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.893 GAL 3.13 AZL 86.48 HCA 151.12 SMA 197.80 ECC .24041 INC 3.5201 V1 29.424  
 RP 243.50 LAP 1.70 LOP 116.08 VP 20.473 GAP 3.92 AZP 93.08 TAL 16.28 TAP 167.40 RCA 150.23 APO 245.35 V2 22.535  
 RC 264.483 GL 26.87 GP -32.77 ZAL 61.43 ZAP 89.09 ETS 181.44 ZAE 116.82 ETE 201.81 ZAC 54.95 ETC 287.07 LVI 10.96

PLANETOCENTRIC CONIC  
 C3 19.909 VHL 4.462 DLA 33.39 RAL 9.18 RAD 6642.8 VEL 11.829 PTH 6.85 VHP 2.510 DPA -21.14 RAP 36.62 ECC 1.3277  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 14 3841.05 -46.37 160.56 258.70 77.86 8 46 15 2841.0 -45.63 125.45  
 60.00 7 26 5 3884.15 -37.02 161.15 255.42 72.77 8 30 50 2884.2 -40.21 130.49  
 70.00 6 37 20 4028.84 -24.76 167.37 250.02 65.69 7 44 29 3028.8 -32.92 141.44  
 71.45 5 51 47 4168.51 -19.29 175.32 247.13 62.20 7 1 15 3168.5 -29.04 151.26  
 71.45 5 51 47 4168.51 -19.29 175.32 247.13 62.20 7 1 15 3168.5 -29.04 151.26  
 71.45 5 51 47 4168.51 -19.29 175.32 247.13 62.20 7 1 15 3168.5 -29.04 151.26  
 110.00 11 36 46 3075.66 -24.76 96.28 250.02 65.69 12 28 2 2075.7 -32.92 70.36

MID-COURSE EXECUTION ACCURACY  
 SGT 3176.5 SGR 3223.0 SG3 1669.7  
 RRT .9215 RRF .9906 RTF .9233  
 SGB 4525.3 R23 .1670 R13 .9768  
 SG1 4435.6 SG2 896.5 THA 45.45

ORBIT DETERMINATION ACCURACY  
 ST 35.0 SR 42.6 SS 79.7  
 CRT .8052 CR8 -.9988 CST -.7843  
 LSA 94.7 MSA 20.6 S8A 1.3  
 EL1 52.5 EL2 16.8 ALF 51.87

DIFFERENTIAL CORRECTIONS  
 TDE .3491 TRA-1.1529 TC3-2.9103 BAU 1.1943  
 RDE .6414 RRA -.4214 RC3-3.4153 FAU .44505  
 FDE 5.5993 FRA-3.1538 FC-19.3524 BSP 7533  
 BDE .7302 BRA 1.2275 BC3 4.4872 FSP 2894

LAUNCH DATE AUG 18 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 9 1974

**HELIOCENTRIC CONIC** DISTANCE 516.832 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.894 GAL 3.10 AZL 86.35 HCA 152.03 SMA 197.83 ECC .24040 INC 3.6497 V1 29.424  
 RP 243.74 LAP 1.71 LOP 116.99 VP 20.448 GAP 3.70 AZP 93.22 TAL 16.11 TAP 168.14 RCA 150.27 APO 245.39 V2 22.511  
 RC 267.212 GL 27.78 GP -33.51 ZAL 61.86 ZAP 87.89 ETS 180.64 ZAE 115.25 ETE 200.96 ZAC 54.35 ETC 267.23 LVI 11.81

**PLANETOCENTRIC CONIC**  
 CS 20.122 VHL 4.486 DLA 34.29 RAL 8.90 RAD 6642.9 VEL 11.838 PTH 6.86 VHP 2.532 DPA -22.00 RAP 36.52 ECC 1.3312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 3 3866.27 -45.98 162.87 259.31 76.11 8 39 30 2866.3 -46.24 127.74  
 60.00 7 14 54 3920.12 -36.25 163.90 255.52 71.04 8 20 14 2920.1 -40.29 133.55  
 69.74 5 40 11 4203.03 -19.68 178.23 247.28 61.33 6 50 14 3203.0 -29.75 154.20  
 69.74 5 40 11 4203.03 -19.68 178.23 247.28 61.33 6 50 14 3203.0 -29.75 154.20  
 69.74 5 40 11 4203.03 -19.68 178.23 247.28 61.33 6 50 14 3203.0 -29.75 154.20  
 69.74 5 40 11 4203.03 -19.68 178.23 247.28 61.33 6 50 14 3203.0 -29.75 154.20  
 69.74 5 40 11 4203.03 -19.68 178.23 247.28 61.33 6 50 14 3203.0 -29.75 154.20

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4118 TRA-1.1888 TC3-3.0384 BAU 1.2381 SGT 3327.8 SGR 3302.0 SG3 1639.3 ST 38.3 SR 46.2 SS 81.2  
 RDE .7021 RRA -.4443 RC3-3.4584 FAU .43643 RRT .9270 RRF .9914 RTF .9282 CRT .8366 CRS -.9991 CST -.8195  
 FDE 5.8866 FRA-3.1311 FC-18.7768 BSP 7832 SGB 4688.0 R23 .1668 R13 .9775 LSA 98.9 MSA 20.6 S8A 1.2  
 BDE .8140 BRA 1.2689 BC3 4.6022 FSP 2840 SG1 4801.7 SG2 895.5 THA 44.76 EL1 57.6 EL2 16.8 ALF 31.37

LAUNCH DATE AUG 18 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 11 1974

**HELIOCENTRIC CONIC** DISTANCE 520.415 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.896 GAL 3.07 AZL 86.21 HCA 152.94 SMA 197.87 ECC .24041 INC 3.7869 V1 29.424  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.425 GAP 3.47 AZP 93.37 TAL 15.93 TAP 168.87 RCA 150.30 APO 245.43 V2 22.487  
 RC 269.924 GL 28.74 GP -34.27 ZAL 62.31 ZAP 86.74 ETS 179.82 ZAE 113.70 ETE 200.13 ZAC 53.73 ETC 287.40 LVI 12.28

**PLANETOCENTRIC CONIC**  
 CS 20.363 VHL 4.513 DLA 35.23 RAL 8.58 RAD 6643.0 VEL 11.848 PTH 6.86 VHP 2.557 DPA -22.86 RAP 36.45 ECC 1.3351  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 27 15 3893.27 -45.51 165.30 259.90 74.29 8 32 8 2893.3 -46.61 130.24  
 60.00 7 2 15 3960.08 -35.33 166.89 255.50 69.20 8 8 16 2960.1 -40.28 136.95  
 68.05 5 29 6 4235.56 -20.08 181.02 247.43 60.42 6 39 42 3235.6 -30.47 157.03  
 68.05 5 29 6 4235.56 -20.08 181.02 247.43 60.42 6 39 42 3235.6 -30.47 157.03  
 68.05 5 29 6 4235.56 -20.08 181.02 247.43 60.42 6 39 42 3235.6 -30.47 157.03  
 68.05 5 29 6 4235.56 -20.08 181.02 247.43 60.42 6 39 42 3235.6 -30.47 157.03  
 68.05 5 29 6 4235.56 -20.08 181.02 247.43 60.42 6 39 42 3235.6 -30.47 157.03

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4783 TRA-1.2258 TC3-3.1565 BAU 1.2823 SGT 3480.7 SGR 3380.9 SG3 1804.9 ST 41.9 SR 50.1 SS 82.6  
 RDE .7698 RRA -.4684 RC3-3.4960 FAU .42885 RRT .9319 RRF .9920 RTF .9325 CRT .8620 CRS -.9993 CST -.8478  
 FDE 5.7618 FRA-3.1039 FC-18.1478 BSP 8124 SGB 4852.4 R23 .1667 R13 .9782 LSA 103.2 MSA 20.6 S8A 1.1  
 BDE .9029 BRA 1.3123 BC3 4.7101 FSP 2777 SG1 4769.1 SG2 895.2 THA 44.11 EL1 63.1 EL2 16.9 ALF 50.84

LAUNCH DATE AUG 18 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 13 1974

**HELIOCENTRIC CONIC** DISTANCE 524.196 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.898 GAL 3.03 AZL 86.07 HCA 153.85 SMA 197.90 ECC .24044 INC 3.9327 V1 29.424  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.402 GAP 3.25 AZP 93.53 TAL 15.75 TAP 169.60 RCA 150.32 APO 245.49 V2 22.464  
 RC 272.618 GL 29.74 GP -35.05 ZAL 62.79 ZAP 85.63 ETS 178.98 ZAE 112.18 ETE 199.30 ZAC 53.09 ETC 287.57 LVI 12.97

**PLANETOCENTRIC CONIC**  
 CS 20.635 VHL 4.543 DLA 36.21 RAL 8.24 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.586 DPA -23.74 RAP 36.42 ECC 1.3396  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 41 3922.27 -44.94 167.87 260.44 72.38 8 24 3 2922.3 -46.95 132.96  
 60.00 6 47 41 4005.21 -34.19 170.17 259.32 67.22 7 54 26 3005.2 -40.14 140.78  
 66.38 5 18 26 4266.51 -20.47 183.73 247.60 59.46 6 29 33 3266.5 -31.21 159.80  
 66.38 5 18 26 4266.51 -20.47 183.73 247.60 59.46 6 29 33 3266.5 -31.21 159.80  
 66.38 5 18 26 4266.51 -20.47 183.73 247.60 59.46 6 29 33 3266.5 -31.21 159.80  
 66.38 5 18 26 4266.51 -20.47 183.73 247.60 59.46 6 29 33 3266.5 -31.21 159.80  
 66.38 5 18 26 4266.51 -20.47 183.73 247.60 59.46 6 29 33 3266.5 -31.21 159.80

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5482 TRA-1.2647 TC3-3.2692 BAU 1.3271 SGT 3634.4 SGR 3460.9 SG3 1567.3 ST 45.8 SR 53.9 SS 83.7  
 RDE .8318 RRA -.4945 RC3-3.3289 FAU .41652 RRT .9363 RRF .9927 RTF .9365 CRT .8827 CRS -.9994 CST -.8706  
 FDE 5.8195 FRA-3.0764 FC-17.4749 BSP 8412 SGB 5018.6 R23 .1664 R13 .9788 LSA 107.7 MSA 20.6 S8A 1.1  
 BDE .9962 BRA 1.3580 BC3 4.8105 FSP 2706 SG1 4938.2 SG2 894.8 THA 43.50 EL1 68.7 EL2 16.9 ALF 50.29

LAUNCH DATE AUG 18 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 15 1974

**HELIOCENTRIC CONIC** DISTANCE 527.978 EARTH TO MARS  
 RL 151.42 LAL -.00 LOL 324.91 VL 32.901 GAL 3.00 AZL 85.91 HCA 154.76 SMA 197.95 ECC .24048 INC 4.0880 V1 29.424  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.381 GAP 3.03 AZP 93.70 TAL 15.57 TAP 170.32 RCA 150.35 APO 245.55 V2 22.441  
 RC 275.293 GL 30.78 GP -35.85 ZAL 63.28 ZAP 84.58 ETS 178.13 ZAE 110.70 ETE 198.49 ZAC 52.41 ETC 287.76 LVI 13.70

**PLANETOCENTRIC CONIC**  
 CS 20.943 VHL 4.576 DLA 37.23 RAL 7.85 RAD 6643.3 VEL 11.872 PTH 6.89 VHP 2.618 DPA -24.62 RAP 36.43 ECC 1.3447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 15 3953.56 -44.26 170.57 260.91 70.39 8 15 8 2953.6 -47.23 135.93  
 60.00 6 30 26 4057.55 -32.75 173.86 254.90 65.06 7 38 3 3057.5 -39.80 145.19  
 64.71 5 8 3 4296.20 -20.86 186.38 247.77 58.44 6 19 39 3296.2 -31.97 162.51  
 64.71 5 8 3 4296.20 -20.86 186.38 247.77 58.44 6 19 39 3296.2 -31.97 162.51  
 64.71 5 8 3 4296.20 -20.86 186.38 247.77 58.44 6 19 39 3296.2 -31.97 162.51  
 64.71 5 8 3 4296.20 -20.86 186.38 247.77 58.44 6 19 39 3296.2 -31.97 162.51  
 64.71 5 8 3 4296.20 -20.86 186.38 247.77 58.44 6 19 39 3296.2 -31.97 162.51

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6234 TRA-1.3042 TC3-3.3715 BAU 1.3714 SGT 3786.4 SGR 3538.8 SG3 1525.2 ST 49.9 SR 58.1 SS 84.9  
 RDE .9031 RRA -.5207 RC3-3.5529 FAU .40495 RRT .9401 RRF .9932 RTF .9397 CRT .8996 CRS -.9995 CST -.8894  
 FDE 5.8726 FRA-3.0372 FC-16.7396 BSP 8730 SGB 5182.7 R23 .1665 R13 .9793 LSA 112.4 MSA 20.6 S8A 1.0  
 BDE 1.0974 BRA 1.4043 BC3 4.8979 FSP 2640 SG1 5104.8 SG2 895.2 THA 42.94 EL1 74.7 EL2 16.9 ALF 49.79

LAUNCH DATE AUG 18 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.903 GAL 2.96 AZL 85.75 HCA 195.88 SMA 198.00 ECC .24053 INC 4.2536 V1 29.424
RP 244.68 LAP 1.75 LOP 120.83 VP 20.360 GAP 2.81 AZP 93.88 TAL 15.38 TAP 171.04 RCA 150.37 APO 245.82 V2 22.418
RC 277.948 GL 31.88 GP -36.68 ZAL 63.80 ZAP 83.57 ETS 177.27 ZAE 109.24 ETE 197.68 ZAC 51.71 ETC 287.96 LVI 14.46

DISTANCE 531.755

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.292 VHL 4.614 DLA 38.29 RAL 7.43 RAD 6843.4 VEL 11.887 PTH 6.90 VHP 2.854 DPA -25.51 RAP 36.49 ECC 1.3504
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 58 46 3987.50 -43.45 173.43 261.28 68.31 8 5 13 2987.5 -47.45 139.18
60.00 6 8 57 4121.15 -30.84 178.16 254.09 62.65 7 17 38 3121.2 -39.14 150.47
63.03 4 57 54 4324.82 -21.25 188.98 247.94 57.36 6 9 58 3324.8 -32.74 165.20
63.03 4 57 54 4324.82 -21.25 188.98 247.94 57.36 6 9 58 3324.8 -32.74 165.20
63.03 4 57 54 4324.82 -21.25 188.98 247.94 57.36 6 9 58 3324.8 -32.74 165.20
63.03 4 57 54 4324.82 -21.25 188.98 247.94 57.36 6 9 58 3324.8 -32.74 165.20
63.03 4 57 54 4324.82 -21.25 188.98 247.94 57.36 6 9 58 3324.8 -32.74 165.20

DIFFERENTIAL CORRECTIONS

TDE .7026 TRA-1.3458 TC3-3.4651 BAU 1.4168
RDE .9777 RRA -.5495 RC3-3.5717 FAU .39273
FDE 5.9079 FRA-2.9979 FC-15.9687 B8P 9026
BDE 1.2040 BRA 1.4537 BC3 4.9764 F8P 2580

MID-COURSE EXECUTION ACCURACY

SGT 3939.6 SGR 3618.6 SG3 1480.2
RRR .9435 RRF .9937 RTF .9427
SCB 5349.3 R23 .1665 R13 .9798
SG1 5273.8 SG2 895.7 THA 42.42

ORBIT DETERMINATION ACCURACY

ST 54.3 SR 62.3 SS 85.8
CRT .9135 CR8 -.9996 CST -.9047
LSA 117.3 MSA 20.6 SSA 1.0
EL1 80.8 EL2 17.0 ALF 49.30

LAUNCH DATE AUG 18 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.906 GAL 2.93 AZL 85.57 HCA 196.56 SMA 198.05 ECC .24060 INC 4.4309 V1 29.424
RP 244.90 LAP 1.78 LOP 121.53 VP 20.340 GAP 2.60 AZP 94.07 TAL 15.19 TAP 171.75 RCA 150.40 APO 245.70 V2 22.397
RC 280.584 GL 33.04 GP -37.54 ZAL 64.33 ZAP 82.62 ETS 176.39 ZAE 107.83 ETE 196.89 ZAC 50.97 ETC 288.17 LVI 13.25

DISTANCE 535.533

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.688 VHL 4.657 DLA 39.40 RAL 6.95 RAD 6643.6 VEL 11.903 PTH 6.91 VHP 2.694 DPA -26.42 RAP 36.60 ECC 1.3569
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 47 0 4024.57 -42.47 176.45 261.51 66.15 7 54 5 3024.6 -47.56 142.76
60.00 5 39 3 4207.55 -28.00 183.72 252.51 59.74 6 49 10 3207.6 -37.84 157.44
61.33 4 47 52 4352.56 -21.62 191.55 248.12 56.22 6 0 25 3352.6 -33.53 167.88
61.33 4 47 52 4352.56 -21.62 191.55 248.12 56.22 6 0 25 3352.6 -33.53 167.88
61.33 4 47 52 4352.56 -21.62 191.55 248.12 56.22 6 0 25 3352.6 -33.53 167.88
61.33 4 47 52 4352.56 -21.62 191.55 248.12 56.22 6 0 25 3352.6 -33.53 167.88
61.33 4 47 52 4352.56 -21.62 191.55 248.12 56.22 6 0 25 3352.6 -33.53 167.88

DIFFERENTIAL CORRECTIONS

TDE .7863 TRA-1.3890 TC3-3.5475 BAU 1.4622
RDE 1.0567 RRA -.5805 RC3-3.5841 FAU .37978
FDE 5.9282 FRA-2.9556 FC-15.1600 B8P 9336
BDE 1.3171 BRA 1.5055 BC3 5.0429 F8P 2479

MID-COURSE EXECUTION ACCURACY

SGT 4092.1 SGR 3699.7 SG3 1432.1
RRR .9467 RRF .9942 RTF .9454
SCB 5516.6 R23 .1663 R13 .9803
SG1 5443.3 SG2 896.3 THA 41.96

ORBIT DETERMINATION ACCURACY

ST 58.9 SR 66.7 SS 86.6
CRT .9250 CR8 -.9997 CST -.9172
LSA 122.4 MSA 20.6 SSA .9
EL1 87.3 EL2 17.1 ALF 48.84

LAUNCH DATE AUG 18 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.909 GAL 2.89 AZL 85.38 HCA 197.48 SMA 198.11 ECC .24069 INC 4.6212 V1 29.424
RP 245.11 LAP 1.77 LOP 122.44 VP 20.322 GAP 2.38 AZP 94.27 TAL 14.99 TAP 172.43 RCA 150.42 APO 245.79 V2 22.378
RC 283.198 GL 34.25 GP -38.43 ZAL 64.90 ZAP 81.73 ETS 175.49 ZAE 106.44 ETE 196.10 ZAC 50.19 ETC 288.39 LVI 16.08

DISTANCE 539.310

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.139 VHL 4.705 DLA 40.56 RAL 6.42 RAD 6643.8 VEL 11.922 PTH 6.93 VHP 2.738 DPA -27.35 RAP 36.75 ECC 1.3643
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 33 41 4065.42 -41.30 179.87 261.56 63.88 7 41 27 3065.4 -47.55 146.71
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58
59.62 4 37 54 4379.68 -21.98 194.12 248.29 55.01 5 50 54 3379.7 -34.33 170.58

DIFFERENTIAL CORRECTIONS

TDE .8749 TRA-1.4343 TC3-3.6180 BAU 1.5083
RDE 1.1410 RRA -.6137 RC3-3.5890 FAU .36607
FDE 5.9348 FRA-2.9086 FC-14.3154 B8P 9633
BDE 1.4378 BRA 1.5801 BC3 5.0962 F8P 2388

MID-COURSE EXECUTION ACCURACY

SGT 4244.1 SGR 3782.2 SG3 1380.9
RRR .9485 RRF .9946 RTF .5477
SCB 5684.9 R23 .1663 R13 .9807
SG1 5613.6 SG2 897.6 THA 41.53

ORBIT DETERMINATION ACCURACY

ST 63.7 SR 71.2 SS 87.2
CRT .9344 CR8 -.9997 CST -.9274
LSA 127.7 MSA 20.6 SSA .8
EL1 94.0 EL2 17.2 ALF 48.42

LAUNCH DATE AUG 18 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.912 GAL 2.85 AZL 85.17 HCA 198.36 SMA 198.17 ECC .24078 INC 4.8261 V1 29.424
RP 245.32 LAP 1.78 LOP 123.34 VP 20.304 GAP 2.16 AZP 94.49 TAL 14.79 TAP 173.15 RCA 150.45 APO 245.88 V2 22.354
RC 285.791 GL 35.32 GP -39.35 ZAL 65.49 ZAP 80.89 ETS 174.59 ZAE 105.10 ETE 195.32 ZAC 49.38 ETC 288.64 LVI 16.94

DISTANCE 543.085

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.653 VHL 4.780 DLA 41.77 RAL 5.82 RAD 6644.0 VEL 11.943 PTH 6.95 VHP 2.788 DPA -28.29 RAP 36.96 ECC 1.3728
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 18 21 4111.01 -39.87 183.11 261.35 61.92 7 28 52 3111.0 -47.36 151.10
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31
57.88 4 27 55 4406.31 -22.33 196.68 248.46 53.73 5 41 22 3406.3 -35.14 173.31

DIFFERENTIAL CORRECTIONS

TDE .9673 TRA-1.4822 TC3-3.6752 BAU 1.5547
RDE 1.2300 RRA -.6500 RC3-3.5844 FAU .35146
FDE 5.9208 FRA-2.8583 FC-13.4320 B8P 9929
BDE 1.5647 BRA 1.6185 BC3 5.1337 F8P 2293

MID-COURSE EXECUTION ACCURACY

SGT 4395.3 SGR 3864.5 SG3 1326.1
RRR .9520 RRF .9950 RTF .9497
SCB 5852.6 R23 .1665 R13 .9810
SG1 5783.1 SG2 898.9 THA 41.14

ORBIT DETERMINATION ACCURACY

ST 68.6 SR 75.9 SS 87.6
CRT .9420 CR8 -.9997 CST -.9357
LSA 133.0 MSA 20.7 SSA .8
EL1 100.8 EL2 17.3 ALF 48.06

LAUNCH DATE AUG 18 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC			DISTANCE 546.859										EARTH TO MARS												
RL	191.42	LAL	-0.00	LOL	324.91	VL	32.915	GAL	2.82	AZL	84.95	HCA	159.26	SMA	198.23	ECC	.24089	INC	5.0475	V1	29.424				
RP	245.53	LAP	1.79	LOP	124.24	VP	20.287	GAP	1.95	AZP	94.72	TAL	14.30	TAP	173.84	RCA	150.48	APO	245.98	V2	22.334				
RC	288.361	GL	36.87	GP	-40.31	ZAL	66.10	ZAP	80.12	ETS	173.67	ZAE	103.80	ETE	194.54	ZAC	48.52	ETC	288.00	LVI	17.85				
PLANETOCENTRIC CONIC																									
C3	23.241	VHL	4.821	DLA	43.03	RAL	5.14	RAD	6644.3	VEL	11.968	PTH	6.97	VHP	2.843	DPA	-29.25	RAP	37.23	ECC	1.3825				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	6	0	20	4162.85		-38.12		186.84		260.78		59.04		7	9	43	3162.8		-46.93		156.04				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
56.11	4	17	51	4432.63		-22.64		199.25		248.62		52.38		5	31	43	3432.6		-35.94		176.08				
DIFFERENTIAL CORRECTIONS			MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY												
TDE	1.0658	TRA	-1.5313	TC3	-3.7157	BAU	1.6011		SGT	4542.9	SGR	3947.8	SG3	1268.2		ST	73.7	SR	80.7	SS	87.7				
RDE	1.3252	RRA	-0.6990	RC3	-3.5702	FAU	.33608		RRT	.9544	RRF	.9954	RTF	.9516		CRT	.9486	CRS	-.9998	CST	-.9428				
FDE	5.8992	FRA	-2.8029	FC	-12.5189	BSP	10249		SG8	6018.6	R23	.1664	R13	.9814		LSA	138.6	MSA	20.7	SSA	.7				
BDE	1.7006	BRA	1.6791	BC3	5.1530	FSP	2196		SG1	5951.0	SG2	899.7	THA	40.80		EL1	107.9	EL2	17.4	ALF	47.72				

LAUNCH DATE AUG 18 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC			DISTANCE 550.631										EARTH TO MARS												
RL	151.42	LAL	-0.00	LOL	324.91	VL	32.918	GAL	2.78	AZL	84.71	HCA	160.15	SMA	198.30	ECC	.24101	INC	5.2875	V1	29.424				
RP	245.73	LAP	1.79	LOP	125.14	VP	20.270	GAP	1.73	AZP	94.98	TAL	14.37	TAP	174.52	RCA	150.50	APO	246.09	V2	22.314				
RC	290.907	GL	38.28	GP	-41.31	ZAL	66.75	ZAP	79.41	ETS	172.74	ZAE	102.54	ETE	193.77	ZAC	47.62	ETC	289.19	LVI	18.81				
PLANETOCENTRIC CONIC																									
C3	23.918	VHL	4.891	DLA	44.34	RAL	4.38	RAD	6644.5	VEL	11.996	PTH	6.99	VHP	2.904	DPA	-30.22	RAP	37.56	ECC	1.3936				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	5	38	24	4223.69		-35.91		190.97		259.66		56.40		6	48	48	3223.7		-46.14		181.70				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
54.30	4	7	38	4458.69		-22.92		201.84		248.76		50.94		5	21	57	3458.7		-36.75		178.91				
DIFFERENTIAL CORRECTIONS			MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY												
TDE	1.1871	TRA	-1.5843	TC3	-3.7426	BAU	1.6491		SGT	4691.0	SGR	4034.2	SG3	1207.8		ST	78.9	SR	85.6	SS	87.9				
RDE	1.4255	RRA	-0.7322	RC3	-3.5485	FAU	.32022		RRT	.9565	RRF	.9957	RTF	.9532		CRT	.9539	CRS	-.9998	CST	-.9483				
FDE	5.8325	FRA	-2.7438	FC	-11.5907	BSP	10538		SG8	6187.1	R23	.1664	R13	.9817		LSA	144.1	MSA	20.7	SSA	.7				
BDE	1.8423	BRA	1.7453	BC3	5.1574	FSP	2089		SG1	6121.1	SG2	901.8	THA	40.50		EL1	115.0	EL2	17.6	ALF	47.45				

LAUNCH DATE AUG 18 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC			DISTANCE 554.402										EARTH TO MARS												
RL	151.42	LAL	-0.00	LOL	324.91	VL	32.922	GAL	2.74	AZL	84.45	HCA	161.04	SMA	198.36	ECC	.24115	INC	5.5488	V1	29.424				
RP	245.93	LAP	1.80	LOP	126.04	VP	20.255	GAP	1.52	AZP	95.25	TAL	14.16	TAP	173.21	RCA	150.53	APO	246.20	V2	22.295				
RC	293.430	GL	39.78	GP	-42.36	ZAL	67.42	ZAP	78.77	ETS	171.80	ZAE	101.33	ETE	193.01	ZAC	46.67	ETC	289.51	LVI	19.81				
PLANETOCENTRIC CONIC																									
C3	24.898	VHL	4.970	DLA	45.72	RAL	3.50	RAD	6644.9	VEL	12.020	PTH	7.02	VHP	2.972	DPA	-31.22	RAP	37.95	ECC	1.4065				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	5	9	52	4299.77		-32.93		195.79		257.65		53.49		6	21	32	3299.8		-44.73		188.48				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
52.45	3	57	10	4484.73		-23.16		204.45		248.86		49.41		5	11	55	3484.7		-37.54		181.83				
DIFFERENTIAL CORRECTIONS			MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY												
TDE	1.2729	TRA	-1.6410	TC3	-3.7519	BAU	1.6980		SGT	4837.7	SGR	4124.2	SG3	1149.2		ST	84.1	SR	90.6	SS	87.0				
RDE	1.5333	RRA	-0.7814	RC3	-3.5170	FAU	.30374		RRT	.9586	RRF	.9960	RTF	.9547		CRT	.9583	CRS	-.9998	CST	-.9529				
FDE	5.7552	FRA	-2.6859	FC	-10.6489	BSP	10830		SG8	6357.1	R23	.1664	R13	.9820		LSA	149.7	MSA	20.8	SSA	.6				
BDE	1.9928	BRA	1.8176	BC3	5.1426	FSP	1977		SG1	6292.7	SG2	902.5	THA	40.26		EL1	122.3	EL2	17.8	ALF	47.25				

LAUNCH DATE AUG 18 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC			DISTANCE 558.174										EARTH TO MARS												
RL	151.42	LAL	-0.00	LOL	324.91	VL	32.926	GAL	2.70	AZL	84.17	HCA	161.94	SMA	198.44	ECC	.24129	INC	5.8345	V1	29.424				
RP	246.12	LAP	1.81	LOP	126.93	VP	20.240	GAP	1.31	AZP	95.55	TAL	13.95	TAP	175.88	RCA	150.56	APO	246.32	V2	22.276				
RC	295.928	GL	41.36	GP	-43.45	ZAL	68.12	ZAP	78.20	ETS	170.86	ZAE	100.16	ETE	192.25	ZAC	45.67	ETC	289.85	LVI	20.86				
PLANETOCENTRIC CONIC																									
C3	25.804	VHL	5.060	DLA	47.14	RAL	2.50	RAD	6645.2	VEL	12.065	PTH	7.05	VHP	3.049	DPA	-32.25	RAP	38.41	ECC	1.4214				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	4	23	59	4416.95		-27.97		202.56		253.40		49.81		5	37	36	3416.9		-41.76		178.17				
50.56	3	46	22	4510.88		-23.35		207.10		248.91		47.80		5	1	33	3510.9		-38.30		184.84				
50.56	3	46	22	4510.88		-23.35		207.10		248.91		47.80		5	1	33	3510.9		-38.30		184.84				
50.56	3	46	22	4510.88		-23.35		207.10		248.91		47.80		5	1	33	3510.9		-38.30		184.84				
50.56	3	46	22	4510.88		-23.35		207.10		248.91		47.80		5	1	33	3510.9		-38.30		184.84				
50.56	3	46	22	4510.88		-23.35		207.10		248.91		47.80		5	1	33	3510.9		-38.30		184.84				

LAUNCH DATE AUG 18 1973

FLIGHT TIME 290.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 561.941

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.930 GAL 2.66 AZL 83.85 HCA 162.82 SMA 198.91 ECC .24145 INC 6.1403 V1 29.424
RP 246.30 LAP 1.81 LOP 127.03 VP 20.227 GAP 1.10 AZP 95.88 TAL 13.73 TAP 176.35 RCA 150.36 APO 246.44 VE 22.250
RC 298.401 GL 43.03 GP -44.58 ZAL 68.85 ZAP 77.72 ETS 169.92 ZAE 99.05 ETE 191.51 ZAC 44.62 ETC 290.24 LV1 21.97

PLANETOCENTRIC CONIC

C3 26.659 VHL 5.163 DLA 48.63 RAL 1.35 RAD 6645.7 VEL 12.109 PTH 7.08 VHP 3.134 DPA -33.30 RAP 38.95 ECC 1.4307
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97
48.63 3 35 9 4537.29 -23.46 209.79 248.90 46.09 4 50 46 3537.3 -39.03 187.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4895 TRA-1.7678 TC3-3.7141 BAU 1.8017 SGT 5123.8 SGR 4320.4 SG3 1013.9 ST 94.1 SR 100.5 SS 84.4
RDE 1.7607 RRA -1.9045 RC3-3.4295 FAU .26983 RRT .9631 RRF .9964 RTF .9582 CRT .9652 CRS -.9998 CST -.9598
FDE 5.4909 FRA-2.5762 FC3-8.7624 BSP 11331 SGB 6702.2 R23 .1639 R13 .9829 LSA 160.1 MSA 20.8 SSA .5
BDE 2.3062 BRA 1.9888 BC3 5.0553 FSP 1717 SG1 6841.9 SG2 896.8 THA 39.96 EL1 136.4 EL2 18.1 ALF 46.95

LAUNCH DATE AUG 18 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

DISTANCE 565.706

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.934 GAL 2.62 AZL 83.51 HCA 163.71 SMA 198.59 ECC .24161 INC 6.4947 V1 29.424
RP 246.48 LAP 1.82 LOP 128.72 VP 20.214 GAP .89 AZP 96.24 TAL 13.50 TAP 177.22 RCA 150.61 APO 246.57 VE 22.241
RC 300.850 GL 44.79 GP -45.77 ZAL 69.62 ZAP 77.31 ETS 168.98 ZAE 97.99 ETE 190.78 ZAC 43.51 ETC 290.67 LV1 23.13

PLANETOCENTRIC CONIC

C3 27.898 VHL 5.282 DLA 50.18 RAL .03 RAD 6646.2 VEL 12.159 PTH 7.12 VHP 3.231 DPA -34.37 RAP 39.58 ECC 1.4391
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23
46.65 3 23 21 4564.18 -23.50 212.53 248.79 44.29 4 39 25 3564.2 -39.70 191.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5998 TRA-1.8381 TC3-3.6827 BAU 1.8530 SGT 5260.8 SGR 4414.9 SG3 942.6 ST 98.7 SR 105.7 SS 82.7
RDE 1.8917 RRA -.9710 RC3-3.3569 FAU .25106 RRT .9648 RRF .9966 RTF .9588 CRT .9670 CRS -.9998 CST -.9615
FDE 5.3324 FRA-2.4925 FC3-7.7908 BSP 11646 SGB 6867.8 R23 .1653 R13 .9828 LSA 165.2 MSA 21.1 SSA .5
BDE 2.4775 BRA 2.0788 BC3 4.9683 FSP 1604 SG1 6808.6 SG2 900.1 THA 39.82 EL1 143.4 EL2 18.5 ALF 47.01

LAUNCH DATE AUG 18 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

DISTANCE 589.469

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.938 GAL 2.57 AZL 83.12 HCA 164.60 SMA 198.67 ECC .24179 INC 6.8792 V1 29.424
RP 246.85 LAP 1.82 LOP 129.61 VP 20.202 GAP .68 AZP 96.63 TAL 13.28 TAP 177.88 RCA 150.64 APO 246.71 VE 22.224
RC 303.274 GL 48.66 GP -47.02 ZAL 70.43 ZAP 76.98 ETS 168.05 ZAE 97.00 ETE 190.08 ZAC 42.34 ETC 291.15 LV1 24.39

PLANETOCENTRIC CONIC

C3 29.363 VHL 5.419 DLA 51.78 RAL 358.48 RAD 6646.8 VEL 12.219 PTH 7.17 VHP 3.340 DPA -35.47 RAP 40.29 ECC 1.4832
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62
44.63 3 10 52 4591.61 -23.43 215.30 248.55 42.40 4 27 24 3591.6 -40.29 194.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7064 TRA-1.9145 TC3-3.5890 BAU 1.9080 SGT 5393.6 SGR 4513.1 SG3 869.3 ST 102.9 SR 110.7 SS 80.4
RDE 2.0298 RRA -1.0470 RC3-3.2702 FAU .23176 RRT .9659 RRF .9966 RTF .5091 CRT .9682 CRS -.9997 CST -.9623
FDE 5.1375 FRA-2.4033 FC3-6.8331 BSP 11936 SGB 7032.7 R23 .1670 R13 .9827 LSA 169.9 MSA 21.4 SSA .5
BDE 2.8817 BRA 2.1821 BC3 4.8554 FSP 1483 SG1 6974.4 SG2 903.5 THA 39.75 EL1 149.9 EL2 19.0 ALF 47.18

LAUNCH DATE AUG 18 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

DISTANCE 573.231

EARTH TO MARS

RL 151.42 LAL -.00 LOL 324.91 VL 32.942 GAL 2.53 AZL 82.89 HCA 165.48 SMA 198.78 ECC .24197 INC 7.3089 V1 29.424
RP 246.82 LAP 1.83 LOP 130.50 VP 20.191 GAP .47 AZP 97.08 TAL 13.05 TAP 178.53 RCA 150.66 APO 246.85 VE 22.207
RC 305.673 GL 48.65 GP -48.31 ZAL 71.27 ZAP 76.75 ETS 167.14 ZAE 96.07 ETE 189.36 ZAC 41.11 ETC 291.66 LV1 25.63

PLANETOCENTRIC CONIC

C3 31.109 VHL 5.578 DLA 53.44 RAL 356.67 RAD 6647.4 VEL 12.290 PTH 7.23 VHP 3.465 DPA -36.59 RAP 41.09 ECC 1.5120
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16
42.57 2 57 29 4619.92 -23.23 218.11 248.12 40.41 4 14 28 3619.9 -40.78 198.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8069 TRA-1.9988 TC3-3.4895 BAU 1.9605 SGT 5518.5 SGR 4617.1 SG3 794.4 ST 106.4 SR 115.6 SS 77.5
RDE 2.1746 RRA -1.1346 RC3-3.1694 FAU .21208 RRT .9673 RRF .9967 RTF .9593 CRT .9687 CRS -.9997 CST -.9623
FDE 4.9032 FRA-2.3081 FC3-5.9014 BSP 12254 SGB 7195.2 R23 .1687 R13 .9825 LSA 173.8 MSA 21.8 SSA .4
BDE 2.8273 BRA 2.2966 BC3 4.7140 FSP 1360 SG1 7138.0 SG2 905.9 THA 39.75 EL1 155.9 EL2 19.6 ALF 47.46



LAUNCH DATE AUG 18 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.946 GAL 2.49 AZL 82.21 HCA 166.36 BMA 198.84 ECC .24217 INC 7.7922 V1 29.424  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.180 GAP .26 AZP 97.58 TAL 12.82 TAP 179.19 RCA 150.69 APO 246.99 V2 22.191  
 RC 308.047 GL 80.75 GP -48.67 ZAL 72.14 ZAP 76.61 ETS 166.26 ZAE 93.20 ETE 188.69 ZAC 39.81 ETC 292.29 LVI 26.88

DISTANCE 576.990

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.210 VHL 5.783 DLA 55.14 RAL 334.54 RAD 6648.2 VEL 12.374 PTH 7.29 VHP 3.607 DPA -37.73 RAP 42.00 ECC 1.5466  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84  
 40.47 2 42 59 4649.30 -22.89 220.96 247.45 38.35 4 0 28 3649.3 -41.13 201.84

DIFFERENTIAL CORRECTIONS

TDE 1.8913 TRA-2.0877 TC3-3.3667 BAU 2.0186  
 RDE 2.3223 RRA-1.2368 RC3-3.0555 FAU .19212  
 FDE 4.6226 FRA-2.2056 FC3-5.0082 BSP 12553  
 BDE 2.9950 BRA 2.4266 BC3 4.5465 FSP 1231

MID-COURSE EXECUTION ACCURACY

SGT 5637.2 SGR 4728.7 SG3 718.5  
 RRT .9685 RRF .9966 RTF .9593  
 SGB 7357.9 R23 .1709 R13 .9822  
 SG1 7301.6 SG2 908.5 THA 39.83

ORBIT DETERMINATION ACCURACY

ST 108.8 SR 120.0 SS 73.9  
 CRT .9683 CR8 -.9996 CST -.9611  
 LSA 176.6 MSA 22.4 SSA .4  
 EL1 160.7 EL2 20.3 ALF 47.69

LAUNCH DATE AUG 18 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.951 GAL 2.45 AZL 81.66 HCA 167.24 BMA 198.93 ECC .24237 INC 8.3403 V1 29.424  
 RP 247.14 LAP 1.84 LOP 132.28 VP 20.170 GAP .05 AZP 98.14 TAL 12.59 TAP 179.83 RCA 150.71 APO 247.14 V2 22.176  
 RC 310.395 GL 52.98 GP -51.08 ZAL 73.06 ZAP 76.56 ETS 165.42 ZAE 94.42 ETE 188.06 ZAC 38.46 ETC 292.97 LVI 28.38

DISTANCE 580.746

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.766 VHL 5.980 DLA 56.87 RAL 352.02 RAD 6649.2 VEL 12.476 PTH 7.37 VHP 3.772 DPA -38.90 RAP 43.02 ECC 1.5886  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65  
 38.36 2 27 6 4679.98 -22.36 223.82 246.46 36.23 3 45 6 3680.0 -41.30 205.65

DIFFERENTIAL CORRECTIONS

TDE 1.9499 TRA-2.1882 TC3-3.2183 BAU 2.0799  
 RDE 2.4697 RRA-1.3573 RC3-2.9262 FAU .17185  
 FDE 4.2938 FRA-2.0944 FC3-4.1597 BSP 12851  
 BDE 3.1467 BRA 2.5750 BC3 4.3497 FSP 1098

MID-COURSE EXECUTION ACCURACY

SGT 5746.3 SGR 4848.6 SG3 841.7  
 RRT .9697 RRF .9965 RTF .9588  
 SGB 7518.6 R23 .1739 R13 .9817  
 SG1 7463.1 SG2 911.3 THA 40.01

ORBIT DETERMINATION ACCURACY

ST 109.9 SR 123.7 SS 69.4  
 CRT .9666 CR8 -.9995 CST -.9580  
 LSA 177.9 MSA 23.2 SSA .4  
 EL1 164.1 EL2 21.2 ALF 48.80

LAUNCH DATE AUG 18 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

RL 151.42 LAL -.00 LOL 324.91 VL 32.955 GAL 2.40 AZL 81.03 HCA 168.12 BMA 199.02 ECC .24259 INC 8.9672 V1 29.424  
 RP 247.29 LAP 1.84 LOP 133.17 VP 20.162 GAP -.15 AZP 98.78 TAL 12.38 TAP 180.48 RCA 150.74 APO 247.30 V2 22.161  
 RC 312.717 GL 55.36 GP -52.54 ZAL 74.01 ZAP 76.63 ETS 164.65 ZAE 93.72 ETE 187.48 ZAC 37.03 ETC 293.74 LVI 29.88

DISTANCE 584.498

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.913 VHL 6.238 DLA 58.82 RAL 349.01 RAD 6650.3 VEL 12.601 PTH 7.46 VHP 3.964 DPA -40.08 RAP 44.18 ECC 1.6404  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56  
 36.25 2 9 32 4712.24 -21.62 226.66 245.04 34.07 3 28 4 3712.2 -41.25 209.56

DIFFERENTIAL CORRECTIONS

TDE 1.9651 TRA-2.3005 TC3-3.0493 BAU 2.1456  
 RDE 2.6093 RRA-1.4992 RC3-2.7813 FAU .15132  
 FDE 3.9139 FRA-1.9697 FC3-3.3664 BSP 13165  
 BDE 3.2665 BRA 2.7459 BC3 4.1243 FSP 966

MID-COURSE EXECUTION ACCURACY

SGT 5844.3 SGR 4977.7 SG3 864.1  
 RRT .9707 RRF .9962 RTF .9576  
 SGB 7676.8 R23 .1786 R13 .9808  
 SG1 7621.8 SG2 917.1 THA 40.29

ORBIT DETERMINATION ACCURACY

ST 109.0 SR 126.3 SS 64.1  
 CRT .9628 CR8 -.9993 CST -.9519  
 LSA 177.1 MSA 24.3 SSA .3  
 EL1 163.3 EL2 22.5 ALF 49.37

LAUNCH DATE AUG 19 1973 FLIGHT TIME 98.00 ARRIVAL DATE NOV 25 1973

HELIOCENTRIC CONIC DISTANCE 271.716 EARTH TO MARS
RL 131.40 LAL -.00 LOL 325.87 VL 35.334 GAL 2.91 AZL 90.00 HCA 83.39 SMA 262.94 ECC .42671 INC .0000 V1 29.429

PLANETOCENTRIC CONIC
C3 38.910 VHL 6.238 DLA 13.48 RAL 33.56 RAD 6650.3 VEL 12.601 PTH 7.46 VHP 8.471 DPA 11.20 RAP 44.38 ECC 1.6404
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3043 TRA -.8433 TC3 .3330 BAW .1790 SGT 940.8 SGR 626.6 SG3 135.4 ST 18.4 SR 29.0 SS 6.0

LAUNCH DATE AUG 19 1973 FLIGHT TIME 100.00 ARRIVAL DATE NOV 27 1973

HELIOCENTRIC CONIC DISTANCE 274.183 EARTH TO MARS
RL 131.40 LAL -.00 LOL 325.87 VL 35.188 GAL 2.95 AZL 89.97 HCA 84.31 SMA 257.67 ECC .41509 INC .0297 V1 29.429

PLANETOCENTRIC CONIC
C3 37.275 VHL 6.105 DLA 13.45 RAL 32.88 RAD 6649.7 VEL 12.536 PTH 7.41 VHP 8.206 DPA 11.16 RAP 44.69 ECC 1.6134
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3051 TRA -.8326 TC3 .3635 BAW .1873 SGT 981.5 SGR 632.6 SG3 144.6 ST 18.7 SR 29.2 SS 6.2

LAUNCH DATE AUG 19 1973 FLIGHT TIME 102.00 ARRIVAL DATE NOV 29 1973

HELIOCENTRIC CONIC DISTANCE 276.785 EARTH TO MARS
RL 131.40 LAL -.00 LOL 325.87 VL 35.049 GAL 2.99 AZL 89.93 HCA 85.62 SMA 252.90 ECC .40420 INC .0874 V1 29.429

PLANETOCENTRIC CONIC
C3 35.780 VHL 5.982 DLA 13.44 RAL 32.20 RAD 6649.2 VEL 12.477 PTH 7.37 VHP 7.952 DPA 11.12 RAP 44.98 ECC 1.5889
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3052 TRA -.8222 TC3 .3945 BAW .1954 SGT 981.8 SGR 638.3 SG3 154.4 ST 19.0 SR 29.4 SS 6.4

LAUNCH DATE AUG 19 1973 FLIGHT TIME 104.00 ARRIVAL DATE DEC 1 1973

HELIOCENTRIC CONIC DISTANCE 279.505 EARTH TO MARS
RL 131.40 LAL -.00 LOL 325.87 VL 34.919 GAL 3.03 AZL 89.89 HCA 86.73 SMA 248.59 ECC .39399 INC .1037 V1 29.429

PLANETOCENTRIC CONIC
C3 34.413 VHL 5.866 DLA 13.43 RAL 31.51 RAD 6648.7 VEL 12.422 PTH 7.33 VHP 7.707 DPA 11.06 RAP 45.27 ECC 1.5664
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3058 TRA -.8113 TC3 .4266 BAW .2034 SGT 1001.7 SGR 643.0 SG3 164.6 ST 19.3 SR 29.5 SS 6.5

LAUNCH DATE AUG 19 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 3 1973

HELIOCENTRIC CONIC

DISTANCE 282.330

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 34.796 GAL 3.07 AZL 89.86 HCA 87.83 SMA 244.66 ECC .36440 INC .1399 V1 29.429  
 RP 221.71 LAP .14 LOP 53.70 VP 25.588 GAP 21.99 AZP 89.89 TAL 11.08 TAP 98.91 RCA 150.81 APO 338.71 V2 24.799  
 RC 91.436 6L .85 GP -5.85 ZAL 67.48 ZAP 170.41 ETS 219.18 ZAE 158.43 ETE 343.74 ZAC 76.91 ETC 282.42 LVI -10.25

PLANETOCENTRIC CONIC

C3 33.162 VHL 5.759 DLA 13.43 RAL 30.83 RAD 6648.2 VEL 12.372 PTH 7.29 VHP 7.471 DPA 11.00 RAP 45.55 ECC 1.5458  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 42 8 3527.99 -46.64 130.70 273.61 100.73 11 40 56 2526.0 -37.22 100.53  
 60.00 11 6 45 3482.43 -39.91 126.17 274.98 96.12 12 4 28 2462.4 -33.16 97.30  
 70.00 11 42 1 3358.86 -34.07 118.32 275.54 92.62 12 38 0 2358.7 -29.45 90.58  
 80.00 12 34 28 3194.36 -29.86 105.99 275.67 90.29 13 27 42 2194.4 -26.70 79.01  
 90.00 13 48 50 2954.31 -28.27 88.34 275.66 89.44 14 38 4 1954.3 -25.66 61.64  
 100.00 15 17 19 2668.83 -29.86 67.36 275.67 90.29 16 1 48 1668.8 -26.70 40.38  
 110.00 16 41 27 2405.48 -34.07 47.24 275.54 92.62 17 21 33 1405.5 -29.45 19.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3066 TRA -.8004 TC3 .4594 BAU .2114 SGT 1021.5 SGR 649.2 S63 175.6 ST 19.6 SR 29.7 S8 6.7  
 RDE -.5921 RRA .2248 RC3 -.1274 FAU .06707 RRT -.1299 RRF .1642 RTF -.6035 CRT .6998 CRS .8970 C8T .8751  
 FDE .1956 FRA .1506 FC3-1.7510 B8P 1420 SGB 1210.3 R23 -.0353 R13 .6087 LSA 33.9 MSA 12.5 S8A 1.8  
 BDE .6668 BRA .8314 BC3 .4768 F8P 224 SG1 1027.2 S62 640.1 THA 172.26 EL1 33.3 EL2 12.5 ALF 60.67

LAUNCH DATE AUG 19 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 5 1973

HELIOCENTRIC CONIC

DISTANCE 285.248

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 34.680 GAL 3.11 AZL 89.82 HCA 88.93 SMA 241.08 ECC .37541 INC .1753 V1 29.429  
 RP 222.09 LAP .18 LOP 54.80 VP 25.390 GAP 21.60 AZP 90.00 TAL 11.42 TAP 100.36 RCA 150.58 APO 331.58 V2 24.737  
 RC 93.523 6L 1.08 GP -6.00 ZAL 66.85 ZAP 169.62 ETS 216.87 ZAE 158.34 ETE 343.22 ZAC 76.72 ETC 282.40 LVI -10.04

PLANETOCENTRIC CONIC

C3 32.016 VHL 5.658 DLA 13.43 RAL 30.14 RAD 6647.8 VEL 12.326 PTH 7.26 VHP 7.244 DPA 10.93 RAP 45.82 ECC 1.5269  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 39 23 3519.11 -46.52 129.88 272.06 101.36 11 38 2 2519.1 -36.90 99.92  
 60.00 11 4 1 3453.55 -39.84 125.42 273.51 96.62 12 1 35 2453.6 -32.91 96.68  
 70.00 11 39 17 3349.77 -34.04 117.63 274.13 93.03 12 35 7 2349.8 -29.26 89.96  
 80.00 12 31 43 3185.47 -29.85 105.33 274.28 90.63 13 24 49 2185.5 -26.56 78.39  
 90.00 13 46 6 2945.41 -28.28 87.69 274.29 89.76 14 35 11 1945.4 -25.53 61.02  
 100.00 15 14 35 2659.94 -29.85 66.70 274.28 90.63 15 58 55 1659.9 -26.56 39.76  
 110.00 16 38 43 2396.59 -34.04 46.55 274.13 93.03 17 18 40 1396.6 -29.26 18.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3073 TRA -.7893 TC3 .4927 BAU .2192 SGT 1040.6 SGR 654.4 S63 187.1 ST 19.9 SR 29.8 S8 6.9  
 RDE -.5838 RRA .2229 RC3 -.1395 FAU .07029 RRT -.1390 RRF .1761 RTF -.6126 CRT .7049 CRS .9061 C8T .8654  
 FDE .2053 FRA .1364 FC3-1.9007 B8P 1460 SGB 1229.3 R23 -.0382 R13 .6183 LSA 34.2 MSA 12.6 S8A 1.9  
 BDE .6598 BRA .8201 BC3 .5121 F8P 242 SG1 1047.1 S62 644.1 THA 171.93 EL1 33.5 EL2 12.5 ALF 60.26

LAUNCH DATE AUG 19 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC

DISTANCE 288.249

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 34.571 GAL 3.15 AZL 89.79 HCA 90.03 SMA 237.81 ECC .36698 INC .2106 V1 29.429  
 RP 222.48 LAP .21 LOP 55.90 VP 25.199 GAP 21.22 AZP 90.00 TAL 11.77 TAP 101.80 RCA 150.54 APO 325.07 V2 24.715  
 RC 95.665 6L 1.31 GP -6.16 ZAL 66.23 ZAP 168.81 ETS 214.90 ZAE 158.30 ETE 342.85 ZAC 76.53 ETC 282.36 LVI -9.82

PLANETOCENTRIC CONIC

C3 30.965 VHL 5.565 DLA 13.43 RAL 29.45 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 7.025 DPA 10.85 RAP 46.08 ECC 1.5096  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 36 39 3510.78 -46.41 129.11 270.57 101.94 11 35 9 2510.8 -36.59 99.36  
 60.00 11 1 16 3445.23 -39.78 124.73 272.09 97.09 11 58 41 2445.2 -32.67 96.10  
 70.00 11 36 32 3341.46 -34.00 116.98 272.75 93.41 12 32 13 2341.5 -29.08 89.38  
 80.00 12 28 58 3177.17 -29.84 104.71 272.94 90.96 13 21 55 2177.2 -26.42 77.81  
 90.00 13 43 20 2937.13 -28.28 87.09 272.96 90.07 14 32 17 1937.1 -25.40 60.45  
 100.00 15 11 50 2651.64 -29.84 66.08 272.94 90.96 15 56 1 1651.6 -26.42 39.18  
 110.00 16 35 58 2388.28 -34.00 45.90 272.75 93.41 17 15 46 1388.3 -29.08 18.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3081 TRA -.7783 TC3 .5262 BAU .2268 SGT 1059.5 SGR 659.6 S63 199.4 ST 20.1 SR 29.9 S8 7.2  
 RDE -.5759 RRA .2209 RC3 -.1524 FAU .07370 RRT -.1487 RRF .1887 RTF -.6211 CRT .7101 CRS .9145 C8T .8552  
 FDE .2157 FRA .1204 FC3-2.0605 B8P 1503 SGB 1248.0 R23 -.0414 R13 .6273 LSA 34.4 MSA 12.6 S8A 2.0  
 BDE .6531 BRA .8081 BC3 .5479 F8P 261 SG1 1066.7 S62 647.8 THA 171.59 EL1 33.8 EL2 12.5 ALF 59.83

LAUNCH DATE AUG 19 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC

DISTANCE 291.324

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 34.468 GAL 3.19 AZL 89.75 HCA 91.12 SMA 234.81 ECC .35903 INC .2459 V1 29.429  
 RP 222.86 LAP .25 LOP 56.99 VP 25.016 GAP 20.85 AZP 90.00 TAL 12.11 TAP 103.24 RCA 150.50 APO 319.11 V2 24.673  
 RC 97.860 6L 1.55 GP -6.32 ZAL 65.62 ZAP 167.98 ETS 213.18 ZAE 158.32 ETE 342.02 ZAC 76.33 ETC 282.36 LVI -9.61

PLANETOCENTRIC CONIC

C3 30.001 VHL 5.477 DLA 13.44 RAL 28.77 RAD 6647.0 VEL 12.245 PTH 7.19 VHP 6.814 DPA 10.76 RAP 46.33 ECC 1.4937  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 33 54 3502.99 -46.29 128.39 269.13 102.48 11 32 17 2503.0 -36.30 98.84  
 60.00 10 56 31 3437.46 -39.71 124.08 270.72 97.53 11 55 48 2437.5 -32.44 95.57  
 70.00 11 33 46 3333.73 -33.97 116.38 271.43 93.77 12 29 19 2333.7 -28.91 88.84  
 80.00 12 26 11 3169.47 -29.83 104.14 271.64 91.26 13 19 1 2169.5 -26.28 77.28  
 90.00 13 40 33 2929.44 -28.28 86.53 271.67 90.35 14 29 23 1929.4 -25.28 59.91  
 100.00 15 9 3 2643.94 -29.83 65.51 271.64 91.26 15 53 7 1643.9 -26.28 38.65  
 110.00 16 33 12 2380.55 -33.97 45.30 271.43 93.77 17 12 53 1380.5 -28.91 17.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3089 TRA -.7872 TC3 .5601 BAU .2343 SGT 1077.8 SGR 664.6 S63 212.4 ST 20.4 SR 29.9 S8 7.4  
 RDE -.5681 RRA .2189 RC3 -.1663 FAU .07731 RRT -.1592 RRF .2020 RTF -.6295 CRT .7153 CRS .9221 C8T .8447  
 FDE .2271 FRA .1030 FC3-2.2308 B8P 1543 SGB 1266.2 R23 -.0446 R13 .6363 LSA 34.7 MSA 12.6 S8A 2.0  
 BDE .6466 BRA .7978 BC3 .5842 F8P 281 SG1 1085.9 S62 651.2 THA 171.21 EL1 34.0 EL2 12.5 ALF 59.42

LAUNCH DATE AUG 10 1973 FLIGHT TIME 114.00 ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC DISTANCE 294.465 EARTH TO MARS
RL 151.40 LAL -.00 LOL 325.87 VL 34.370 GAL 3.23 AZL 89.72 HCA 92.21 SMA 232.05 ECC .35157 INC .2008 V1 29.429
RP 223.25 LAP .28 LOP 59.08 VP 24.840 GAP 20.47 AZP 90.01 TAL 12.48 TAP 104.67 RCA 150.47 APO 313.63 VE 24.631
RC 100.104 GL 1.79 GP -6.49 ZAL 65.00 ZAP 167.12 ETB 211.66 ZAE 159.36 ETE 341.33 ZAC 76.13 ETC 292.34 LVI -9.39
PLANETOCENTRIC CONIC
C3 29.110 VHL 5.398 DLA 13.45 RAL 29.09 RAD 6646.7 VEL 12.209 PTH 7.16 VHP 6.611 DPA 10.66 RAP 46.57 ECC 1.4782
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 10 31 9 3499.72 -46.19 127.72 267.74 102.99 11 29 24 2495.7 -36.03 98.36
60.00 10 58 45 3430.23 -39.64 123.47 269.39 97.93 11 52 55 2430.2 -32.23 95.07
70.00 11 30 59 3326.54 -33.94 115.82 270.14 94.10 12 26 25 2326.5 -26.75 88.34
80.00 12 23 24 3162.33 -29.62 103.61 270.38 91.54 13 16 6 2162.3 -26.16 76.79
90.00 13 37 45 2922.33 -26.27 88.01 270.41 90.61 14 26 28 1922.3 -25.17 59.42
100.00 15 6 15 2636.80 -20.82 64.98 270.38 91.54 15 50 12 1636.8 -26.16 38.15
110.00 16 30 25 2373.36 -33.94 44.74 270.14 94.10 17 9 59 1373.4 -26.75 17.26
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3010 TRA -.7471 TC3 .6062 BAW .2462 8GT 1093.4 8GR 669.4 8G3 225.7 8T 20.2 8R 30.0 8S 7.7
RDE -.5603 RRA .2170 RC3 -.1807 FAU .08097 RRT -.1785 RRF .2150 RTF -.6507 CRT .7149 CR8 .9297 CBT .8324
PDE .2421 PRA .0664 FC3-2.4078 B8P 1473 8GB 1282.1 R23 -.0349 R13 .6578 L8A 34.7 M8A 12.5 88A 2.1
BDE .6361 BRA .7780 BC3 .6325 F8P 306 8G1 1103.5 8G2 652.7 THA 170.36 EL1 33.9 EL2 12.5 ALP 59.83

LAUNCH DATE AUG 10 1973 FLIGHT TIME 116.00 ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC DISTANCE 297.667 EARTH TO MARS
RL 151.40 LAL -.00 LOL 325.87 VL 34.278 GAL 3.27 AZL 89.68 HCA 93.30 SMA 229.82 ECC .34458 INC .3157 V1 29.429
RP 223.84 LAP .32 LOP 59.17 VP 24.671 GAP 20.10 AZP 90.02 TAL 12.80 TAP 106.10 RCA 150.43 APO 308.60 VE 24.590
RC 102.397 GL 2.03 GP -6.66 ZAL 64.41 ZAP 166.25 ETB 210.37 ZAE 158.49 ETE 340.58 ZAC 75.93 ETC 292.33 LVI -9.17
PLANETOCENTRIC CONIC
C3 28.303 VHL 5.320 DLA 13.47 RAL 27.43 RAD 6646.3 VEL 12.176 PTH 7.14 VHP 6.415 DPA 10.54 RAP 46.79 ECC 1.4658
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 10 28 25 3489.00 -46.08 127.11 266.42 103.45 11 26 34 2489.0 -35.78 97.92
60.00 10 53 0 3423.57 -39.59 122.92 268.12 98.31 11 50 3 2423.6 -32.03 94.62
70.00 11 26 12 3319.96 -33.90 119.31 268.91 94.40 12 23 32 2320.0 -26.60 87.89
80.00 12 20 35 3155.83 -29.81 103.13 269.17 91.79 13 13 11 2155.8 -26.04 76.34
90.00 13 34 56 2915.86 -26.27 85.53 269.21 90.85 14 23 32 1915.9 -25.07 59.98
100.00 15 3 27 2630.30 -20.81 64.50 269.17 91.79 15 47 17 1630.3 -26.04 37.71
110.00 16 27 38 2366.78 -33.90 44.23 268.91 94.40 17 7 5 1366.8 -26.60 16.60
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3081 TRA -.7391 TC3 .6358 BAW .2518 8GT 1111.6 8GR 674.6 8G3 240.4 8T 20.5 8R 30.0 8S 7.9
RDE -.5531 RRA .2147 RC3 -.1985 FAU .08506 RRT -.1871 RRF .2306 RTF -.6530 CRT .7228 CR8 .9355 CBT .8217
PDE .2534 PRA .0634 FC3-2.6017 B8P 1548 8GB 1300.2 R23 -.0436 R13 .6608 L8A 35.0 M8A 12.5 88A 2.2
BDE .6317 BRA .7697 BC3 .6654 F8P 327 8G1 1122.5 8G2 686.2 THA 170.12 EL1 34.1 EL2 12.5 ALP 59.12

LAUNCH DATE AUG 10 1973 FLIGHT TIME 118.00 ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC DISTANCE 300.922 EARTH TO MARS
RL 151.40 LAL -.00 LOL 325.87 VL 34.191 GAL 3.31 AZL 89.65 HCA 94.38 SMA 227.18 ECC .33800 INC .3807 V1 29.429
RP 224.03 LAP .38 LOP 60.29 VP 24.908 GAP 19.74 AZP 90.03 TAL 13.14 TAP 107.62 RCA 150.39 APO 303.97 VE 24.548
RC 104.735 GL 2.28 GP -6.84 ZAL 63.82 ZAP 165.36 ETB 209.21 ZAE 158.65 ETE 339.78 ZAC 75.72 ETC 282.32 LVI -8.94
PLANETOCENTRIC CONIC
C3 27.897 VHL 5.249 DLA 13.49 RAL 26.77 RAD 6646.0 VEL 12.145 PTH 7.11 VHP 6.226 DPA 10.42 RAP 47.01 ECC 1.4535
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 10 28 41 3482.81 -45.98 126.54 265.14 103.88 11 23 44 2482.8 -35.54 97.51
60.00 10 50 14 3417.49 -39.82 122.41 266.89 98.65 11 47 12 2417.5 -31.85 94.20
70.00 11 25 25 3313.94 -33.87 114.85 267.72 94.67 12 20 39 2313.9 -28.46 87.47
80.00 12 17 46 3149.91 -29.80 102.69 268.00 92.02 13 10 16 2149.9 -25.94 75.93
90.00 13 32 6 2909.39 -26.26 85.10 268.04 91.06 14 20 38 1910.0 -24.98 59.57
100.00 15 0 38 2624.38 -20.80 64.08 268.00 92.02 15 44 22 1624.4 -25.94 37.30
110.00 16 24 51 2360.76 -33.87 43.76 267.72 94.67 17 4 12 1360.8 -26.46 16.39
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3087 TRA -.7306 TC3 .6686 BAW .2578 8GT 1128.8 8GR 679.7 8G3 255.7 8T 20.8 8R 30.0 8S 8.2
RDE -.8460 RRA .2123 RC3 -.2130 FAU .08920 RRT -.1987 RRF .2464 RTF -.6582 CRT .7301 CR8 .9408 CBT .8113
PDE .2669 PRA .0393 FC3-2.8081 B8P 1619 8GB 1317.7 R23 -.0512 R13 .6680 L8A 35.3 M8A 12.5 88A 2.3
BDE .6872 BRA .7608 BC3 .6886 F8P 351 8G1 1140.8 8G2 689.4 THA 169.81 EL1 34.4 EL2 12.5 ALP 59.46

LAUNCH DATE AUG 10 1973 FLIGHT TIME 120.00 ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC DISTANCE 304.285 EARTH TO MARS
RL 151.40 LAL -.00 LOL 325.87 VL 34.109 GAL 3.35 AZL 89.61 HCA 95.46 SMA 225.02 ECC .33162 INC .3886 V1 29.429
RP 224.48 LAP .38 LOP 61.33 VP 24.381 GAP 19.38 AZP 90.04 TAL 13.48 TAP 108.94 RCA 150.36 APO 299.69 VE 24.508
RC 107.110 GL 2.53 GP -7.03 ZAL 63.24 ZAP 164.48 ETB 208.17 ZAE 158.88 ETE 338.88 ZAC 75.81 ETC 282.31 LVI -8.78
PLANETOCENTRIC CONIC
C3 26.870 VHL 5.184 DLA 13.52 RAL 26.18 RAD 6645.8 VEL 12.117 PTH 7.09 VHP 6.048 DPA 10.28 RAP 47.21 ECC 1.4422
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 10 22 59 3477.12 -45.89 126.02 263.92 104.26 11 20 56 2477.1 -35.33 97.14
60.00 10 47 30 3411.86 -39.46 121.93 265.72 98.96 11 44 22 2411.9 -31.68 93.82
70.00 11 22 38 3306.48 -33.84 114.42 266.57 94.92 12 17 46 2306.5 -28.33 87.10
80.00 12 14 56 3144.38 -29.78 102.29 266.87 92.23 13 7 21 2144.6 -25.84 75.56
90.00 13 29 15 2904.72 -26.28 84.72 266.92 91.25 14 17 40 1904.7 -24.89 58.21
100.00 14 8 48 2619.05 -20.78 63.86 266.87 92.23 15 41 27 1619.0 -25.84 36.93
110.00 16 22 4 2355.29 -33.84 43.34 266.57 94.92 17 1 19 1355.3 -26.33 16.02
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.3110 TRA -.7289 TC3 .6860 BAW .2634 8GT 1144.8 8GR 684.9 8G3 272.0 8T 21.2 8R 30.0 8S 8.5
RDE -.8390 RRA .2096 RC3 -.2307 FAU .09378 RRT -.2082 RRF .2633 RTF -.6604 CRT .7365 CR8 .9450 CBT .8004
PDE .2809 PRA .0138 FC3-3.0218 B8P 1667 8GB 1334.0 R23 -.0576 R13 .6703 L8A 35.5 M8A 12.4 88A 2.4
BDE .6823 BRA .7508 BC3 .7333 F8P 376 8G1 1159.0 8G2 692.2 THA 169.40 EL1 34.5 EL2 12.4 ALP 57.92

LAUNCH DATE AUG 18 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC

DISTANCE 307.573

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 34.032 GAL 3.38 AZL 89.58 HCA 96.53 SMA 223.03 ECC .32601 INC .4205 V1 29.429  
 RP 224.81 LAP .42 LOP 62.40 VP 24.200 GAP 19.02 AZP 90.05 TAP 13.81 TAP 110.34 RCA 150.32 APO 295.74 V2 24.464  
 RC 109.544 GL 2.79 GP -7.23 ZAL 62.66 ZAP 163.52 ETS 207.25 ZAE 159.09 ETE 337.86 ZAC 75.29 ETC 282.30 LVI -8.49

PLANETOCENTRIC CONIC

C3 26.239 VHL 5.122 DLA 13.56 RAL 25.48 RAD 6645.5 VEL 12.091 PTH 7.07 VHP 5.869 DPA 10.14 RAP 47.39 ECC 1.4318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 20 17 3471.94 -45.80 123.56 262.76 104.61 11 18 9 2471.9 -35.13 96.81  
 60.00 10 44 46 3406.80 -39.41 121.53 264.59 99.24 11 41 33 2406.8 -31.53 93.48  
 70.00 11 19 51 3303.56 -33.81 114.04 265.47 95.14 12 14 54 2303.6 -28.22 88.76  
 80.00 12 12 6 3139.82 -29.77 101.94 265.79 92.42 13 4 26 2139.8 -25.76 75.24  
 90.00 13 26 24 2900.04 -28.25 84.38 265.84 91.42 14 14 44 1900.0 -24.81 57.89  
 100.00 14 54 58 2614.29 -29.77 63.31 265.79 92.42 15 38 32 1614.3 -25.76 36.60  
 110.00 16 19 17 2350.58 -33.81 42.96 265.47 95.14 16 58 27 1350.4 -28.22 15.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3129 TRA -.7110 TC3 .7263 BAU .2694 SGT 1159.9 SGR 690.2 S63 289.1 ST 21.4 SR 30.0 88 8.8  
 RDE -.5322 RRA .2072 RC3 -.2493 FAU .09849 RRT -.2207 RRF .2809 RTF -.6647 CRT .7427 CR8 .9486 CST .7698  
 FDE .2965 FRA -.0145 FC3-3.2495 B8P 1715 SGB 1349.8 R23 -.0637 R13 .6758 LSA 35.7 M8A 12.4 88A 2.8  
 BDE .6174 BRA .7406 BC3 .7679 F8P 404 S61 1174.7 S62 664.7 THA 168.94 EL1 34.7 EL2 12.4 ALF 57.41

LAUNCH DATE AUG 19 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC

DISTANCE 310.961

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.959 GAL 3.42 AZL 89.54 HCA 97.60 SMA 221.18 ECC .32055 INC .4553 V1 29.429  
 RP 225.20 LAP .45 LOP 63.47 VP 24.055 GAP 18.67 AZP 90.06 TAP 14.14 TAP 111.74 RCA 150.28 APO 292.08 V2 24.422  
 RC 112.011 GL 3.05 GP -7.43 ZAL 62.14 ZAP 162.57 ETS 206.42 ZAE 159.37 ETE 336.78 ZAC 75.07 ETC 282.30 LVI -8.26

PLANETOCENTRIC CONIC

C3 25.657 VHL 5.065 DLA 13.60 RAL 24.85 RAD 6645.3 VEL 12.067 PTH 7.05 VHP 5.700 DPA 9.98 RAP 47.57 ECC 1.4223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 17 37 3467.25 -45.72 123.13 261.65 104.93 11 15 25 2467.3 -34.95 96.51  
 60.00 10 42 3 3402.25 -39.35 121.15 263.32 99.49 11 38 45 2402.2 -31.39 93.17  
 70.00 11 17 4 3299.19 -33.78 113.70 264.42 95.34 12 12 3 2299.2 -28.12 88.46  
 80.00 12 9 16 3135.64 -29.76 101.63 264.75 92.58 13 1 31 2135.6 -25.68 74.95  
 90.00 13 23 31 2895.95 -28.24 84.08 264.81 91.57 14 11 47 1896.0 -24.75 57.61  
 100.00 14 52 8 2610.11 -29.76 63.00 264.75 92.58 15 35 38 1610.1 -25.68 36.32  
 110.00 16 16 30 2346.01 -33.78 42.62 264.42 95.34 16 55 36 1346.0 -28.12 15.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3149 TRA -.7008 TC3 .7560 BAU .2752 SGT 1174.2 SGR 695.8 S63 307.0 ST 21.6 SR 29.9 88 9.1  
 RDE -.5259 RRA .2044 RC3 -.2689 FAU .10343 RRT -.2537 RRF .2993 RTF -.6690 CRT .7490 CR8 .9514 CST .7791  
 FDE .3135 FRA -.0450 FC3-3.4899 B8P 1755 SGB 1364.8 R23 -.0699 R13 .6814 LSA 35.9 M8A 12.4 88A 2.8  
 BDE .6126 BRA .7300 BC3 .8024 F8P 433 S61 1190.7 S62 687.1 THA 168.44 EL1 34.8 EL2 12.3 ALF 56.80

LAUNCH DATE AUG 19 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC

DISTANCE 314.384

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.890 GAL 3.45 AZL 89.51 HCA 98.67 SMA 219.47 ECC .31542 INC .4902 V1 29.429  
 RP 225.59 LAP .48 LOP 64.54 VP 23.915 GAP 18.32 AZP 90.07 TAP 14.46 TAP 113.13 RCA 150.24 APO 288.69 V2 24.380  
 RC 114.516 GL 3.31 GP -7.64 ZAL 61.61 ZAP 161.61 ETS 205.67 ZAE 159.69 ETE 335.58 ZAC 74.84 ETC 282.30 LVI -8.03

PLANETOCENTRIC CONIC

C3 25.122 VHL 5.012 DLA 13.65 RAL 24.23 RAD 6645.0 VEL 12.045 PTH 7.03 VHP 5.537 DPA 9.80 RAP 47.72 ECC 1.4134  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 14 59 3463.05 -45.64 124.76 260.59 105.21 11 12 42 2463.0 -34.78 96.24  
 60.00 10 39 20 3398.20 -39.31 120.82 262.49 99.71 11 35 58 2398.2 -31.27 92.90  
 70.00 11 14 17 3295.36 -33.76 113.41 263.41 95.51 12 9 12 2295.4 -28.03 86.20  
 80.00 12 6 25 3132.03 -29.75 101.36 263.75 92.72 12 58 37 2132.0 -25.61 74.70  
 90.00 13 20 39 2892.45 -28.23 83.82 263.82 91.70 14 8 51 1892.4 -24.69 57.37  
 100.00 14 49 17 2606.50 -29.75 62.73 263.75 92.72 15 32 43 1606.5 -25.61 36.07  
 110.00 16 13 43 2342.18 -33.76 42.33 263.41 95.51 16 52 46 1342.2 -28.03 15.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3165 TRA -.6906 TC3 .7850 BAU .2810 SGT 1187.4 SGR 701.6 S63 326.0 ST 21.6 SR 29.9 88 9.3  
 RDE -.5188 RRA .2014 RC3 -.2898 FAU .10865 RRT -.2478 RRF .3186 RTF -.6.31 CRT .7551 CR8 .9535 CST .7685  
 FDE .3317 FRA -.0782 FC3-3.7442 B8P 1792 SGB 1379.2 R23 -.0760 R13 .6869 LSA 36.1 M8A 12.3 88A 2.7  
 BDE .6077 BRA .7193 BC3 .8367 F8P 464 S61 1205.9 S62 689.3 THA 167.89 EL1 34.9 EL2 12.3 ALF 56.42

LAUNCH DATE AUG 19 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC

DISTANCE 317.841

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.825 GAL 3.48 AZL 89.47 HCA 99.73 SMA 217.88 ECC .31059 INC .5253 V1 29.429  
 RP 225.98 LAP .52 LOP 65.00 VP 23.780 GAP 17.97 AZP 90.09 TAP 14.78 TAP 114.51 RCA 150.21 APO 285.55 V2 24.338  
 RC 117.057 GL 3.58 GP -7.86 ZAL 61.09 ZAP 160.63 ETS 204.99 ZAE 160.04 ETE 334.27 ZAC 74.61 ETC 282.30 LVI -7.80

PLANETOCENTRIC CONIC

C3 24.628 VHL 4.963 DLA 13.70 RAL 23.63 RAD 6644.8 VEL 12.025 PTH 7.01 VHP 5.379 DPA 9.62 RAP 47.87 ECC 1.4053  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 12 22 3459.32 -45.58 124.42 259.58 105.47 11 10 1 2459.3 -34.64 96.00  
 60.00 10 36 39 3394.66 -39.27 120.52 261.50 99.90 11 33 14 2394.7 -31.16 92.67  
 70.00 11 11 31 3292.05 -33.74 113.15 262.44 95.66 12 6 23 2292.1 -27.95 85.98  
 80.00 12 3 34 3128.98 -29.74 101.14 262.79 92.84 12 55 43 2129.0 -25.55 74.49  
 90.00 13 17 45 2889.53 -28.23 83.61 262.86 91.81 14 5 55 1889.5 -24.64 57.17  
 100.00 14 46 25 2603.45 -29.74 62.50 262.79 92.84 15 29 49 1603.5 -25.55 35.86  
 110.00 16 10 57 2338.87 -33.74 42.07 262.44 95.66 16 49 56 1338.9 -27.95 14.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3183 TRA -.6806 TC3 .8122 BAU .2864 SGT 1199.5 SGR 707.7 S63 346.0 ST 22.1 SR 29.8 88 9.9  
 RDE -.5122 RRA .1983 RC3 -.3117 FAU .11412 RRT -.2623 RRF .3388 RTF -.6766 CRT .7611 CR8 .9550 CST .7591  
 FDE .3517 FRA -.0128 FC3-4.0114 B8P 1830 SGB 1392.8 R23 -.0826 R13 .6921 LSA 36.2 M8A 12.3 88A 2.8  
 BDE .6030 BRA .7089 BC3 .8699 F8P 498 S61 1220.3 S62 671.4 THA 167.30 EL1 35.0 EL2 12.2 ALF 55.92

LAUNCH DATE AUG 19 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC										DISTANCE 321.327										EARTH TO MARS																																													
RL	131.40	LAL	-.00	LOL	325.87	VL	33.763	GAL	3.52	AZL	89.44	HCA	100.79	SMA	216.40	ECC	.30605	INC	.9604	V1	29.429	RP	226.37	LAP	.55	LOP	66.66	VP	23.649	GAP	17.63	AZP	90.10	TAL	15.08	TAP	115.87	RCA	150.17	APO	282.63	V2	24.297	RC	119.833	GL	3.84	GP	-8.09	ZAL	60.60	ZAP	159.62	ETS	204.37	ZAE	160.42	ETE	332.82	ZAC	74.38	ETC	282.30	LVI	-7.56
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.173	VHL	4.917	DLA	13.77	RAL	23.05	RAD	6644.6	VEL	12.006	PTH	7.00	VHP	5.228	DPA	9.42	RAP	47.99	ECC	1.3978	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																												
50.00	10	9	46	3456.04	-45.52	124.13	258.63	105.68	11	7	22	2456.0	-34.51	95.79	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																					
60.00	10	33	59	3391.80	-39.23	120.27	260.57	100.07	11	30	30	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								
70.00	11	8	45	3289.27	-33.72	112.94	261.52	95.79	12	3	34	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								
80.00	12	0	42	3126.49	-29.73	100.95	261.88	92.93	12	52	49	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								
90.00	13	14	51	2887.18	-28.22	83.44	261.96	91.89	14	2	58	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								
100.00	14	43	34	2600.96	-29.73	62.32	261.88	92.93	15	26	55	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								
110.00	16	8	11	2336.09	-33.72	41.86	261.52	95.79	16	47	7	2391.6	-31.06	92.46	2289.3	-27.88	85.79	2126.5	-25.51	74.32	1887.2	-24.60	57.01	1601.0	-25.51	35.69	1336.1	-27.88	14.71	ST	22.2	SR	29.7	SS	10.3	CRT	.7668	CRS	.9558	CBT	.7493																								

LAUNCH DATE AUG 19 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC										DISTANCE 324.841										EARTH TO MARS																																													
RL	131.40	LAL	-.00	LOL	325.87	VL	33.705	GAL	3.55	AZL	89.40	HCA	101.85	SMA	215.03	ECC	.30178	INC	.9555	V1	29.429	RP	226.76	LAP	.58	LOP	67.72	VP	23.523	GAP	17.29	AZP	90.12	TAL	15.38	TAP	117.23	RCA	150.14	APO	279.92	V2	24.255	RC	122.240	GL	4.12	GP	-8.33	ZAL	60.12	ZAP	158.60	ETS	203.81	ZAE	160.83	ETE	331.23	ZAC	74.14	ETC	282.31	LVI	-7.33
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	23.754	VHL	4.874	DLA	13.84	RAL	22.48	RAD	6644.5	VEL	11.989	PTH	6.98	VHP	5.081	DPA	9.20	RAP	48.10	ECC	1.3909	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																												
50.00	10	7	12	3453.23	-45.46	123.88	257.72	105.87	11	4	45	2453.2	-34.40	95.61	2389.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																					
60.00	10	31	20	3389.02	-39.20	120.06	259.68	100.21	11	27	49	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								
70.00	11	5	59	3287.00	-33.70	112.76	260.65	95.89	12	0	46	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								
80.00	11	57	50	3124.55	-29.72	100.81	261.01	93.01	12	49	55	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								
90.00	13	11	56	2885.39	-28.22	83.31	261.09	91.96	14	0	2	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								
100.00	14	40	42	2599.02	-29.72	62.18	261.01	93.01	15	24	1	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								
110.00	16	5	26	2333.82	-33.70	41.68	260.65	95.89	16	44	20	2369.0	-30.98	92.29	2369.0	-27.83	85.63	2124.6	-25.47	74.19	1885.4	-24.57	56.89	1599.0	-25.47	35.56	1335.8	-27.83	14.55	ST	22.4	SR	29.5	SS	10.7	CRT	.7728	CRS	.9561	CBT	.7404																								

LAUNCH DATE AUG 19 1973

FLIGHT TIME 134.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC										DISTANCE 326.380										EARTH TO MARS																																													
RL	131.40	LAL	-.00	LOL	325.87	VL	33.650	GAL	3.58	AZL	89.37	HCA	102.90	SMA	213.75	ECC	.29777	INC	.9310	V1	29.429	RP	227.19	LAP	.62	LOP	68.77	VP	23.402	GAP	16.96	AZP	90.14	TAL	15.67	TAP	118.57	RCA	150.10	APO	277.40	V2	24.214	RC	124.878	GL	4.39	GP	-8.57	ZAL	59.66	ZAP	157.56	ETS	203.29	ZAE	161.26	ETE	329.47	ZAC	73.89	ETC	282.32	LVI	-7.09
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	23.367	VHL	4.834	DLA	13.92	RAL	21.92	RAD	6644.3	VEL	11.973	PTH	6.97	VHP	4.940	DPA	8.98	RAP	48.20	ECC	1.3848	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																												
50.00	10	4	40	3450.85	-45.42	123.66	256.88	106.03	11	2	11	2490.8	-34.31	95.48	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																					
60.00	10	28	42	3386.90	-39.18	119.89	258.84	100.33	11	23	8	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																								
70.00	11	3	14	3285.24	-33.69	112.63	259.82	95.97	11	57	59	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																								
80.00	11	34	50	3123.16	-29.71	100.70	260.18	93.06	12	47	1	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																								
90.00	13	9	1	2884.18	-28.21	83.22	260.26	92.00	13	57	5	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																								
100.00	14	37	50	2597.63	-29.71	62.07	260.18	93.06	15	21	8	2386.9	-30.92	92.13	2386.9	-27.78	85.51	2123.2	-25.44	74.10	1884.2	-24.55	56.80	1597.6	-25.44	35.46	1332.1	-27.78	14.43	ST	22.6	SR	29.4	SS	11.2	CRT	.7784	CRS	.9559	CBT	.7319																								
110.00	16	2	41	2332.08	-33.69	41.54	259.82	9																																																									

LAUNCH DATE AUG 19 1973 FLIGHT TIME 136.00 ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC DISTANCE 335.525 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.950 GAL 3.63 AZL 89.30 HCA 104.99 SMA 211.45 ECC .29045 INC .7023 V1 29.429  
 RP 227.93 LAP .68 LOP 70.88 VP 23.171 GAP 16.30 AZP 90.18 TAL 16.23 TAP 121.22 RCA 150.04 APO 272.07 V2 24.131  
 RC 130.237 GL 4.94 GP -9.09 ZAL 58.00 ZAP 155.42 ETS 202.35 ZAE 162.17 EYE 325.38 ZAC 73.39 ETC 282.36 LVI -6.60

PLANETOCENTRIC CONIC  
 C3 22.679 VHL 4.762 DLA 14.10 RAL 20.86 RAD 8644.0 VEL 11.944 PTH 6.95 VHP 4.673 DPA 8.48 RAP 48.33 ECC 1.3732  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 42 3447.37 -45.33 123.36 255.29 106.26 10 57 9 2447.4 -34.17 95.24  
 60.00 10 23 29 3384.03 -39.14 119.65 257.29 100.48 11 19 53 2384.0 -30.83 91.96  
 70.00 10 57 45 3283.20 -33.68 112.47 258.27 96.06 11 52 28 2283.2 -27.74 85.38  
 80.00 11 49 12 3121.98 -29.71 100.62 258.65 93.11 12 41 14 2122.0 -25.42 74.02  
 90.00 13 3 7 2883.41 -28.21 83.16 258.72 92.03 13 51 11 1883.4 -24.54 56.75  
 100.00 14 32 4 2596.45 -29.71 61.99 258.65 93.11 15 15 21 1596.4 -25.42 35.38  
 110.00 15 57 11 2330.02 -33.68 41.39 258.27 96.06 16 36 1 1330.0 -27.73 14.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3259 TRA -.6328 TC3 .9215 BAU .3097 SGT 1241.1 SGR 746.9 SG3 462.2 ST 22.9 SR 29.0 SS 12.2  
 RDE -.4791 RRA .1791 RC3 -.4409 FAU .14584 RRT -.3419 RRF .4519 RTF -.6862 CRT .7897 CR3 .9545 CST .7179  
 FDE .4754 FRA -.3313 FC3-5.5672 BSP 1961 SGB 1448.5 R23 -.1219 R13 .7138 LSA 36.9 MSA 12.1 SSA 3.3  
 BDE .5794 BRA .6576 BC3 1.0215 F8P 694 SGI 1278.1 SG2 681.5 THA 163.58 EL1 35.1 EL2 11.6 ALF 53.40

LAUNCH DATE AUG 19 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC DISTANCE 339.127 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.504 GAL 3.66 AZL 89.26 HCA 106.03 SMA 210.42 ECC .28711 INC .7363 V1 29.429  
 RP 226.32 LAP .71 LOP 71.90 VP 23.062 GAP 15.98 AZP 90.20 TAL 16.49 TAP 122.52 RCA 150.01 APO 270.84 V2 24.090  
 RC 132.954 GL 5.23 GP -9.36 ZAL 58.40 ZAP 154.32 ETS 201.94 ZAE 162.63 ETE 323.00 ZAC 73.13 ETC 282.38 LVI -6.36

PLANETOCENTRIC CONIC  
 C3 22.374 VHL 4.730 DLA 14.21 RAL 20.35 RAD 8643.9 VEL 11.932 PTH 6.94 VHP 4.547 DPA 8.20 RAP 48.37 ECC 1.3682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 57 15 3446.26 -45.33 123.26 254.58 106.33 10 54 41 2446.3 -34.13 95.17  
 60.00 10 20 54 3383.29 -39.13 119.59 256.58 100.52 11 17 18 2383.3 -30.80 91.91  
 70.00 10 55 1 3282.90 -33.67 112.45 257.56 96.08 11 49 44 2282.9 -27.73 85.36  
 80.00 11 46 19 3122.18 -29.71 100.63 257.94 93.10 12 38 21 2122.2 -25.43 74.03  
 90.00 13 0 9 2883.85 -28.21 83.19 258.01 92.02 13 48 13 1883.9 -24.54 56.78  
 100.00 14 29 11 2596.65 -29.71 62.00 257.94 93.10 15 12 27 1596.6 -25.43 35.40  
 110.00 15 54 27 2329.72 -33.67 41.36 257.56 96.08 16 33 17 1329.7 -27.73 14.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3272 TRA -.6239 TC3 .9368 BAU .3135 SGT 1244.9 SGR 757.2 SG3 489.0 ST 23.0 SR 28.8 SS 12.8  
 RDE -.4723 RRA .1744 RC3 -.4710 FAU .15313 RRT -.3585 RRF .4766 RTF -.6862 CRT .7951 CR3 .9532 CST .7112  
 FDE .5058 FRA -.3845 FC3-5.9252 BSP 1977 SGB 1457.0 R23 -.1313 R13 .7174 LSA 37.0 MSA 12.1 SSA 3.4  
 BDE .5746 BRA .6478 BC3 1.0482 F8P 739 SGI 1286.6 SG2 683.9 THA 162.65 EL1 35.1 EL2 11.5 ALF 52.88

LAUNCH DATE AUG 19 1973 FLIGHT TIME 142.00 ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC DISTANCE 342.747 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.481 GAL 3.68 AZL 89.23 HCA 107.07 SMA 209.46 ECC .28398 INC .7745 V1 29.429  
 RP 226.70 LAP .74 LOP 72.94 VP 22.956 GAP 15.65 AZP 90.23 TAL 16.74 TAP 123.81 RCA 149.98 APO 268.94 V2 24.049  
 RC 135.694 GL 5.51 GP -9.65 ZAL 58.02 ZAP 153.20 ETS 201.54 ZAE 163.09 ETE 320.38 ZAC 72.86 ETC 282.40 LVI -6.11

PLANETOCENTRIC CONIC  
 C3 22.092 VHL 4.700 DLA 14.33 RAL 19.88 RAD 8643.8 VEL 11.920 PTH 6.93 VHP 4.425 DPA 7.91 RAP 48.39 ECC 1.3636  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 54 50 3445.54 -45.32 123.19 253.91 106.38 10 52 16 2445.5 -34.10 95.13  
 60.00 10 18 21 3382.96 -39.13 119.56 255.91 100.54 11 14 44 2383.0 -30.79 91.89  
 70.00 10 52 17 3283.09 -33.67 112.46 256.89 96.07 11 47 0 2283.1 -27.73 85.37  
 80.00 11 43 24 3122.90 -29.71 100.69 257.27 93.07 12 35 27 2122.9 -25.44 74.06  
 90.00 12 57 10 2884.84 -28.22 83.27 257.34 91.98 13 45 15 1884.8 -24.56 56.85  
 100.00 14 26 16 2597.37 -29.71 62.05 257.27 93.07 15 9 34 1597.4 -25.44 35.45  
 110.00 15 51 43 2329.90 -33.67 41.38 256.89 96.07 16 30 33 1329.9 -27.73 14.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3290 TRA -.6157 TC3 .9482 BAU .3170 SGT 1247.1 SGR 768.4 SG3 517.0 ST 23.2 SR 28.5 SS 13.4  
 RDE -.4683 RRA .1698 RC3 -.5027 FAU .16074 RRT -.3745 RRF .5017 RTF -.6850 CRT .8006 CR3 .9519 CST .7058  
 FDE .5393 FRA -.4411 FC3-6.2991 BSP 1994 SGB 1464.8 R23 -.1419 R13 .7204 LSA 37.1 MSA 12.1 SSA 3.5  
 BDE .5699 BRA .6386 BC3 1.0732 F8P 788 SGI 1293.9 SG2 686.7 THA 161.68 EL1 35.0 EL2 11.3 ALF 52.30

LAUNCH DATE AUG 19 1973 FLIGHT TIME 144.00 ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC DISTANCE 346.382 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.420 GAL 3.70 AZL 89.19 HCA 108.10 SMA 208.56 ECC .28103 INC .8110 V1 29.429  
 RP 229.09 LAP .77 LOP 73.98 VP 22.853 GAP 15.34 AZP 90.25 TAL 16.98 TAP 125.08 RCA 149.95 APO 267.17 V2 24.008  
 RC 138.457 GL 5.80 GP -9.94 ZAL 57.66 ZAP 152.06 ETS 201.17 ZAE 163.54 ETE 317.49 ZAC 72.59 ETC 282.43 LVI -5.86

PLANETOCENTRIC CONIC  
 C3 21.831 VHL 4.672 DLA 14.45 RAL 19.39 RAD 8643.6 VEL 11.909 PTH 6.92 VHP 4.308 DPA 7.61 RAP 48.40 ECC 1.3593  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 52 27 3445.22 -45.31 123.16 253.28 106.40 10 49 52 2445.2 -34.09 95.11  
 60.00 10 15 48 3383.06 -39.13 119.57 255.28 100.54 11 12 11 2383.1 -30.80 91.90  
 70.00 10 49 33 3283.74 -33.68 112.51 256.26 96.04 11 44 17 2283.7 -27.75 85.41  
 80.00 11 40 29 3124.14 -29.72 100.78 256.63 93.02 12 32 33 2124.1 -25.46 74.16  
 90.00 12 54 10 2886.36 -28.22 83.38 256.71 91.92 13 42 16 1886.4 -24.59 56.95  
 100.00 14 23 21 2598.61 -29.72 62.15 256.63 93.02 15 6 40 1598.6 -25.46 35.53  
 110.00 15 49 0 2330.55 -33.68 41.43 256.26 96.04 16 27 50 1330.6 -27.75 14.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3305 TRA -.6079 TC3 .9571 BAU .3202 SGT 1247.7 SGR 780.9 SG3 546.3 ST 23.4 SR 28.3 SS 14.0  
 RDE -.4582 RRA .1642 RC3 -.5360 FAU .16869 RRT -.3904 RRF .5272 RTF -.6832 CRT .8057 CR3 .9504 CST .7010  
 FDE .5751 FRA -.5001 FC3-6.6896 BSP 2008 SGB 1471.9 R23 -.1528 R13 .7235 LSA 37.2 MSA 12.1 SSA 3.5  
 BDE .5649 BRA .6297 BC3 1.0970 F8P 836 SGI 1300.2 SG2 689.9 THA 160.61 EL1 34.9 EL2 11.2 ALF 51.71

LAUNCH DATE AUG 19 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC

DISTANCE 350.033

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.381 GAL 3.72 AZL 89.15 HCA 109.14 SMA 207.72 ECC .27025 INC .8478 V1 29.429  
 RP 229.48 LAP .80 LOP 75.01 VP 22.754 GAP 15.02 AZP 90.28 TAL 17.21 TAP 126.35 RCA 149.92 APO 265.51 V2 23.967  
 RC 141.241 GL 6.09 GP -10.24 ZAL 57.32 ZAP 180.89 ETS 200.82 ZAE 163.97 ETE 314.31 ZAC 72.31 ETC 282.47 LVI -5.61

PLANETOCENTRIC CONIC

C3 21.590 VHL 4.646 DLA 14.58 RAL 18.93 RAD 6643.5 VEL 11.899 PTH 6.91 VHP 4.195 DPA 7.28 RAP 48.38 ECC 1.3553  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 30 5 3445.27 -45.31 123.17 252.69 106.40 10 47 31 2445.3 -34.09 95.11  
 60.00 10 13 17 3383.55 -39.13 119.61 254.68 100.51 11 9 40 2383.5 -30.61 91.93  
 70.00 10 46 49 3284.82 -33.69 112.59 255.67 95.99 11 41 34 2284.8 -27.77 85.49  
 80.00 11 37 33 3125.86 -29.72 100.90 256.03 92.96 12 29 39 2125.9 -25.50 74.28  
 90.00 12 51 8 2888.38 -28.22 83.52 256.10 91.85 13 39 16 1888.4 -24.62 57.09  
 100.00 14 20 25 2600.33 -29.72 62.27 256.03 92.96 15 3 45 1600.3 -25.50 35.65  
 110.00 15 46 16 2331.64 -33.69 41.51 255.67 95.99 16 25 7 1331.6 -27.77 14.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3211 TRA -.5896 TC3 .9829 BAU .3282 SGT 1247.2 SGR 795.3 SG3 577.7 ST 22.8 SR 28.0 SS 14.6  
 RDE -.4513 RRA .1582 RC3 -.5717 FAU .17722 RRT -.4197 RRF .5538 RTF -.6936 CRT .8070 CRS .9472 CST .6867  
 FDE .6080 FRA -.5697 FC3-7.1065 BSP 1890 SGB 1479.2 R23 -.1466 R13 .7371 LSA 36.9 MSA 12.1 SSA 3.6  
 BDE .5539 BRA .6105 BC3 1.1371 FSP 883 SG1 1309.8 SG2 687.4 THA 158.97 EL1 34.4 EL2 11.0 ALF 52.16

LAUNCH DATE AUG 19 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC

DISTANCE 353.696

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.345 GAL 3.74 AZL 89.11 HCA 110.16 SMA 206.93 ECC .27565 INC .8651 V1 29.429  
 RP 229.86 LAP .83 LOP 76.04 VP 22.858 GAP 14.71 AZP 90.30 TAL 17.43 TAP 127.59 RCA 149.89 APO 263.98 V2 23.927  
 RC 144.046 GL 6.38 GP -10.56 ZAL 57.00 ZAP 149.71 ETS 200.48 ZAE 164.37 ETE 310.82 ZAC 72.03 ETC 282.51 LVI -5.35

PLANETOCENTRIC CONIC

C3 21.366 VHL 4.622 DLA 14.73 RAL 18.49 RAD 6643.4 VEL 11.890 PTH 6.90 VHP 4.087 DPA 6.94 RAP 48.34 ECC 1.3516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 47 46 3445.71 -45.32 123.21 252.15 106.37 10 45 12 2445.7 -34.10 95.14  
 60.00 10 10 46 3384.48 -39.15 119.69 254.14 100.46 11 7 10 2384.5 -30.64 91.99  
 70.00 10 44 5 3286.40 -33.70 112.72 255.11 95.92 11 38 52 2286.4 -27.81 85.59  
 80.00 11 34 36 3128.13 -29.73 101.07 255.47 92.87 12 26 44 2128.1 -25.54 74.44  
 90.00 12 48 4 2890.99 -28.23 83.72 255.54 91.75 13 36 15 1891.0 -24.66 57.27  
 100.00 14 17 28 2602.60 -29.73 62.44 255.47 92.87 15 0 51 1602.6 -25.54 35.80  
 110.00 15 43 32 2333.22 -33.70 41.63 255.11 95.92 16 22 25 1333.2 -27.81 14.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3270 TRA -.5875 TC3 .9770 BAU .3287 SGT 1243.8 SGR 810.3 SG3 609.2 ST 23.2 SR 27.7 SS 15.3  
 RDE -.4438 RRA .1524 RC3 -.6081 FAU .18573 RRT -.4286 RRF .5791 RTF -.6843 CRT .8135 CRS .9461 CST .6884  
 FDE .6516 FRA -.6326 FC3-7.5294 BSP 1954 SGB 1484.4 R23 -.1659 R13 .7354 LSA 37.1 MSA 12.2 SSA 3.7  
 BDE .5511 BRA .6069 BC3 1.1508 FSP 941 SG1 1312.3 SG2 693.9 THA 157.93 EL1 34.5 EL2 10.9 ALF 51.08

LAUNCH DATE AUG 19 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC

DISTANCE 357.372

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.311 GAL 3.76 AZL 89.08 HCA 111.19 SMA 206.20 ECC .27320 INC .9226 V1 29.429  
 RP 230.25 LAP .86 LOP 77.06 VP 22.565 GAP 14.40 AZP 90.33 TAL 17.64 TAP 128.62 RCA 149.87 APO 262.54 V2 23.887  
 RC 146.870 GL 6.68 GP -10.88 ZAL 56.71 ZAP 148.50 ETS 200.16 ZAE 164.72 ETE 307.01 ZAC 71.74 ETC 282.55 LVI -3.09

PLANETOCENTRIC CONIC

C3 21.159 VHL 4.600 DLA 14.88 RAL 18.07 RAD 6643.4 VEL 11.881 PTH 6.89 VHP 3.983 DPA 6.59 RAP 48.29 ECC 1.3482  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 45 28 3446.53 -45.34 123.28 251.65 106.32 10 42 54 2446.5 -34.14 95.19  
 60.00 10 8 16 3385.82 -39.16 119.80 253.62 100.39 11 4 42 2385.8 -30.88 92.08  
 70.00 10 41 21 3288.43 -33.71 112.67 254.59 95.83 11 36 10 2288.4 -27.86 85.73  
 80.00 11 31 38 3130.90 -29.74 101.28 254.94 92.76 12 23 49 2130.9 -25.59 74.62  
 90.00 12 44 59 2894.13 -28.24 83.94 255.01 91.64 13 33 13 1894.1 -24.72 57.48  
 100.00 14 14 30 2605.37 -29.74 62.65 254.94 92.76 14 57 55 1605.4 -25.59 35.99  
 110.00 15 40 48 2335.23 -33.71 41.79 254.59 95.83 16 19 43 1335.2 -27.86 14.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3312 TRA -.5843 TC3 .9899 BAU .3297 SGT 1238.3 SGR 826.9 SG3 642.0 ST 23.6 SR 27.3 SS 16.1  
 RDE -.4358 RRA .1482 RC3 -.8465 FAU .19459 RRT -.4382 RRF .6044 RTF -.6853 CRT .8190 CRS .9448 CST .6873  
 FDE .6978 FRA -.7003 FC3-7.9815 BSP 1995 SGB 1489.1 R23 -.1835 R13 .7350 LSA 37.3 MSA 12.3 SSA 3.8  
 BDE .5473 BRA .6023 BC3 1.1656 FSP 999 SG1 1314.0 SG2 700.5 THA 158.72 EL1 34.4 EL2 10.7 ALF 50.13

LAUNCH DATE AUG 19 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC

DISTANCE 361.080

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 33.279 GAL 3.77 AZL 89.04 HCA 112.21 SMA 205.52 ECC .27090 INC .9605 V1 29.429  
 RP 230.63 LAP .89 LOP 78.08 VP 22.476 GAP 14.10 AZP 90.36 TAL 17.83 TAP 130.04 RCA 149.85 APO 261.20 V2 23.847  
 RC 149.713 GL 6.98 GP -11.21 ZAL 56.43 ZAP 147.27 ETS 199.85 ZAE 165.02 ETE 302.88 ZAC 71.45 ETC 282.60 LVI -4.83

PLANETOCENTRIC CONIC

C3 20.968 VHL 4.579 DLA 15.05 RAL 17.67 RAD 6643.3 VEL 11.873 PTH 6.89 VHP 3.883 DPA 6.21 RAP 48.21 ECC 1.3451  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 11 3447.70 -45.36 123.38 251.18 106.24 10 40 39 2447.7 -34.18 95.28  
 60.00 10 5 47 3387.55 -39.18 119.94 253.15 100.29 11 2 14 2387.5 -30.94 92.19  
 70.00 10 38 37 3290.90 -33.73 113.08 254.10 95.72 11 33 28 2290.9 -27.92 85.90  
 80.00 11 28 38 3134.17 -29.75 101.92 254.44 92.63 12 20 52 2134.2 -25.65 74.65  
 90.00 12 41 52 2897.79 -28.24 84.21 254.51 91.51 13 30 10 1897.8 -24.78 57.74  
 100.00 14 11 30 2608.64 -29.75 62.89 254.44 92.63 14 54 58 1608.6 -25.65 36.22  
 110.00 15 38 3 2337.72 -33.73 41.98 254.10 95.72 16 17 1 1337.7 -27.92 14.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3342 TRA -.5807 TC3 .9814 BAU .3312 SGT 1231.4 SGR 845.3 SG3 676.2 ST 23.8 SR 26.9 SS 16.9  
 RDE -.4278 RRA .1397 RC3 -.6867 FAU .20379 RRT -.4478 RRF .6295 RTF -.6665 CRT .8238 CRS .9435 CST .6861  
 FDE .7471 FRA -.7717 FC3-8.4142 BSP 2018 SGB 1493.6 R23 -.1998 R13 .7358 LSA 37.5 MSA 12.4 SSA 3.8  
 BDE .5428 BRA .5973 BC3 1.1814 FSP 1061 SG1 1315.4 SG2 707.6 THA 155.35 EL1 34.3 EL2 10.6 ALF 49.25



LAUNCH DATE AUG 19 1973 FLIGHT TIME 154.00 ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 364.757 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.249 GAL 3.79 AZL 89.00 HCA 113.22 SMA 204.88 ECC .26874 INC .9989 V1 29.429  
 RP 231.01 LAP .92 LOP 79.10 VP 22.389 GAP 13.80 AZP 90.39 TAL 18.01 TAP 131.24 RCA 149.82 APO 259.94 V2 23.007  
 RC 152.572 GL 7.29 GP -11.56 ZAL 56.18 ZAP 146.01 ETS 199.55 ZAE 165.25 ETE 298.44 ZAC 71.15 ETC 282.65 LVI -4.56

PLANETOCENTRIC CONIC  
 C3 20.790 VHL 4.560 DLA 15.22 RAL 17.27 RAD 6643.2 VEL 11.866 PTH 6.88 VHP 3.786 DPA 5.82 RAP 48.12 ECC 1.3422  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 40 55 3449.23 -45.39 123.52 250.76 106.14 10 38 25 2449.2 -34.24 95.36  
 60.00 10 3 18 3389.67 -39.21 120.11 252.71 100.18 10 59 47 2389.7 -31.00 92.33  
 70.00 10 35 52 3293.82 -33.75 113.29 253.65 95.58 11 30 45 2293.8 -27.99 86.10  
 80.00 11 25 36 3137.94 -29.76 101.80 253.98 92.49 12 17 54 2137.9 -25.72 75.11  
 90.00 12 38 43 2901.98 -28.25 84.52 254.04 91.35 13 27 5 1902.0 -24.85 58.02  
 100.00 14 8 28 2612.41 -29.76 63.17 253.98 92.49 14 52 1 1612.4 -25.72 36.48  
 110.00 15 35 18 2340.64 -33.75 42.21 253.65 95.58 16 14 19 1340.6 -27.99 15.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3367 TRA -.5770 TC3 .9496 BAV .3327 SGT 1222.1 SGR 865.5 SG3 711.6 ST 24.0 SR 26.5 SS 17.8  
 RDE -.4192 RRA .1327 RC3 -.7268 FAU .21332 RRT -.4563 RRF .6543 RTF -.6569 CRT .8284 CR8 .9421 CST .6850  
 FDE .7999 FRA -.8462 FC3-8.8828 B8P 2038 SGB 1497.5 R23 -.2153 R13 .7375 LSA 37.7 MSA 12.8 S8A 3.9  
 BDE .5376 BRA .5921 BC3 1.1971 F8P 1125 SG1 1315.6 SG2 715.4 THA 153.82 EL1 34.2 EL2 10.4 ALF 48.39

LAUNCH DATE AUG 19 1973 FLIGHT TIME 156.00 ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 368.465 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.220 GAL 3.80 AZL 88.96 HCA 114.24 SMA 204.29 ECC .26671 INC 1.0377 V1 29.429  
 RP 231.39 LAP .95 LOP 80.11 VP 22.304 GAP 13.50 AZP 90.43 TAL 18.19 TAP 132.42 RCA 149.80 APO 258.77 V2 23.767  
 RC 155.447 GL 7.60 GP -11.92 ZAL 55.94 ZAP 144.74 ETS 199.25 ZAE 165.40 ETE 293.71 ZAC 70.84 ETC 282.70 LVI -4.29

PLANETOCENTRIC CONIC  
 C3 20.628 VHL 4.542 DLA 15.40 RAL 16.90 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 3.694 DPA 5.41 RAP 48.00 ECC 1.3395  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 41 3451.11 -45.43 123.69 250.37 106.01 10 36 12 2451.1 -34.32 95.48  
 60.00 10 0 49 3392.19 -39.24 120.32 252.31 100.04 10 57 21 2392.2 -31.08 92.90  
 70.00 10 33 6 3297.18 -35.77 113.55 253.23 95.43 11 28 3 2297.2 -28.07 86.33  
 80.00 11 22 33 3142.22 -29.78 102.12 253.55 92.32 12 14 55 2142.2 -25.80 75.40  
 90.00 12 35 31 2906.70 -28.28 84.86 253.60 91.18 13 23 58 1906.7 -24.92 58.35  
 100.00 14 5 25 2616.69 -29.78 63.49 253.55 92.32 14 49 1 1616.7 -25.80 36.77  
 110.00 15 32 32 2344.00 -33.77 42.47 253.23 95.43 16 11 36 1344.0 -28.07 15.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3383 TRA -.5737 TC3 .9345 BAV .3344 SGT 1210.9 SGR 887.6 SG3 748.4 ST 24.2 SR 26.0 SS 18.6  
 RDE -.4104 RRA .1253 RC3 -.7730 FAU .22317 RRT -.4634 RRF .6784 RTF -.6459 CRT .8323 CR8 .9406 CST .6835  
 FDE .8561 FRA -.9251 FC3-9.3671 B8P 2048 SGB 1501.4 R23 -.2302 R13 .7398 LSA 37.8 MSA 12.8 S8A 3.9  
 BDE .5319 BRA .5872 BC3 1.2128 F8P 1191 SG1 1315.2 SG2 724.2 THA 152.13 EL1 34.0 EL2 10.3 ALF 47.55

LAUNCH DATE AUG 19 1973 FLIGHT TIME 158.00 ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 372.181 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.194 GAL 3.81 AZL 88.92 HCA 115.25 SMA 203.73 ECC .26480 INC 1.0770 V1 29.429  
 RP 231.77 LAP .97 LOP 81.12 VP 22.223 GAP 13.20 AZP 90.48 TAL 18.35 TAP 133.59 RCA 149.78 APO 257.68 V2 23.728  
 RC 158.336 GL 7.91 GP -12.28 ZAL 55.73 ZAP 143.43 ETS 198.96 ZAE 165.45 ETE 288.78 ZAC 70.53 ETC 282.76 LVI -4.02

PLANETOCENTRIC CONIC  
 C3 20.474 VHL 4.525 DLA 15.60 RAL 16.54 RAD 6643.0 VEL 11.852 PTH 6.87 VHP 3.608 DPA 4.98 RAP 47.87 ECC 1.3389  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 36 28 3453.33 -45.47 123.89 250.02 103.86 10 34 1 2453.3 -34.40 95.62  
 60.00 9 58 21 3395.08 -39.27 120.56 251.94 99.88 10 54 56 2395.1 -31.17 92.89  
 70.00 10 30 19 3300.98 -33.80 113.84 252.84 95.26 11 25 20 2301.0 -28.16 86.58  
 80.00 11 19 27 3146.99 -29.79 102.47 253.15 92.14 12 11 54 2147.0 -25.89 75.73  
 90.00 12 32 16 2911.96 -28.28 85.25 253.20 90.99 13 20 48 1912.0 -25.01 58.71  
 100.00 14 2 19 2621.46 -29.79 63.84 253.15 92.14 14 46 1 1621.5 -25.89 37.10  
 110.00 15 29 43 2347.80 -33.79 42.78 252.84 95.26 16 8 53 1347.8 -28.16 16.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3385 TRA -.5706 TC3 .9157 BAV .3383 SGT 1197.6 SGR 911.9 SG3 786.2 ST 24.3 SR 25.5 SS 19.5  
 RDE -.4013 RRA .1173 RC3 -.8191 FAU .23331 RRT -.4684 RRF .7019 RTF -.6334 CRT .8361 CR8 .9388 CST .6818  
 FDE .9153 FRA -1.0080 FC3-9.8857 B8P 2051 SGB 1505.2 R23 -.2442 R13 .7429 LSA 38.0 MSA 12.9 S8A 3.9  
 BDE .5257 BRA .5825 BC3 1.2286 F8P 1258 SG1 1313.9 SG2 734.3 THA 150.25 EL1 33.8 EL2 10.1 ALF 46.71

LAUNCH DATE AUG 19 1973 FLIGHT TIME 160.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 375.905 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.169 GAL 3.82 AZL 88.88 HCA 116.25 SMA 203.22 ECC .26301 INC 1.1169 V1 29.429  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.143 GAP 12.91 AZP 90.49 TAL 18.49 TAP 134.75 RCA 149.77 APO 256.66 V2 23.689  
 RC 161.238 GL 8.23 GP -12.66 ZAL 55.53 ZAP 142.11 ETS 198.68 ZAE 165.40 ETE 283.63 ZAC 70.21 ETC 282.83 LVI -3.75

PLANETOCENTRIC CONIC  
 C3 20.333 VHL 4.509 DLA 15.80 RAL 16.20 RAD 6643.0 VEL 11.847 PTH 6.86 VHP 3.521 DPA 4.53 RAP 47.71 ECC 1.3346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 34 15 3455.90 -45.51 124.11 249.71 105.69 10 31 51 2455.9 -34.50 95.78  
 60.00 9 55 52 3398.36 -39.31 120.83 251.60 99.70 10 52 31 2398.4 -31.27 92.91  
 70.00 10 27 31 3305.21 -33.82 114.17 252.49 95.07 11 22 36 2305.2 -28.26 86.87  
 80.00 11 16 19 3152.27 -29.80 102.86 252.78 91.93 12 8 52 2152.3 -25.98 76.09  
 90.00 12 28 59 2917.76 -28.27 85.67 252.82 90.78 13 17 36 1917.8 -25.10 59.11  
 100.00 13 59 11 2626.74 -29.80 64.23 252.78 91.93 14 42 58 1626.7 -25.98 37.48  
 110.00 15 26 57 2352.03 -33.82 43.09 252.49 95.07 16 6 9 1352.0 -28.26 15.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3404 TRA -.5686 TC3 .8928 BAV .3384 SGT 1182.9 SGR 938.4 SG3 825.4 ST 24.4 SR 25.0 SS 20.5  
 RDE -.3917 RRA .1092 RC3 -.8675 FAU .24380 RRT -.4710 RRF .7247 RTF -.6188 CRT .8394 CR8 .9373 CST .6806  
 FDE .9795 FRA -1.0918 FC3-10.3808 B8P 2054 SGB 1509.9 R23 -.2575 R13 .7469 LSA 38.1 MSA 13.2 S8A 3.9  
 BDE .5190 BRA .5790 BC3 1.2449 F8P 1329 SG1 1312.9 SG2 745.9 THA 148.19 EL1 33.5 EL2 9.9 ALF 45.82

LAUNCH DATE AUG 19 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.145 GAL 3.83 AZL 88.84 HCA 117.26 SMA 202.73 ECC .26133 INC 1.1573 V1 29.429  
 RP 232.51 LAP 1.03 LOP 83.13 VP 22.067 GAP 12.62 AZP 90.53 TAL 18.63 TAP 135.89 RCA 149.75 APO 255.71 V2 23.650  
 RC 164.150 GL 8.55 GP -13.05 ZAL 55.36 ZAP 140.76 ETS 198.39 ZAE 165.23 ETE 278.42 ZAC 69.86 ETC 282.90 LVI -3.47

PLANETOCENTRIC CONIC  
 C3 20.202 VHL 4.495 DLA 16.02 RAL 15.87 RAD 6642.9 VEL 11.841 PTH 6.86 VHP 3.440 DPA 4.07 RAP 47.53 ECC 1.3325  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 32 4 3458.80 -45.57 124.37 249.43 105.50 10 29 43 2458.0 -34.62 95.97  
 60.00 9 53 23 3402.02 -39.35 121.13 251.30 99.50 10 50 5 2402.0 -31.38 93.16  
 70.00 10 24 41 3309.89 -33.85 114.53 252.16 94.85 11 19 51 2309.9 -28.37 87.19  
 80.00 11 13 9 3158.06 -29.81 103.29 252.43 91.70 12 5 47 2158.1 -26.08 76.49  
 90.00 12 25 36 2924.10 -28.28 86.14 252.47 90.54 13 14 22 1924.1 -25.20 59.55  
 100.00 13 56 0 2632.53 -29.81 64.66 252.43 91.70 14 39 53 1632.5 -26.08 37.86  
 110.00 15 24 8 2356.71 -33.85 43.45 252.16 94.85 16 3 24 1358.7 -28.37 16.11

DIFFERENTIAL CORRECTIONS  
 TDE -.3413 TRA -.5672 TC3 .8648 BAU .3406 SGT 1166.0 SGR 967.0 SG3 865.5 ST 24.5 SR 24.4 SS 21.5  
 RDE -.3816 RRA .1005 RC3 -.9178 FAU .25450 RRT -.4701 RRF .7463 RTF -.6016 CRT .8425 CRS .9359 CST .6798  
 FDE 1.0492 FRA -1.1794 FC -10.9063 B8P 2056 SGB 1514.8 R23 -.2694 R13 .7518 LSA 38.3 MSA 13.4 SSA 3.9  
 BDE .5120 BRA .5760 BC3 1.2611 F8P 1401 SG1 1310.8 SG2 759.2 THA 145.91 EL1 33.2 EL2 9.7 ALF 44.87

LAUNCH DATE AUG 19 1973

FLIGHT TIME 164.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.123 GAL 3.83 AZL 88.80 HCA 118.26 SMA 202.28 ECC .25976 INC 1.1983 V1 29.429  
 RP 232.89 LAP 1.06 LOP 84.14 VP 21.992 GAP 12.33 AZP 90.57 TAL 18.75 TAP 137.01 RCA 149.74 APO 254.83 V2 23.612  
 RC 167.073 GL 8.87 GP -13.45 ZAL 55.20 ZAP 139.39 ETS 198.10 ZAE 164.93 ETE 273.21 ZAC 69.56 ETC 282.97 LVI -3.19

PLANETOCENTRIC CONIC  
 C3 20.081 VHL 4.481 DLA 16.24 RAL 15.55 RAD 6642.9 VEL 11.836 PTH 6.85 VHP 3.382 DPA 3.58 RAP 47.34 ECC 1.3308  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 29 53 3462.04 -45.63 124.66 249.19 105.28 10 27 35 2462.0 -34.74 96.17  
 60.00 9 50 54 3406.06 -39.40 121.47 251.03 99.28 10 47 40 2406.1 -31.51 93.43  
 70.00 10 21 50 3315.01 -33.88 114.93 251.87 94.82 11 17 5 2315.0 -28.48 87.55  
 80.00 11 9 55 3164.36 -29.83 103.76 252.12 91.46 12 2 39 2164.4 -26.19 76.93  
 90.00 12 22 13 2930.99 -28.28 86.64 252.15 90.29 13 11 4 1931.0 -25.31 60.02  
 100.00 13 52 47 2638.83 -29.83 65.13 252.12 91.46 14 36 45 1638.8 -26.19 38.29  
 110.00 15 21 17 2361.83 -33.88 43.85 251.87 94.82 16 0 39 1361.8 -28.48 16.46

DIFFERENTIAL CORRECTIONS  
 TDE -.3417 TRA -.5688 TC3 .8330 BAU .3434 SGT 1147.9 SGR 998.2 SG3 906.9 ST 24.6 SR 23.8 SS 22.6  
 RDE -.3711 RRA .0914 RC3 -.9705 FAU .26552 RRT -.4659 RRF .7670 RTF -.5817 CRT .8453 CRS .9341 CST .6783  
 FDE 1.1223 FRA -1.2707 FC -11.4469 B8P 2056 SGB 1521.2 R23 -.2790 R13 .7581 LSA 38.5 MSA 13.7 SSA 3.9  
 BDE .5044 BRA .5739 BC3 1.2790 F8P 1475 SG1 1309.4 SG2 774.3 THA 143.37 EL1 32.9 EL2 9.5 ALF 43.89

LAUNCH DATE AUG 19 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.103 GAL 3.84 AZL 88.78 HCA 119.26 SMA 201.86 ECC .25828 INC 1.2400 V1 29.429  
 RP 233.25 LAP 1.08 LOP 85.13 VP 21.920 GAP 12.05 AZP 90.61 TAL 18.87 TAP 138.12 RCA 149.73 APO 254.00 V2 23.573  
 RC 170.003 GL 9.20 GP -13.87 ZAL 55.07 ZAP 136.00 ETS 197.81 ZAE 164.51 ETE 268.09 ZAC 69.22 ETC 283.05 LVI -2.90

PLANETOCENTRIC CONIC  
 C3 19.969 VHL 4.469 DLA 16.48 RAL 15.25 RAD 6642.8 VEL 11.831 PTH 6.85 VHP 3.288 DPA 3.08 RAP 47.12 ECC 1.3288  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 27 42 3485.82 -45.69 124.99 248.98 105.04 10 25 28 2485.6 -34.88 96.40  
 60.00 9 48 25 3410.48 -39.45 121.83 250.79 99.03 10 45 15 2410.5 -31.64 93.73  
 70.00 10 18 57 3320.57 -33.91 115.36 251.60 94.37 11 14 18 2320.6 -28.61 87.93  
 80.00 11 6 37 3171.18 -29.84 104.27 251.83 91.19 11 59 29 2171.2 -28.31 77.40  
 90.00 12 18 44 2938.45 -28.28 87.18 251.85 90.02 13 7 42 1938.4 -25.42 60.54  
 100.00 13 49 29 2645.86 -29.84 65.84 251.83 91.19 14 33 35 1645.7 -26.31 38.77  
 110.00 15 18 24 2367.39 -33.91 44.28 251.60 94.37 15 57 51 1367.4 -28.61 16.85

DIFFERENTIAL CORRECTIONS  
 TDE -.3415 TRA -.5687 TC3 .7937 BAU .3465 SGT 1127.7 SGR 1031.9 SG3 949.1 ST 24.7 SR 23.2 SS 23.8  
 RDE -.3601 RRA .0817 RC3 -1.0253 FAU .27675 RRT -.4574 RRF .7886 RTF -.5582 CRT .8478 CRS .9321 CST .6783  
 FDE 1.1994 FRA -1.3652 FC -11.9980 B8P 2059 SGB 1528.6 R23 -.2855 R13 .7682 LSA 38.7 MSA 13.9 SSA 3.9  
 BDE .4863 BRA .5728 BC3 1.2978 F8P 1552 SG1 1307.9 SG2 791.2 THA 140.50 EL1 32.6 EL2 9.3 ALF 42.87

LAUNCH DATE AUG 19 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.083 GAL 3.84 AZL 88.72 HCA 120.23 SMA 201.47 ECC .25689 INC 1.2823 V1 29.429  
 RP 233.62 LAP 1.11 LOP 86.13 VP 21.850 GAP 11.77 AZP 90.65 TAL 18.97 TAP 139.22 RCA 149.71 APO 253.23 V2 23.536  
 RC 172.941 GL 9.54 GP -14.28 ZAL 54.95 ZAP 136.58 ETS 197.52 ZAE 163.96 ETE 263.12 ZAC 68.88 ETC 283.13 LVI -2.61

PLANETOCENTRIC CONIC  
 C3 19.868 VHL 4.457 DLA 16.73 RAL 14.98 RAD 6642.8 VEL 11.827 PTH 6.85 VHP 3.217 DPA 2.55 RAP 46.88 ECC 1.3289  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 25 31 3489.51 -45.78 125.34 248.80 104.78 10 23 21 2489.5 -35.03 96.65  
 60.00 9 45 54 3415.26 -39.90 122.23 250.57 98.77 10 42 49 2415.3 -31.78 94.05  
 70.00 10 16 2 3326.55 -33.94 115.83 251.35 94.10 11 11 29 2326.6 -28.75 88.34  
 80.00 11 3 16 3178.51 -29.85 104.81 251.56 90.91 11 56 15 2178.5 -26.44 77.91  
 90.00 12 15 10 2946.44 -28.28 87.77 251.57 89.73 13 4 17 1946.4 -25.54 61.09  
 100.00 13 46 8 2652.98 -29.85 66.18 251.56 90.91 14 30 21 1653.0 -26.44 39.27  
 110.00 15 15 28 2373.37 -33.94 44.74 251.35 94.10 15 55 2 1373.4 -28.75 17.26

DIFFERENTIAL CORRECTIONS  
 TDE -.3323 TRA -.5594 TC3 .7711 BAU .3535 SGT 1103.9 SGR 1070.5 SG3 994.7 ST 24.2 SR 22.6 SS 24.5  
 RDE -.3497 RRA .0704 RC3 -1.0847 FAU .28892 RRT -.4599 RRF .8080 RTF -.5445 CRT .8482 CRS .9270 CST .6656  
 FDE 1.2649 FRA -1.4777 FC -12.5904 B8P 1975 SGB 1537.8 R23 -.2749 R13 .7825 LSA 38.5 MSA 14.2 SSA 3.9  
 BDE .4825 BRA .5638 BC3 1.3309 F8P 1610 SG1 1314.2 SG2 798.5 THA 136.91 EL1 31.8 EL2 9.1 ALF 42.69

LAUNCH DATE AUG 19 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC DISTANCE 394.623 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.083 GAL 3.85 AZL 88.67 HCA 121.24 SMA 201.11 ECC .25560 INC 1.3253 V1 29.429  
 RP 233.99 LAP 1.13 LOP 87.12 VP 21.782 GAP 11.49 AZP 90.69 TAL 19.06 TAP 140.30 RCA 149.71 APO 252.51 V2 23.488  
 RC 175.886 GL 9.88 GP -14.72 ZAL 54.85 ZAP 135.15 ETS 197.22 ZAE 163.29 ETE 258.41 ZAC 66.53 ETC 283.22 LVI -2.31

PLANETOCENTRIC CONIC  
 C3 19.771 VHL 4.446 DLA 16.99 RAL 14.89 RAD 6642.7 VEL 11.823 PTH 6.84 VHP 3.150 DPA 2.01 RAP 46.63 ECC 1.3254  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 23 21 3473.76 -45.83 125.72 248.66 104.49 10 21 15 2473.8 -35.20 96.93  
 60.00 9 43 23 3420.45 -39.55 122.66 250.39 98.48 10 40 23 2420.4 -31.94 94.40  
 70.00 10 13 4 3333.03 -33.97 116.33 251.14 93.80 11 8 37 2333.0 -28.69 88.79  
 80.00 10 59 51 3186.42 -29.85 105.40 251.33 90.60 11 52 58 2186.4 -26.57 78.46  
 90.00 12 11 31 2955.08 -28.27 88.40 251.33 89.41 13 0 47 1955.1 -25.67 61.69  
 100.00 13 42 43 2660.89 -29.85 66.77 251.33 90.60 14 27 4 1660.9 -26.57 39.82  
 110.00 15 12 31 2379.85 -33.97 45.25 251.14 93.80 15 52 11 1379.9 -28.89 17.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3383 TRA -.5684 TC3 .7096 BAW .3553 SGT 1083.8 SGR 1107.2 S63 1036.4 ST 24.7 SR 21.8 SS 25.9  
 RDE -.3365 RRA .0608 RC3-1.1419 FAU .29988 RRT -.4287 RRF .8224 RTF -.5016 CRT .8514 CR8 .9271 CBT .6698  
 FDE 1.3650 FRA-1.5639 FC-13.1315 B8P 2051 SGB 1549.4 R23 -.2824 R13 .7898 LSA 39.1 MSA 14.6 S8A 3.8  
 BDE .4772 BRA .5716 BC3 1.3444 F8P 1703 S61 1309.7 S62 827.8 THA 133.57 EL1 31.7 EL2 8.9 ALF 40.83

LAUNCH DATE AUG 19 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC DISTANCE 398.382 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.049 GAL 3.85 AZL 88.63 HCA 122.23 SMA 200.77 ECC .25438 INC 1.3692 V1 29.429  
 RP 234.35 LAP 1.16 LOP 88.11 VP 21.716 GAP 11.21 AZP 90.73 TAL 19.14 TAP 141.37 RCA 149.70 APO 251.84 V2 23.461  
 RC 178.836 GL 10.23 GP -15.17 ZAL 54.77 ZAP 133.69 ETS 196.92 ZAE 162.50 ETE 253.97 ZAC 68.18 ETC 283.31 LVI -2.01

PLANETOCENTRIC CONIC  
 C3 19.683 VHL 4.437 DLA 17.26 RAL 14.43 RAD 6642.7 VEL 11.819 PTH 6.84 VHP 3.086 DPA 1.45 RAP 46.36 ECC 1.3239  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 11 3478.34 -45.91 126.13 248.55 104.18 10 19 9 2478.3 -35.37 97.22  
 60.00 9 40 50 3426.01 -39.60 123.12 250.24 98.17 10 37 56 2426.0 -32.11 94.78  
 70.00 10 10 4 3339.96 -34.00 116.87 250.96 93.48 11 5 44 2340.0 -29.04 89.27  
 80.00 10 56 22 3194.86 -29.86 106.03 251.12 90.27 11 49 36 2194.9 -26.71 79.05  
 90.00 12 7 47 2964.30 -28.27 89.07 251.10 89.07 12 57 12 1964.3 -25.80 62.34  
 100.00 13 39 13 2669.33 -29.86 67.40 251.12 90.27 14 23 43 1669.3 -26.71 40.41  
 110.00 15 9 30 2386.77 -34.00 45.79 250.96 93.48 15 49 17 1386.8 -29.04 18.19

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3391 TRA -.5740 TC3 .6521 BAW .3599 SGT 1082.6 SGR 1147.6 S63 1080.0 ST 24.8 SR 21.0 SS 27.2  
 RDE -.3232 RRA .0503 RC3-1.2024 FAU .31134 RRT -.3996 RRF .8381 RTF -.4606 CRT .8533 CR8 .9255 CBT .6694  
 FDE 1.4631 FRA-1.6579 FC-13.6942 B8P 2086 SGB 1564.0 R23 -.2755 R13 .8033 LSA 39.5 MSA 14.9 S8A 3.8  
 BDE .4665 BRA .5762 BC3 1.3678 F8P 1789 S61 1311.3 S62 852.6 THA 129.54 EL1 31.3 EL2 8.7 ALF 39.37

LAUNCH DATE AUG 19 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC DISTANCE 402.147 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.033 GAL 3.85 AZL 88.59 HCA 123.21 SMA 200.46 ECC .25324 INC 1.4139 V1 29.429  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.653 GAP 10.94 AZP 90.77 TAL 19.21 TAP 142.42 RCA 149.69 APO 251.22 V2 23.424  
 RC 181.791 GL 10.58 GP -15.63 ZAL 54.70 ZAP 132.21 ETS 196.61 ZAE 161.59 ETE 249.81 ZAC 67.83 ETC 283.40 LVI -1.71

PLANETOCENTRIC CONIC  
 C3 19.603 VHL 4.427 DLA 17.54 RAL 14.17 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 3.026 DPA .87 RAP 46.07 ECC 1.3226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 18 59 3483.23 -45.99 126.58 248.46 103.65 10 17 3 2483.2 -35.56 97.84  
 60.00 9 38 15 3431.94 -39.66 123.62 250.11 97.84 10 35 27 2431.9 -32.28 95.19  
 70.00 10 7 0 3347.30 -34.03 117.44 250.79 93.14 11 2 47 2347.3 -29.20 89.78  
 80.00 10 52 47 3203.82 -29.86 106.69 250.92 89.92 11 46 11 2203.8 -26.65 79.87  
 90.00 12 3 57 2974.09 -28.25 89.79 250.90 88.71 12 53 31 1974.1 -25.84 63.02  
 100.00 13 35 39 2678.30 -29.86 68.08 250.92 89.92 14 20 17 1678.3 -26.88 41.04  
 110.00 15 6 26 2394.12 -34.03 46.38 250.79 93.14 15 46 20 1394.1 -29.20 18.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3238 TRA -.5853 TC3 .6204 BAW .3706 SGT 1032.6 SGR 1196.7 S63 1129.8 ST 23.9 SR 20.3 SS 27.9  
 RDE -.3124 RRA .0363 RC3-1.2708 FAU .32484 RRT -.3938 RRF .8343 RTF -.4498 CRT .8520 CR8 .9168 CBT .6808  
 FDE 1.5250 FRA-1.7817 FC-14.3331 B8P 1980 SGB 1680.6 R23 -.2444 R13 .8262 LSA 39.0 MSA 15.1 S8A 3.8  
 BDE .4500 BRA .5885 BC3 1.4141 F8P 1834 S61 1330.0 S62 854.0 THA 124.70 EL1 30.2 EL2 8.4 ALF 39.52

LAUNCH DATE AUG 19 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC DISTANCE 405.913 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 33.018 GAL 3.84 AZL 88.54 HCA 124.20 SMA 200.17 ECC .25219 INC 1.4594 V1 29.429  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.591 GAP 10.66 AZP 90.82 TAL 19.26 TAP 143.48 RCA 149.69 APO 250.65 V2 23.387  
 RC 184.750 GL 10.95 GP -16.09 ZAL 54.66 ZAP 130.71 ETS 196.29 ZAE 160.59 ETE 245.98 ZAC 67.47 ETC 283.50 LVI -1.40

PLANETOCENTRIC CONIC  
 C3 19.528 VHL 4.419 DLA 17.84 RAL 13.94 RAD 6642.6 VEL 11.813 PTH 6.83 VHP 2.968 DPA .28 RAP 45.76 ECC 1.3214  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 48 3488.50 -46.07 127.06 248.42 103.49 10 14 57 2488.5 -35.76 97.89  
 60.00 9 35 39 3438.31 -39.72 124.15 250.02 97.48 10 32 57 2438.3 -32.47 95.82  
 70.00 10 3 53 3355.20 -34.05 118.05 250.66 92.78 10 59 48 2355.2 -29.37 90.33  
 80.00 10 49 6 3213.45 -29.85 107.41 250.76 89.54 11 42 40 2213.5 -27.01 80.35  
 90.00 12 0 0 2984.61 -28.23 90.56 250.72 88.33 12 49 45 1984.6 -26.08 63.76  
 100.00 13 31 58 2687.93 -29.85 68.78 250.76 89.54 14 16 46 1687.9 -27.01 41.71  
 110.00 15 3 19 2402.02 -34.05 46.97 250.66 92.78 15 43 21 1402.0 -29.37 19.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3351 TRA -.5843 TC3 .5288 BAW .3739 SGT 1020.1 SGR 1237.6 S63 1169.3 ST 24.8 SR 19.2 SS 29.8  
 RDE -.2952 RRA .0271 RC3-1.3310 FAU .33480 RRT -.3270 RRF .8664 RTF -.3659 CRT .8555 CR8 .9191 CBT .6614  
 FDE 1.6641 FRA-1.8805 FC-14.8427 B8P 2135 SGB 1803.8 R23 -.2292 R13 .8401 LSA 40.2 MSA 15.6 S8A 3.7  
 BDE .4466 BRA .5849 BC3 1.4322 F8P 1953 S61 1329.0 S62 897.6 THA 119.63 EL1 30.3 EL2 8.1 ALF 36.63

LAUNCH DATE AUG 19 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC

DISTANCE 409.603

EARTH TO MARS

RL 181.40 LAL -.00 LOL 328.87 VL 33.008 GAL 3.84 AZL 88.48 HCA 128.18 SMA 199.80 ECC .28119 INC 1.5088 V1 29.429
RP 236.42 LAP 1.23 LOP 91.06 VP 21.831 GAP 10.39 AZP 90.87 TAL 19.31 TAP 144.48 RCA 149.89 APO 250.11 V2 23.381
RC 187.714 GL 11.31 GP -16.87 ZAL 54.64 ZAP 129.20 ETS 193.96 ZAE 189.49 ETE 242.44 ZAC 67.10 ETC 283.60 LVI -1.00

PLANETOCENTRIC CONIC

C3 19.460 VML 4.411 DLA 18.18 RAL 13.71 RAD 8642.6 VEL 11.810 PTH 6.83 VHP 2.814 DPA -.33 RAP 45.44 ECC 1.3203
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 14 36 3404.08 -46.16 127.37 248.40 103.10 10 12 80 2494.1 -35.97 98.28
60.00 9 33 1 3445.03 -39.78 124.71 249.95 97.10 10 30 26 2448.0 -32.66 96.09
70.00 10 0 42 3363.54 -34.08 119.70 250.54 92.40 10 56 45 2363.5 -29.85 90.92
80.00 10 45 20 3223.64 -29.85 108.17 250.61 89.14 11 39 3 2223.6 -27.16 81.06
90.00 11 55 36 2995.75 -29.21 91.37 250.56 87.92 12 48 51 1995.8 -26.23 64.94
100.00 13 20 12 2698.11 -29.88 69.53 250.61 89.14 14 13 10 1698.1 -27.16 42.43
110.00 15 0 8 2410.36 -34.08 47.62 250.54 92.40 15 40 18 1410.4 -29.88 19.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3312 TRA -.8903 TC3 .4801 BAU .3831 8GT 1000.4 8GR 1286.7 8G3 1214.4 8T 24.7 8R 18.3 88 31.1
RDE -.2803 RRA .0146 RC3-1.3988 FAU .34880 RRT -.2808 RRF .8790 RTF -.3080 CRT .8961 CR8 .9144 CBT .6580
FDE 1.7682 FRA-1.9849 FC-18.4194 B8P 2188 8GB 1629.8 8G2 -.1910 R13 .8808 L8A 40.8 M8A 16.0 88A 3.6
BDE .4339 BRA .5905 BC3 1.4723 F8P 2033 8G1 1347.3 8G2 817.2 TMA 113.88 EL1 29.7 EL2 7.8 ALP 38.22

LAUNCH DATE AUG 19 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

DISTANCE 413.457

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 32.992 GAL 3.84 AZL 88.45 HCA 126.18 SMA 199.85 ECC .25026 INC 1.5533 V1 29.429
RP 235.77 LAP 1.25 LOP 92.03 VP 21.472 GAP 10.13 AZP 90.92 TAL 19.34 TAP 145.80 RCA 149.68 APO 249.61 V2 23.319
RC 190.880 GL 11.89 GP -17.05 ZAL 54.63 ZAP 127.66 ETS 195.62 ZAE 188.30 ETE 239.18 ZAC 66.73 ETC 283.71 LVI -.77

PLANETOCENTRIC CONIC

C3 19.399 VML 4.404 DLA 18.47 RAL 13.49 RAD 8642.6 VEL 11.807 PTH 6.83 VHP 2.863 DPA -.98 RAP 49.10 ECC 1.3193
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 12 22 3500.01 -46.25 128.11 248.41 102.69 10 10 42 2900.0 -36.19 98.64
60.00 9 30 20 3452.18 -39.83 125.31 249.90 96.70 10 27 92 2452.2 -32.87 96.58
70.00 9 57 26 3372.38 -34.10 119.39 250.45 91.99 10 53 38 2372.4 -29.73 91.54
80.00 10 41 27 3234.43 -29.83 108.97 250.48 88.72 11 38 21 2234.4 -27.33 81.82
90.00 11 51 43 3007.57 -29.18 92.24 250.42 87.49 12 41 51 2007.6 -26.38 65.37
100.00 13 24 18 2708.90 -29.83 70.34 250.48 88.72 14 9 27 1708.9 -27.33 43.19
110.00 14 56 52 2419.19 -34.10 48.31 250.45 91.99 15 37 11 1419.2 -29.73 20.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3229 TRA -.8939 TC3 .3943 BAU .3948 8GT 980.0 8GR 1340.5 8G3 1281.4 8T 24.3 8R 17.4 88 32.3
RDE -.2858 RRA .0008 RC3-1.4704 FAU .38894 RRT -.2328 RRF .8908 RTF -.2814 CRT .8959 CR8 .9070 CBT .6428
FDE 1.8677 FRA-2.0811 FC-16.0187 B8P 2180 8GB 1660.6 8G2 -.1471 R13 .8787 L8A 40.7 M8A 16.3 88A 3.8
BDE .4180 BRA .5939 BC3 1.5224 F8P 2100 8G1 1377.3 8G2 927.7 TMA 108.08 EL1 28.8 EL2 7.6 ALP 34.12

LAUNCH DATE AUG 19 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

DISTANCE 417.233

EARTH TO MARS

RL 151.40 LAL -.00 LOL 325.87 VL 32.981 GAL 3.83 AZL 88.40 HCA 127.13 SMA 199.42 ECC .24840 INC 1.6018 V1 29.429
RP 236.12 LAP 1.28 LOP 93.01 VP 21.416 GAP 9.86 AZP 90.97 TAL 19.37 TAP 146.49 RCA 149.68 APO 249.16 V2 23.279
RC 193.848 GL 12.07 GP -17.38 ZAL 54.64 ZAP 126.11 ETS 195.26 ZAE 157.04 ETE 236.20 ZAC 66.36 ETC 283.62 LVI -.44

PLANETOCENTRIC CONIC

C3 19.344 VML 4.398 DLA 18.80 RAL 13.28 RAD 8642.5 VEL 11.805 PTH 6.83 VHP 2.815 DPA -1.61 RAP 44.75 ECC 1.3183
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 10 7 3506.31 -46.34 128.69 248.45 102.25 10 8 33 2906.3 -36.43 98.08
60.00 9 27 36 3459.74 -39.89 125.95 249.89 96.27 10 25 16 2459.8 -33.08 97.11
70.00 9 54 3 3381.75 -34.12 120.12 250.38 91.98 10 50 27 2381.8 -29.93 92.20
80.00 10 37 28 3243.91 -29.81 109.82 250.38 88.27 11 31 32 2243.9 -27.49 82.64
90.00 11 47 22 3020.16 -29.14 93.15 250.30 87.03 12 37 42 2020.2 -26.53 66.28
100.00 13 20 18 2720.38 -29.81 71.19 250.38 88.27 14 5 38 1720.4 -27.49 44.00
110.00 14 53 32 2428.57 -34.12 49.04 250.38 91.98 15 34 0 1428.6 -29.93 21.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3236 TRA -.6084 TC3 .3017 BAU .4058 8GT 874.3 8GR 1391.4 8G3 1303.2 8T 24.3 8R 16.2 88 34.0
RDE -.2473 RRA -.0108 RC3-1.8387 FAU .36967 RRT -.1958 RRF .9007 RTF -.1179 CRT .8972 CR8 .9028 CBT .6412
FDE 2.0027 FRA-2.1663 FC-16.5480 B8P 2280 8GB 1698.6 8G2 -.0988 R13 .8860 L8A 41.6 M8A 16.7 88A 3.4
BDE .4073 BRA .6085 BC3 1.5680 F8P 2200 8G1 1406.8 8G2 981.9 TMA 101.87 EL1 28.8 EL2 7.2 ALP 31.82

LAUNCH DATE AUG 19 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

DISTANCE 421.012

EARTH TO MARS

RL 181.40 LAL -.00 LOL 328.87 VL 32.970 GAL 3.82 AZL 88.38 HCA 128.10 SMA 199.21 ECC .24889 INC 1.6818 V1 29.429
RP 236.46 LAP 1.30 LOP 93.88 VP 21.361 GAP 9.60 AZP 91.02 TAL 19.38 TAP 147.48 RCA 149.68 APO 248.73 V2 23.244
RC 198.819 GL 12.47 GP -18.08 ZAL 54.66 ZAP 124.58 ETS 194.90 ZAE 155.70 ETE 233.46 ZAC 65.99 ETC 283.93 LVI -1.11

PLANETOCENTRIC CONIC

C3 19.294 VML 4.392 DLA 19.18 RAL 13.08 RAD 8642.5 VEL 11.803 PTH 6.83 VHP 2.770 DPA -2.27 RAP 44.38 ECC 1.3178
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 7 50 3512.98 -46.44 129.31 248.52 101.79 10 6 23 2912.9 -36.67 98.81
60.00 9 24 49 3467.74 -39.95 126.62 249.90 95.82 10 22 37 2467.7 -33.30 97.67
70.00 9 50 40 3391.64 -34.14 120.90 250.34 91.10 10 47 11 2391.6 -30.12 92.81
80.00 10 33 17 3253.08 -29.78 110.72 250.29 87.80 11 27 38 2253.0 -27.66 83.30
90.00 11 42 50 3033.80 -29.09 94.13 250.19 86.58 12 33 24 2033.8 -26.69 67.81
100.00 13 16 9 2732.52 -29.78 72.09 250.29 87.80 14 1 41 1732.8 -27.66 44.87
110.00 14 50 6 2438.48 -34.14 49.81 250.34 91.10 15 30 44 1438.5 -30.12 21.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3181 TRA -.6188 TC3 .2180 BAU .4193 8GT 988.5 8GR 1447.3 8G3 1346.8 8T 24.4 8R 15.1 88 38.8
RDE -.2268 RRA -.0244 RC3-1.6113 FAU .38084 RRT -.0816 RRF .9101 RTF -.0869 CRT .8977 CR8 .8944 CBT .6318
FDE 2.1263 FRA-2.2675 FC-17.0833 B8P 2351 8GB 1741.4 8G2 -.0463 R13 .8880 L8A 42.2 M8A 17.1 88A 3.4
BDE .3922 BRA .6193 BC3 1.6256 F8P 2280 8G1 1481.1 8G2 982.7 TMA 98.58 EL1 27.9 EL2 6.8 ALP 29.88

LAUNCH DATE AUG 19 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC												DISTANCE 424.792												EARTH TO MARS		
RL	151.40	LAL	-0.00	LOL	325.87	VL	32.960	GAL	3.81	AZL	88.30	HCA	129.06	SMA	199.02	ECC	.24785	INC	1.7023	V1	29.429					
RP	236.81	LAP	1.32	LOP	94.95	VP	21.308	GAP	9.34	AZP	91.07	TAL	19.39	TAP	148.45	RCA	149.69	APO	248.34	V2	23.209					
RC	199.589	GL	12.87	GP	-18.56	ZAL	54.71	ZAP	122.98	ETS	194.51	ZAE	154.31	ETE	230.95	ZAC	65.61	ETC	284.04	LVI	.22					
PLANETOCENTRIC CONIC																										
C3	19.250	VHL	4.587	DLA	19.51	RAL	12.89	RAD	6642.5	VEL	11.801	PTH	6.82	VHP	2.728	DPA	-2.95	RAP	44.01	ECC	1.3168					
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG															
50.00	9 5 32	3519.96	-46.53	129.96	248.62	101.30	10 4 12	2520.0		-36.93	99.98															
60.00	9 21 58	3476.17	-40.01	127.33	249.93	95.34	10 19 54	2476.2		-33.54	98.26															
70.00	9 47 8	3402.08	-34.15	121.71	250.31	90.62	10 43 50	2402.1		-30.33	93.65															
80.00	10 20 59	3270.90	-29.75	111.67	250.22	87.30	11 23 30	2270.9		-27.84	84.41															
90.00	11 38 8	3047.65	-28.02	95.16	250.10	86.04	12 28 56	2047.6		-26.85	88.21															
100.00	13 11 51	2745.37	-29.75	73.04	250.22	87.30	13 57 36	1745.4		-27.84	45.78															
110.00	14 46 34	2448.90	-34.15	50.63	250.31	90.62	15 27 23	1448.9		-30.33	22.57															
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY		
TDE	-.3117	TRA	-.6304	TC3	.1224	BAU	.4350	SGT	969.5	SGR	1505.6	SG3	1389.8	ST	24.2	SR	14.0	SS	37.0							
RDE	-.2107	RRA	-.0383	RC3	-1.6858	FAU	.39200	RRT	-.0003	RRF	.9187	RTF	.0003	CRT	.8586	CR8	.8832	C8T	.6202							
FDE	2.2552	FRA	-2.3670	FC	-17.6296	BSP	2437	SG8	1790.7	R23	-.0008	R13	.9187	LSA	42.8	MSA	17.5	SSA	3.3							
BDE	.3762	BRA	.6316	BC3	1.6902	FSP	2360	SG1	1505.6	SG2	969.5	THA	90.02	EL1	27.2	EL2	6.4	ALF	28.01							

LAUNCH DATE AUG 19 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC												DISTANCE 428.575												EARTH TO MARS		
RL	151.40	LAL	-0.00	LOL	325.87	VL	32.951	GAL	3.81	AZL	88.25	HCA	130.03	SMA	198.84	ECC	.24715	INC	1.7543	V1	29.429					
RP	237.14	LAP	1.34	LOP	95.91	VP	21.258	GAP	9.08	AZP	91.13	TAL	19.38	TAP	149.41	RCA	149.70	APO	247.98	V2	23.174					
RC	202.557	GL	13.28	GP	-19.08	ZAL	54.76	ZAP	121.39	ETS	194.12	ZAE	152.86	ETE	228.63	ZAC	65.22	ETC	284.16	LVI	.88					
PLANETOCENTRIC CONIC																										
C3	19.212	VHL	4.583	DLA	19.88	RAL	12.71	RAD	6642.5	VEL	11.799	PTH	6.82	VHP	2.689	DPA	-3.64	RAP	43.62	ECC	1.3162					
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG															
50.00	9 3 11	3527.34	-48.63	130.84	248.75	100.77	10 1 58	2527.3		-37.20	100.48															
60.00	9 19 4	3485.04	-40.08	128.08	249.98	94.84	10 17 9	2485.0		-33.78	98.89															
70.00	9 43 29	3413.10	-34.15	122.57	250.30	90.11	10 40 23	2413.1		-30.54	94.44															
80.00	10 24 31	3284.50	-29.70	112.68	250.18	86.77	11 19 15	2284.5		-28.01	85.38															
90.00	11 33 14	3082.67	-27.95	98.25	250.03	85.49	12 24 16	2082.7		-27.01	89.28															
100.00	13 7 23	2758.97	-29.70	74.05	250.16	86.77	13 53 22	1759.0		-28.01	46.75															
110.00	14 42 56	2459.92	-34.15	51.49	250.30	90.11	15 23 56	1459.9		-30.54	23.36															
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY		
TDE	-.3041	TRA	-.6432	TC3	.0244	BAU	.4525	SGT	978.7	SGR	1566.2	SG3	1431.8	ST	24.0	SR	12.8	SS	38.8							
RDE	-.1912	RRA	-.0328	RC3	-1.7617	FAU	.40276	RRT	.0860	RRF	.9264	RTF	.0916	CRT	.8600	CR8	.8677	C8T	.8058							
FDE	2.3849	FRA	-2.4667	FC	-18.1498	BSP	2538	SG8	1846.8	R23	.0383	R13	.9257	LSA	43.5	MSA	17.8	SSA	3.2							
BDE	.3592	BRA	.6454	BC3	1.7619	FSP	2437	SG1	1569.9	SG2	972.8	THA	85.00	EL1	26.5	EL2	5.9	ALF	25.98							

LAUNCH DATE AUG 19 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC												DISTANCE 432.380												EARTH TO MARS		
RL	151.40	LAL	-0.00	LOL	325.87	VL	32.943	GAL	3.79	AZL	88.19	HCA	130.99	SMA	198.67	ECC	.24650	INC	1.8078	V1	29.429					
RP	237.48	LAP	1.36	LOP	96.87	VP	21.206	GAP	8.82	AZP	91.19	TAL	19.37	TAP	150.35	RCA	149.70	APO	247.65	V2	23.140					
RC	205.923	GL	13.70	GP	-19.61	ZAL	54.84	ZAP	119.79	ETS	193.71	ZAE	151.35	ETE	226.49	ZAC	64.84	ETC	284.28	LVI	.91					
PLANETOCENTRIC CONIC																										
C3	19.179	VHL	4.579	DLA	20.27	RAL	12.54	RAD	6642.5	VEL	11.798	PTH	6.82	VHP	2.693	DPA	-4.34	RAP	43.22	ECC	1.3188					
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG															
50.00	9 0 47	3555.11	-48.73	131.37	248.90	100.22	9 59 42	2555.1		-37.48	101.01															
60.00	9 16 5	3494.37	-40.11	128.86	250.08	94.30	10 14 19	2494.4		-34.03	99.53															
70.00	9 39 44	3424.71	-34.15	123.48	250.32	89.58	10 38 49	2424.7		-30.78	95.27															
80.00	10 19 52	3298.90	-29.84	113.75	250.12	86.22	11 14 51	2298.9		-29.19	88.42															
90.00	11 28 8	3078.61	-27.88	97.41	249.98	84.92	12 19 23	2078.6		-27.17	70.42															
100.00	13 2 44	2773.38	-29.84	73.12	250.12	86.22	13 48 57	1773.4		-28.19	47.19															
110.00	14 39 10	2471.53	-34.15	52.40	250.32	89.58	15 20 22	1471.5		-30.78	24.79															
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY		
TDE	-.2953	TRA	-.6570	TC3	-.0784	BAU	.4720	SGT	998.7	SGR	1628.8	SG3	1472.6	ST	23.7	SR	11.5	SS	40.2							
RDE	-.1703	RRA	-.0674	RC3	-1.8391	FAU	.41315	RRT	.1742	RRF	.9334	RTF	.1337	CRT	.8624	CR8	.8464	C8T	.5894							
FDE	2.5232	FRA	-2.5624	FC	-18.6498	BSP	2649	SG8	1908.6	R23	.0699	R13	.9310	LSA	44.4	MSA	18.2	SSA	3.1							
BDE	.3409	BRA	.6604	BC3	1.8407	FSP	2510	SG1	1643.2	SG2	972.9	THA	80.59	EL1	25.8	EL2	5.3	ALF	23.78							

LAUNCH DATE AUG 19 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC												DISTANCE 438.145												EARTH TO MARS		
RL	151.40	LAL	-0.00	LOL	325.87	VL	32.938	GAL	3.78	AZL	88.14	HCA	131.95	SMA	198.93	ECC	.24590	INC	1.8628	V1	29.429					
RP	237.81	LAP	1.39	LOP	97.83	VP	21.157	GAP	8.56	AZP	91.25	TAL	19.34	TAP	151.29	RCA	149.71	APO	247.35	V2	23.106					
RC	208.485	GL	14.13	GP	-20.15	ZAL	54.93	ZAP	118.19	ETS	193.28	ZAE	149.81	ETE	224.52	ZAC	64.45	ETC	284.40	LVI	1.27					
PLANETOCENTRIC CONIC																										
C3	19.152	VHL	4.576	DLA	20.67	RAL	12.37	RAD	6642.5	VEL	11.797	PTH	6.82	VHP	2.619	DPA	-5.06	RAP	42.82	ECC	1.3152					
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG															
50.00	8 58 20	3543.27	-46.82	132.13	249.09	99.64	9 57 24	2543.3		-37.77	101.58															
60.00	9 13 1	3504.19	-40.16	129.70	250.17	93.74	10 11 25	2504.2		-34.29	100.26															
70.00	9 35 50	3436.95	-34.14	124.43	250.35	89.01	10 33 7	2437.0		-30.98	96.16															
80.00	10 15 0	3314.16	-29.57	114.88	250.10	85.63	11 10 15	2314.2		-28.37	87.51															
90.00	11 22 43	3095.55	-27.75	98.63	249.91	84.32	12 14 19	2095.6		-27.32	71.63															
100.00	12 57 52	2788.63	-29.57	76.24	250.10	85.63	13 44 21	1788.6		-28.37	48.88															
110.00	14 35 17	2483.77	-34.14	53.35	250.35	89.01	15 16 41	1483.8		-30.98	25.08															
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY		
TDE	-.2843	TRA	-.6713	TC3	-.1850	BAU	.4933	SGT	1023.3	SGR	1693.8	SG3	1512.0	ST	23.3	SR	10.2	SS	41.7							
RDE	-.1490	RRA	-.0829	RC3	-1.9177	FAU	.42315	RRT	.2616	RRF	.9397	RTF	.2743	CRT	.8659	CR8	.8150	C8T	.5679							
FDE	2.6573	FRA	-2.6599	FC	-19.1284	BSP	2774	SG8	1978.9	R23	.0939	R13	.9355	LSA	45.2	MSA	18.5	SSA	3.0							
BDE	.3210	BRA	.6764	BC3	1.9266	FSP	2578	SG1	1724.9	SG2	969.8	THA	76.77	EL1	25.0	EL2	4.8	ALF	21.59							

LAUNCH DATE AUG 19 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.020 GAL 3.77 AZL 88.08 HCA 132.80 SMA 199.39 ECC .24535 INC 1.9190 V1 29.429  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.110 GAP 8.31 AZP 91.31 TAL 19.31 TAP 152.21 RCA 149.72 APO 247.07 V2 23.073  
 RC 211.443 GL 14.57 GP -20.69 ZAL 55.04 ZAP 116.58 ETS 192.83 ZAE 148.22 ETE 222.68 ZAC 64.05 ETC 284.52 LVI 1.63

DISTANCE 439.933

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.130 VHL 4.374 DLA 21.08 RAL 12.21 RAD 6642.4 VEL 11.796 PTH 6.82 VHP 2.589 DPA -5.78 RAP 42.41 ECC 1.3148  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 55 50 3551.83 -46.92 132.94 249.30 99.03 9 55 2 2551.8 -38.07 102.17  
 60.00 9 9 51 3514.50 -40.20 130.57 250.29 93.15 10 8 26 2514.5 -34.56 101.00  
 70.00 9 31 48 3449.85 -34.12 125.44 250.40 88.42 10 29 18 2449.9 -31.20 97.10  
 80.00 10 9 56 3330.31 -29.48 116.07 250.08 85.01 11 5 26 2330.3 -28.55 88.68  
 90.00 11 17 4 3113.58 -27.82 99.94 249.87 83.68 12 8 57 2113.6 -27.48 72.93  
 100.00 12 52 48 2804.79 -29.48 77.44 250.08 85.01 13 39 32 1804.8 -28.55 50.05  
 110.00 14 31 15 2496.67 -34.12 54.36 250.40 88.42 15 12 51 1496.7 -31.20 26.01

DIFFERENTIAL CORRECTIONS

TDE -.2704 TRA -.6852 TC3 -.2932 BAU .5169 SGT 1056.7 SGR 1762.7 SG3 1551.6 ST 22.9 SR 9.0 SS 43.2  
 RDE -.1275 RRA -.0994 RC3-1.9997 FAU .43322 RRT .3447 RRF .9456 RTF .3603 CRT .8711 CRS .7673 CST .5397  
 FDE 2.7859 FRA-2.7623 FC-19.6054 BSP 2905 SGB 2055.2 R23 .1099 R13 .9399 LSA 45.9 MSA 18.7 SSA 3.0  
 BDE .2990 BRA .6924 BC3 2.0211 F8P 2631 SG1 1815.6 SG2 963.1 THA 73.59 EL1 24.2 EL2 4.2 ALF 19.54

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 19 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.922 GAL 3.75 AZL 88.02 HCA 133.86 SMA 198.27 ECC .24484 INC 1.9769 V1 29.429  
 RP 238.47 LAP 1.43 LOP 99.75 VP 21.065 GAP 8.06 AZP 91.37 TAL 19.27 TAP 153.13 RCA 149.73 APO 246.82 V2 23.040  
 RC 214.394 GL 15.02 GP -21.24 ZAL 55.16 ZAP 114.97 ETS 192.37 ZAE 146.60 ETE 220.96 ZAC 63.66 ETC 284.64 LVI 1.99

DISTANCE 443.722

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.114 VHL 4.372 DLA 21.51 RAL 12.05 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.561 DPA -6.52 RAP 41.99 ECC 1.3146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 16 3360.81 -47.01 133.79 249.55 98.38 9 52 37 2560.8 -38.38 102.81  
 60.00 9 6 35 3325.32 -40.23 131.49 250.44 92.53 10 5 21 2525.3 -34.83 101.79  
 70.00 9 27 36 3463.43 -34.09 126.50 250.46 87.79 10 25 20 2463.4 -31.43 98.09  
 80.00 10 4 36 3347.44 -29.37 117.33 250.08 84.35 11 0 23 2347.4 -28.73 89.92  
 90.00 11 11 5 3132.77 -27.47 101.32 249.84 83.00 12 3 18 2132.8 -27.63 74.31  
 100.00 12 47 28 2821.91 -29.37 78.70 250.08 84.35 13 34 30 1821.9 -28.73 51.29  
 110.00 14 27 3 2510.25 -34.09 55.42 250.46 87.79 15 8 53 1510.3 -31.43 27.01

DIFFERENTIAL CORRECTIONS

TDE -.2521 TRA -.6970 TC3 -.3993 BAU .5428 SGT 1093.1 SGR 1837.2 SG3 1592.1 ST 22.1 SR 7.9 SS 44.8  
 RDE -.1068 RRA -.1185 RC3-2.0863 FAU .44361 RRT .4218 RRF .9510 RTF .4402 CRT .8779 CRS .6929 CST .4997  
 FDE 2.8973 FRA-2.8643 FC-20.0920 BSP 3039 SGB 2137.8 R23 .1171 R13 .9447 LSA 46.5 MSA 19.0 SSA 2.9  
 BDE .2738 BRA .7070 BC3 2.1241 F8P 2658 SG1 1914.6 SG2 951.1 THA 71.08 EL1 23.2 EL2 3.6 ALF 17.89

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 19 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.917 GAL 3.74 AZL 87.96 HCA 134.81 SMA 198.18 ECC .24437 INC 2.0366 V1 29.429  
 RP 238.79 LAP 1.44 LOP 100.70 VP 21.020 GAP 7.81 AZP 91.44 TAL 19.21 TAP 154.02 RCA 149.74 APO 246.59 V2 23.008  
 RC 217.340 GL 15.49 GP -21.79 ZAL 55.30 ZAP 113.37 ETS 191.89 ZAE 144.96 ETE 219.37 ZAC 63.26 ETC 284.57 LVI 2.37

DISTANCE 447.509

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.103 VHL 4.371 DLA 21.96 RAL 11.90 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.536 DPA -7.27 RAP 41.58 ECC 1.3144  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 36 3570.27 -47.10 134.68 249.82 97.89 9 50 8 2570.3 -38.71 103.48  
 60.00 9 3 13 3536.74 -40.28 132.48 250.61 91.87 10 2 10 2536.7 -35.12 102.82  
 70.00 9 23 14 3477.82 -34.05 127.62 250.54 87.13 10 21 11 2477.8 -31.67 99.14  
 80.00 9 58 58 3365.72 -29.24 118.67 250.09 83.66 10 35 4 2365.7 -28.91 91.25  
 90.00 11 4 43 3153.37 -27.29 102.80 249.82 82.28 11 57 18 2153.4 -27.77 75.80  
 100.00 12 41 50 2840.19 -29.24 80.04 250.09 83.66 13 29 10 1840.2 -28.91 52.82  
 110.00 14 22 40 2524.64 -34.05 56.54 250.54 87.13 15 4 45 1524.6 -31.67 28.06

DIFFERENTIAL CORRECTIONS

TDE -.2479 TRA -.7260 TC3 -.5445 BAU .5877 SGT 1177.0 SGR 1895.1 SG3 1618.1 ST 22.4 SR 6.3 SS 47.0  
 RDE -.0759 RRA -.1289 RC3-2.1549 FAU .44903 RRT .5003 RRF .9550 RTF .5.59 CRT .8798 CRS .5697 CST .4876  
 FDE 3.1059 FRA-2.9057 FC-20.3493 BSP 3255 SGB 2230.9 R23 .1429 R13 .9452 LSA 48.6 MSA 19.4 SSA 2.8  
 BDE .2593 BRA .7173 BC3 2.2227 F8P 2783 SG1 2014.3 SG2 958.8 THA 67.34 EL1 23.1 EL2 2.9 ALF 14.21

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 19 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.812 GAL 3.72 AZL 87.90 HCA 135.78 SMA 198.07 ECC .24393 INC 2.0981 V1 29.429  
 RP 239.10 LAP 1.46 LOP 101.85 VP 20.977 GAP 7.56 AZP 91.50 TAL 19.15 TAP 154.91 RCA 149.75 APO 246.38 V2 22.975  
 RC 220.278 GL 15.97 GP -22.35 ZAL 55.45 ZAP 111.76 ETS 191.40 ZAE 143.29 ETE 217.87 ZAC 62.86 ETC 284.89 LVI 2.75

DISTANCE 451.298

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 19.099 VHL 4.370 DLA 22.43 RAL 11.75 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.513 DPA -8.03 RAP 41.17 ECC 1.3143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 35 3580.17 -47.18 135.62 250.12 96.97 9 47 35 2580.2 -39.05 104.18  
 60.00 8 59 44 3548.71 -40.29 133.47 250.80 91.18 9 58 52 2548.7 -35.41 103.50  
 70.00 9 18 39 3492.96 -33.99 128.80 250.64 86.43 10 16 52 2493.0 -31.90 100.26  
 80.00 9 53 2 3385.13 -29.08 120.09 250.10 82.92 10 49 27 2385.1 -29.08 92.87  
 90.00 10 58 0 3175.39 -27.08 104.38 249.79 81.52 11 50 55 2175.4 -27.91 77.40  
 100.00 12 38 54 2859.60 -29.08 81.46 250.10 82.92 13 23 34 1859.6 -29.08 54.04  
 110.00 14 18 6 2539.78 -33.99 57.72 250.64 86.43 15 0 25 1539.8 -31.90 29.18

DIFFERENTIAL CORRECTIONS

TDE -.2323 TRA -.7462 TC3 -.8724 BAU .5959 SGT 1248.4 SGR 1965.4 SG3 1646.3 ST 22.0 SR 5.3 SS 48.7  
 RDE -.0494 RRA -.1450 RC3-2.2350 FAU .45641 RRT .5647 RRF .9591 RTF .5803 CRT .8569 CRS .3471 CST .4494  
 FDE 3.2582 FRA-2.9812 FC-20.6885 BSP 3437 SGB 2328.3 R23 .1517 R13 .9482 LSA 49.9 MSA 19.6 SSA 2.7  
 BDE .2375 BRA .7602 BC3 2.3340 F8P 2837 SG1 2124.3 SG2 953.2 THA 64.87 EL1 22.5 EL2 2.7 ALF 11.93

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 19 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC  
 RL 181.40 LAL -.00 LOL 325.87 VL 32.807 GAL 3.70 AZL 87.84 HCA 136.70 SMA 197.90 ECC .24354 INC 2.1618 V1 20.420  
 RP 239.42 LAP 1.48 LOP 102.80 VP 20.936 GAP 7.32 AZP 91.57 TAL 19.00 TAP 155.79 RCA 149.77 APO 246.20 V2 22.844  
 RC 223.209 GL 16.48 GP -22.92 ZAL 55.82 ZAP 110.16 ETS 190.88 ZAE 141.60 ETE 216.48 ZAC 62.46 ETC 285.02 LVI 3.14

DISTANCE 455.088

EARTH TO MARS  
 ST 21.6 BR 4.8 SB 90.8  
 CRT 7.663 CR8 .0081 C8T .4043  
 L8A 51.4 M8A 19.9 S8A 2.8  
 EL1 21.0 EL2 3.0 ALP 8.6

PLANETOCENTRIC CONIC  
 C3 19.101 VHL 4.370 DLA 22.91 RAL 11.61 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.494 DPA -6.79 RAP 40.75 ECC 1.3143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 7 3590.54 -47.27 136.61 250.45 96.22 9 44 57 2590.5 -39.39 104.94  
 60.00 8 56 6 3561.26 -40.30 134.54 251.01 90.46 9 55 27 2581.3 -35.71 104.44  
 70.00 9 13 52 3508.04 -33.91 130.04 250.75 85.70 10 12 21 2508.9 -32.14 101.45  
 80.00 9 46 44 3405.83 -28.90 121.61 250.12 82.15 10 43 30 2405.8 -29.24 94.19  
 90.00 10 30 46 3199.07 -26.83 106.06 249.77 80.71 11 44 5 2199.1 -26.03 79.12  
 100.00 12 29 36 2880.30 -28.90 82.97 250.12 82.15 13 17 36 1880.3 -29.24 55.55  
 110.00 14 13 18 2558.76 -33.91 58.96 250.75 85.70 14 55 54 1558.8 -32.14 30.37

DIFFERENTIAL CORRECTIONS  
 TDE -.2148 TRA -.7674 TC3 -.8043 BAU .6288  
 RDE -.0217 RRA -.1615 RC3-2.3149 FAU .46300  
 PDE 3.4083 FRA-3.0527 FC-20.9883 S8P 3633  
 BDE .2159 BRA .7842 BC3 2.4508 F8P 2887

MID-COURSE EXECUTION ACCURACY  
 SGT 1329.1 SGR 2036.8 S63 1673.8  
 RRT .6212 RRF .9628 RTF .6363  
 SGB 2431.9 R23 .1581 R13 .9510  
 SGI 2240.0 S62 946.9 THA 62.65

ORBIT DETERMINATION ACCURACY  
 ST 21.6 BR 4.8 SB 90.8  
 CRT 7.663 CR8 .0081 C8T .4043  
 L8A 51.4 M8A 19.9 S8A 2.8  
 EL1 21.0 EL2 3.0 ALP 8.6

LAUNCH DATE AUG 19 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC  
 RL 151.40 LAL -.00 LOL 325.87 VL 32.903 GAL 3.68 AZL 87.77 HCA 137.68 SMA 197.91 ECC .24318 INC 2.2272 V1 20.420  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.898 GAP 7.07 AZP 91.65 TAL 19.01 TAP 156.68 RCA 149.78 APO 246.03 V2 22.913  
 RC 226.132 GL 16.97 GP -23.49 ZAL 55.81 ZAP 108.57 ETS 190.35 ZAE 139.90 ETE 213.11 ZAC 62.05 ETC 285.14 LVI 3.54

DISTANCE 456.879

EARTH TO MARS  
 ST 21.3 BR 5.0 SB 82.3  
 CRT .5876 CR8 -.3772 C8T .3517  
 L8A 52.9 M8A 20.1 S8A 2.8  
 EL1 21.5 EL2 4.0 ALP 8.0

PLANETOCENTRIC CONIC  
 C3 19.109 VHL 4.371 DLA 23.41 RAL 11.46 RAD 6642.4 VEL 11.795 PTH 6.82 VHP 2.478 DPA -9.56 RAP 40.34 ECC 1.3148  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 12 3601.42 -47.34 137.65 250.81 95.42 9 42 14 2601.4 -39.75 105.73  
 60.00 8 52 19 3574.48 -40.30 135.67 251.25 89.69 9 51 53 2574.5 -36.01 108.43  
 70.00 9 8 50 3525.84 -33.82 131.35 250.87 84.93 10 7 35 2525.8 -32.38 102.71  
 80.00 9 40 1 3427.98 -28.68 123.22 250.14 81.33 10 37 9 2428.0 -29.40 95.81  
 90.00 10 43 0 3224.65 -26.53 107.88 249.74 79.84 11 36 44 2224.6 -28.14 80.88  
 100.00 12 22 53 2902.46 -28.68 84.58 250.14 81.33 13 11 16 1902.5 -29.40 57.18  
 110.00 14 8 16 2572.66 -33.82 60.27 250.87 84.93 14 91 9 1572.7 -32.38 31.63

DIFFERENTIAL CORRECTIONS  
 TDE -.1993 TRA -.7898 TC3 -.9397 BAU .6571  
 RDE .0078 RRA -.1779 RC3-2.3945 FAU .46880  
 PDE 3.5629 FRA-3.1149 FC-21.2393 S8P 3844  
 BDE .1998 BRA .8095 BC3 2.5723 F8P 2938

MID-COURSE EXECUTION ACCURACY  
 SGT 1418.8 SGR 2108.8 S63 1698.4  
 RRT .6889 RRF .9661 RTF .6841  
 SGB 2541.7 R23 .1628 R13 .9536  
 SGI 2361.1 S62 941.0 THA 60.64

ORBIT DETERMINATION ACCURACY  
 ST 21.3 BR 5.0 SB 82.3  
 CRT .5876 CR8 -.3772 C8T .3517  
 L8A 52.9 M8A 20.1 S8A 2.8  
 EL1 21.5 EL2 4.0 ALP 8.0

LAUNCH DATE AUG 19 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC  
 RL 181.40 LAL -.00 LOL 325.87 VL 32.900 GAL 3.68 AZL 87.70 HCA 136.88 SMA 197.84 ECC .24285 INC 2.2930 V1 20.420  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.856 GAP 6.83 AZP 91.72 TAL 18.92 TAP 157.81 RCA 149.80 APO 245.89 V2 22.882  
 RC 229.048 GL 17.80 GP -24.07 ZAL 56.01 ZAP 108.98 ETS 189.79 ZAE 138.18 ETE 213.84 ZAC 61.64 ETC 285.27 LVI 3.98

DISTANCE 462.669

EARTH TO MARS  
 ST 20.9 BR 5.0 SB 94.0  
 CRT .4100 CR8 -.6561 C8T .2880  
 L8A 54.6 M8A 20.2 S8A 2.4  
 EL1 21.0 EL2 5.3 ALP 7.0

PLANETOCENTRIC CONIC  
 C3 19.124 VHL 4.373 DLA 23.92 RAL 11.32 RAD 6642.4 VEL 11.798 PTH 6.82 VHP 2.482 DPA -10.34 RAP 39.84 ECC 1.3147  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 12 3612.82 -47.41 136.75 251.20 94.58 9 39 24 2612.8 -40.12 106.97  
 60.00 8 48 22 3586.37 -40.29 136.85 251.50 88.89 9 48 11 2586.4 -36.32 106.47  
 70.00 9 3 31 3543.73 -33.70 132.74 250.89 84.12 10 8 38 2543.7 -32.61 104.05  
 80.00 9 32 30 3451.77 -28.43 124.94 250.18 80.48 10 30 22 2451.8 -29.54 97.87  
 90.00 10 34 33 3282.45 -26.19 109.84 249.70 78.92 11 25 45 2282.4 -28.22 83.01  
 100.00 12 18 42 2926.24 -28.43 86.30 250.18 80.48 13 4 28 1926.2 -29.54 58.94  
 110.00 14 2 57 2590.55 -33.70 61.65 250.89 84.12 14 48 8 1590.5 -32.61 32.87

DIFFERENTIAL CORRECTIONS  
 TDE -.1734 TRA -.8124 TC3-1.0767 BAU .6900  
 RDE .0374 RRA -.1954 RC3-2.4747 FAU .47402  
 PDE 3.7109 FRA-3.1802 FC-21.4566 S8P 4058  
 BDE .1774 BRA .8355 BC3 2.6988 F8P 2967

MID-COURSE EXECUTION ACCURACY  
 SGT 1914.7 SGR 2183.1 S63 1720.8  
 RRT .7117 RRF .9692 RTF .7252  
 SGB 2657.1 R23 .1652 R13 .9563  
 SGI 2487.6 S62 933.8 THA 88.88

ORBIT DETERMINATION ACCURACY  
 ST 20.9 BR 5.0 SB 94.0  
 CRT .4100 CR8 -.6561 C8T .2880  
 L8A 54.6 M8A 20.2 S8A 2.4  
 EL1 21.0 EL2 5.3 ALP 7.0

LAUNCH DATE AUG 19 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC  
 RL 181.40 LAL -.00 LOL 325.87 VL 32.897 GAL 3.64 AZL 87.63 HCA 136.83 SMA 197.78 ECC .24255 INC 2.3652 V1 20.420  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.819 GAP 6.89 AZP 91.80 TAL 18.83 TAP 158.36 RCA 149.81 APO 245.76 V2 22.881  
 RC 231.955 GL 18.04 GP -24.65 ZAL 56.22 ZAP 109.41 ETS 189.22 ZAE 136.48 ETE 212.68 ZAC 61.22 ETC 285.39 LVI 4.37

DISTANCE 466.461

EARTH TO MARS  
 ST 20.4 BR 7.2 SB 85.4  
 CRT .3334 CR8 -.7951 C8T .2029  
 L8A 55.8 M8A 20.3 S8A 2.3  
 EL1 20.6 EL2 6.7 ALP 7.4

PLANETOCENTRIC CONIC  
 C3 19.148 VHL 4.376 DLA 24.46 RAL 11.18 RAD 6642.5 VEL 11.797 PTH 6.82 VHP 2.450 DPA -11.12 RAP 39.54 ECC 1.3151  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO C8T TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 36 3 3624.76 -47.47 139.90 251.61 93.69 9 36 28 2624.8 -40.50 107.47  
 60.00 8 44 14 3602.86 -40.26 138.09 251.76 88.08 9 44 17 2603.0 -36.63 107.58  
 70.00 8 57 55 3562.67 -33.56 134.20 251.13 83.27 9 57 17 2562.7 -32.84 105.48  
 80.00 9 25 6 3477.38 -28.12 126.78 250.17 79.54 10 23 3 2477.4 -29.66 99.46  
 90.00 10 25 20 3282.86 -25.77 111.97 249.64 77.93 11 20 3 2282.9 -28.27 85.24  
 100.00 12 7 58 2951.86 -28.12 88.15 250.17 79.54 12 57 9 1951.9 -29.66 60.83  
 110.00 13 97 21 2608.46 -33.56 63.11 251.13 83.27 14 40 50 1608.5 -32.84 34.40

DIFFERENTIAL CORRECTIONS  
 TDE -.1462 TRA -.8327 TC3-1.2091 BAU .7281  
 RDE .0648 RRA -.2186 RC3-2.5617 FAU .47989  
 PDE 3.8227 FRA-3.2710 FC-21.6988 S8P 4283  
 BDE .1999 BRA .8604 BC3 2.8327 F8P 2988

MID-COURSE EXECUTION ACCURACY  
 SGT 1809.7 SGR 2264.9 S63 1744.7  
 RRT .7485 RRF .9721 RTF .7621  
 SGB 2776.8 R23 .1622 R13 .9599  
 SGI 2621.1 S62 922.3 THA 87.47

ORBIT DETERMINATION ACCURACY  
 ST 20.4 BR 7.2 SB 85.4  
 CRT .3334 CR8 -.7951 C8T .2029  
 L8A 55.8 M8A 20.3 S8A 2.3  
 EL1 20.6 EL2 6.7 ALP 7.4

LAUNCH DATE AUG 19 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.095 GAL 3.62 AZL 87.56 HCA 140.46 SMA 197.74 ECC .24228 INC 2.4379 V1 29.429
RP 240.63 LAP 1.55 LOP 106.36 VP 20.782 GAP 6.35 AZP 91.88 TAP 18.73 TAP 199.20 RCA 149.83 APO 245.65 V2 22.821
RC 234.852 GL 18.60 GP -25.24 ZAL 56.46 ZAP 103.86 ETS 188.64 ZAE 134.73 ETE 211.47 ZAC 60.80 ETC 285.52 LVI 4.80

PLANETOCENTRIC CONIC

C3 19.176 VHL 4.379 DLA 25.01 RAL 11.04 RAD 6642.5 VEL 11.798 PTH 6.82 VHP 2.440 DPA -11.90 RAP 39.18 ECC 1.3156
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 48 3637.32 -47.92 141.11 252.05 92.76 9 33 25 2637.3 -40.89 108.42
60.00 8 39 54 3618.56 -40.22 139.40 252.05 87.16 9 40 13 2618.4 -36.95 108.77
70.00 8 51 57 3582.86 -33.39 135.75 251.27 82.37 9 51 40 2582.9 -33.07 107.01
80.00 9 16 41 3505.26 -27.76 128.77 250.17 78.55 10 15 6 2505.3 -29.76 101.53
90.00 10 15 5 3316.63 -25.27 114.31 249.56 76.86 11 10 22 2316.6 -28.28 87.70
100.00 11 59 33 2979.73 -27.76 90.14 250.17 78.55 12 49 13 1979.7 -29.76 62.89
110.00 13 51 24 2629.68 -33.39 64.66 251.27 82.37 14 35 13 1629.7 -33.07 35.93

DIFFERENTIAL CORRECTIONS

TDE -.1259 TRA -.0635 TC3-1.3648 BAU .7593 SGT 1734.9 SGR 2329.8 SG3 1752.9 ST 20.5 SR 9.1 SS 57.8
RDE .1032 RRA -.2287 RC3-2.6288 FAU .48097 RRT .7771 RRF .9743 RTF .7883 CRT .2327 CR8 -.8988 C8T .1408
FDE 4.0213 FRA-3.2688 FC-21.7146 BSP 4530 SGB 2904.8 R23 .1704 R13 .9608 LSA 58.4 MSA 20.6 S8A 2.2
BDE .1628 BRA .8932 BC3 2.9819 F8P 3037 SG1 2754.0 SG2 923.7 THA 55.53 EL1 20.6 EL2 8.8 ALF 7.16

LAUNCH DATE AUG 19 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.093 GAL 3.60 AZL 87.49 HCA 141.40 SMA 197.70 ECC .24205 INC 2.5134 V1 29.429
RP 240.93 LAP 1.57 LOP 107.30 VP 20.747 GAP 6.11 AZP 91.96 TAP 18.62 TAP 160.02 RCA 149.85 APO 245.56 V2 22.792
RC 237.739 GL 19.17 GP -25.83 ZAL 56.71 ZAP 102.32 ETS 188.03 ZAE 135.00 ETE 210.35 ZAC 60.37 ETC 285.64 LVI 5.23

PLANETOCENTRIC CONIC

C3 19.213 VHL 4.383 DLA 25.59 RAL 10.90 RAD 6642.5 VEL 11.800 PTH 6.82 VHP 2.433 DPA -12.69 RAP 38.78 ECC 1.3182
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 29 23 3650.49 -47.55 142.38 252.52 91.78 9 30 13 2650.5 -41.29 109.43
60.00 8 35 21 3634.57 -40.15 140.77 252.35 86.23 9 35 55 2634.6 -37.28 110.02
70.00 8 45 37 3604.32 -33.19 137.39 251.41 81.42 9 45 41 2604.3 -33.29 108.65
80.00 9 7 29 3535.67 -27.33 130.93 250.15 77.49 10 6 25 2535.7 -29.83 103.78
90.00 10 3 34 3354.52 -24.66 116.92 249.44 75.70 10 59 28 2354.5 -28.23 90.47
100.00 11 50 21 3010.14 -27.33 92.30 250.15 77.49 12 40 31 2010.1 -29.83 65.15
110.00 13 45 3 2651.14 -33.19 66.30 251.41 81.42 14 29 14 1651.1 -33.29 37.56

DIFFERENTIAL CORRECTIONS

TDE -.0983 TRA -.8901 TC3-1.5109 BAU .7956 SGT 1853.4 SGR 2404.0 SG3 1764.1 ST 20.5 SR 11.1 SS 59.6
RDE .1383 RRA -.2462 RC3-2.7040 FAU .48306 RRT .8028 RRF .9765 RTF .8128 CRT .2314 CR8 -.9388 C8T .0524
FDE 4.1741 FRA-3.3089 FC-21.7664 BSP 4776 SGB 3035.5 R23 .1716 R13 .9625 LSA 60.5 MSA 20.7 S8A 2.2
BDE .1697 BRA .9235 BC3 3.0975 F8P 3057 SG1 2893.3 SG2 918.3 THA 54.07 EL1 20.7 EL2 10.7 ALF 9.75

LAUNCH DATE AUG 19 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.091 GAL 3.57 AZL 87.41 HCA 142.33 SMA 197.67 ECC .24183 INC 2.5919 V1 29.429
RP 241.22 LAP 1.58 LOP 108.23 VP 20.712 GAP 5.87 AZP 92.05 TAP 18.51 TAP 160.84 RCA 149.87 APO 245.48 V2 22.783
RC 242.615 GL 19.77 GP -26.43 ZAL 56.97 ZAP 100.80 ETS 187.41 ZAE 131.26 ETE 209.28 ZAC 59.94 ETC 285.77 LVI 5.68

PLANETOCENTRIC CONIC

C3 19.260 VHL 4.389 DLA 26.19 RAL 10.75 RAD 6642.5 VEL 11.802 PTH 6.82 VHP 2.429 DPA -13.49 RAP 38.42 ECC 1.3170
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 25 48 3664.31 -47.57 143.72 253.02 90.76 9 26 52 2664.3 -41.70 110.50
60.00 8 30 32 3651.67 -40.07 142.22 252.66 85.25 9 31 24 2651.7 -37.60 111.36
70.00 8 38 49 3627.24 -32.94 139.13 251.55 80.42 9 39 17 2627.2 -33.49 110.40
80.00 8 57 18 3569.24 -26.82 133.29 250.09 76.35 9 56 47 2569.2 -29.86 106.28
90.00 9 50 17 3398.05 -23.89 119.88 249.25 74.40 10 46 56 2398.0 -28.10 93.65
100.00 11 40 10 3043.71 -26.82 94.66 250.09 76.35 12 30 54 2043.7 -29.86 67.65
110.00 13 38 16 2674.06 -32.94 68.05 251.55 80.42 14 22 50 1674.1 -33.49 39.32

DIFFERENTIAL CORRECTIONS

TDE -.0684 TRA -.9178 TC3-1.6580 BAU .8331 SGT 1978.8 SGR 2479.1 SG3 1771.8 ST 20.6 SR 13.2 SS 61.4
RDE .1740 RRA -.2841 RC3-2.7783 FAU .48433 RRT .8247 RRF .9785 RTF .8337 CRT .2661 CR8 -.9813 C8T -.0442
FDE 4.3162 FRA-3.3439 FC-21.7708 BSP 5026 SGB 3170.8 R23 .1720 R13 .9644 LSA 62.7 MSA 20.8 S8A 2.1
BDE .1869 BRA .9549 BC3 3.2354 F8P 3068 SG1 3038.5 SG2 912.9 THA 52.74 EL1 21.1 EL2 12.5 ALF 15.09

LAUNCH DATE AUG 19 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.090 GAL 3.55 AZL 87.33 HCA 143.26 SMA 197.68 ECC .24165 INC 2.6735 V1 29.429
RP 241.50 LAP 1.60 LOP 109.16 VP 20.679 GAP 5.64 AZP 92.14 TAP 18.39 TAP 161.65 RCA 149.89 APO 245.41 V2 22.734
RC 243.479 GL 20.39 GP -27.04 ZAL 57.25 ZAP 99.31 ETS 186.76 ZAE 129.56 ETE 208.25 ZAC 59.50 ETC 285.90 LVI 6.14

PLANETOCENTRIC CONIC

C3 19.316 VHL 4.395 DLA 26.81 RAL 10.60 RAD 6642.5 VEL 11.804 PTH 6.83 VHP 2.427 DPA -14.28 RAP 38.07 ECC 1.3179
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 22 2 3678.84 -47.58 145.12 253.54 89.67 9 23 21 2678.8 -42.12 111.64
60.00 8 25 27 3669.74 -39.98 143.74 252.98 84.23 9 26 37 2669.7 -37.92 112.79
70.00 8 31 32 3651.82 -32.65 140.99 251.68 79.35 9 32 23 2651.8 -33.69 112.30
80.00 8 45 52 3606.80 -26.19 135.90 250.00 75.12 9 45 58 2606.8 -29.82 109.07
90.00 9 34 24 3449.97 -22.90 123.36 248.96 72.94 10 31 54 2450.0 -27.83 97.42
100.00 11 28 44 3081.27 -26.19 97.27 250.00 75.12 12 20 5 2081.3 -29.82 70.44
110.00 13 30 59 2698.64 -32.65 69.90 251.68 79.35 14 15 57 1698.6 -33.69 41.21

DIFFERENTIAL CORRECTIONS

TDE -.0361 TRA -.9483 TC3-1.8089 BAU .8714 SGT 2106.0 SGR 2553.6 SG3 1775.5 ST 21.0 SR 15.6 SS 63.2
RDE .2119 RRA -.2819 RC3-2.8498 FAU .48445 RRT .8432 RRF .9903 RTF .8512 CRT .3191 CR8 -.9748 C8T -.1444
FDE 4.4607 FRA-3.3687 FC-21.7129 BSP 5285 SGB 3310.0 R23 .1725 R13 .9661 LSA 65.1 MSA 20.9 S8A 2.0
BDE .2149 BRA .9874 BC3 3.3743 F8P 3075 SG1 3182.9 SG2 908.3 THA 51.48 EL1 22.0 EL2 14.1 ALF 23.26



LAUNCH DATE AUG 19 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.07 VL 32.090 GAL 3.52 AZL 87.24 MCA 144.10 SMA 197.64 ECC .24148 INC 2.7506 V1 29.429 RP 241.78 LAP 1.61 LOP 110.09 VP 20.647 GAP 5.40 AZP 92.24 TAL 18.26 TAP 162.45 RCA 149.01 APO 245.37 V2 22.706 RC 246.330 GL 21.03 GP -27.66 ZAL 57.54 ZAP 97.84 ETS 186.11 ZAE 127.84 ETE 207.25 ZAC 59.05 ETC 286.02 LVI 6.62

Distance 485.411

Planetocentric Conic: C3 19.382 VHL 4.403 DLA 27.45 RAL 10.45 RAD 6642.6 VEL 11.807 PTH 6.83 VHP 2.427 DPA -15.08 RAP 37.74 ECC 1.3190 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.0011 TRA -.9756 TC3-1.9548 BAU .9106 RDE .2516 RRA -.2398 RC3-2.9202 FAU .48378 FDE 4.6025 FRA-3.3860 FC-21.6086 BSP 5554 BDE .2516 BRA 1.0208 BC3 3.5141 FSP 3076

Mid-Course Execution Accuracy: SGT 2238.2 SGR 2629.1 SG3 1776.0 RRT .8589 RRF .9819 RTF .8660 SGB 3452.8 R23 .1725 R13 .9677 SG1 3332.3 SG2 904.3 THA 50.33

Orbit Determination Accuracy: ST 21.6 SR 18.1 SS 65.0 CRT .3850 CR8 -.9831 CST -.2465 LSA 67.6 MSA 21.0 SSA 1.9 EL1 23.7 EL2 15.2 ALF 32.45

LAUNCH DATE AUG 19 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 27 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.07 VL 32.889 GAL 3.50 AZL 87.15 HCA 145.11 SMA 197.63 ECC .24135 INC 2.8474 V1 29.429 RP 242.06 LAP 1.63 LOP 111.02 VP 20.616 GAP 5.17 AZP 92.34 TAL 18.13 TAP 163.24 RCA 149.93 APO 245.33 V2 22.679 RC 249.167 GL 21.70 GP -28.28 ZAL 57.85 ZAP 96.40 ETS 185.43 ZAE 126.14 ETE 206.28 ZAC 58.59 ETC 286.15 LVI 7.10

Distance 489.200

Planetocentric Conic: C3 19.480 VHL 4.411 DLA 28.11 RAL 10.29 RAD 6642.6 VEL 11.810 PTH 6.83 VHP 2.430 DPA -15.08 RAP 37.44 ECC 1.3203 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE .0362 TRA-1.0062 TC3-2.1038 BAU .9504 RDE .2931 RRA -.3181 RC3-2.9868 FAU .48185 FDE 4.7397 FRA-3.3972 FC-21.4368 BSP 5828 BDE .2953 BRA 1.0553 BC3 3.6534 FSP 3073

Mid-Course Execution Accuracy: SGT 2375.4 SGR 2703.4 SG3 1772.0 RRT .8725 RRF .9834 RTF .8786 SGB 3598.8 R23 .1728 R13 .9690 SG1 3484.3 SG2 900.6 THA 49.23

Orbit Determination Accuracy: ST 22.5 SR 20.7 SS 66.8 CRT .4552 CR8 -.9883 CBT -.3449 LSA 70.4 MSA 21.0 SSA 1.8 EL1 26.1 EL2 15.9 ALF 39.66

LAUNCH DATE AUG 19 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 29 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.07 VL 32.889 GAL 3.47 AZL 87.06 HCA 146.03 SMA 197.63 ECC .24123 INC 2.9401 V1 29.429 RP 242.33 LAP 1.64 LOP 111.94 VP 20.586 GAP 4.94 AZP 92.46 TAL 17.99 TAP 164.02 RCA 149.96 APO 245.31 V2 22.652 RC 251.989 GL 22.39 GP -28.91 ZAL 58.18 ZAP 94.98 ETS 184.74 ZAE 124.45 ETE 205.33 ZAC 58.12 ETC 286.28 LVI 7.81

Distance 492.988

Planetocentric Conic: C3 19.549 VHL 4.421 DLA 28.81 RAL 10.12 RAD 6642.6 VEL 11.814 PTH 6.83 VHP 2.436 DPA -16.69 RAP 37.15 ECC 1.3217 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE .0763 TRA-1.0379 TC3-2.2517 BAU .9911 RDE .3364 RRA -.3369 RC3-3.0513 FAU .47902 FDE 4.8713 FRA-3.4038 FC-21.2132 BSP 6099 BDE .3448 BRA 1.0912 BC3 3.7922 FSP 3058

Mid-Course Execution Accuracy: SGT 2316.0 SGR 2778.2 SG3 1764.5 RRT .8842 RRF .9848 RTF .8694 SGB 3748.2 R23 .1728 R13 .9703 SG1 3839.2 SG2 897.3 THA 48.20

Orbit Determination Accuracy: ST 23.7 SR 23.4 SS 68.5 CRT .5258 CR8 -.9917 CBT -.4376 LSA 73.2 MSA 21.1 SSA 1.7 EL1 29.1 EL2 16.2 ALF 44.20

LAUNCH DATE AUG 19 1973

FLIGHT TIME 224.00

ARRIVAL DATE MAR 31 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.07 VL 32.890 GAL 3.44 AZL 86.98 HCA 146.98 SMA 197.64 ECC .24113 INC 3.0372 V1 29.429 RP 242.60 LAP 1.66 LP 112.86 VP 20.558 GAP 4.71 AZP 92.55 TAL 17.84 TAP 164.80 RCA 149.98 APO 245.30 V2 22.625 RC 254.795 GL 23.10 GP -29.55 ZAL 58.52 ZAP 93.60 ETS 184.03 ZAE 122.78 ETE 204.41 ZAC 57.63 ETC 286.41 LVI 8.13

Distance 496.776

Planetocentric Conic: C3 19.652 VHL 4.433 DLA 29.53 RAL 9.94 RAD 6642.7 VEL 11.818 PTH 6.84 VHP 2.443 DPA -17.50 RAP 36.89 ECC 1.3234 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE .1200 TRA-1.0697 TC3-2.3970 BAU 1.0322 RDE .3821 RRA -.3554 RC3-3.1125 FAU .47517 FDE 5.0004 FRA-3.3991 FC-20.9324 BSP 6387 BDE .4005 BRA 1.1272 BC3 3.9286 FSP 3041

Mid-Course Execution Accuracy: SGT 2658.1 SGR 2852.7 SG3 1753.1 RRT .8942 RRF .9860 RTF .8987 SGB 3899.2 R23 .1727 R13 .9715 SG1 3795.2 SG2 894.6 THA 47.26

Orbit Determination Accuracy: ST 25.3 SR 26.3 SS 70.3 CRT .5931 CR8 -.9941 CBT -.5229 LSA 76.3 MSA 21.1 SSA 1.6 EL1 32.5 EL2 16.4 ALF 46.85

LAUNCH DATE AUG 19 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 2 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.87 VL 32.890 GAL 3.41 AZL 86.86 HCA 147.87 SMA 197.65 ECC .24106 INC 3.1389 V1 29.429  
 RP 242.86 LAP 1.87 LOP 113.78 VP 20.530 GAP 4.48 AZP 92.66 TAL 17.69 TAP 165.56 RCA 150.00 APO 245.30 V2 22.999  
 RC 257.584 GL 23.85 GP -30.20 ZAL 58.86 ZAP 82.26 ETS 183.30 ZAE 121.13 ETE 203.51 ZAC 57.13 ETC 286.55 LVI 8.66

Distance 500.563 Earth to Mars

Planocentric Conic: C3 19.770 VHL 4.446 DLA 30.27 RAL 9.75 RAD 8642.7 VEL 11.823 PTH 6.84 VHP 2.454 DPA -18.30 RAP 36.66 ECC 1.3254  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 59 43 3763.92 -47.22 153.31 256.50 83.38 9 2 27 2763.9 -44.29 118.66  
 60.00 7 54 24 3778.11 -38.83 152.73 254.64 78.23 8 57 23 2778.1 -39.45 121.58  
 70.00 7 43 20 3810.79 -30.04 152.63 251.90 72.93 8 46 31 2810.8 -34.13 124.67  
 78.72 6 39 51 4010.98 -17.66 162.52 246.71 65.01 7 46 42 3011.0 -26.43 138.45  
 78.72 6 39 51 4010.98 -17.66 162.52 246.71 65.01 7 46 42 3011.0 -26.43 138.45  
 78.72 6 39 51 4010.98 -17.66 162.52 246.71 65.01 7 46 42 3011.0 -26.43 138.45  
 110.00 12 42 47 2857.61 -30.04 81.55 251.90 72.93 13 30 24 1857.6 -34.13 53.59

Differential Corrections: TDE .1661 TRA-1.1031 TC3-2.5407 BAU 1.0740 SGT 2803.5 SGR 2927.5 SCS 1738.0 ST 27.1 SR 29.2 SS 72.0  
 RDE .4289 RRA -.3752 RC3-3.1709 FAU .47039 RRT .9030 RRF .9871 RTF .9067 CRT .6535 CRS -.9956 CST -.5971  
 FDE 5.1167 FRA-3.3943 FC-20.5984 B5P 6670 SGB 4053.4 R23 .1726 R13 .9726 LSA 79.3 MSA 21.2 SSA 1.6  
 BDE .4599 BRA 1.1651 BC3 4.0633 F5P 3014 SGI 3954.0 SGI 892.0 THA 46.37 EL1 36.3 EL2 16.5 ALF 48.21

LAUNCH DATE AUG 19 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 4 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.87 VL 32.891 GAL 3.38 AZL 86.75 HCA 148.79 SMA 197.67 ECC .24100 INC 3.2458 V1 29.429  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.503 GAP 4.26 AZP 92.78 TAL 17.53 TAP 166.32 RCA 150.03 APO 245.31 V2 22.973  
 RC 260.356 GL 24.63 GP -30.86 ZAL 59.26 ZAP 90.95 ETS 182.56 ZAE 119.50 ETE 202.63 ZAC 56.62 ETC 286.68 LVI 9.22

Distance 504.349 Earth to Mars

Planocentric Conic: C3 19.904 VHL 4.461 DLA 31.05 RAL 9.54 RAD 8642.8 VEL 11.829 PTH 6.85 VHP 2.467 DPA -19.12 RAP 36.45 ECC 1.3276  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 21 3783.92 -47.05 155.21 257.14 81.92 8 57 25 2783.9 -44.73 120.38  
 60.00 7 46 41 3804.39 -38.44 154.85 254.94 76.83 8 50 6 2804.4 -39.71 123.77  
 70.00 7 29 49 3854.26 -29.13 155.69 251.75 71.33 8 34 3 2854.3 -34.01 128.06  
 76.61 6 23 43 4061.10 -18.04 166.46 246.82 64.29 7 31 25 3061.1 -27.06 142.40  
 76.61 6 23 43 4061.10 -18.04 166.46 246.82 64.29 7 31 25 3061.1 -27.06 142.40  
 76.61 6 23 43 4061.10 -18.04 166.46 246.82 64.29 7 31 25 3061.1 -27.06 142.40  
 110.00 12 29 15 2901.08 -29.13 84.61 251.75 71.33 13 17 36 1901.1 -34.01 56.98

Differential Corrections: TDE .2157 TRA-1.1371 TC3-2.6811 BAU 1.1162 SGT 2950.4 SGR 3002.3 SCS 1719.3 ST 29.3 SR 32.3 SS 73.6  
 RDE .4783 RRA -.3951 RC3-3.2260 FAU .46487 RRT .9106 RRF .9882 RTF .9136 CRT .7067 CRS -.9967 CST -.6613  
 FDE 5.2285 FRA-3.3807 FC-20.2105 B5P 6958 SGB 4209.4 R23 .1724 R13 .9736 LSA 82.8 MSA 21.2 SSA 1.5  
 BDE .5247 BRA 1.2038 BC3 4.1946 F5P 2981 SGI 4114.2 SGI 890.1 THA 45.55 EL1 40.3 EL2 16.6 ALF 48.89

LAUNCH DATE AUG 19 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 6 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.87 VL 32.892 GAL 3.35 AZL 86.64 HCA 149.70 SMA 197.69 ECC .24097 INC 3.3582 V1 29.429  
 RP 243.37 LAP 1.69 LOP 115.62 VP 20.477 GAP 4.03 AZP 92.90 TAL 17.37 TAP 167.07 RCA 150.05 APO 245.33 V2 22.948  
 RC 283.112 GL 25.44 GP -31.54 ZAL 59.66 ZAP 89.67 ETS 181.80 ZAE 117.88 ETE 201.77 ZAC 56.09 ETC 286.82 LVI 9.79

Distance 508.135 Earth to Mars

Planocentric Conic: C3 20.057 VHL 4.479 DLA 31.86 RAL 9.32 RAD 8642.9 VEL 11.835 PTH 6.85 VHP 2.482 DPA -19.94 RAP 36.27 ECC 1.3301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 36 3805.12 -46.83 157.21 257.78 80.40 8 52 1 2805.1 -45.17 122.24  
 60.00 7 38 18 3832.69 -37.98 157.12 255.21 75.36 8 42 9 2832.7 -39.93 126.14  
 70.00 7 13 48 3905.07 -27.98 159.19 251.45 69.56 8 18 53 2905.1 -33.75 132.00  
 74.68 6 9 27 4105.01 -18.42 169.98 246.94 63.54 7 17 52 3105.0 -27.71 145.93  
 74.68 6 9 27 4105.01 -18.42 169.98 246.94 63.54 7 17 52 3105.0 -27.71 145.93  
 74.68 6 9 27 4105.01 -18.42 169.98 246.94 63.54 7 17 52 3105.0 -27.71 145.93  
 110.00 12 13 14 2951.89 -27.98 88.10 251.45 69.56 13 2 26 1951.9 -33.75 60.92

Differential Corrections: TDE .2685 TRA-1.1720 TC3-2.8174 BAU 1.1587 SGT 3098.8 SGR 3078.6 SCS 1696.6 ST 31.8 SR 35.5 SS 75.2  
 RDE .5300 RRA -.4158 RC3-3.2766 FAU .45790 RRT .9172 RRF .9891 RTF .5.98 CRT .7521 CRS -.9975 CST -.7154  
 FDE 5.3324 FRA-3.3829 FC-19.7646 B5P 7248 SGB 4366.7 R23 .1722 R13 .9745 LSA 86.4 MSA 21.2 SSA 1.4  
 BDE .5942 BRA 1.2436 BC3 4.3213 F5P 2941 SGI 4275.4 SGI 888.3 THA 44.78 EL1 44.6 EL2 16.6 ALF 48.14

LAUNCH DATE AUG 19 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 8 1974

Heliocentric Conic: RL 151.40 LAL -.00 LOL 325.87 VL 32.894 GAL 3.31 AZL 86.52 HCA 150.68 SMA 197.72 ECC .24095 INC 3.4767 V1 29.429  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.453 GAP 3.81 AZP 93.03 TAL 17.20 TAP 167.82 RCA 150.08 APO 245.36 V2 22.923  
 RC 285.850 GL 26.28 GP -32.24 ZAL 60.07 ZAP 88.44 ETS 181.02 ZAE 116.30 ETE 200.92 ZAC 55.54 ETC 286.97 LVI 10.39

Distance 511.919 Earth to Mars

Planocentric Conic: C3 20.230 VHL 4.498 DLA 32.70 RAL 9.08 RAD 8642.9 VEL 11.842 PTH 6.86 VHP 2.501 DPA -20.78 RAP 36.13 ECC 1.3329  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 23 3827.65 -46.55 159.32 258.42 78.60 8 46 11 2827.6 -45.60 124.24  
 60.00 7 29 1 3863.34 -37.42 159.55 255.44 73.80 8 33 25 2863.3 -40.12 128.73  
 70.00 6 53 47 3967.73 -26.41 163.39 250.89 67.52 7 59 54 2967.7 -33.22 136.81  
 72.86 5 58 24 4144.71 -18.80 173.21 247.08 62.74 7 5 29 3144.7 -28.38 149.19  
 72.86 5 58 24 4144.71 -18.80 173.21 247.08 62.74 7 5 29 3144.7 -28.38 149.19  
 72.86 5 58 24 4144.71 -18.80 173.21 247.08 62.74 7 5 29 3144.7 -28.38 149.19  
 110.00 11 53 13 3014.55 -26.41 92.31 250.89 67.52 12 43 27 2014.6 -33.22 65.73

Differential Corrections: TDE .3248 TRA-1.2080 TC3-2.9498 BAU 1.2019 SGT 3249.0 SGR 3151.6 SCS 1670.7 ST 34.6 SR 38.8 SS 76.7  
 RDE .5847 RRA -.4368 RC3-3.3240 FAU .45033 RRT .9230 RRF .9899 RTF .9248 CRT .7901 CRS -.9981 CST -.7604  
 FDE 5.4302 FRA-3.3369 FC-19.2715 B5P 7537 SGB 4526.5 R23 .1722 R13 .9753 LSA 90.2 MSA 21.2 SSA 1.3  
 BDE .6688 BRA 1.2845 BC3 4.4441 F5P 2894 SGI 4438.6 SGI 887.6 THA 44.06 EL1 49.2 EL2 16.7 ALF 49.13

LAUNCH DATE AUG 19 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC DISTANCE 515.703 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 32.896 GAL 3.28 AZL 86.40 HCA 151.53 SMA 197.79 ECC .24094 INC 3.6018 V1 29.429  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.429 GAP 3.58 AZP 93.17 TAL 17.02 TAP 168.55 RCA 150.11 APO 245.40 V2 22.499  
 RC 268.970 GL 27.16 GP -32.95 ZAL 60.51 ZAP 87.25 ETS 180.23 ZAE 114.74 ETE 200.09 ZAC 54.96 ETC 287.12 LVI 11.01

PLANETOCENTRIC CONIC  
 C3 20.426 VHL 4.520 DLA 33.57 RAL 8.82 RAD 6643.0 VEL 11.850 PTH 6.87 VHP 2.522 DPA -21.59 RAP 36.02 ECC 1.3362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 41 3851.64 -46.21 161.53 259.06 77.12 8 39 52 2851.6 -46.01 126.41  
 60.00 7 18 47 3896.77 -36.76 162.12 255.60 72.16 8 23 44 2896.8 -40.25 131.57  
 70.00 6 25 7 4056.11 -23.99 169.10 249.80 64.92 7 32 44 3056.1 -32.15 143.48  
 71.10 5 44 15 4181.26 -19.19 176.25 247.22 61.91 6 53 56 3181.3 -29.07 152.25  
 71.10 5 44 15 4181.26 -19.19 176.25 247.22 61.91 6 53 56 3181.3 -29.07 152.25  
 71.10 5 44 15 4181.26 -19.19 176.25 247.22 61.91 6 53 56 3181.3 -29.07 152.25  
 110.00 11 24 34 3102.93 -23.99 98.02 249.80 64.92 12 16 17 2102.9 -32.15 72.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3845 TRA-1.2453 TC3-3.0765 BAU 1.2455 SGT 3400.1 SGR 3227.0 SG3 1641.2 ST 37.7 SR 42.2 SS 78.1  
 RDE .8411 RRA -.4596 RC3-3.3673 FAU .44188 RRT .9283 RRF .9907 RTF .9295 CRT .8222 CRS -.9985 CST -.7977  
 FDE 5.5133 FRA-3.3120 FC-18.7286 BSP 7829 SGB 4887.7 R23 .1720 R13 .9760 LSA 94.1 MSA 21.2 SSA 1.3  
 BDE .7475 BRA 1.3274 BC3 4.5610 FSP 2841 SG1 4603.1 SG2 886.5 THA 43.39 EL1 54.0 EL2 16.0 ALF 48.95

LAUNCH DATE AUG 19 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC DISTANCE 519.485 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 32.896 GAL 3.25 AZL 86.27 HCA 152.44 SMA 197.79 ECC .24096 INC 3.7342 V1 29.429  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.406 GAP 3.36 AZP 93.31 TAL 16.85 TAP 169.28 RCA 150.13 APO 245.45 V2 22.475  
 RC 271.273 GL 28.08 GP -33.68 ZAL 60.96 ZAP 86.11 ETS 179.42 ZAE 113.21 ETE 199.27 ZAC 54.37 ETC 287.27 LVI 11.65

PLANETOCENTRIC CONIC  
 C3 20.648 VHL 4.544 DLA 34.48 RAL 8.54 RAD 6643.1 VEL 11.860 PTH 6.87 VHP 2.546 DPA -22.42 RAP 35.95 ECC 1.3398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 23 3877.26 -45.79 163.87 259.67 75.37 8 33 1 2877.3 -46.40 128.78  
 60.00 7 7 19 3933.56 -35.95 164.91 255.67 70.41 8 12 53 2933.6 -40.30 134.69  
 69.39 5 32 45 4215.45 -19.58 179.14 247.37 61.03 6 43 0 3215.4 -29.77 155.18  
 69.39 5 32 45 4215.45 -19.58 179.14 247.37 61.03 6 43 0 3215.4 -29.77 155.18  
 69.39 5 32 45 4215.45 -19.58 179.14 247.37 61.03 6 43 0 3215.4 -29.77 155.18  
 69.39 5 32 45 4215.45 -19.58 179.14 247.37 61.03 6 43 0 3215.4 -29.77 155.18  
 69.39 5 32 45 4215.45 -19.58 179.14 247.37 61.03 6 43 0 3215.4 -29.77 155.18

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4481 TRA-1.2832 TC3-3.1966 BAU 1.2891 SGT 3551.3 SGR 3301.4 SG3 1607.7 ST 41.0 SR 45.8 SS 79.5  
 RDE .7013 RRA -.4822 RC3-3.4046 FAU .43237 RRT .9328 RRF .9914 RTF .9334 CRT .8484 CRS -.9988 CST -.8262  
 FDE 5.5918 FRA-3.2731 FC-18.1286 BSP 8133 SGB 4848.9 R23 .1721 R13 .9767 LSA 98.2 MSA 21.2 SSA 1.2  
 BDE .8323 BRA 1.3708 BC3 4.6701 FSP 2788 SG1 4767.1 SG2 886.6 THA 42.76 EL1 59.2 EL2 16.0 ALF 48.70

LAUNCH DATE AUG 19 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC DISTANCE 523.267 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 32.900 GAL 3.21 AZL 86.13 HCA 153.34 SMA 197.84 ECC .24099 INC 3.8746 V1 29.429  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.384 GAP 3.14 AZP 93.46 TAL 16.66 TAP 170.00 RCA 150.16 APO 245.51 V2 22.452  
 RC 273.937 GL 29.05 GP -34.43 ZAL 61.43 ZAP 85.01 ETS 178.60 ZAE 111.70 ETE 198.46 ZAC 53.74 ETC 287.44 LVI 12.32

PLANETOCENTRIC CONIC  
 C3 20.899 VHL 4.572 DLA 35.43 RAL 8.22 RAD 6643.2 VEL 11.870 PTH 6.88 VHP 2.573 DPA -23.27 RAP 35.92 ECC 1.3439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 26 3904.70 -45.29 166.32 260.24 73.53 8 25 31 2904.7 -46.75 131.31  
 60.00 6 54 19 3974.55 -34.97 167.95 255.62 68.55 8 0 33 2974.5 -40.25 136.18  
 67.70 5 21 47 4247.65 -19.97 181.91 247.53 60.10 6 32 34 3247.7 -30.50 158.00  
 67.70 5 21 47 4247.65 -19.97 181.91 247.53 60.10 6 32 34 3247.7 -30.50 158.00  
 67.70 5 21 47 4247.65 -19.97 181.91 247.53 60.10 6 32 34 3247.7 -30.50 158.00  
 67.70 5 21 47 4247.65 -19.97 181.91 247.53 60.10 6 32 34 3247.7 -30.50 158.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5187 TRA-1.3228 TC3-3.3098 BAU 1.3334 SGT 3703.4 SGR 3377.7 SG3 1571.6 ST 44.7 SR 49.5 SS 80.7  
 RDE .7644 RRA -.5076 RC3-3.4381 FAU .42218 RRT .9370 RRF .9921 RTF .9370 CRT .8705 CRS -.9991 CST -.8836  
 FDE 5.6578 FRA-3.2429 FC-17.4888 BSP 8423 SGB 5012.4 R23 .1718 R13 .9773 LSA 102.8 MSA 21.2 SSA 1.1  
 BDE .9221 BRA 1.4188 BC3 4.7724 FSP 2720 SG1 4933.5 SG2 886.0 THA 42.19 EL1 64.5 EL2 16.9 ALF 48.39

LAUNCH DATE AUG 19 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC DISTANCE 527.048 EARTH TO MARS  
 RL 151.40 LAL -.00 LOL 325.87 VL 32.902 GAL 3.18 AZL 85.98 HCA 154.25 SMA 197.88 ECC .24103 INC 4.0239 V1 29.429  
 RP 244.56 LAP 1.75 LOP 120.17 VP 20.363 GAP 2.92 AZP 93.63 TAL 16.47 TAP 170.72 RCA 150.19 APO 245.58 V2 22.430  
 RC 276.623 GL 30.08 GP -35.20 ZAL 61.93 ZAP 83.96 ETS 177.76 ZAE 110.23 ETE 197.66 ZAC 53.09 ETC 287.61 LVI 13.02

PLANETOCENTRIC CONIC  
 C3 21.183 VHL 4.603 DLA 36.42 RAL 7.87 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.604 DPA -24.12 RAP 35.92 ECC 1.3488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 11 42 3934.21 -44.69 168.91 260.77 71.61 8 17 16 2934.2 -47.07 134.09  
 60.00 6 39 14 4021.08 -33.76 171.30 255.39 66.55 7 46 16 3021.1 -40.06 142.12  
 66.03 5 11 9 4278.44 -20.36 184.62 247.69 59.12 6 22 27 3278.4 -31.24 160.77  
 66.03 5 11 9 4278.44 -20.36 184.62 247.69 59.12 6 22 27 3278.4 -31.24 160.77  
 66.03 5 11 9 4278.44 -20.36 184.62 247.69 59.12 6 22 27 3278.4 -31.24 160.77  
 66.03 5 11 9 4278.44 -20.36 184.62 247.69 59.12 6 22 27 3278.4 -31.24 160.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5878 TRA-1.3630 TC3-3.4143 BAU 1.3778 SGT 3854.7 SGR 3453.9 SG3 1531.7 ST 48.6 SR 53.4 SS 81.9  
 RDE .8314 RRA -.5329 RC3-3.4659 FAU .41110 RRT .9406 RRF .9927 RTF .9401 CRT .8887 CRS -.9992 CST -.8744  
 FDE 5.7141 FRA-3.1985 FC-16.8015 BSP 8724 SGB 5175.7 R23 .1718 R13 .9779 LSA 107.1 MSA 21.2 SSA 1.1  
 BDE 1.0181 BRA 1.4634 BC3 4.8651 FSP 2651 SG1 5099.2 SG2 886.7 THA 41.66 EL1 70.2 EL2 17.0 ALF 48.05

LAUNCH DATE AUG 19 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC  
 RL 131.40 LAL -.00 LOL 325.87 VL 32.908 GAL 3.14 AZL 85.82 HCA 155.18 SMA 187.94 ECC .24109 INC 4.1830 V1 29.429  
 RP 244.79 LAP 1.78 LOP 121.08 VP 20.343 GAP 2.70 AZP 93.80 TAL 16.28 TAP 171.43 RCA 130.22 APO 245.66 V2 22.407  
 RC 278.288 GL 31.12 GP -36.00 ZAL 62.44 ZAP 82.96 ETS 176.91 ZAE 108.79 ETE 196.87 ZAC 52.41 ETC 287.79 LVI 13.78

DISTANCE 530.827 EARTH TO MARS  
 C3 21.305 VML 4.837 DLA 37.45 RAL 7.48 RAD 6643.5 VEL 11.896 PTH 6.91 VHP 2.638 DPA -24.99 RAP 35.98 ECC 1.3839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 2 3 3966.09 -43.97 171.64 261.21 69.61 8 8 9 2966.1 -47.32 137.13  
 60.00 6 21 14 4075.46 -32.23 175.09 254.89 64.36 7 29 9 3075.5 -39.64 146.69  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48

PLANETOCENTRIC CONIC  
 C3 21.305 VML 4.837 DLA 37.45 RAL 7.48 RAD 6643.5 VEL 11.896 PTH 6.91 VHP 2.638 DPA -24.99 RAP 35.98 ECC 1.3839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 2 3 3966.09 -43.97 171.64 261.21 69.61 8 8 9 2966.1 -47.32 137.13  
 60.00 6 21 14 4075.46 -32.23 175.09 254.89 64.36 7 29 9 3075.5 -39.64 146.69  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48  
 64.35 5 0 50 4307.88 -20.75 187.25 247.86 58.09 6 12 38 3307.9 -32.00 163.48

DIFFERENTIAL CORRECTIONS  
 TDE .6834 TRA-1.4031 TC3-3.5098 BAW 1.4225 SGT 4006.4 SCR 3530.0 SG3 1488.3 ST 52.7 SR 57.4 SS 82.0  
 RDE .9012 RRA -.5804 RC3-3.4872 FAU .39914 RRT .9438 RRF .9933 RTF .9429 CRT .9037 CR8 -.9994 C8T -.8914  
 FDE 3.7337 FRA-3.1530 FC-16.0685 B8P 9015 SGB 5339.7 R23 .1718 R13 .9784 L8A 111.8 M8A 21.2 88A 1.0  
 BDE 1.1190 BRA 1.5128 BC3 4.9478 F8P 2373 SGI 5265.4 SG2 887.4 THA 41.17 EL1 76.0 EL2 17.0 ALF 47.69

LAUNCH DATE AUG 19 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC  
 RL 131.40 LAL -.00 LOL 325.87 VL 32.908 GAL 3.10 AZL 85.65 HCA 156.05 SMA 187.99 ECC .24116 INC 4.3529 V1 29.429  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.324 GAP 2.48 AZP 93.98 TAL 16.08 TAP 172.14 RCA 130.24 APO 245.74 V2 22.386  
 RC 281.893 GL 32.23 GP -36.83 ZAL 62.98 ZAP 82.02 ETS 176.05 ZAE 107.39 ETE 196.09 ZAC 51.70 ETC 287.99 LVI 14.52

DISTANCE 534.605 EARTH TO MARS  
 C3 21.871 VML 4.677 DLA 38.53 RAL 7.05 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 2.676 DPA -25.86 RAP 36.07 ECC 1.3599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 18 4000.73 -43.11 174.52 261.54 67.53 7 57 58 3000.7 -47.50 140.46  
 60.00 5 58 27 4142.62 -30.16 179.58 253.94 61.89 7 7 30 3142.6 -38.86 152.23  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17

PLANETOCENTRIC CONIC  
 C3 21.871 VML 4.677 DLA 38.53 RAL 7.05 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 2.676 DPA -25.86 RAP 36.07 ECC 1.3599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 18 4000.73 -43.11 174.52 261.54 67.53 7 57 58 3000.7 -47.50 140.46  
 60.00 5 58 27 4142.62 -30.16 179.58 253.94 61.89 7 7 30 3142.6 -38.86 152.23  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17  
 62.66 4 50 42 4336.33 -21.12 189.85 248.04 57.00 6 2 58 3336.3 -32.78 166.17

DIFFERENTIAL CORRECTIONS  
 TDE .7431 TRA-1.4492 TC3-3.5958 BAW 1.4679 SGT 4158.2 SCR 3608.5 SG3 1442.3 ST 57.1 SR 61.5 SS 83.7  
 RDE .9753 RRA -.5906 RC3-3.5034 FAU .38856 RRT .9469 RRF .9938 RTF .9454 CRT .9161 CR8 -.9999 C8T -.9054  
 FDE 3.7805 FRA-3.1078 FC-15.3018 B8P 9314 SGB 5505.6 R23 .1717 R13 .9789 L8A 116.6 M8A 21.2 88A .9  
 BDE 1.2261 BRA 1.5650 BC3 5.0203 F8P 2493 SGI 5433.5 SG2 888.1 THA 40.73 EL1 82.2 EL2 17.1 ALF 47.35

LAUNCH DATE AUG 19 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC  
 RL 131.40 LAL -.00 LOL 325.87 VL 32.911 GAL 3.07 AZL 85.46 HCA 156.95 SMA 188.03 ECC .24124 INC 4.5350 V1 29.429  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.305 GAP 2.27 AZP 94.17 TAL 15.88 TAP 172.83 RCA 130.27 APO 245.83 V2 22.369  
 RC 284.497 GL 33.40 GP -37.69 ZAL 63.53 ZAP 81.12 ETS 175.16 ZAE 106.02 ETE 195.31 ZAC 50.95 ETC 288.20 LVI 13.82

DISTANCE 538.382 EARTH TO MARS  
 C3 22.286 VML 4.721 DLA 39.63 RAL 6.56 RAD 6643.8 VEL 11.928 PTH 6.93 VHP 2.719 DPA -26.78 RAP 36.22 ECC 1.3688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 13 4036.64 -42.08 177.58 261.73 65.35 7 46 31 3036.6 -47.50 144.12  
 60.00 5 25 4 4238.51 -26.92 185.63 252.03 58.80 6 39 43 3238.5 -37.27 159.87  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86

PLANETOCENTRIC CONIC  
 C3 22.286 VML 4.721 DLA 39.63 RAL 6.56 RAD 6643.8 VEL 11.928 PTH 6.93 VHP 2.719 DPA -26.78 RAP 36.22 ECC 1.3688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 13 4036.64 -42.08 177.58 261.73 65.35 7 46 31 3036.6 -47.50 144.12  
 60.00 5 25 4 4238.51 -26.92 185.63 252.03 58.80 6 39 43 3238.5 -37.27 159.87  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86  
 60.96 4 40 40 4364.02 -21.49 192.42 248.21 55.84 5 53 24 3364.0 -33.56 168.86

DIFFERENTIAL CORRECTIONS  
 TDE .8274 TRA-1.4947 TC3-3.6700 BAW 1.5138 SGT 4308.9 SCR 3897.2 SG3 1393.0 ST 61.6 SR 65.8 SS 84.4  
 RDE 1.0539 RRA -.6221 RC3-3.5124 FAU .37317 RRT .9496 RRF .9942 RTF .5776 CRT .9264 CR8 -.9996 C8T -.9189  
 FDE 3.7927 FRA-3.0341 FC-14.4962 B8P 9607 SGB 5671.2 R23 .1718 R13 .9793 L8A 121.7 M8A 21.2 88A .9  
 BDE 1.3399 BRA 1.6190 BC3 5.0800 F8P 2406 SGI 5801.0 SG2 889.6 THA 40.32 EL1 88.5 EL2 17.3 ALF 47.03

LAUNCH DATE AUG 19 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC  
 RL 131.40 LAL -.00 LOL 325.87 VL 32.914 GAL 3.03 AZL 85.27 HCA 157.85 SMA 188.11 ECC .24134 INC 4.7307 V1 29.429  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.288 GAP 2.05 AZP 94.38 TAL 15.67 TAP 173.52 RCA 130.30 APO 245.93 V2 22.344  
 RC 287.079 GL 34.63 GP -38.58 ZAL 64.14 ZAP 80.29 ETS 174.27 ZAE 104.69 ETE 194.54 ZAC 50.16 ETC 288.42 LVI 16.16

DISTANCE 542.158 EARTH TO MARS  
 C3 22.780 VML 4.771 DLA 40.82 RAL 6.01 RAD 6644.0 VEL 11.948 PTH 6.95 VHP 2.769 DPA -27.67 RAP 36.42 ECC 1.3748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 23 28 4080.53 -40.84 180.83 261.71 63.08 7 33 28 3080.5 -47.51 148.17  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57

PLANETOCENTRIC CONIC  
 C3 22.780 VML 4.771 DLA 40.82 RAL 6.01 RAD 6644.0 VEL 11.948 PTH 6.95 VHP 2.769 DPA -27.67 RAP 36.42 ECC 1.3748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 23 28 4080.53 -40.84 180.83 261.71 63.08 7 33 28 3080.5 -47.51 148.17  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57  
 59.24 4 30 40 4391.11 -21.84 194.99 248.39 54.61 5 43 51 3391.1 -34.36 171.57

DIFFERENTIAL CORRECTIONS  
 TDE .9168 TRA-1.5420 TC3-3.7316 BAW 1.5596 SGT 4458.5 SCR 3767.3 SG3 1340.7 ST 66.4 SR 70.3 SS 85.0  
 RDE 1.1379 RRA -.6561 RC3-3.5139 FAU .35901 RRT .9520 RRF .9946 RTF .9495 CRT .9350 CR8 -.9998 C8T -.9269  
 FDE 3.7915 FRA-2.9965 FC-13.6562 B8P 9908 SGB 5837.0 R23 .1719 R13 .9797 L8A 126.9 M8A 21.2 88A .8  
 BDE 1.4813 BRA 1.6758 BC3 5.1256 F8P 2317 SGI 5768.6 SG2 891.3 THA 39.96 EL1 95.1 EL2 17.4 ALF 46.74

LAUNCH DATE AUG 19 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.917 GAL 2.99 AZL 85.06 HCA 150.75 SMA 190.10 ECC .24145 INC 4.9417 V1 29.429
RP 245.63 LAP 1.79 LOP 124.69 VP 20.272 GAP 1.84 AZP 94.61 TAL 15.47 TAP 174.21 RCA 150.33 APO 246.03 V2 22.324
RC 289.637 GL 35.92 GP -39.51 ZAL 64.75 ZAP 79.52 ETS 173.36 ZAE 103.40 ETE 193.70 ZAC 49.33 ETC 288.67 LVI 17.04

PLANETOCENTRIC CONIC

C3 23.301 VHL 4.827 DLA 42.04 RAL 5.40 RAD 6844.3 VEL 11.970 PTH 6.97 VHP 2.817 DPA -28.59 RAP 36.67 ECC 1.3835
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 34 4127.47 -39.33 184.32 261.41 60.71 7 18 22 3127.5 -47.25 152.68
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32
57.49 4 20 38 4417.76 -22.17 197.55 248.55 53.31 5 34 16 3417.8 -35.16 174.32

DIFFERENTIAL CORRECTIONS

TDE 1.0109 TRA-1.5915 TC3-3.7784 BAU 1.6058
RDE 1.2275 RRA -.6933 RC3-3.5065 FAU .34407
PDE 5.7732 FRA-2.9360 FC-12.7637 BSP 10206
BDE 1.5902 BRA 1.7360 BC3 5.1547 F8P 2220

MID-COURSE EXECUTION ACCURACY

SGT 4606.1 SGR 3848.5 SG3 1285.3
RRY .9542 RRF .9950 RTF .9812
SG8 8002.2 R23 .1721 R13 .9800
SG1 5935.4 SG2 893.1 THA 39.64

ORBIT DETERMINATION ACCURACY

ST 71.3 SR 74.0 SS 85.3
CRT .9423 CR8 -.9997 C8T -.9348
LSA 132.3 MSA 21.2 S8A .8
EL1 101.9 EL2 17.5 ALF 46.49

LAUNCH DATE AUG 19 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.921 GAL 2.95 AZL 84.83 HCA 159.64 SMA 198.25 ECC .24157 INC 5.1700 V1 29.429
RP 245.83 LAP 1.80 LOP 125.59 VP 20.256 GAP 1.82 AZP 94.85 TAL 15.25 TAP 174.89 RCA 150.36 APO 246.14 V2 22.305
RC 292.172 GL 37.28 GP -40.48 ZAL 65.39 ZAP 78.81 ETS 172.45 ZAE 102.15 ETE 193.02 ZAC 48.46 ETC 288.94 LVI 17.96

PLANETOCENTRIC CONIC

C3 23.922 VHL 4.891 DLA 43.32 RAL 4.70 RAD 6844.5 VEL 11.998 PTH 6.99 VHP 2.875 DPA -29.54 RAP 36.99 ECC 1.3937
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 5 50 45 4181.16 -37.47 188.11 260.71 58.21 7 0 26 3181.2 -46.72 157.78
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11
55.70 4 10 31 4444.03 -22.48 200.13 248.70 51.94 5 24 35 3444.0 -35.96 177.11

DIFFERENTIAL CORRECTIONS

TDE 1.1081 TRA-1.6439 TC3-3.8106 BAU 1.6530
RDE 1.3210 RRA -.7348 RC3-3.4917 FAU .32859
PDE 5.7281 FRA-2.8751 FC-11.8916 BSP 10500
BDE 1.7242 BRA 1.6007 BC3 5.1688 F8P 2118

MID-COURSE EXECUTION ACCURACY

SGT 4752.5 SGR 3932.1 SG3 1227.3
RRY .9564 RRF .9953 RTF .9529
SG8 8168.3 R23 .1720 R13 .9804
SG1 6103.1 SG2 894.2 THA 39.36

ORBIT DETERMINATION ACCURACY

ST 76.3 SR 79.5 SS 85.2
CRT .9483 CR8 -.9997 C8T -.9411
LSA 137.7 MSA 21.3 S8A .7
EL1 108.8 EL2 17.7 ALF 46.28

LAUNCH DATE AUG 19 1973

FLIGHT TIME 254.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.925 GAL 2.91 AZL 84.58 HCA 160.53 SMA 198.32 ECC .24170 INC 5.4160 V1 29.429
RP 246.02 LAP 1.80 LOP 126.48 VP 20.241 GAP 1.41 AZP 95.11 TAL 15.04 TAP 175.87 RCA 150.39 APO 246.26 V2 22.266
RC 294.682 GL 38.72 GP -41.49 ZAL 66.07 ZAP 78.17 ETS 171.52 ZAE 100.94 ETE 192.27 ZAC 47.54 ETC 289.23 LVI 18.94

PLANETOCENTRIC CONIC

C3 24.637 VHL 4.964 DLA 44.65 RAL 3.91 RAD 6844.8 VEL 12.025 PTH 7.01 VHP 2.939 DPA -30.51 RAP 37.36 ECC 1.4055
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 5 27 35 4244.87 -35.10 192.38 259.40 55.54 6 38 20 3244.9 -45.79 163.62
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97
53.88 4 0 12 4470.21 -22.74 202.72 248.82 50.47 5 14 42 3470.2 -36.75 179.97

DIFFERENTIAL CORRECTIONS

TDE 1.2104 TRA-1.6988 TC3-3.8265 BAU 1.7006
RDE 1.4227 RRA -.7792 RC3-3.4663 FAU .31232
PDE 5.6693 FRA-2.8033 FC-10.9748 BSP 10805
BDE 1.6679 BRA 1.6600 BC3 5.1630 F8P 2018

MID-COURSE EXECUTION ACCURACY

SGT 4697.0 SGR 4017.0 SG3 1186.4
RRY .9583 RRF .9936 RTF .5441
SG8 8333.8 R23 .1723 R13 .9806
SG1 6270.0 SG2 896.5 THA 39.12

ORBIT DETERMINATION ACCURACY

ST 81.4 SR 84.4 SS 85.0
CRT .9533 CR8 -.9997 C8T -.9464
LSA 143.2 MSA 21.3 S8A .7
EL1 115.9 EL2 17.9 ALF 46.11

LAUNCH DATE AUG 19 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 151.40 LAL -.00 LOL 325.87 VL 32.929 GAL 2.87 AZL 84.31 HCA 161.42 SMA 198.40 ECC .24185 INC 5.6882 V1 29.429
RP 246.21 LAP 1.81 LOP 127.38 VP 20.227 GAP 1.20 AZP 95.39 TAL 14.82 TAP 176.24 RCA 150.41 APO 246.36 V2 22.267
RC 297.167 GL 40.24 GP -42.54 ZAL 68.77 ZAP 77.80 ETS 170.58 ZAE 99.78 ETE 191.52 ZAC 46.57 ETC 289.56 LVI 19.96

PLANETOCENTRIC CONIC

C3 25.465 VHL 5.046 DLA 46.04 RAL 3.00 RAD 6845.2 VEL 12.060 PTH 7.04 VHP 3.011 DPA -31.50 RAP 37.80 ECC 1.4191
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 4 58 39 4326.53 -31.83 197.40 257.04 52.97 6 8 45 3326.5 -44.13 170.78
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91
52.02 3 49 38 4496.32 -22.96 205.35 248.90 48.93 5 4 34 3496.3 -37.53 182.91

DIFFERENTIAL CORRECTIONS

TDE 1.3091 TRA-1.7623 TC3-3.8308 BAU 1.7554
RDE 1.5164 RRA -.8424 RC3-3.4513 FAU .29748
PDE 5.5381 FRA-2.7782 FC-10.1136 BSP 10945
BDE 2.0033 BRA 1.9533 BC3 5.1562 F8P 1859

MID-COURSE EXECUTION ACCURACY

SGT 5046.4 SGR 4122.6 SG3 1107.7
RRY .9612 RRF .9960 RTF .9569
SG8 8516.3 R23 .1685 R13 .9816
SG1 6455.4 SG2 888.6 THA 39.02

ORBIT DETERMINATION ACCURACY

ST 86.2 SR 88.7 SS 83.8
CRT .9580 CR8 -.9997 C8T -.9513
LSA 147.9 MSA 21.2 S8A .6
EL1 122.4 EL2 17.9 ALF 45.86

LAUNCH DATE AUG 19 1973 FLIGHT TIME 258.00 ARRIVAL DATE MAY 4 1974

Heliocentric Conic: RL 131.40 LAL -.00 LOL 325.87 VL 32.933 GAL 2.83 AZL 84.02 HCA 182.31 SMA 198.47 ECC .24200 INC 5.9843 V1 29.429  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.214 GAP .99 AZP 95.70 TAL 14.59 TAP 176.91 RCA 150.44 APO 246.51 V2 22.249  
 RC 299.628 GL 41.84 GP -43.65 ZAL 67.50 ZAP 77.10 ETS 169.65 ZAE 98.68 ETE 190.78 ZAC 45.54 ETC 289.91 LVI 21.03

Planetocentric Conic: C3 26.426 VHL 5.141 DLA 47.49 RAL 1.96 RAD 6645.6 VEL 12.099 PTH 7.08 VHP 3.091 DPA -32.52 RAP 38.32 ECC 1.4349  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 56 10 4478.84 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96  
 50.12 3 38 41 4522.63 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96  
 50.12 3 38 41 4522.63 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96  
 50.12 3 38 41 4522.63 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96  
 50.12 3 38 41 4522.63 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96  
 50.12 3 38 41 4522.63 -23.12 208.01 248.93 47.29 4 54 4 3522.6 -38.28 185.96

Differential Corrections: TDE 1.4178 TRA-1.8249 TC3-3.8088 BAU 1.8038 RDE 1.6343 RRA -.8961 RC3-3.4001 FAU .27947 FDE 5.4399 FRA-2.8923 FC3-9.1557 BSP 11261 BDE 2.1636 BRA 2.0330 BC3 5.1057 FSP 1755  
 Mid-Course Execution Accuracy: SGT 5185.6 SGR 4209.8 SG3 1040.7 RRT .9627 RRF .9962 RTF .9575 SGB 6879.3 R23 .1699 R13 .9816 SG1 6819.4 SG2 892.5 THA 38.85  
 Orbit Determination Accuracy: ST 91.2 SR 93.9 SS 83.0 CRT .9611 CR8 -.9997 CBT -.9544 LSA 153.5 MSA 21.3 S8A .6 EL1 129.6 EL2 18.3 ALP 45.87

LAUNCH DATE AUG 19 1973 FLIGHT TIME 260.00 ARRIVAL DATE MAY 6 1974

Heliocentric Conic: RL 131.40 LAL -.00 LOL 325.87 VL 32.937 GAL 2.79 AZL 83.69 HCA 163.20 SMA 198.58 ECC .24216 INC 6.3102 V1 29.429  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.201 GAP .78 AZP 96.04 TAL 14.37 TAP 177.57 RCA 150.47 APO 246.64 V2 22.232  
 RC 302.065 GL 43.34 GP -44.80 ZAL 68.27 ZAP 76.68 ETS 168.71 ZAE 97.63 ETE 190.05 ZAC 44.46 ETC 290.31 LVI 22.16

Planetocentric Conic: C3 27.550 VHL 5.249 DLA 48.99 RAL .76 RAD 6646.0 VEL 12.145 PTH 7.11 VHP 3.101 DPA -33.58 RAP 38.91 ECC 1.4534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12  
 48.17 3 27 17 4549.22 -23.21 210.71 248.88 45.56 4 43 6 3549.2 -38.99 189.12

Differential Corrections: TDE 1.5272 TRA-1.8913 TC3-3.7659 BAU 1.8531 RDE 1.7587 RRA -.9561 RC3-3.3368 FAU .26092 FDE 5.3086 FRA-2.6002 FC3-8.1992 BSP 11580 BDE 2.3293 BRA 2.1192 BC3 5.0312 FSP 1649  
 Mid-Course Execution Accuracy: SGT 5320.2 SGR 4299.5 SG3 971.3 RRT .9640 RRF .9963 RTF .9580 SGB 6840.3 R23 .1714 R13 .9815 SG1 6781.3 SG2 896.5 THA 38.72  
 Orbit Determination Accuracy: ST 96.0 SR 99.0 SS 81.7 CRT .9634 CR8 -.9997 CBT -.9568 LSA 158.6 MSA 21.6 S8A .5 EL1 136.7 EL2 18.6 ALP 45.94

LAUNCH DATE AUG 19 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 8 1974

Heliocentric Conic: RL 131.40 LAL -.00 LOL 325.87 VL 32.941 GAL 2.74 AZL 83.33 HCA 164.09 SMA 198.64 ECC .24234 INC 6.8708 V1 29.429  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.190 GAP .57 AZP 96.42 TAL 14.14 TAP 178.22 RCA 150.50 APO 246.78 V2 22.215  
 RC 304.476 GL 45.34 GP -46.01 ZAL 69.08 ZAP 76.34 ETS 167.79 ZAE 96.63 ETE 189.34 ZAC 43.32 ETC 290.75 LVI 23.35

Planetocentric Conic: C3 28.874 VHL 5.373 DLA 50.36 RAL 359.36 RAD 6646.6 VEL 12.199 PTH 7.16 VHP 3.282 DPA -34.63 RAP 39.59 ECC 1.4752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41  
 46.17 3 15 16 4576.31 -23.21 213.45 248.72 43.73 4 31 32 3576.3 -39.63 192.41

Differential Corrections: TDE 1.6343 TRA-1.9638 TC3-3.7010 BAU 1.9048 RDE 1.8893 RRA-1.0258 RC3-3.2630 FAU .24208 FDE 5.1410 FRA-2.5071 FC3-7.2582 BSP 11902 BDE 2.4981 BRA 2.1153 BC3 4.9340 FSP 1535  
 Mid-Course Execution Accuracy: SGT 5451.4 SGR 4395.5 SG3 900.4 RRT .9654 RRF .9964 RTF .9584 SGB 7002.6 R23 .1727 R13 .9814 SG1 6944.5 SG2 899.8 THA 38.67  
 Orbit Determination Accuracy: ST 100.4 SR 104.1 SS 79.8 CRT .9651 CR8 -.9997 CBT -.9583 LSA 163.7 MSA 21.8 S8A .5 EL1 143.3 EL2 19.1 ALP 46.09

LAUNCH DATE AUG 19 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 10 1974

Heliocentric Conic: RL 131.40 LAL -.00 LOL 325.87 VL 32.948 GAL 2.70 AZL 82.93 HCA 164.97 SMA 198.78 ECC .24282 INC 7.0720 V1 29.429  
 RP 246.90 LAP 1.83 LOP 130.98 VP 20.179 GAP .36 AZP 96.83 TAL 13.90 TAP 178.87 RCA 150.53 APO 246.82 V2 22.199  
 RC 306.863 GL 47.25 GP -47.27 ZAL 69.92 ZAP 76.09 ETS 168.87 ZAE 95.70 ETE 188.64 ZAC 42.12 ETC 291.25 LVI 24.60

Planetocentric Conic: C3 30.445 VHL 5.518 DLA 52.18 RAL 357.74 RAD 6647.2 VEL 12.263 PTH 7.21 VHP 3.397 DPA -35.73 RAP 40.36 ECC 1.8010  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85  
 44.14 3 2 28 4604.10 -23.10 216.24 248.42 41.81 4 19 12 3604.1 -40.19 195.85

Differential Corrections: TDE 1.7357 TRA-2.0428 TC3-3.6138 BAU 1.9580 RDE 2.0263 RRA-1.1055 RC3-3.1753 FAU .22273 FDE 4.9361 FRA-2.4084 FC3-6.3335 BSP 12212 BDE 2.6661 BRA 2.3227 BC3 4.8106 FSP 1416  
 Mid-Course Execution Accuracy: SGT 5578.3 SGR 4495.6 SG3 827.6 RRT .9667 RRF .9965 RTF .9585 SGB 7164.3 R23 .1746 R13 .9812 SG1 7107.1 SG2 903.4 THA 38.66  
 Orbit Determination Accuracy: ST 104.2 SR 109.0 SS 77.4 CRT .9660 CR8 -.9996 CBT -.9587 LSA 168.0 MSA 22.2 S8A .4 EL1 149.5 EL2 19.6 ALP 46.35

LAUNCH DATE AUG 19 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 576.068

EARTH TO MARS

RL 151.40 LAL	-.00 LOL 325.97 VL	32.950 GAL	2.66 AZL	82.48 HCA	165.85 SMA	198.81 ECC	.24271 INC	7.5216 V1	29.429	
RP 247.06 LAP	1.83 LOP 131.84 VP	20.169 GAP	.15 AZP	97.30 TAL	13.67 TAP	179.52 RCA	150.56 APO	247.07 V2	22.183	
RC 309.224 GL	49.27 GP	-48.60 ZAL	70.80 ZAP	75.94 ETS	165.98 ZAE	94.84 ETE	187.96 ZAC	40.85 ETC	291.80 LVI	25.91

PLANETOCENTRIC CONIC

C3 32.324 VHL	5.685 DLA	53.85 RAL	355.84 RAD	6647.9 VEL	12.339 PTH	7.27 VHP	3.528 DPA	-36.85 RAP	41.22 ECC	1.5320
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42
42.06	2 48 44	4632.78	-22.86	219.06	247.91	39.81	4 5 57	3632.8	-40.63	199.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8256 TRA-2.1294	TC3-3.5026	BAU 2.0144	SGT 5699.0	SGR 4604.3	SG3 753.8	ST 107.1	SR 113.6	SS 74.3
RDE 2.1670 RRA-1.1996	RC3-3.0757	FAU .20316	RRT .9680	RRF .9985	RTF .9586	CRT .9862	CR8 -.9995	C8T -.9582
FDE 4.6869 FRA-2.3068	FC3-5.4412	BSP 12499	SGB 7328.5	R23 .1763	R13 .9810	LSA 171.4	MSA 22.7	88A .4
BDE 2.8335 BRA 2.4441	BC3 4.6614	FSP 1288	SG1 7270.4	SG2 908.4	TMA 38.74	EL1 154.6	EL2 20.3	ALF 46.73

LAUNCH DATE AUG 19 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

DISTANCE 579.824

EARTH TO MARS

RL 151.40 LAL	-.00 LOL 325.87 VL	32.954 GAL	2.61 AZL	81.97 HCA	166.73 SMA	198.90 ECC	.24292 INC	8.0289 V1	29.429	
RP 247.22 LAP	1.84 LOP 132.73 VP	20.180 GAP	-.05 AZP	97.82 TAL	13.44 TAP	180.16 RCA	150.59 APO	247.22 V2	22.168	
RC 311.559 GL	51.42 GP	-49.98 ZAL	71.72 ZAP	75.87 ETS	165.13 ZAE	94.05 ETE	187.31 ZAC	39.52 ETC	292.43 LVI	27.28

PLANETOCENTRIC CONIC

C3 34.595 VHL	5.882 DLA	55.56 RAL	353.59 RAD	6648.7 VEL	12.430 PTH	7.33 VHP	3.678 DPA	-38.00 RAP	42.20 ECC	1.5694
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14
39.96	2 33 48	4662.61	-22.46	221.90	247.14	37.73	3 51 30	3662.6	-40.93	203.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8975 TRA-2.2235	TC3-3.3657	BAU 2.0728	SGT 5810.2	SGR 4717.9	SG3 678.3	ST 109.0	SR 117.7	SS 70.5
RDE 2.3129 RRA-1.3067	RC3-2.9591	FAU .18305	RRT .9691	RRF .9963	RTF .9581	CRT .9651	CR8 -.9994	C8T -.9559
FDE 4.3991 FRA-2.1911	FC3-4.5808	BSP 12821	SGB 7484.5	R23 .1793	R13 .9805	LSA 173.7	MSA 23.3	88A .4
BDE 2.9917 BRA 2.5790	BC3 4.4816	FSP 1163	SG1 7428.9	SG2 909.9	TMA 38.89	EL1 159.0	EL2 21.1	ALF 47.28

LAUNCH DATE AUG 19 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC

DISTANCE 583.580

EARTH TO MARS

RL 151.40 LAL	-.00 LOL 325.87 VL	32.959 GAL	2.57 AZL	81.39 HCA	167.61 SMA	198.89 ECC	.24313 INC	8.6060 V1	29.429	
RP 247.37 LAP	1.84 LOP 133.61 VP	20.152 GAP	-.26 AZP	98.41 TAL	13.20 TAP	180.80 RCA	150.61 APO	247.38 V2	22.134	
RC 313.869 GL	53.70 GP	-51.41 ZAL	72.68 ZAP	75.91 ETS	164.32 ZAE	93.34 ETE	186.71 ZAC	38.13 ETC	293.14 LVI	28.72

PLANETOCENTRIC CONIC

C3 37.371 VHL	6.113 DLA	57.30 RAL	350.91 RAD	6649.7 VEL	12.540 PTH	7.42 VHP	3.852 DPA	-39.17 RAP	43.29 ECC	1.6150
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97
37.84	2 17 22	4693.84	-21.86	224.75	246.00	35.60	3 35 36	3693.8	-41.03	206.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9358 TRA-2.3281	TC3-3.2032	BAU 2.1347	SGT 5911.1	SGR 4840.6	SG3 602.1	ST 109.2	SR 121.0	SS 65.8
RDE 2.4540 RRA-1.4343	RC3-2.8275	FAU .16266	RRT .9702	RRF .9961	RTF .5.73	CRT .9625	CR8 -.9992	C8T -.9513
FDE 4.0591 FRA-2.0680	FC3-3.7681	BSP 13135	SGB 7640.2	R23 .1832	R13 .9798	LSA 174.1	MSA 24.3	88A .3
BDE 3.1256 BRA 2.7345	BC3 4.2726	FSP 1033	SG1 7585.3	SG2 914.0	TMA 39.14	EL1 161.5	EL2 22.2	ALF 48.04

LAUNCH DATE AUG 20 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 26 1973

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 35.293 GAL 3.20 AZL 89.98 HCA 82.99 SMA 280.00 ECC .42288 INC .0099 V1 29.435
RP 220.38 LAP .02 LOP 49.82 VP 26.377 GAP 23.46 AZP 90.00 TAL 10.79 TAP 93.77 RCA 150.57 APO 371.23 V2 24.944
RC 84.610 GL .09 GP -5.34 ZAL 68.20 ZAP 172.98 ETS 231.20 ZAE 159.16 ETE 345.33 ZAC 77.57 ETC 282.50 LVI -10.99

PLANETOCENTRIC CONIC

C3 38.953 VHL 6.241 DLA 13.20 RAL 32.72 RAD 8650.3 VEL 12.603 PTH 7.46 VHP 8.387 DPA 11.23 RAP 44.58 ECC 1.6411
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 46 20 3583.64 -47.06 134.24 279.35 98.03 11 45 45 2365.6 -38.55 103.15
60.00 11 11 8 3499.61 -40.14 129.31 280.36 94.00 12 9 28 2499.6 -34.17 99.93
70.00 11 46 37 3395.20 -34.14 121.17 280.68 90.94 12 43 12 2395.2 -30.19 93.16
80.00 12 39 16 3230.24 -29.84 108.66 280.67 88.89 13 33 6 2230.2 -27.26 81.53
90.00 13 53 44 2989.88 -28.22 90.94 280.63 88.14 14 43 34 1989.9 -26.15 64.13
100.00 15 22 8 2704.71 -29.84 70.02 280.67 88.89 16 7 13 1704.7 -27.26 42.90
110.00 16 46 3 2442.02 -34.14 50.09 280.68 90.94 17 26 45 1442.0 -30.19 22.08

DIFFERENTIAL CORRECTIONS

TDE -.3031 TRA -.0298 TC3 .3419 BAU .1839
RDE -.6295 RRA .2323 RC3 -.0883 FAU .05674
FDE .1543 FRA .1581 FC3-1.2611 B8P 1229
BDE .6987 BRA .8617 BC3 .3531 F8P 166

MID-COURSE EXECUTION ACCURACY

SGT 933.9 SGR 827.8 SG3 137.2
RRT -.0985 RRF .1247 RTF -.5584
8GB 1125.3 R23 -.0258 R13 .5622
SG1 937.8 SG2 822.3 THA 173.20

ORBIT DETERMINATION ACCURACY

ST 18.2 SR 29.1 SS 5.6
CRT .6858 CR8 .8688 CST .8897
LSA 32.6 M8A 12.1 S8A 1.6
EL1 32.2 EL2 12.0 ALF 62.64

LAUNCH DATE AUG 20 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 28 1973

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 35.139 GAL 3.24 AZL 89.95 HCA 84.10 SMA 255.79 ECC .41149 INC .0495 V1 29.435
RP 220.76 LAP .05 LOP 50.94 VP 26.144 GAP 23.06 AZP 89.99 TAL 11.13 TAP 95.23 RCA 150.54 APO 361.05 V2 24.902
RC 86.480 GL .30 GP -5.47 ZAL 67.57 ZAP 172.31 ETS 226.99 ZAE 158.67 ETE 344.96 ZAC 77.39 ETC 282.47 LVI -10.79

PLANETOCENTRIC CONIC

C3 37.358 VHL 6.112 DLA 13.27 RAL 32.03 RAD 6649.7 VEL 12.540 PTH 7.42 VHP 8.125 DPA 11.19 RAP 44.88 ECC 1.6148
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 43 40 3554.74 -46.95 133.21 277.61 98.82 11 42 54 2554.7 -38.17 102.30
60.00 11 8 29 3488.66 -40.08 128.38 278.72 94.63 12 6 38 2488.7 -35.88 99.15
70.00 11 43 59 3384.18 -34.13 120.31 279.12 91.45 12 40 24 2384.2 -29.98 92.38
80.00 12 36 40 3219.15 -29.85 107.83 279.15 89.32 13 30 19 2219.2 -27.09 80.75
90.00 13 51 9 2978.75 -28.25 90.13 279.12 88.54 14 40 48 1978.8 -26.00 63.35
100.00 15 19 32 2693.62 -29.85 69.20 279.15 89.32 16 4 25 1693.6 -27.09 42.12
110.00 16 43 26 2431.00 -34.13 49.23 279.12 91.45 17 23 57 1431.0 -29.98 21.29

DIFFERENTIAL CORRECTIONS

TDE -.3038 TRA -.8192 TC3 .3718 BAU .1920
RDE -.6204 RRA .2305 RC3 -.0975 FAU .05940
FDE .1617 FRA .1477 FC3-1.3765 B8P 1272
BDE .6908 BRA .8510 BC3 .3844 F8P 179

MID-COURSE EXECUTION ACCURACY

SGT 954.1 SGR 833.8 SG3 146.5
RRT -.1054 RRF .1340 RTF -.5689
8GB 1145.4 R23 -.0284 R13 .5730
SG1 958.2 SG2 827.6 THA 172.96

ORBIT DETERMINATION ACCURACY

ST 18.5 SR 29.3 SS 5.8
CRT .6907 CR8 .8794 CST .8805
LSA 32.9 M8A 12.1 S8A 1.7
EL1 32.5 EL2 12.1 ALF 62.21

LAUNCH DATE AUG 20 1973

FLIGHT TIME 102.00

ARRIVAL DATE NOV 30 1973

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 35.003 GAL 3.28 AZL 89.91 HCA 85.21 SMA 251.17 ECC .40080 INC .0882 V1 29.435
RP 221.14 LAP .09 LOP 52.05 VP 25.921 GAP 22.68 AZP 89.99 TAL 11.47 TAP 96.68 RCA 150.50 APO 351.84 V2 24.881
RC 88.416 GL .51 GP -5.60 ZAL 66.93 ZAP 171.80 ETS 223.46 ZAE 158.64 ETE 344.56 ZAC 77.21 ETC 282.45 LVI -10.59

PLANETOCENTRIC CONIC

C3 35.901 VHL 5.992 DLA 13.25 RAL 31.34 RAD 6649.2 VEL 12.482 PTH 7.37 VHP 7.872 DPA 11.14 RAP 45.17 ECC 1.5908
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 40 58 3544.40 -46.83 132.24 275.91 99.56 11 40 2 2544.4 -37.81 101.66
60.00 11 5 49 3478.27 -40.02 127.50 277.13 95.22 12 3 47 2478.3 -33.60 98.41
70.00 11 41 20 3373.74 -34.11 119.50 277.59 91.93 12 37 34 2373.7 -29.76 91.64
80.00 12 34 2 3208.64 -29.86 107.05 277.67 89.73 13 27 30 2208.6 -26.93 80.01
90.00 13 48 31 2968.21 -28.26 89.36 277.64 88.93 14 37 59 1968.2 -25.85 62.61
100.00 15 16 53 2683.11 -29.86 68.42 277.67 89.73 16 1 37 1683.1 -26.93 41.38
110.00 16 40 48 2420.55 -34.11 48.42 277.59 91.93 17 21 7 1420.6 -29.76 20.56

DIFFERENTIAL CORRECTIONS

TDE -.3042 TRA -.8084 TC3 .4031 BAU .2002
RDE -.8117 RRA .2287 RC3 -.1074 FAU .06220
FDE .1893 FRA .1338 FC3-1.4999 B8P 1313
BDE .6831 BRA .8402 BC3 .4172 F8P 194

MID-COURSE EXECUTION ACCURACY

SGT 974.0 SGR 839.7 SG3 156.4
RRT -.1132 RRF .1440 RTF -.5840
8GB 1185.3 R23 -.0307 R13 .5840
SG1 978.7 SG2 832.8 THA 172.67

ORBIT DETERMINATION ACCURACY

ST 18.8 SR 29.4 SS 6.0
CRT .6952 CR8 .8894 CST .8708
LSA 33.2 M8A 12.2 S8A 1.7
EL1 32.8 EL2 12.2 ALF 61.83

LAUNCH DATE AUG 20 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 2 1973

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 34.874 GAL 3.31 AZL 89.88 HCA 86.32 SMA 246.98 ECC .39079 INC .1225 V1 29.435
RP 221.32 LAP .12 LOP 53.15 VP 25.708 GAP 22.27 AZP 89.99 TAL 11.82 TAP 98.14 RCA 150.46 APO 343.50 V2 24.819
RC 90.414 GL .73 GP -5.74 ZAL 66.30 ZAP 170.85 ETS 220.48 ZAE 158.47 ETE 344.11 ZAC 77.03 ETC 282.42 LVI -10.38

PLANETOCENTRIC CONIC

C3 34.569 VHL 5.880 DLA 13.24 RAL 30.85 RAD 6648.7 VEL 12.429 PTH 7.33 VHP 7.629 DPA 11.09 RAP 45.45 ECC 1.5889
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 38 13 3534.61 -46.72 131.32 274.28 100.26 11 37 10 2534.6 -37.46 100.98
60.00 11 3 7 3468.44 -39.95 126.68 275.58 95.78 12 0 55 2468.4 -33.32 97.72
70.00 11 38 39 3363.86 -34.08 118.73 276.11 92.38 12 34 43 2363.9 -29.56 90.94
80.00 12 31 22 3198.71 -29.86 106.31 276.22 90.12 13 24 40 2198.7 -26.77 79.31
90.00 13 45 52 2958.26 -28.27 88.63 276.21 89.29 14 35 10 1958.3 -25.71 61.91
100.00 15 14 13 2673.18 -29.86 67.68 276.22 90.12 15 58 47 1673.2 -26.77 40.68
110.00 16 38 5 2410.68 -34.08 47.65 276.11 92.38 17 18 16 1410.7 -29.56 19.86

DIFFERENTIAL CORRECTIONS

TDE -.3049 TRA -.7977 TC3 .4345 BAU .2081
RDE -.6032 RRA .2289 RC3 -.1180 FAU .06516
FDE .1777 FRA .1293 FC3-1.6319 B8P 1359
BDE .6759 BRA .8250 BC3 .4503 F8P 211

MID-COURSE EXECUTION ACCURACY

SGT 993.5 SGR 845.3 SG3 166.8
RRT -.1211 RRF .1545 RTF -.5892
8GB 1184.7 R23 -.0334 R13 .5942
SG1 998.7 SG2 837.2 THA 172.39

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 29.6 SS 6.1
CRT .7002 CR8 .8989 CST .8603
LSA 33.5 M8A 12.2 S8A 1.8
EL1 33.0 EL2 12.2 ALF 61.42



LAUNCH DATE AUG 20 1973 FLIGHT TIME 106.00 ARRIVAL DATE DEC 4 1973

HELIOCENTRIC CONIC										DISTANCE 280.961										EARTH TO MARS																																																																																				
RL	151.37	LAL	-.00	L0L	326.83	VL	34.753	GAL	3.35	AZL	89.84	HCA	87.42	SMA	243.17	ECC	.38140	INC	.1579	V1	29.435	RP	221.90	LAP	.16	LOP	54.25	VP	25.503	GAP	21.88	AZP	89.99	TAL	12.17	TAP	99.59	RCA	150.43	APO	335.92	V2	24.778	RC	92.473	GL	.95	GP	-5.88	ZAL	65.66	ZAP	170.08	ETS	217.95	ZAE	158.35	ETE	343.62	ZAC	76.85	ETC	282.40	LVI	-10.17																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	33.349	VHL	5.775	DLA	13.23	RAL	29.96	RAD	6648.3	VEL	12.380	PTH	7.30	VNP	7.395	DPA	11.02	RAP	45.72	ECC	1.5488	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	35	32	3525.38	-46.60	130.46	272.69	100.91	11	34	17	2525.4	-37.13	100.35	60.00	11	0	24	3459.18	-39.89	125.90	274.09	96.31	11	58	3	2459.2	-33.06	97.07	70.00	11	35	57	3354.56	-34.05	118.00	274.67	92.81	12	31	51	2354.6	-29.36	90.29	80.00	12	20	40	3189.38	-29.85	105.62	274.81	90.48	13	21	50	2189.4	-26.62	78.66	90.00	13	43	11	2948.91	-28.28	87.95	274.81	89.64	14	32	19	1948.9	-25.58	61.26	100.00	15	11	32	2663.85	-29.85	66.99	274.81	90.48	15	55	56	1663.8	-26.82	40.03	110.00	16	35	23	2401.38	-34.05	46.92	274.67	92.81	17	15	25	1401.4	-29.36	19.21
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3054	TRA	-.7867	TC3	.4664	BAU	.2158	SGT	1012.4	SGR	650.7	SG3	177.9	ST	19.4	SR	29.7	SS	6.3	RDE	-.5950	RRA	.2250	RC3	-.1294	FAU	.06830	RRT	-.1297	RRF	.1657	RTF	-.5983	CRT	.7051	CRS	.9077	CST	.8488	FDE	.1863	FRA	.1077	FC3	-1.7730	BSP	1401	SGB	1203.5	R23	-.0362	R13	.6038	LSA	33.8	MSA	12.3	SSA	1.9	BDE	.6689	BRA	.8183	BC3	.4840	FSP	227	SG1	1018.3	SG2	641.5	THA	172.07	EL1	33.3	EL2	12.3	ALF	61.03																									

LAUNCH DATE AUG 20 1973 FLIGHT TIME 108.00 ARRIVAL DATE DEC 6 1973

HELIOCENTRIC CONIC										DISTANCE 283.915										EARTH TO MARS																																																																																				
RL	151.37	LAL	-.00	L0L	326.83	VL	34.639	GAL	3.39	AZL	89.81	HCA	88.52	SMA	239.69	ECC	.37258	INC	.1932	V1	29.435	RP	222.28	LAP	.19	LOP	55.35	VP	25.307	GAP	21.49	AZP	89.99	TAL	12.52	TAP	101.04	RCA	150.39	APO	329.00	V2	24.736	RC	94.587	GL	1.18	GP	-6.03	ZAL	65.03	ZAP	169.28	ETS	215.79	ZAE	158.29	ETE	343.08	ZAC	76.66	ETC	282.36	LVI	-9.96																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	32.233	VHL	5.677	DLA	13.23	RAL	29.27	RAD	6647.9	VEL	12.335	PTH	7.26	VNP	7.170	DPA	10.94	RAP	45.98	ECC	1.5305	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	32	48	3516.70	-46.49	129.65	271.16	101.52	11	31	24	2516.7	-36.81	99.76	60.00	10	57	40	3450.48	-39.82	125.17	272.64	96.80	11	55	11	2450.5	-32.82	96.46	70.00	11	33	14	3345.84	-34.02	117.33	273.27	93.21	12	28	59	2345.8	-29.17	89.68	80.00	12	25	57	3180.64	-29.85	104.97	273.44	90.82	13	18	58	2180.6	-26.47	78.05	90.00	13	40	28	2940.15	-28.28	87.31	273.46	89.96	14	29	28	1940.2	-25.45	60.66	100.00	15	8	49	2655.11	-29.85	66.34	273.44	90.82	15	53	4	1655.1	-26.47	39.42	110.00	16	32	40	2392.66	-34.02	46.24	273.27	93.21	17	12	33	1392.7	-29.17	18.60
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3062	TRA	-.7756	TC3	.4993	BAU	.2236	SGT	1031.3	SGR	656.1	SG3	189.7	ST	19.6	SR	29.8	SS	6.5	RDE	-.5872	RRA	.2231	RC3	-.1415	FAU	.07162	RRT	-.1389	RRF	.1776	RTF	-.6076	CRT	.7103	CRS	.9159	CST	.8373	FDE	.1960	FRA	.0914	FC3	-1.9237	BSP	1441	SGB	1222.3	R23	-.0390	R13	.6136	LSA	34.1	MSA	12.3	SSA	1.9	BDE	.6622	BRA	.8071	BC3	.5190	FSP	246	SG1	1037.9	SG2	645.6	THA	171.73	EL1	33.5	EL2	12.3	ALF	60.64																									

LAUNCH DATE AUG 20 1973 FLIGHT TIME 110.00 ARRIVAL DATE DEC 8 1973

HELIOCENTRIC CONIC										DISTANCE 286.948										EARTH TO MARS																																																																																				
RL	151.37	LAL	-.00	L0L	326.83	VL	34.532	GAL	3.43	AZL	89.77	HCA	89.61	SMA	236.51	ECC	.36431	INC	.2286	V1	29.435	RP	222.67	LAP	.23	LOP	56.45	VP	25.118	GAP	21.11	AZP	90.00	TAL	12.88	TAP	102.49	RCA	150.35	APO	322.68	V2	24.694	RC	96.756	GL	1.41	GP	-6.19	ZAL	64.41	ZAP	188.45	ETS	213.92	ZAE	158.28	ETE	342.48	ZAC	76.47	ETC	282.36	LVI	-9.75																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	31.209	VHL	5.587	DLA	13.23	RAL	28.59	RAD	6647.5	VEL	12.294	PTH	7.23	VNP	6.954	DPA	10.86	RAP	46.23	ECC	1.5136	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	30	4	3508.56	-46.38	128.90	269.69	102.09	11	28	32	2508.6	-36.51	99.21	60.00	10	54	56	3442.35	-39.75	124.49	271.24	97.26	11	52	19	2442.3	-32.58	95.90	70.00	11	30	30	3337.70	-33.99	116.69	271.92	93.59	12	26	7	2337.7	-28.99	89.11	80.00	12	23	14	3172.49	-29.84	104.37	272.12	91.14	13	16	6	2172.5	-26.34	77.49	90.00	13	37	44	2932.00	-28.28	86.71	272.14	90.25	14	26	36	1932.0	-25.32	60.09	100.00	15	6	5	2646.96	-29.84	65.73	272.12	91.14	15	50	12	1647.0	-26.34	38.86	110.00	16	29	56	2384.52	-33.99	45.81	271.92	93.59	17	9	41	1384.5	-28.99	18.03
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3068	TRA	-.7845	TC3	.5320	BAU	.2311	SGT	1049.3	SGR	661.3	SG3	202.1	ST	19.9	SR	29.9	SS	6.7	RDE	-.5796	RRA	.2210	RC3	-.1544	FAU	.07511	RRT	-.1486	RRF	.1902	RTF	-.6060	CRT	.7154	CRS	.9230	CST	.8247	FDE	.2055	FRA	.0728	FC3	-2.0833	BSP	1481	SGB	1240.3	R23	-.0422	R13	.6228	LSA	34.3	MSA	12.3	SSA	2.0	BDE	.8558	BRA	.7958	BC3	.5540	FSP	265	SG1	1056.8	SG2	649.4	THA	171.37	EL1	33.7	EL2	12.3	ALF	60.26																									

LAUNCH DATE AUG 20 1973 FLIGHT TIME 112.00 ARRIVAL DATE DEC 10 1973

HELIOCENTRIC CONIC										DISTANCE 290.053										EARTH TO MARS																																																																																				
RL	151.37	LAL	-.00	L0L	326.83	VL	34.430	GAL	3.47	AZL	89.74	HCA	90.71	SMA	233.80	ECC	.35854	INC	.2634	V1	29.435	RP	223.06	LAP	.26	LOP	57.34	VP	24.937	GAP	20.73	AZP	90.00	TAL	13.23	TAP	103.94	RCA	150.31	APO	316.89	V2	24.652	RC	98.976	GL	1.65	GP	-6.35	ZAL	63.79	ZAP	187.60	ETS	212.30	ZAE	158.33	ETE	341.83	ZAC	76.27	ETC	282.35	LVI	-9.53																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	30.271	VHL	5.502	DLA	13.23	RAL	27.90	RAD	6647.1	VEL	12.256	PTH	7.20	VNP	6.745	DPA	10.76	RAP	46.47	ECC	1.4982	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	10	27	20	3500.97	-46.27	128.20	268.28	102.62	11	25	41	2501.0	-36.23	98.71	60.00	10	52	12	3434.76	-39.69	123.85	269.89	97.68	11	49	27	2434.8	-32.36	95.38	70.00	11	27	45	3330.13	-33.95	116.10	270.61	93.93	12	23	15	2330.1	-28.83	88.59	80.00	12	20	29	3164.94	-29.83	103.80	270.84	91.44	13	13	14	2164.9	-26.20	76.97	90.00	13	34	59	2924.46	-28.28	86.16	270.87	90.53	14	23	44	1924.5	-25.21	59.57	100.00	15	3	21	2639.41	-29.83	65.17	270.84	91.44	15	47	20	1639.4	-26.20	38.33	110.00	16	27	12	2376.95	-33.95	45.02	270.61	93.93	17	6	49	1377.0	-28.83	17.51
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3077	TRA	-.7537	TC3	.5648	BAU	.2385	SGT	1067.2	SGR	666.5	SG3	215.2	ST	20.1	SR	30.0	SS	6.9	RDE	-.5722	RRA	.2189	RC3	-.1682	FAU	.07879	RRT	-.1587	RRF	.2035	RTF	-.6240	CRT	.7209	CRS	.9295	CST	.8124	FDE	.2165	FRA	.0526	FC3	-2.2535	BSP	1521	SGB	1258.2	R23	-.0456	R13	.6313	LSA	34.6	MSA	12.3	SSA	2.1	BDE	.6497	BRA	.7848	BC3	.5893	FSP	286	SG1	1075.6	SG2	652.9	THA	171.00	EL1	33.9	EL2	12.3	ALF	59.86																									

LAUNCH DATE AUG 20 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 34.334 GAL 3.50 AZL 89.70 HCA 91.79 SMA 230.92 ECC .34924 INC .2981 V1 29.435  
 RP 223.44 LAP .30 LOP 58.83 VP 24.762 GAP 20.36 AZP 90.01 TAL 13.58 TAP 105.38 RCA 150.27 APO 311.56 V2 24.811  
 RC 101.244 GL 1.89 GP -6.52 ZAL 63.16 ZAP 166.74 ETS 210.88 ZAE 158.42 ETE 341.11 ZAC 76.07 ETC 282.33 LVI -9.32

DISTANCE 293.221  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.409 VHL 5.423 DLA 13.24 RAL 27.23 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 6.544 DPA 10.66 RAP 46.69 ECC 1.4840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 24 36 3493.89 -46.16 127.55 268.91 103.11 11 22 50 2493.9 -35.96 98.24  
 60.00 10 49 28 3427.71 -39.62 123.26 268.58 98.07 11 46 36 2427.7 -32.16 94.90  
 70.00 11 25 0 3323.11 -33.92 115.56 269.35 94.25 12 20 24 2323.1 -28.67 88.10  
 80.00 12 17 43 3157.95 -29.81 103.29 269.60 91.71 13 10 21 2158.0 -26.08 76.48  
 90.00 13 32 13 2917.49 -28.27 85.65 269.64 90.79 14 20 51 1917.5 -25.10 59.09  
 100.00 15 0 35 2632.42 -29.81 64.65 269.60 91.71 15 44 28 1632.4 -26.08 37.89  
 110.00 16 24 27 2369.93 -33.92 44.48 269.35 94.25 17 3 57 1369.9 -28.67 17.02

DIFFERENTIAL CORRECTIONS  
 TDE -.3005 TRA -.7345 TC3 .6087 BAU .2499 SGT 1082.7 SGR 671.4 SG3 228.9 ST 19.9 SR 30.1 SS 7.2  
 RDE -.5849 RRA .2169 RC3 -.1827 FAU .08262 RRT -.1774 RRF .2169 RTF -.6438 CRT .7210 CRS .9355 CST .7980  
 FDE .2299 FRA .0323 FC3-2.4322 BSP 1458 SGB 1274.0 R23 -.0373 R13 .6511 LSA 34.6 MSA 12.2 S8A 2.2  
 BDE .6398 BRA .7659 BC3 .6355 FSP 310 SG1 1092.9 SG2 654.6 THA 170.16 EL1 33.9 EL2 12.2 ALF 60.23

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 20 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 34.244 GAL 3.54 AZL 89.67 HCA 92.88 SMA 228.45 ECC .34240 INC .3329 V1 29.435  
 RP 223.83 LAP .33 LOP 59.71 VP 24.595 GAP 19.99 AZP 90.02 TAL 13.93 TAP 106.81 RCA 150.23 APO 306.67 V2 24.569  
 RC 103.560 GL 2.13 GP -6.70 ZAL 62.59 ZAP 165.85 ETS 209.63 ZAE 158.56 ETE 340.33 ZAC 75.87 ETC 282.32 LVI -9.10

DISTANCE 296.446  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 28.618 VHL 5.350 DLA 13.25 RAL 26.56 RAD 6646.5 VEL 12.189 PTH 7.15 VHP 6.350 DPA 10.54 RAP 46.91 ECC 1.4710  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 21 54 3487.36 -46.06 126.96 265.61 103.56 11 20 1 2487.4 -35.72 97.81  
 60.00 10 46 44 3421.23 -39.56 122.72 267.33 98.44 11 43 46 2421.2 -31.96 94.46  
 70.00 11 22 16 3316.69 -33.89 115.06 268.14 94.55 12 17 32 2316.7 -28.52 87.66  
 80.00 12 14 57 3151.60 -29.80 102.81 268.41 91.96 13 7 29 2151.6 -25.97 76.05  
 90.00 13 29 27 2911.17 -28.26 85.19 268.45 91.02 14 17 58 1911.2 -25.00 58.65  
 100.00 14 57 49 2626.07 -29.80 64.18 268.41 91.96 15 41 35 1626.1 -25.97 37.41  
 110.00 16 21 42 2363.51 -33.89 43.98 268.14 94.55 17 1 6 1363.5 -28.52 16.58

DIFFERENTIAL CORRECTIONS  
 TDE -.3043 TRA -.7263 TC3 .6373 BAU .2553 SGT 1099.9 SGR 676.8 SG3 243.7 ST 20.3 SR 30.1 SS 7.4  
 RDE -.9580 RRA .2144 RC3 -.1982 FAU .08677 RRT -.1860 RRF .2323 RTF -.6463 CRT .7287 CRS .9397 CST .7851  
 FDE .2408 FRA .0067 FC3-2.6249 BSP 1532 SGB 1291.4 R23 -.0456 R13 .6547 LSA 34.9 MSA 12.2 S8A 2.3  
 BDE .6356 BRA .7573 BC3 .6674 FSP 332 SG1 1111.1 SG2 658.2 THA 169.89 EL1 34.2 EL2 12.2 ALF 59.57

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 20 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 34.158 GAL 3.58 AZL 89.63 HCA 93.98 SMA 226.18 ECC .33597 INC .3676 V1 29.435  
 RP 224.22 LAP .37 LOP 60.79 VP 24.434 GAP 19.83 AZP 90.03 TAL 14.28 TAP 108.23 RCA 150.19 APO 302.17 V2 24.527  
 RC 105.921 GL 2.38 GP -6.88 ZAL 62.00 ZAP 164.95 ETS 208.92 ZAE 158.75 ETE 339.47 ZAC 75.66 ETC 282.13 LVI -8.88

DISTANCE 299.724  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.892 VHL 5.281 DLA 13.27 RAL 25.91 RAD 6646.2 VEL 12.159 PTH 7.12 VHP 6.183 DPA 10.41 RAP 47.11 ECC 1.4590  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 19 12 3481.35 -45.96 126.41 264.36 103.97 11 17 14 2481.4 -35.49 97.42  
 60.00 10 44 1 3415.28 -39.50 122.23 266.13 98.77 11 40 57 2415.3 -31.78 94.05  
 70.00 11 19 31 3310.83 -33.85 114.61 266.97 94.81 12 14 42 2310.8 -28.39 87.26  
 80.00 12 12 11 3145.82 -29.79 102.39 267.26 92.18 13 4 37 2145.8 -25.86 75.65  
 90.00 13 26 40 2905.43 -28.26 84.77 267.31 91.23 14 15 6 1905.4 -24.90 58.26  
 100.00 14 55 3 2620.29 -29.79 63.75 267.26 92.18 15 38 43 1620.3 -25.86 37.02  
 110.00 16 18 57 2357.63 -33.85 43.52 266.97 94.81 16 58 15 1357.7 -28.39 16.18

DIFFERENTIAL CORRECTIONS  
 TDE -.3073 TRA -.7176 TC3 .6664 BAU .2611 SGT 1116.4 SGR 681.9 SG3 259.2 ST 20.6 SR 30.1 SS 7.7  
 RDE -.9513 RRA .2119 RC3 -.2147 FAU .09114 RRT -.1960 RRF .2483 RTF -.6497 CRT .7358 CRS .9431 CST .7724  
 FDE .2533 FRA -.0208 FC3-2.8288 BSP 1593 SGB 1308.2 R23 -.0528 R13 .6592 LSA 35.1 MSA 12.2 S8A 2.3  
 BDE .6311 BRA .7482 BC3 .7001 FSP 357 SG1 1128.7 SG2 661.4 THA 169.58 EL1 34.4 EL2 12.2 ALF 58.88

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 20 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 34.078 GAL 3.61 AZL 89.60 HCA 95.03 SMA 224.08 ECC .32992 INC .4023 V1 29.435  
 RP 224.61 LAP .40 LOP 61.87 VP 24.278 GAP 19.26 AZP 90.04 TAL 14.62 TAP 109.65 RCA 150.15 APO 298.01 V2 24.485  
 RC 108.328 GL 2.62 GP -7.07 ZAL 61.43 ZAP 164.03 ETS 207.54 ZAE 158.97 ETE 336.53 ZAC 75.45 ETC 282.30 LVI -8.66

DISTANCE 303.048  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.224 VHL 5.218 DLA 13.30 RAL 25.26 RAD 6645.9 VEL 12.132 PTH 7.10 VHP 5.983 DPA 10.27 RAP 47.30 ECC 1.4480  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 16 32 3475.85 -45.87 125.91 263.17 104.35 11 14 28 2475.8 -35.28 97.06  
 60.00 10 41 19 3409.86 -39.44 121.78 264.98 99.07 11 38 9 2409.9 -31.62 93.89  
 70.00 11 16 47 3305.52 -33.82 114.19 265.85 95.05 12 11 52 2305.5 -28.26 86.90  
 80.00 12 9 24 3140.63 -29.77 102.00 266.16 92.38 13 1 45 2140.6 -25.77 75.29  
 90.00 13 23 52 2900.30 -28.23 84.39 266.22 91.41 14 12 12 1900.3 -24.82 57.91  
 100.00 14 52 16 2615.10 -29.77 63.37 266.16 92.38 15 35 51 1615.1 -25.77 36.66  
 110.00 16 16 13 2352.34 -33.82 43.11 265.85 95.05 16 55 25 1352.3 -28.26 15.81

DIFFERENTIAL CORRECTIONS  
 TDE -.3095 TRA -.7079 TC3 .6958 BAU .2670 SGT 1131.7 SGR 687.2 SG3 275.7 ST 20.8 SR 30.1 SS 8.0  
 RDE -.9447 RRA .2093 RC3 -.2322 FAU .09574 RRT -.2073 RRF .2651 RTF -.6539 CRT .7421 CRS .9456 CST .7596  
 FDE .2669 FRA -.0500 FC3-3.0444 BSP 1642 SGB 1324.0 R23 -.0592 R13 .6645 LSA 35.3 MSA 12.2 S8A 2.4  
 BDE .6265 BRA .7382 BC3 .7335 FSP 383 SG1 1145.3 SG2 664.3 THA 169.13 EL1 34.5 EL2 12.2 ALF 58.48

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 20 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 20 1973

Heliocentric Conic: RL 181.37 LAL -0.00 LOL 326.83 VL 34.002 GAL 3.65 AZL 89.56 HCA 96.10 SMA 222.14 ECC 32424 INC 4369 V1 29.435  
 RP 225.00 LAP .43 LOP 62.94 VP 24.130 GAP 18.91 AZP 90.05 TAL 14.96 TAP 111.06 RCA 150.11 APO 294.16 V2 24.443  
 RC 110.773 GL 2.98 GP -7.27 ZAL 60.88 ZAP 183.09 ETS 206.86 ZAE 199.24 ETE 337.50 ZAC 75.24 ETC 282.30 LVI -8.43

Distance 306.414 Earth to Mars

Planeto-centric Conic: C3 26.809 VHL 5.158 DLA 13.33 RAL 24.63 RAD 6645.7 VEL 12.107 PTH 7.08 VHP 5.809 DPA 10.12 RAP 47.47 ECC 1.4379  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 13 53 3470.84 -45.78 125.46 262.03 104.69 11 11 44 2470.8 -38.08 98.74  
 60.00 10 38 38 3404.96 -39.39 121.37 263.88 99.34 11 35 23 2405.0 -31.47 93.36  
 70.00 11 14 2 3300.76 -33.79 113.83 264.77 95.27 12 9 3 2300.8 -28.15 86.57  
 80.00 12 6 37 3136.01 -29.76 101.66 265.10 92.56 12 58 53 2136.0 -25.68 74.97  
 90.00 13 21 4 2895.75 -28.24 84.06 265.16 91.58 14 9 20 1895.7 -24.74 57.59  
 100.00 14 49 29 2610.48 -29.76 63.03 265.10 92.56 15 33 0 1610.5 -25.68 36.34  
 110.00 16 13 29 2347.58 -33.79 42.74 264.77 95.27 16 52 36 1347.6 -28.15 15.49

Differential Corrections: TDE -.3114 TRA -.6981 TC3 .7247 BAU .2728 RRT -.2196 RRF .2027 RTF -.6581 SGT 1146.1 SGR 692.7 SG3 293.0 ST 21.1 SR 30.1 SS 8.3  
 RDE -.5382 RRA .2065 RC3 -.2506 FAU .10056 SGB 1339.2 R23 -.0654 R13 .6699 CRT .7484 CRS .9473 CST .7470 LSA 35.5 MSA 12.2 SSA 2.5  
 FDE .2814 FRA -.0815 FC3-3.2718 BSP 1688 SGI 1161.3 SG2 666.9 THA 168.65 EL1 34.7 EL2 12.1 ALF 58.01  
 BDE .6218 BRA .7280 BC3 .7688 FSP 411

LAUNCH DATE AUG 20 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 22 1973

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 33.93D GAL 3.68 AZL 89.53 HCA 97.17 SMA 220.34 ECC 31891 INC 4717 V1 29.435  
 RP 225.39 LAP .47 LOP 64.01 VP 23.986 GAP 18.55 AZP 90.06 TAL 15.29 TAP 112.46 RCA 150.07 APO 290.61 V2 24.401  
 RC 113.259 GL 3.13 GP -7.47 ZAL 60.34 ZAP 162.13 ETS 205.86 ZAE 159.55 ETE 336.37 ZAC 75.02 ETC 282.29 LVI -8.21

Distance 309.818 Earth to Mars

Planeto-centric Conic: C3 26.044 VHL 5.103 DLA 13.37 RAL 24.01 RAD 6645.4 VEL 12.083 PTH 7.06 VHP 5.641 DPA 9.96 RAP 47.63 ECC 1.4266  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 11 15 3466.31 -45.70 125.05 260.95 104.99 11 9 2 2466.3 -34.91 96.45  
 60.00 10 35 58 3400.56 -39.34 121.01 262.83 99.58 11 32 38 2400.6 -31.34 93.06  
 70.00 11 11 19 3296.53 -33.77 113.50 263.74 95.46 12 6 15 2296.5 -28.05 86.28  
 80.00 12 3 50 3131.96 -29.74 101.36 264.08 92.72 12 56 2 2132.0 -25.61 74.70  
 90.00 13 18 15 2891.78 -28.23 83.77 264.15 91.73 14 6 27 1891.8 -24.68 57.32  
 100.00 14 46 42 2606.43 -29.74 62.72 264.08 92.72 15 30 8 1606.4 -25.61 36.07  
 110.00 16 10 45 2343.35 -33.77 42.42 263.74 95.46 16 49 48 1343.3 -28.05 15.20

Differential Corrections: TDE -.3131 TRA -.6878 TC3 .7528 BAU .2784 RRT -.2325 RRF .3010 RTF -.6620 SGT 1159.2 SGR 698.3 SG3 311.2 ST 21.3 SR 30.1 SS 8.6  
 RDE -.5318 RRA .2034 RC3 -.2701 FAU .10563 SGB 1353.3 R23 -.0715 R13 .6753 CRT .7546 CRS .9483 CST .7346 LSA 35.7 MSA 12.1 SSA 2.6  
 FDE .2976 FRA -.1161 FC3-3.5114 BSP 1725 SGI 1176.2 SG2 669.4 THA 168.13 EL1 34.8 EL2 12.1 ALF 57.55  
 BDE .6171 BRA .7173 BC3 .7996 FSP 440

LAUNCH DATE AUG 20 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 24 1973

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 33.862 GAL 3.71 AZL 89.49 HCA 98.24 SMA 218.67 ECC 31389 INC 5065 V1 29.435  
 RP 225.78 LAP .50 LOP 65.07 VP 23.847 GAP 18.20 AZP 90.07 TAL 15.61 TAP 113.85 RCA 150.03 APO 287.31 V2 24.359  
 RC 115.782 GL 3.39 GP -7.68 ZAL 59.82 ZAP 161.15 ETS 205.14 ZAE 159.89 ETE 335.12 ZAC 74.80 ETC 282.29 LVI -7.98

Distance 313.258 Earth to Mars

Planeto-centric Conic: C3 25.523 VHL 5.092 DLA 13.42 RAL 23.41 RAD 6645.2 VEL 12.062 PTH 7.05 VHP 5.480 DPA 9.78 RAP 47.78 ECC 1.4200  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 8 40 3482.27 -45.83 124.69 259.92 105.27 11 6 22 2482.3 -34.75 96.19  
 60.00 10 33 18 3396.67 -39.29 120.69 261.83 99.79 11 29 55 2396.7 -31.22 92.80  
 70.00 11 8 35 3292.83 -33.74 113.21 262.76 95.83 12 3 28 2292.8 -27.97 86.03  
 80.00 12 1 3 3128.47 -29.73 101.10 263.11 92.86 12 53 11 2128.5 -25.54 74.46  
 90.00 13 15 26 2888.39 -28.22 83.52 263.18 91.85 14 3 34 1888.4 -24.62 57.09  
 100.00 14 43 55 2602.94 -29.73 62.47 263.11 92.86 15 27 18 1602.9 -25.54 35.83  
 110.00 16 8 2 2339.65 -33.74 42.13 262.76 95.83 16 47 1 1339.7 -27.97 14.95

Differential Corrections: TDE -.3147 TRA -.6780 TC3 .7799 BAU .2840 RRT -.2465 RRF .3204 RTF -.6660 SGT 1171.8 SGR 704.2 SG3 330.4 ST 21.5 SR 30.0 SS 9.0  
 RDE -.5259 RRA .2003 RC3 -.2907 FAU .11098 SGB 1367.2 R23 -.0777 R13 .6808 CRT .7605 CRS .9488 CST .7233 LSA 35.9 MSA 12.1 SSA 2.7  
 FDE .3151 FRA -.1523 FC3-3.7648 BSP 1761 SGI 1190.8 SG2 671.6 THA 167.56 EL1 34.9 EL2 12.0 ALF 57.10  
 BDE .6125 BRA .7069 BC3 .8323 FSP 472

LAUNCH DATE AUG 20 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 26 1973

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 33.798 GAL 3.74 AZL 89.46 HCA 99.30 SMA 217.12 ECC 30918 INC 5412 V1 29.435  
 RP 226.17 LAP .53 LOP 66.13 VP 23.714 GAP 17.86 AZP 90.09 TAL 15.93 TAP 115.23 RCA 149.99 APO 284.25 V2 24.318  
 RC 118.341 GL 3.65 GP -7.90 ZAL 59.31 ZAP 160.16 ETS 204.49 ZAE 160.27 ETE 333.75 ZAC 74.57 ETC 282.30 LVI -7.75

Distance 316.729 Earth to Mars

Planeto-centric Conic: C3 25.043 VHL 5.004 DLA 13.47 RAL 22.82 RAD 6645.0 VEL 12.042 PTH 7.03 VHP 5.324 DPA 9.59 RAP 47.91 ECC 1.4121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 6 6 3458.68 -45.57 124.36 258.94 105.51 11 3 44 2458.7 -34.61 95.96  
 60.00 10 30 40 3393.26 -39.25 120.41 260.87 99.98 11 27 13 2393.3 -31.11 92.57  
 70.00 11 5 52 3289.66 -33.72 112.97 261.82 95.77 12 0 42 2289.7 -27.89 85.81  
 80.00 11 58 15 3125.54 -29.72 100.88 262.18 92.97 12 50 21 2125.5 -25.49 74.26  
 90.00 13 12 36 2885.57 -28.22 83.32 262.25 91.95 14 0 42 1885.6 -24.57 56.90  
 100.00 14 41 7 2600.01 -29.72 62.25 262.18 92.97 15 24 27 1600.0 -25.49 35.63  
 110.00 16 5 19 2336.48 -33.72 41.89 261.82 95.77 16 44 15 1336.5 -27.89 14.73

Differential Corrections: TDE -.3164 TRA -.6682 TC3 .8053 BAU .2892 RRT -.2605 RRF .3405 RTF -.6690 SGT 1183.1 SGR 710.5 SG3 350.6 ST 21.7 SR 29.9 SS 9.3  
 RDE -.5192 RRA .1969 RC3 -.3124 FAU .11658 SGB 1380.1 R23 -.0847 R13 .6856 CRT .7666 CRS .9481 CST .7120 LSA 36.0 MSA 12.1 SSA 2.8  
 FDE .3334 FRA -.1918 FC3-4.0303 BSP 1795 SGI 1204.3 SG2 673.9 THA 166.96 EL1 35.0 EL2 11.9 ALF 56.63  
 BDE .6080 BRA .6966 BC3 .8638 FSP 506

LAUNCH DATE AUG 20 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC															DISTANCE 320.229					EARTH TO MARS					
RL	151.37	LAL	-.00	LOL	326.83	VL	33.738	GAL	3.77	AZL	89.42	HCA	100.36	SMA	215.69	ECC	.30475	INC	.5762	V1	29.435				
RP	226.56	LAP	.57	LOP	67.19	VP	23.983	GAP	17.51	AZP	90.10	TAL	16.24	TAP	116.59	RCA	149.96	APO	281.2	V2	24.276				
RC	120.933	GL	3.91	GP	-8.13	ZAL	58.83	ZAP	159.14	ETL	203.89	ZAE	160.67	ETE	332.23	ZAC	74.34	ETC	282.30	LVI	-7.52				
PLANETOCENTRIC CONIC															MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY					
C3	24.600	VHL	4.960	DLA	13.53	RAL	22.24	RAD	6644.8	VEL	12.024	PTH	7.01	VHP	5.174	DPA	9.39	RAP	48.02	ECC	1.4049				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	3	33	3455.55		-45.51		124.08		258.01		105.72	11	1	9	2455.6		-34.49		95.76					
60.00	10	28	3	3390.34		-39.22		120.17		259.96		100.14	11	24	34	2390.3		-31.02		92.38					
70.00	11	3	10	3287.00		-33.70		112.76		260.93		95.89	11	57	57	2287.0		-27.83		85.63					
80.00	11	55	28	3123.15		-29.71		100.70		261.29		93.06	12	47	31	2123.2		-25.44		74.10					
90.00	13	9	46	2883.32		-28.21		83.15		261.37		92.03	13	57	50	1883.3		-24.53		56.75					
100.00	14	38	20	2597.62		-29.71		62.07		261.29		93.06	15	21	37	1597.6		-25.44		35.46					
110.00	16	2	37	2333.82		-33.70		41.68		260.93		95.89	16	41	30	1333.8		-27.83		14.55					
TDE	-.3178	TRA	-.6583	TC3	.8295	BAU	.2943	RRT	-1193.2	RRF	.7173	RTF	-.6719	L8A	36.2	M8A	12.1	S8A	2.9	EL1	35.0	EL2	11.8	ALF	56.18

LAUNCH DATE AUG 20 1973

FLIGHT TIME 132.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC															DISTANCE 323.756					EARTH TO MARS					
RL	151.37	LAL	-.00	LOL	326.83	VL	33.681	GAL	3.80	AZL	89.39	HCA	101.41	SMA	214.35	ECC	.30058	INC	.6111	V1	29.435				
RP	226.95	LAP	.60	LOP	68.24	VP	23.460	GAP	17.17	AZP	90.12	TAL	16.54	TAP	117.95	RCA	149.92	APO	278.70	V2	24.234				
RC	123.556	GL	4.18	GP	-8.37	ZAL	58.36	ZAP	158.11	ETL	203.34	ZAE	161.09	ETE	330.58	ZAC	74.10	ETC	282.31	LVI	-7.29				
PLANETOCENTRIC CONIC															MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY					
C3	24.192	VHL	4.919	DLA	13.60	RAL	21.68	RAD	6644.7	VEL	12.007	PTH	7.00	VHP	5.029	DPA	9.17	RAP	48.12	ECC	1.3981				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	1	3	3452.87		-45.46		123.84		257.13		105.90	10	58	36	2452.9		-34.39		95.59					
60.00	10	25	28	3387.88		-39.19		119.97		259.10		100.27	11	21	56	2387.9		-30.95		92.22					
70.00	11	0	29	3284.84		-33.69		112.60		260.08		95.99	11	55	13	2284.8		-27.77		85.49					
80.00	11	52	40	3121.31		-29.71		100.57		260.45		93.13	12	44	41	2121.3		-25.41		73.97					
90.00	13	6	56	2881.63		-28.21		83.03		260.53		92.10	13	54	57	1881.6		-24.50		56.63					
100.00	14	35	32	2595.78		-29.71		61.94		260.45		93.13	15	18	48	1595.8		-25.41		35.34					
110.00	15	59	55	2331.68		-33.69		41.51		260.08		95.99	16	38	47	1331.7		-27.77		14.40					
TDE	-.3192	TRA	-.6469	TC3	.8518	BAU	.2990	RRT	-1202.1	RRF	.7246	RTF	-.6742	L8A	36.3	M8A	12.0	S8A	3.0	EL1	35.1	EL2	11.7	ALF	56.73

LAUNCH DATE AUG 20 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC															DISTANCE 327.306					EARTH TO MARS					
RL	151.37	LAL	-.00	LOL	326.83	VL	33.627	GAL	3.83	AZL	89.35	HCA	102.46	SMA	213.10	ECC	.29667	INC	.6463	V1	29.435				
RP	227.34	LAP	.63	LOP	69.29	VP	23.340	GAP	16.84	AZP	90.14	TAL	16.83	TAP	119.29	RCA	149.88	APO	276.33	V2	24.193				
RC	126.208	GL	4.45	GP	-8.81	ZAL	57.91	ZAP	157.06	ETL	202.83	ZAE	161.54	ETE	328.72	ZAC	73.86	ETC	282.33	LVI	-7.06				
PLANETOCENTRIC CONIC															MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY					
C3	23.815	VHL	4.880	DLA	13.68	RAL	21.14	RAD	6644.5	VEL	11.991	PTH	6.99	VHP	4.890	DPA	8.94	RAP	48.20	ECC	1.3919				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	9	58	34	3450.61		-45.42		123.64		256.30		106.05	10	58	5	2450.8		-34.30		95.45					
60.00	10	22	54	3385.88		-39.16		119.80		258.28		100.38	11	19	19	2385.9		-30.88		92.08					
70.00	10	57	47	3283.18		-33.68		112.47		259.27		96.07	11	52	31	2283.2		-27.73		85.37					
80.00	11	49	52	3120.00		-29.70		100.47		259.65		93.18	12	41	52	2120.0		-25.38		73.88					
90.00	13	4	5	2880.49		-28.21		82.95		259.72		92.14	13	52	5	1880.5		-24.49		56.55					
100.00	14	32	44	2594.47		-29.70		61.84		259.65		93.18	15	15	59	1594.5		-25.38		35.25					
110.00	15	57	14	2330.00		-33.68		41.38		259.27		96.07	16	36	4	1330.0		-27.73		14.29					
TDE	-.3207	TRA	-.6399	TC3	.8719	BAU	.3035	RRT	-1209.8	RRF	.7329	RTF	-.6787	L8A	36.4	M8A	12.0	S8A	3.1	EL1	35.1	EL2	11.6	ALF	56.28

LAUNCH DATE AUG 20 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC															DISTANCE 330.878					EARTH TO MARS					
RL	151.37	LAL	-.00	LOL	326.83	VL	33.577	GAL	3.85	AZL	89.32	HCA	103.51	SMA	211.95	ECC	.29299	INC	.6816	V1	29.435				
RP	227.73	LAP	.66	LOP	70.34	VP	23.224	GAP	16.31	AZP	90.16	TAL	17.11	TAP	120.62	RCA	149.85	APO	274.04	V2	24.152				
RC	128.887	GL	4.72	GP	-8.87	ZAL	57.48	ZAP	155.98	ETL	202.36	ZAE	162.00	ETE	326.68	ZAC	73.61	ETC	282.34	LVI	-6.82				
PLANETOCENTRIC CONIC															MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY					
C3	23.467	VHL	4.844	DLA	13.77	RAL	20.81	RAD	6644.3	VEL	11.977	PTH	6.97	VHP	4.756	DPA	8.69	RAP	48.26	ECC	1.3682				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	9	56	8	3448.78		-45.38		123.48		255.52		106.17	10	53	37	2448.8		-34.23		95.33					
60.00	10	20	21	3384.33		-39.14		119.67		257.51		100.47	11	16	45	2384.3		-30.84		91.98					
70.00	10	55	7	3282.00		-33.67		112.38		258.50		96.12	11	49	49	2282.0		-27.71		85.29					
80.00	11	47	4	3119.22		-29.70		100.41		258.88		93.22	12	39	3	2119.2		-25.37		73.63					
90.00	13	1	13	2879.90		-28.20		82.91		258.96		92.16	13	49	13	1879.9		-24.48		56.31					
100.00	14	29	56	2593.89		-29.70		61.78		258.88		93.22	15	13	10	1593.7		-25.37		35.20					
110.00	15	54	33	2328.82		-33.67		41.29		258.50		96.12	16	33	22	1328.8		-27.71		14.21					
TDE	-.3222	TRA	-.6308	TC3	.8899	BAU	.3076	RRT	-1215.8	RRF	.7410	RTF	-.6766	L8A	36.5	M8A	12.0	S8A	3.2	EL1	35.1	EL2	11.5	ALF	54.77

LAUNCH DATE AUG 20 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 5 1974

Heliocentric Conic

RL 151.37 LAL -.00 LOL 326.83 VL 33.520 GAL 3.88 AZL 89.20 HCA 104.55 SMA 210.87 ECC .28953 INC .7171 V1 29.438  
 RP 228.12 LAP .69 LOP 71.38 VP 23.112 GAP 16.18 AZP 90.18 TAL 17.38 TAP 121.83 RCA 149.81 APO 271.92 V2 24.110  
 RC 131.592 GL 4.99 GP -9.13 ZAL 57.08 ZAP 154.89 ETS 201.93 ZAE 162.47 ETE 324.42 ZAC 73.36 ETC 282.36 LVI -6.98

DISTANCE 334.471

EARTH TO MARS

Planetocentric Conic

C3 23.146 VHL 4.811 DLA 13.86 RAL 20.10 RAD 6644.2 VEL 11.964 PTH 6.96 VHP 4.626 DPA 8.43 RAP 48.30 ECC 1.3809  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 53 43 3447.36 -45.35 123.35 254.78 106.26 10 51 11 2447.4 -34.17 95.24  
 60.00 10 17 49 3383.22 -39.13 119.58 256.78 100.53 11 14 12 2383.2 -30.80 91.91  
 70.00 10 52 27 3281.31 -33.66 112.32 257.78 96.15 11 47 8 2281.3 -27.69 85.25  
 80.00 11 44 16 3118.96 -29.70 100.39 258.16 93.23 12 36 14 2119.0 -25.36 73.81  
 90.00 12 58 20 2879.85 -28.20 82.90 258.24 92.16 13 46 20 1879.9 -24.47 56.51  
 100.00 14 27 7 2593.43 -29.70 61.76 258.16 93.23 15 10 21 1593.4 -25.36 35.10  
 110.00 15 51 53 2328.13 -33.66 41.24 257.78 96.15 16 30 41 1328.1 -27.69 14.17

Differential Corrections

TDE -.3239 TRA -.6223 TC3 .9050 BAU .3113  
 RDE -.4876 RRA .1764 RC3 -.4398 FAU .14912  
 FDE .4522 FRA -.4327 FC3-5.5775 BSP 1914  
 BDE .5854 BRA .6468 BC3 1.0062 FSP 704

Mid-Course Execution Accuracy

SGT 1220.5 SGR 750.4 SG3 468.3  
 RRT -.3380 RRF .4532 RTF -.6766  
 SGB 1432.8 R23 -.1251 R13 .7064  
 SGI 1258.4 SGI 685.0 THA 163.12

Orbit Determination Accuracy

ST 22.5 SR 29.2 SS 11.7  
 CRT .7950 CR3 .9402 CST .6684  
 LSA 36.6 MSA 12.0 SSA 3.3  
 EL1 35.1 EL2 11.4 ALF 54.25

LAUNCH DATE AUG 20 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 7 1974

Heliocentric Conic

RL 151.37 LAL -.00 LOL 326.83 VL 33.484 GAL 3.90 AZL 89.25 HCA 105.59 SMA 209.86 ECC .28628 INC .7528 V1 29.435  
 RP 228.51 LAP .73 LOP 72.42 VP 23.004 GAP 15.86 AZP 90.20 TAL 17.64 TAP 123.23 RCA 149.78 APO 269.94 V2 24.069  
 RC 134.321 GL 5.27 GP -9.40 ZAL 56.69 ZAP 153.78 ETS 201.52 ZAE 162.94 ETE 321.93 ZAC 73.10 ETC 282.39 LVI -6.34

DISTANCE 338.082

EARTH TO MARS

Planetocentric Conic

C3 22.848 VHL 4.780 DLA 13.97 RAL 19.61 RAD 6644.1 VEL 11.951 PTH 6.95 VHP 4.501 DPA 8.15 RAP 48.33 ECC 1.3760  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 21 3446.33 -45.33 123.26 254.09 106.33 10 48 47 2446.3 -34.13 95.18  
 60.00 10 15 18 3382.34 -39.12 119.53 256.09 100.57 11 11 41 2382.5 -30.78 91.86  
 70.00 10 49 47 3281.08 -33.66 112.31 257.09 96.16 11 44 28 2281.1 -27.68 85.23  
 80.00 11 41 27 3119.22 -29.70 100.41 257.47 93.22 12 33 26 2119.2 -25.37 73.83  
 90.00 12 55 27 2880.34 -28.21 82.94 257.55 92.14 13 43 28 1880.3 -24.48 56.54  
 100.00 14 24 18 2593.69 -29.70 61.78 257.47 93.22 15 7 32 1593.7 -25.37 35.20  
 110.00 15 49 13 2327.90 -33.66 41.22 257.09 96.16 16 28 1 1327.9 -27.68 14.15

Differential Corrections

TDE -.3252 TRA -.6141 TC3 .9175 BAU .3148  
 RDE -.4812 RRA .1714 RC3 -.4694 FAU .15656  
 FDE .4811 FRA -.4908 FC3-5.9320 BSP 1932  
 BDE .5807 BRA .6376 BC3 1.0308 FSP 750

Mid-Course Execution Accuracy

SGT 1223.4 SGR 760.8 SG3 495.3  
 RRT -.3538 RRF .4778 RTF -.6758  
 SGB 1440.6 R23 -.1351 R13 .7096  
 SGI 1265.9 SGI 687.6 THA 162.17

Orbit Determination Accuracy

ST 22.6 SR 29.0 SS 12.2  
 CRT .8003 CR3 .9377 CST .6615  
 LSA 36.7 MSA 12.1 SSA 3.4  
 EL1 35.0 EL2 11.2 ALF 53.75

LAUNCH DATE AUG 20 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 9 1974

Heliocentric Conic

RL 151.37 LAL -.00 LOL 326.83 VL 33.441 GAL 3.92 AZL 89.21 HCA 106.63 SMA 208.92 ECC .28322 INC .7887 V1 29.435  
 RP 228.90 LAP .76 LOP 73.46 VP 22.899 GAP 15.53 AZP 90.23 TAL 17.89 TAP 124.32 RCA 149.75 APO 268.09 V2 24.028  
 RC 137.073 GL 5.55 GP -9.68 ZAL 56.32 ZAP 152.84 ETS 201.13 ZAE 163.41 ETE 319.17 ZAC 72.84 ETC 282.42 LVI -6.10

DISTANCE 341.710

EARTH TO MARS

Planetocentric Conic

C3 22.573 VHL 4.751 DLA 14.08 RAL 19.14 RAD 6644.0 VEL 11.940 PTH 6.94 VHP 4.381 DPA 7.86 RAP 48.34 ECC 1.3715  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 49 0 3445.70 -45.32 123.21 253.44 106.37 10 46 25 2445.7 -34.10 95.14  
 60.00 10 12 49 3382.29 -39.12 119.51 255.45 100.58 11 9 11 2382.3 -30.77 91.85  
 70.00 10 47 7 3281.32 -33.66 112.32 256.44 96.15 11 41 49 2281.3 -27.69 85.25  
 80.00 11 38 37 3119.98 -29.70 100.47 256.82 93.19 12 30 37 2120.0 -25.38 73.88  
 90.00 12 52 33 2881.36 -28.21 83.01 256.90 92.11 13 40 34 1881.4 -24.50 56.61  
 100.00 14 21 29 2594.45 -29.70 61.84 256.82 93.19 15 4 43 1594.5 -25.38 35.25  
 110.00 15 46 34 2328.14 -33.66 41.24 256.44 96.15 16 23 22 1328.1 -27.69 14.17

Differential Corrections

TDE -.3267 TRA -.6064 TC3 .9271 BAU .3179  
 RDE -.4743 RRA .1661 RC3 -.5005 FAU .18434  
 FDE .5128 FRA -.5525 FC3-6.3028 BSP 1947  
 BDE .5761 BRA .6287 BC3 1.0538 FSP 799

Mid-Course Execution Accuracy

SGT 1224.6 SGR 772.2 SG3 523.6  
 RRT -.3692 RRF .5027 RTF -.6740  
 SGB 1447.8 R23 -.1458 R13 .7125  
 SGI 1272.4 SGI 690.7 THA 161.15

Orbit Determination Accuracy

ST 22.6 SR 28.8 SS 12.8  
 CRT .8096 CR3 .9352 CST .6558  
 LSA 36.8 MSA 12.1 SSA 3.5  
 EL1 35.0 EL2 11.1 ALF 53.21

LAUNCH DATE AUG 20 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 11 1974

Heliocentric Conic

RL 151.37 LAL -.00 LOL 326.83 VL 33.401 GAL 3.94 AZL 89.17 HCA 107.66 SMA 208.05 ECC .28035 INC .8249 V1 29.435  
 RP 229.28 LAP .79 LOP 74.49 VP 22.798 GAP 15.22 AZP 90.25 TAL 18.13 TAP 125.78 RCA 149.72 APO 266.37 V2 23.988  
 RC 139.847 GL 5.83 GP -9.97 ZAL 55.98 ZAP 151.49 ETS 200.77 ZAE 163.86 ETE 316.13 ZAC 72.57 ETC 282.45 LVI -5.85

DISTANCE 345.355

EARTH TO MARS

Planetocentric Conic

C3 22.319 VHL 4.724 DLA 14.20 RAL 18.68 RAD 6643.9 VEL 11.929 PTH 6.93 VHP 4.266 DPA 7.55 RAP 48.33 ECC 1.3673  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 46 41 3445.45 -45.32 123.18 252.84 106.39 10 44 6 2445.5 -34.09 95.12  
 60.00 10 10 21 3382.45 -39.12 119.52 254.84 100.57 11 6 43 2382.4 -30.78 91.86  
 70.00 10 44 28 3282.02 -33.67 112.38 255.83 96.12 11 39 10 2282.0 -27.71 85.30  
 80.00 11 35 47 3121.23 -29.71 100.56 256.21 93.14 12 27 48 2121.2 -25.41 73.97  
 90.00 12 49 38 2882.90 -28.21 83.12 256.29 92.05 13 37 41 1882.9 -24.53 56.72  
 100.00 14 18 39 2595.72 -29.71 61.93 256.21 93.14 15 1 55 1595.7 -25.41 35.33  
 110.00 15 43 55 2328.84 -33.67 41.30 255.83 96.12 16 22 43 1328.8 -27.71 14.21

Differential Corrections

TDE -.3284 TRA -.5995 TC3 .9338 BAU .3209  
 RDE -.4677 RRA .1605 RC3 -.5332 FAU .17245  
 FDE .5473 FRA -.6165 FC3-6.6894 BSP 1961  
 BDE .5715 BRA .6206 BC3 1.0753 FSP 849

Mid-Course Execution Accuracy

SGT 1224.6 SGR 784.8 SG3 553.1  
 RRT -.3842 RRF .5280 RTF -.6713  
 SGB 1454.5 R23 -.1573 R13 .7152  
 SGI 1278.1 SGI 694.2 THA 160.06

Orbit Determination Accuracy

ST 22.9 SR 28.5 SS 13.4  
 CRT .8107 CR3 .9329 CST .6514  
 LSA 36.9 MSA 12.1 SSA 3.6  
 EL1 34.9 EL2 11.0 ALF 52.63

LAUNCH DATE AUG 20 1973 FLIGHT TIME 146.00 ARRIVAL DATE JAN 13 1974

MELIOCENTRIC CONIC DISTANCE 349.011 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.364 GAL 3.96 AZL 89.14 HCA 108.69 SMA 207.23 ECC .27765 INC .8614 V1 29.439  
 RP 229.67 LAP .82 LOP 75.52 VP 22.700 GAP 14.90 AZP 90.28 TAL 18.36 TAP 127.04 RCA 149.69 APO 264.77 V2 23.947  
 RC 142.641 GL 6.11 GP -10.28 ZAL 55.65 ZAP 150.31 ETS 200.42 ZAE 184.29 ETE 312.78 ZAC 72.30 ETC 282.48 LVI -5.60

PLANETOCENTRIC CONIC

C3 22.084 VHL 4.699 DLA 14.33 RAL 18.23 RAD 6643.8 VEL 11.920 PTH 6.93 VHP 4.154 DPA 7.22 RAP 48.29 ECC 1.3634  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 44 23 3445.56 -45.32 123.19 252.27 106.30 10 41 49 2445.6 -34.10 95.13  
 60.00 10 7 53 3382.99 -39.13 119.56 254.27 100.34 11 4 16 2383.0 -30.79 91.89  
 70.00 10 41 49 3283.14 -33.68 112.46 255.26 96.07 11 36 32 2283.1 -27.73 85.37  
 80.00 11 32 56 3122.98 -29.71 100.69 255.63 93.07 12 24 59 2123.0 -25.44 74.08  
 90.00 12 46 41 2884.93 -28.22 83.27 255.71 91.98 13 34 46 1884.9 -24.56 56.86  
 100.00 14 15 48 2597.45 -29.71 62.06 255.63 93.07 14 59 5 1597.5 -25.44 35.45  
 110.00 15 41 15 2329.96 -33.68 41.38 255.26 96.07 16 20 5 1330.0 -27.73 14.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3200 TRA -.5830 TC3 .9549 BAU .3281 SGT 1223.1 SGR 799.2 SG3 584.7 ST 22.4 SR 28.3 SS 14.0  
 RDE -.4611 RRA .1541 RC3 -.5682 FAU .18114 RRT -.4115 RRF .5544 RTF -.6799 CRT .8122 CR8 .9285 CST .6393  
 FDE .5789 FRA -.6907 FC3-7.1014 BSP 1852 SGB 1461.1 R23 -.1531 R13 .7278 LSA 36.6 MSA 12.1 SSA 3.7  
 BDE .5612 BRA .6031 BC3 1.1112 FSP 896 SG1 1286.6 SG2 692.5 THA 158.41 EL1 34.5 EL2 10.7 ALF 53.01

LAUNCH DATE AUG 20 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 15 1974

MELIOCENTRIC CONIC DISTANCE 352.681 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.328 GAL 3.98 AZL 89.10 HCA 109.71 SMA 206.47 ECC .27512 INC .8982 V1 29.439  
 RP 230.05 LAP .85 LOP 76.55 VP 22.605 GAP 14.59 AZP 90.30 TAL 18.57 TAP 128.29 RCA 149.67 APO 263.27 V2 23.907  
 RC 145.456 GL 6.40 GP -10.59 ZAL 55.35 ZAP 149.11 ETS 200.09 ZAE 184.67 ETE 309.11 ZAC 72.02 ETC 282.52 LVI -5.35

PLANETOCENTRIC CONIC

C3 21.865 VHL 4.676 DLA 14.47 RAL 17.81 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 4.047 DPA 6.88 RAP 48.24 ECC 1.3598  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 42 8 3446.06 -45.33 123.24 251.75 106.35 10 39 34 2446.1 -34.12 95.16  
 60.00 10 5 27 3383.97 -39.14 119.64 253.75 100.49 11 1 51 2384.0 -30.82 91.96  
 70.00 10 39 10 3284.74 -33.69 112.59 254.73 95.99 11 33 55 2284.7 -27.77 85.48  
 80.00 11 30 4 3125.25 -29.72 100.86 255.09 92.98 12 22 9 2125.3 -25.48 74.24  
 90.00 12 43 43 2887.53 -28.22 83.46 255.17 91.88 13 31 51 1887.5 -24.61 57.03  
 100.00 14 12 56 2599.73 -29.72 62.23 255.09 92.98 14 56 16 1599.7 -25.48 35.61  
 110.00 15 38 36 2331.56 -33.69 41.51 254.73 95.99 16 17 28 1331.6 -27.77 14.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3255 TRA -.5811 TC3 .9472 BAU .3284 SGT 1218.4 SGR 814.3 SG3 616.5 ST 22.8 SR 28.0 SS 14.7  
 RDE -.4537 RRA .1479 RC3 -.6040 FAU .18983 RRT -.4195 RRF .5795 RTF -.6697 CRT .8185 CR8 .9268 CST .6389  
 FDE .6203 FRA -.7609 FC3-7.5162 BSP 1911 SGB 1465.5 R23 -.1725 R13 .7259 LSA 36.8 MSA 12.3 SSA 3.7  
 BDE .5584 BRA .5996 BC3 1.1234 FSP 954 SG1 1287.9 SG2 699.4 THA 157.31 EL1 34.5 EL2 10.6 ALF 52.00

LAUNCH DATE AUG 20 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 17 1974

MELIOCENTRIC CONIC DISTANCE 356.363 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.299 GAL 3.99 AZL 89.06 HCA 110.73 SMA 205.76 ECC .27273 INC .9354 V1 29.435  
 RP 230.44 LAP .87 LOP 77.57 VP 22.513 GAP 14.28 AZP 90.33 TAL 18.78 TAP 129.51 RCA 149.64 APO 261.87 V2 23.867  
 RC 148.289 GL 6.69 GP -10.91 ZAL 55.08 ZAP 147.89 ETS 199.77 ZAE 185.01 ETE 305.12 ZAC 71.73 ETC 282.57 LVI -5.10

PLANETOCENTRIC CONIC

C3 21.663 VHL 4.654 DLA 14.62 RAL 17.40 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 3.944 DPA 6.52 RAP 48.17 ECC 1.3565  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 39 54 3446.91 -45.35 123.31 251.27 106.29 10 37 21 2446.9 -34.15 95.21  
 60.00 10 3 2 3385.33 -39.16 119.76 253.26 100.41 10 59 27 2385.3 -30.87 92.05  
 70.00 10 36 31 3286.78 -33.70 112.75 254.23 95.90 11 31 18 2286.8 -27.82 85.62  
 80.00 11 27 11 3128.01 -29.73 101.06 254.59 92.87 12 19 19 2128.0 -25.54 74.43  
 90.00 12 40 44 2890.63 -28.23 83.69 254.66 91.77 13 28 54 1890.6 -24.66 57.25  
 100.00 14 10 3 2602.48 -29.73 62.43 254.59 92.87 14 53 25 1602.5 -25.54 35.80  
 110.00 15 35 57 2333.60 -33.70 41.66 254.23 95.90 16 14 51 1333.6 -27.82 14.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3295 TRA -.5785 TC3 .9389 BAU .3293 SGT 1212.5 SGR 831.1 SG3 649.6 ST 23.1 SR 27.6 SS 15.4  
 RDE -.4462 RRA .1413 RC3 -.6416 FAU .19888 RRT -.4281 RRF .6047 RTF -.6000 CRT .8238 CR8 .9252 CST .6386  
 FDE .6650 FRA -.8340 FC3-7.9481 BSP 1948 SGB 1469.9 R23 -.1901 R13 .7256 LSA 37.0 MSA 12.4 SSA 3.8  
 BDE .5547 BRA .5955 BC3 1.1372 FSP 1014 SG1 1289.1 SG2 706.4 THA 156.05 EL1 34.5 EL2 10.5 ALF 51.09

LAUNCH DATE AUG 20 1973 FLIGHT TIME 152.00 ARRIVAL DATE JAN 19 1974

MELIOCENTRIC CONIC DISTANCE 360.057 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.284 GAL 4.00 AZL 89.03 HCA 111.75 SMA 205.09 ECC .27050 INC .9730 V1 29.435  
 RP 230.82 LAP .90 LOP 78.59 VP 22.424 GAP 13.98 AZP 90.36 TAL 18.97 TAP 130.72 RCA 149.62 APO 260.57 V2 23.827  
 RC 131.140 GL 6.90 GP -11.24 ZAL 54.80 ZAP 146.64 ETS 199.46 ZAE 185.29 ETE 300.79 ZAC 71.45 ETC 282.62 LVI -4.88

PLANETOCENTRIC CONIC

C3 21.475 VHL 4.634 DLA 14.79 RAL 17.01 RAD 6643.5 VEL 11.894 PTH 6.90 VHP 3.846 DPA 6.14 RAP 48.08 ECC 1.3534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 37 41 3448.11 -45.37 123.42 250.83 106.21 10 35 10 2448.1 -34.20 95.29  
 60.00 10 0 37 3387.07 -39.18 119.90 252.80 100.32 10 57 4 2387.1 -30.92 92.16  
 70.00 10 33 51 3289.25 -33.72 112.94 253.76 95.79 11 28 41 2289.3 -27.88 85.79  
 80.00 11 24 17 3131.25 -29.74 101.30 254.11 92.75 12 16 28 2131.3 -25.60 74.65  
 90.00 12 37 42 2894.25 -28.24 83.95 254.18 91.64 13 25 57 1894.3 -24.72 57.49  
 100.00 14 7 9 2605.72 -29.74 62.67 254.11 92.75 14 30 34 1605.7 -25.60 36.02  
 110.00 15 33 18 2336.07 -33.72 41.85 253.76 95.79 16 12 14 1336.1 -27.88 14.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3324 TRA -.5755 TC3 .9286 BAU .3308 SGT 1204.6 SGR 849.4 SG3 684.1 ST 23.4 SR 27.2 SS 16.2  
 RDE -.4383 RRA .1342 RC3 -.6810 FAU .20827 RRT -.4367 RRF .6295 RTF -.6502 CRT .8286 CR8 .9236 CST .6381  
 FDE .7132 FRA -.9115 FC3-8.3961 BSP 1969 SGB 1474.0 R23 -.2063 R13 .7265 LSA 37.1 MSA 12.6 SSA 3.8  
 BDE .5501 BRA .5909 BC3 1.1515 FSP 1077 SG1 1289.6 SG2 713.8 THA 154.61 EL1 34.3 EL2 10.4 ALF 50.26

LAUNCH DATE AUG 20 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 363.760

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.234 GAL 4.02 AZL 88.99 HCA 112.77 SMA 204.47 ECC .26840 INC 1.0109 V1 29.435  
 RP 231.20 LAP .93 LOP 79.61 VP 22.339 GAP 13.68 AZP 90.39 TAL 19.15 TAP 131.92 RCA 149.59 APO 259.36 V2 23.767  
 RC 154.008 GL 7.28 GP -11.59 ZAL 54.56 ZAP 145.37 ETS 199.16 ZAE 165.50 ETE 206.16 ZAC 71.15 ETC 262.67 LVI -3.59

PLANETOCENTRIC CONIC

C3 21.301 VHL 4.615 DLA 14.96 RAL 16.64 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 3.751 DPA 5.74 RAP 47.97 ECC 1.3506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 35 30 3449.66 -45.40 123.56 250.43 106.11 10 33 0 2449.7 -34.26 95.39  
 60.00 9 58 13 3389.20 -39.20 120.07 252.38 100.20 10 54 42 2389.2 -30.99 92.30  
 70.00 10 31 11 3292.15 -33.74 113.16 253.33 95.66 11 26 4 2292.1 -27.95 85.98  
 80.00 11 21 21 3134.98 -29.75 101.58 253.67 92.60 12 13 36 2135.0 -25.67 74.90  
 90.00 12 34 39 2898.38 -28.24 84.26 253.73 91.48 13 22 57 1898.4 -24.78 57.78  
 100.00 14 4 13 2609.45 -29.75 62.95 253.67 92.60 14 47 42 1609.5 -25.67 36.27  
 110.00 15 30 38 2338.97 -33.74 42.08 253.33 95.66 16 9 37 1339.0 -27.95 14.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3347 TRA -.5725 TC3 .9151 BAU .3320 SGT 1194.7 SGR 869.7 SG3 719.8 ST 23.6 SR 26.8 SS 17.0  
 RDE -.4302 RRA .1268 RC3 -.7224 FAU .21799 RRT -.4438 RRF .6541 RTF -.6393 CRT .8330 CR8 .9217 CST .6370  
 FDE .7631 FRA -.9929 FC3-8.8598 BSP 1981 SGB 1477.7 R23 -.2221 R13 .7282 LSA 37.2 MSA 12.8 SSA 3.9  
 BDE .5451 BRA .5864 BC3 1.1659 FSP 1140 SG1 1289.2 SG2 722.2 THA 153.02 EL1 34.2 EL2 10.2 ALF 49.45

LAUNCH DATE AUG 20 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

DISTANCE 367.472

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.207 GAL 4.03 AZL 88.95 HCA 113.78 SMA 203.90 ECC .26642 INC 1.0493 V1 29.435  
 RP 231.58 LAP .96 LOP 80.62 VP 22.255 GAP 13.38 AZP 90.42 TAL 19.31 TAP 133.10 RCA 149.57 APO 258.22 V2 23.748  
 RC 156.890 GL 7.58 GP -11.94 ZAL 54.34 ZAP 144.08 ETS 198.87 ZAE 165.61 ETE 201.26 ZAC 70.85 ETC 262.73 LVI -4.33

PLANETOCENTRIC CONIC

C3 21.140 VHL 4.598 DLA 15.14 RAL 16.28 RAD 6643.3 VEL 11.880 PTH 6.89 VHP 3.660 DPA 5.33 RAP 47.84 ECC 1.3479  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 33 20 3451.54 -45.43 123.73 250.06 105.98 10 30 52 2451.5 -34.33 98.51  
 60.00 9 55 49 3391.70 -39.23 120.28 252.00 100.07 10 52 21 2391.7 -31.06 92.47  
 70.00 10 28 31 3295.47 -33.76 113.42 252.93 95.51 11 23 26 2295.5 -28.03 86.21  
 80.00 11 18 23 3139.19 -29.77 101.89 253.26 92.44 12 10 42 2139.2 -25.74 75.19  
 90.00 12 31 33 2903.03 -28.25 84.59 253.31 91.31 13 19 56 1903.0 -24.86 58.09  
 100.00 14 1 15 2613.66 -29.77 63.26 253.26 92.44 14 44 49 1613.7 -25.74 36.56  
 110.00 15 27 57 2342.29 -33.76 42.33 252.93 95.51 16 6 59 1342.3 -28.03 15.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3364 TRA -.5701 TC3 .8982 BAU .3336 SGT 1183.1 SGR 891.9 SG3 756.8 ST 23.7 SR 26.4 SS 17.9  
 RDE -.4217 RRA .1189 RC3 -.7657 FAU .22805 RRT -.4494 RRF .6781 RTF -.6270 CRT .8368 CR8 .9201 CST .6365  
 FDE .8179 FRA -1.0768 FC3-9.3391 BSP 1988 SGB 1481.6 R23 -.2370 R13 .7306 LSA 37.4 MSA 13.0 SSA 3.9  
 BDE .5394 BRA .5824 BC3 1.1803 FSP 1206 SG1 1288.3 SG2 731.6 THA 151.25 EL1 34.0 EL2 10.1 ALF 48.65

LAUNCH DATE AUG 20 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

DISTANCE 371.193

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.181 GAL 4.04 AZL 88.91 HCA 114.79 SMA 203.36 ECC .26457 INC 1.0882 V1 29.435  
 RP 231.95 LAP .99 LOP 81.63 VP 22.175 GAP 13.08 AZP 90.46 TAL 19.47 TAP 134.26 RCA 149.56 APO 257.16 V2 23.708  
 RC 159.785 GL 7.89 GP -12.31 ZAL 54.13 ZAP 142.77 ETS 198.57 ZAE 165.62 ETE 206.14 ZAC 70.54 ETC 262.79 LVI -4.06

PLANETOCENTRIC CONIC

C3 20.990 VHL 4.581 DLA 15.33 RAL 15.93 RAD 6643.3 VEL 11.874 PTH 6.89 VHP 3.573 DPA 4.90 RAP 47.69 ECC 1.3454  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 12 3453.76 -45.47 123.92 249.73 105.84 10 28 45 2453.8 -34.42 95.65  
 60.00 9 53 25 3394.58 -39.27 120.52 251.65 99.91 10 50 0 2394.6 -31.15 92.66  
 70.00 10 25 49 3299.22 -33.78 113.71 252.56 95.34 11 20 48 2299.2 -28.12 86.46  
 80.00 11 15 24 3143.88 -29.78 102.24 252.87 92.26 12 7 47 2143.9 -25.83 75.51  
 90.00 12 28 25 2908.19 -28.26 84.97 252.92 91.13 13 16 53 1908.2 -24.95 58.45  
 100.00 13 58 15 2618.36 -29.78 63.61 252.87 92.26 14 41 54 1618.4 -25.83 36.88  
 110.00 15 25 16 2346.04 -33.78 42.62 252.56 95.34 16 4 22 1346.0 -28.12 15.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3375 TRA -.5681 TC3 .8779 BAU .3354 SGT 1169.6 SGR 916.2 SG3 795.0 ST 23.9 SR 25.9 SS 18.8  
 RDE -.4129 RRA .1106 RC3 -.8110 FAU .23842 RRT -.4530 RRF .7015 RTF -.6130 CRT .8403 CR8 .9181 CST .6353  
 FDE .8751 FRA -1.1655 FC3-9.8338 BSP 1989 SGB 1485.7 R23 -.2510 R13 .7340 LSA 37.5 MSA 13.2 SSA 3.9  
 BDE .5333 BRA .5787 BC3 1.1932 FSP 1274 SG1 1287.0 SG2 742.3 THA 149.28 EL1 33.8 EL2 9.9 ALF 47.85

LAUNCH DATE AUG 20 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

DISTANCE 374.921

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.158 GAL 4.05 AZL 88.87 HCA 115.79 SMA 202.86 ECC .26283 INC 1.1276 V1 29.435  
 RP 232.33 LAP 1.02 LOP 82.63 VP 22.096 GAP 12.79 AZP 90.49 TAL 19.61 TAP 135.41 RCA 149.54 APO 256.17 V2 23.670  
 RC 162.693 GL 8.20 GP -12.68 ZAL 53.95 ZAP 141.43 ETS 198.29 ZAE 165.51 ETE 200.89 ZAC 70.23 ETC 262.86 LVI -3.79

PLANETOCENTRIC CONIC

C3 20.851 VHL 4.566 DLA 15.53 RAL 15.80 RAD 6643.2 VEL 11.868 PTH 6.88 VHP 3.489 DPA 4.45 RAP 47.51 ECC 1.3432  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 29 4 3456.30 -45.52 124.15 249.43 105.67 10 26 40 2456.3 -34.52 95.81  
 60.00 9 51 2 3397.82 -39.30 120.78 251.33 99.73 10 47 40 2397.8 -31.25 92.88  
 70.00 10 23 7 3303.40 -33.81 114.03 252.22 95.15 11 18 10 2303.4 -28.22 86.75  
 80.00 11 12 22 3149.07 -29.79 102.63 252.52 92.06 12 4 51 2149.1 -25.92 75.87  
 90.00 12 25 14 2913.87 -28.27 85.39 252.56 90.92 13 13 48 1913.9 -25.04 58.84  
 100.00 13 55 13 2623.54 -29.79 63.99 252.52 92.06 14 38 57 1623.5 -25.92 37.24  
 110.00 15 22 33 2350.22 -33.81 42.95 252.22 95.15 16 1 43 1350.2 -28.22 15.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3385 TRA -.5671 TC3 .8527 BAU .3372 SGT 1154.2 SGR 942.5 SG3 834.2 ST 24.0 SR 25.4 SS 19.7  
 RDE -.4037 RRA .1018 RC3 -.8581 FAU .24903 RRT -.4533 RRF .7239 RTF -.5962 CRT .8435 CR8 .9165 CST .6346  
 FDE .9371 FRA -1.2561 FC3-10.3399 BSP 1990 SGB 1490.2 R23 -.2641 R13 .7381 LSA 37.6 MSA 13.5 SSA 3.9  
 BDE .5268 BRA .5762 BC3 1.2098 FSP 1345 SG1 1284.9 SG2 754.7 THA 147.11 EL1 33.6 EL2 9.8 ALF 47.00

LAUNCH DATE AUG 20 1973      FLIGHT TIME 162.00      ARRIVAL DATE JAN 29 1974

Heliocentric Conic      DISTANCE 378.658      EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.133 GAL 4.05 AZL 88.83 MCA 116.80 SMA 202.39 ECC .28120 INC 1.1676 V1 29.435  
 RP 232.70 LAP 1.04 LOP 83.64 VP 22.021 GAP 12.50 AZP 90.53 TAL 19.75 TAP 136.54 RCA 149.52 APO 255.25 V2 23.631  
 RC 165.610 GL 8.51 GP -13.07 ZAL 53.79 ZAP 140.07 ETS 196.00 ZAE 165.29 ETE 275.60 ZAC 69.91 ETC 282.93 LVI -3.52

PLANETOCENTRIC CONIC

C3 20.722 VHL 4.552 DLA 15.74 RAL 15.29 RAD 6643.2 VEL 11.863 PTH 6.88 VHP 3.409 DPA 3.98 RAP 47.32 ECC 1.3410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 26 57 3459.18 -45.57 124.41 249.17 105.47 10 24 36 2459.2 -34.63 95.99  
 60.00 9 48 38 3401.43 -39.35 121.08 251.04 99.53 10 45 20 2401.4 -31.36 93.12  
 70.00 10 20 23 3308.00 -33.84 114.39 251.91 94.94 11 15 31 2308.0 -28.32 87.06  
 80.00 11 9 17 3154.74 -29.81 103.05 252.19 91.83 12 1 52 2154.7 -26.03 76.26  
 90.00 12 21 59 2920.08 -26.27 85.84 252.23 90.69 13 10 39 1920.1 -25.14 59.27  
 100.00 13 52 9 2629.21 -29.81 64.42 252.19 91.83 14 35 58 1629.2 -26.03 37.63  
 110.00 15 19 49 2354.82 -33.84 43.30 251.91 94.94 15 59 4 1354.8 -28.32 15.98

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3393 TRA -.5667 TC3 .8227 BAU .3393      SGT 1137.0 SGR 970.9 SG3 874.4      ST 24.1 SR 24.9 SS 20.7  
 RDE -.3939 RRA .0926 RC3 -.9072 FAU .25986      RRT -.4499 RRF .7453 RTF -.5766      CRT .8466 CR8 .9149 CST .6343  
 FDE 1.0041 FRA-1.3502 FC-10.8567 BSP 1994      SGB 1495.1 R23 -.2755 R13 .7434      LSA 37.7 MSA 13.7 SSA 3.9  
 BDE .5199 BRA .5743 BC3 1.2247 FSP 1419      SG1 1282.3 SG2 768.8 THA 144.70      EL1 33.3 EL2 9.6 ALF 46.09

LAUNCH DATE AUG 20 1973      FLIGHT TIME 164.00      ARRIVAL DATE JAN 31 1974

Heliocentric Conic      DISTANCE 382.398      EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.112 GAL 4.06 AZL 88.79 HCA 117.80 SMA 201.95 ECC .25967 INC 1.2081 V1 29.435  
 RP 233.07 LAP 1.07 LOP 84.63 VP 21.947 GAP 12.21 AZP 90.56 TAL 19.87 TAP 137.66 RCA 149.51 APO 254.39 V2 23.593  
 RC 168.537 GL 8.83 GP -13.46 ZAL 53.65 ZAP 138.69 ETS 197.71 ZAE 164.93 ETE 270.35 ZAC 69.59 ETC 283.00 LVI -3.25

PLANETOCENTRIC CONIC

C3 20.602 VHL 4.539 DLA 15.98 RAL 14.90 RAD 6643.1 VEL 11.858 PTH 6.87 VHP 3.353 DPA 3.50 RAP 47.11 ECC 1.3391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 24 50 3462.38 -45.63 124.69 248.94 105.26 10 22 33 2462.4 -34.76 96.20  
 60.00 9 46 14 3405.41 -39.39 121.41 250.79 99.31 10 43 0 2405.4 -31.49 93.39  
 70.00 10 17 37 3313.02 -33.87 114.78 251.63 94.71 11 12 50 2313.0 -28.44 87.41  
 80.00 11 6 10 3160.91 -29.82 103.51 251.89 91.59 11 58 51 2160.9 -26.13 76.69  
 90.00 12 18 41 2926.81 -28.28 86.33 251.93 90.44 13 7 28 1926.8 -25.24 59.73  
 100.00 13 49 2 2635.38 -29.82 64.87 251.89 91.59 14 32 57 1635.4 -26.13 38.06  
 110.00 15 17 4 2359.84 -33.87 43.69 251.63 94.71 15 56 24 1359.8 -28.44 16.33

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3396 TRA -.5672 TC3 .7891 BAU .3420      SGT 1118.7 SGR 1002.0 SG3 915.9      ST 24.2 SR 24.3 SS 21.6  
 RDE -.3838 RRA .0829 RC3 -.9587 FAU .27107      RRT -.4433 RRF .7699 RTF -.5542      CRT .8492 CR8 .9130 CST .6330  
 FDE 1.0740 FRA-1.4477 FC-11.3908 BSP 1992      SGB 1501.8 R23 -.2841 R13 .7506      LSA 37.9 MSA 14.0 SSA 3.9  
 BDE .5125 BRA .5733 BC3 1.2417 FSP 1492      SG1 1280.6 SG2 784.7 THA 141.99      EL1 33.0 EL2 9.4 ALF 45.17

LAUNCH DATE AUG 20 1973      FLIGHT TIME 166.00      ARRIVAL DATE FEB 2 1974

Heliocentric Conic      DISTANCE 386.145      EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.092 GAL 4.06 AZL 88.75 HCA 118.79 SMA 201.54 ECC .25824 INC 1.2493 V1 29.435  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.876 GAP 11.93 AZP 90.60 TAL 19.97 TAP 138.77 RCA 149.50 APO 253.59 V2 23.554  
 RC 171.472 GL 9.15 GP -13.87 ZAL 53.52 ZAP 137.28 ETS 197.41 ZAE 164.45 ETE 265.24 ZAC 69.27 ETC 283.08 LVI -2.97

PLANETOCENTRIC CONIC

C3 20.491 VHL 4.527 DLA 16.20 RAL 14.70 RAD 6643.1 VEL 11.853 PTH 6.87 VHP 3.260 DPA 2.99 RAP 46.88 ECC 1.3372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 22 44 3465.90 -45.69 125.01 248.75 105.02 10 20 30 2465.9 -34.89 96.42  
 60.00 9 43 50 3409.75 -39.44 121.77 250.56 99.07 10 40 39 2409.7 -31.62 93.68  
 70.00 10 14 50 3318.47 -33.90 115.20 251.38 94.46 11 10 9 2318.5 -28.56 87.78  
 80.00 11 2 59 3167.58 -29.83 104.00 251.62 91.33 11 55 47 2167.6 -26.25 77.15  
 90.00 12 15 20 2934.09 -28.28 86.87 251.64 90.10 13 4 14 1934.1 -25.38 60.24  
 100.00 13 45 51 2642.05 -29.83 65.37 251.62 91.33 14 29 53 1642.1 -26.25 38.52  
 110.00 15 14 17 2365.29 -33.90 44.12 251.38 94.46 15 53 42 1365.3 -28.56 16.70

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3399 TRA -.5692 TC3 .7491 BAU .3449      SGT 1099.0 SGR 1035.0 SG3 987.8      ST 24.3 SR 23.7 SS 22.7  
 RDE -.3730 RRA .0730 RC3-1.0110 FAU .28232      RRT -.4310 RRF .7852 RTF -.5271      CRT .8515 CR8 .9116 CST .6326  
 FDE 1.1509 FRA-1.5455 FC-11.9278 BSP 1997      SGB 1509.6 R23 -.2898 R13 .7591      LSA 38.0 MSA 14.4 SSA 3.8  
 BDE .5046 BRA .5738 BC3 1.2589 FSP 1569      SG1 1278.5 SG2 802.8 THA 138.97      EL1 32.7 EL2 9.2 ALF 44.15

LAUNCH DATE AUG 20 1973      FLIGHT TIME 168.00      ARRIVAL DATE FEB 4 1974

Heliocentric Conic      DISTANCE 389.899      EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.073 GAL 4.06 AZL 88.71 HCA 119.78 SMA 201.17 ECC .25690 INC 1.2910 V1 29.435  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.807 GAP 11.65 AZP 90.64 TAL 20.07 TAP 139.86 RCA 149.49 APO 252.85 V2 23.517  
 RC 174.413 GL 9.48 GP -14.29 ZAL 53.41 ZAP 135.88 ETS 197.12 ZAE 163.84 ETE 260.33 ZAC 68.93 ETC 283.16 LVI -2.69

PLANETOCENTRIC CONIC

C3 20.389 VHL 4.515 DLA 16.44 RAL 14.42 RAD 6643.0 VEL 11.849 PTH 6.87 VHP 3.191 DPA 2.47 RAP 46.62 ECC 1.3355  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 38 3469.73 -45.76 125.36 248.58 104.76 10 18 28 2469.7 -35.04 96.67  
 60.00 9 41 24 3414.44 -39.49 122.16 250.36 98.81 10 38 19 2414.4 -31.76 94.00  
 70.00 10 12 1 3324.34 -33.93 115.65 251.15 94.20 11 7 25 2324.3 -28.70 88.19  
 80.00 10 59 45 3174.73 -29.84 104.53 251.37 91.05 11 52 40 2174.7 -26.37 77.64  
 90.00 12 11 54 2941.89 -28.28 87.44 251.39 89.89 13 0 55 1941.9 -25.47 60.78  
 100.00 13 42 37 2649.20 -29.84 65.90 251.37 91.05 14 26 46 1649.2 -26.37 39.01  
 110.00 15 11 27 2371.16 -33.93 44.57 251.15 94.20 15 50 58 1371.2 -28.70 17.11

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3321 TRA -.5646 TC3 .7198 BAU .3514      SGT 1076.0 SGR 1073.3 SG3 1003.3      ST 23.9 SR 23.1 SS 23.6  
 RDE -.3630 RRA .0612 RC3-1.0696 FAU .29462      RRT -.4278 RRF .8044 RTF -.5080      CRT .8520 CR8 .9057 CST .6216  
 FDE 1.2134 FRA-1.6632 FC-12.5098 BSP 1930      SGB 1519.8 R23 -.2793 R13 .7759      LSA 37.8 MSA 14.6 SSA 3.8  
 BDE .4920 BRA .5679 BC3 1.2892 FSP 1629      SG1 1284.1 SG2 812.9 THA 135.17      EL1 32.0 EL2 9.0 ALF 43.89



LAUNCH DATE AUG 20 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC

DISTANCE 303.656

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.056 GAL 4.06 AZL 88.67 HCA 120.77 SMA 200.82 ECC .25564 INC 1.3335 V1 29.438  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.740 GAP 11.37 AZP 90.68 TAL 20.16 TAP 140.93 RCA 149.48 APO 252.15 V2 23.479  
 RC 177.360 GL 9.81 GP -14.72 ZAL 53.33 ZAP 134.41 ETS 196.82 ZAE 163.10 ETE 235.69 ZAC 68.60 ETC 283.25 LVI -2.40

PLANETOCENTRIC CONIC

C3 20.293 VHL 4.505 DLA 16.70 RAL 14.16 RAD 6643.0 VEL 11.845 PTH 6.86 VHP 3.125 DPA 1.93 RAP 46.36 ECC 1.3340  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.00 9 18 33 3473.90 -45.83 125.73 248.45 104.48 10 16 27 2473.9 -35.20 96.94  
 60.00 9 38 58 3419.53 -39.54 122.58 250.19 98.53 10 35 58 2419.5 -31.91 94.34  
 70.00 10 9 9 3330.67 -33.96 116.15 250.95 93.91 11 4 40 2330.7 -26.84 88.63  
 80.00 10 56 27 3182.44 -29.85 105.10 251.15 90.75 11 49 30 2182.4 -26.50 78.18  
 90.00 12 8 23 2950.29 -28.28 88.05 251.15 89.58 12 57 33 1950.3 -25.60 61.36  
 100.00 13 39 19 2656.91 -29.85 66.47 251.15 90.75 14 23 36 1656.9 -26.50 39.55  
 110.00 15 8 36 2377.49 -33.96 45.06 250.95 93.91 15 48 13 1377.5 -28.84 17.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3372 TRA -.5742 TC3 .6587 BAU .3538 SGT 1057.1 SGR 1109.5 S63 1045.0 ST 24.3 SR 22.3 SS 24.9  
 RDE -.3502 RRA .0511 RC3-1.1254 FAU .30572 RRT -.3943 RRF .8207 RTF -.4625 CRT .8549 CRS .9064 CST .6268  
 FDE 1.3108 FRA-1.7540 FC-13.0425 BSP 1998 SGB 1532.5 R23 -.2818 R13 .7855 LSA 38.3 MSA 15.0 SSA 3.8  
 BDE .4862 BRA .5764 BC3 1.3040 FSP 1722 S61 1280.7 S62 841.6 THA 131.50 EL1 31.8 EL2 8.9 ALF 42.17

LAUNCH DATE AUG 20 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC

DISTANCE 397.418

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.040 GAL 4.06 AZL 88.62 HCA 121.76 SMA 200.49 ECC .25446 INC 1.3768 V1 29.435  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.675 GAP 11.09 AZP 90.72 TAL 20.23 TAP 141.99 RCA 149.47 APO 251.51 V2 23.442  
 RC 180.313 GL 10.15 GP -15.16 ZAL 53.26 ZAP 132.94 ETS 196.51 ZAE 162.26 ETE 251.35 ZAC 68.26 ETC 283.34 LVI -2.11

PLANETOCENTRIC CONIC

C3 20.205 VHL 4.495 DLA 16.96 RAL 13.92 RAD 6642.9 VEL 11.841 PTH 6.86 VHP 3.062 DPA 1.37 RAP 46.07 ECC 1.3325  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.00 9 16 27 3478.38 -45.91 126.14 248.35 104.18 10 14 26 2478.4 -35.37 97.23  
 60.00 9 36 31 3424.97 -39.59 123.04 250.05 98.23 10 33 36 2425.0 -32.07 94.71  
 70.00 10 6 15 3337.43 -33.99 116.67 250.78 93.60 11 1 53 2337.4 -26.99 89.10  
 80.00 10 53 5 3190.67 -29.85 105.72 250.95 90.43 11 46 16 2190.7 -26.64 78.75  
 90.00 12 4 47 2959.25 -28.27 88.71 250.95 89.26 12 54 6 1959.3 -25.73 61.98  
 100.00 13 35 57 2665.14 -29.85 67.08 250.95 90.43 14 20 22 1665.1 -26.64 40.12  
 110.00 15 5 42 2384.25 -33.99 45.59 250.78 93.60 15 45 26 1384.2 -26.99 18.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3377 TRA -.5805 TC3 .6005 BAU .3587 SGT 1036.9 SGR 1149.4 S63 1088.4 ST 24.5 SR 21.6 SS 26.1  
 RDE -.3375 RRA .0399 RC3-1.1842 FAU .31728 RRT -.3613 RRF .8363 RTF -.4176 CRT .8567 CRS .9046 CST .6260  
 FDE 1.4036 FRA-1.8565 FC-13.5947 BSP 2029 SGB 1548.0 R23 -.2693 R13 .8014 LSA 38.6 MSA 15.4 SSA 3.7  
 BDE .4774 BRA .5819 BC3 1.3276 FSP 1806 S61 1283.0 S62 866.2 THA 127.03 EL1 31.5 EL2 8.7 ALF 40.83

LAUNCH DATE AUG 20 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

DISTANCE 401.184

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.024 GAL 4.06 AZL 88.58 HCA 122.74 SMA 200.19 ECC .25336 INC 1.4208 V1 29.435  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.612 GAP 10.81 AZP 90.77 TAL 20.29 TAP 143.04 RCA 149.47 APO 250.91 V2 23.405  
 RC 183.270 GL 10.49 GP -15.60 ZAL 53.21 ZAP 131.45 ETS 196.19 ZAE 161.30 ETE 247.32 ZAC 67.91 ETC 283.44 LVI -1.82

PLANETOCENTRIC CONIC

C3 20.124 VHL 4.486 DLA 17.24 RAL 13.68 RAD 6642.9 VEL 11.838 PTH 6.86 VHP 3.003 DPA .79 RAP 45.76 ECC 1.3312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.00 9 14 21 3483.19 -45.99 126.58 248.28 103.85 10 12 24 2483.2 -35.56 97.54  
 60.00 9 34 2 3430.79 -39.65 123.52 249.94 97.90 10 31 13 2430.8 -32.25 95.11  
 70.00 10 3 18 3344.63 -34.02 117.23 250.63 93.27 10 59 3 2344.6 -29.15 89.60  
 80.00 10 49 38 3199.42 -29.86 106.37 250.77 90.09 11 42 57 2199.4 -26.78 79.36  
 90.00 12 1 5 2968.80 -28.26 89.40 250.76 88.91 12 50 34 1968.8 -25.86 62.65  
 100.00 13 32 30 2673.89 -29.86 67.73 250.77 90.09 14 17 4 1673.9 -26.78 40.73  
 110.00 15 2 44 2391.45 -34.02 46.15 250.63 93.27 15 42 36 1391.4 -29.15 18.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3343 TRA -.5849 TC3 .5437 BAU .3658 SGT 1016.0 SGR 1193.3 S63 1133.5 ST 24.4 SR 20.8 SS 27.2  
 RDE -.3247 RRA .0276 RC3-1.2464 FAU .32931 RRT -.3277 RRF .8512 RTF -.3119 CRT .8576 CRS .9007 CST .6204  
 FDE 1.4930 FRA-1.9870 FC-14.1671 BSP 2038 SGB 1567.2 R23 -.2433 R13 .8216 LSA 38.8 MSA 15.8 SSA 3.7  
 BDE .4661 BRA .5856 BC3 1.3598 FSP 1884 S61 1292.7 S62 886.0 THA 121.88 EL1 30.9 EL2 8.4 ALF 39.76

LAUNCH DATE AUG 20 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

DISTANCE 404.933

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 33.010 GAL 4.06 AZL 88.53 HCA 123.72 SMA 199.81 ECC .25233 INC 1.4657 V1 29.439  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.551 GAP 10.34 AZP 90.81 TAL 20.34 TAP 144.07 RCA 149.46 APO 250.35 V2 23.369  
 RC 186.232 GL 10.84 GP -16.06 ZAL 53.17 ZAP 129.94 ETS 195.87 ZAE 160.25 ETE 243.60 ZAC 67.56 ETC 283.94 LVI -1.92

PLANETOCENTRIC CONIC

C3 20.049 VHL 4.478 DLA 17.53 RAL 13.45 RAD 6642.9 VEL 11.835 PTH 6.85 VHP 2.947 DPA .20 RAP 45.44 ECC 1.3300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.00 9 12 15 3488.32 -46.07 127.04 248.24 103.50 10 10 23 2488.3 -35.75 97.87  
 60.00 9 31 31 3436.99 -39.71 124.04 249.85 97.56 10 28 48 2437.0 -32.43 95.53  
 70.00 10 0 18 3352.29 -34.04 117.83 250.50 92.92 10 56 10 2352.3 -29.31 90.13  
 80.00 10 46 6 3208.74 -29.86 107.06 250.62 89.73 11 39 34 2208.7 -26.93 80.02  
 90.00 11 57 17 2978.97 -28.25 90.15 250.59 88.54 12 46 56 1979.0 -26.00 63.36  
 100.00 13 28 58 2683.21 -29.86 68.43 250.62 89.73 14 13 41 1683.2 -26.93 41.38  
 110.00 14 59 44 2399.11 -34.04 46.75 250.50 92.92 15 39 43 1399.1 -29.31 19.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3338 TRA -.5939 TC3 .4750 BAU .3733 SGT 999.3 SGR 1238.2 S63 1177.6 ST 24.5 SR 19.9 SS 28.6  
 RDE -.3104 RRA .0156 RC3-1.3093 FAU .34098 RRT -.2795 RRF .8646 RTF -.3135 CRT .8588 CRS .8982 CST .6184  
 FDE 1.5976 FRA-2.0695 FC-14.7241 BSP 2083 SGB 1591.1 R23 -.2094 R13 .8422 LSA 39.2 MSA 16.2 SSA 3.6  
 BDE .4559 BRA .5941 BC3 1.3928 FSP 1970 S61 1304.9 S62 910.4 THA 116.15 EL1 30.5 EL2 8.2 ALF 38.24

LAUNCH DATE AUG 20 1973 FLIGHT TIME 170.00 ARRIVAL DATE FEB 14 1974

Table with columns for Heliocentric Conic, Planetary Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCM TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CBT TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2.

LAUNCH DATE AUG 20 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 16 1974

Table with columns for Heliocentric Conic, Planetary Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCM TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CBT TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2.

LAUNCH DATE AUG 20 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 16 1974

Table with columns for Heliocentric Conic, Planetary Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCM TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CBT TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2.

LAUNCH DATE AUG 20 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 20 1974

Table with columns for Heliocentric Conic, Planetary Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCM TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CBT TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2.

LAUNCH DATE AUG 20 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC DISTANCE 423.842 EARTH TO MARS  
 RL 131.37 LAL -.00 LOL 326.83 VL 32.984 GAL 4.02 AZL 88.30 HCA 128.58 SMA 198.80 ECC .24813 INC 1.7048 V1 29.435  
 RP 236.98 LAP 1.33 LOP 95.43 VP 21.272 GAP 9.22 AZP 91.06 TAL 20.44 TAP 149.02 RCA 149.47 APO 248.13 V2 23.191  
 RC 201.073 GL 12.71 GP -18.48 ZAL 53.26 ZAP 122.17 ETS 194.06 ZAE 153.78 ETE 229.14 ZAC 65.76 ETC 284.07 LVI .04

PLANETOCENTRIC CONIC  
 C3 19.762 VHL 4.445 DLA 19.16 RAL 12.48 RAD 6642.7 VEL 11.023 PTH 6.84 VHP 2.712 DPA -3.00 RAP 43.62 ECC 1.3252  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 24 3518.99 -46.52 129.87 248.48 101.36 10 0 3 2519.0 -36.89 99.92  
 60.00 9 18 22 3473.85 -39.99 127.13 249.80 95.47 10 16 15 2473.8 -33.47 98.10  
 70.00 9 44 10 3397.84 -34.15 121.38 250.20 90.82 10 40 48 2397.8 -30.25 93.35  
 80.00 10 26 45 3264.36 -29.77 111.19 250.13 87.56 11 21 10 2264.4 -27.75 83.95  
 90.00 11 36 18 3039.87 -28.06 94.59 250.03 86.32 12 26 58 2039.9 -26.76 67.66  
 100.00 13 9 37 2738.83 -29.77 72.56 250.13 87.56 13 55 16 1738.8 -27.75 45.31  
 110.00 14 43 37 2444.66 -34.15 50.30 250.20 90.82 15 24 21 1444.7 -30.25 22.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3118 TRA -.6485 TC3 .0639 BAU .4369 SGT 973.5 SGR 1500.2 SG3 1395.8 ST 24.1 SR 14.9 SS 35.5  
 RDE -.2288 RRA -.0524 RC3-1.6525 FAU .39825 RRT .0673 RRF .9167 RTF .0719 CRT .8622 CR8 .8633 CST .5777  
 FDE 2.1705 FRA-2.5979 FC-17.4465 BSP 2410 SGB 1788.4 R23 .0341 R13 .9162 LSA 41.5 MSA 18.2 S8A 3.3  
 BDE .3868 BRA .6506 BC3 1.6538 FSP 2373 SG1 1502.7 SG2 969.7 THA 85.71 EL1 27.6 EL2 6.6 ALF 30.06

LAUNCH DATE AUG 20 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC DISTANCE 427.627 EARTH TO MARS  
 RL 131.37 LAL -.00 LOL 326.83 VL 32.948 GAL 4.01 AZL 88.24 HCA 129.55 SMA 198.83 ECC .24746 INC 1.7560 V1 29.435  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.221 GAP 8.96 AZP 91.12 TAL 20.43 TAP 149.97 RCA 149.48 APO 247.79 V2 23.157  
 RC 204.040 GL 13.11 GP -18.99 ZAL 53.33 ZAP 120.58 ETS 193.66 ZAE 152.30 ETE 226.92 ZAC 65.40 ETC 284.19 LVI .37

PLANETOCENTRIC CONIC  
 C3 19.721 VHL 4.441 DLA 19.53 RAL 12.31 RAD 6642.7 VEL 11.021 PTH 6.84 VHP 2.674 DPA -3.68 RAP 43.22 ECC 1.3246  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 59 9 3526.16 -46.61 130.53 248.61 100.86 9 57 55 2526.2 -37.15 100.40  
 60.00 9 15 34 3482.46 -40.04 127.86 249.86 94.98 10 13 36 2482.5 -33.71 98.71  
 70.00 9 40 41 3408.51 -34.15 122.21 250.21 90.32 10 37 29 2408.5 -30.45 94.11  
 80.00 10 22 29 3277.48 -29.72 112.16 250.09 87.05 11 17 6 2277.5 -27.92 84.88  
 90.00 11 31 36 3054.32 -27.99 95.64 249.96 85.80 12 22 31 2054.3 -26.92 68.89  
 100.00 13 5 20 2751.95 -29.72 73.53 250.09 87.05 13 51 12 1752.0 -27.92 46.25  
 110.00 14 40 7 2455.33 -34.15 51.13 250.21 90.32 15 21 2 1455.3 -30.45 23.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3044 TRA -.6630 TC3 -.0340 BAU .4551 SGT 989.4 SGR 1559.3 SG3 1437.2 ST 23.9 SR 13.8 SS 37.0  
 RDE -.2099 RRA -.0672 RC3-1.7258 FAU .40896 RRT .1531 RRF .9245 RTF .1624 CRT .8634 CR8 .8489 CST .5633  
 FDE 2.2966 FRA-2.6996 FC-17.9533 BSP 2515 SGB 1846.7 R23 .0691 R13 .9222 LSA 42.1 MSA 18.6 S8A 3.2  
 BDE .3697 BRA .6664 BC3 1.7261 FSP 2449 SG1 1571.2 SG2 970.3 THA 80.99 EL1 26.9 EL2 6.2 ALF 28.14

LAUNCH DATE AUG 20 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC DISTANCE 431.412 EARTH TO MARS  
 RL 131.37 LAL -.00 LOL 326.83 VL 32.938 GAL 4.00 AZL 88.19 HCA 130.51 SMA 198.48 ECC .24684 INC 1.8085 V1 29.435  
 RP 237.65 LAP 1.38 LOP 97.36 VP 21.172 GAP 8.70 AZP 91.17 TAL 20.40 TAP 150.91 RCA 149.49 APO 247.47 V2 23.123  
 RC 207.005 GL 13.52 GP -19.51 ZAL 53.41 ZAP 118.98 ETS 193.25 ZAE 150.78 ETE 224.86 ZAC 65.02 ETC 284.30 LVI .71

PLANETOCENTRIC CONIC  
 C3 19.685 VHL 4.437 DLA 19.91 RAL 12.14 RAD 6642.7 VEL 11.019 PTH 6.84 VHP 2.638 DPA -4.37 RAP 42.81 ECC 1.3240  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 51 3533.71 -46.71 131.24 248.77 100.32 9 55 45 2533.7 -37.43 100.92  
 60.00 9 12 42 3491.52 -40.09 128.62 249.95 94.47 10 10 33 2491.5 -33.95 99.35  
 70.00 9 37 4 3419.75 -34.15 123.09 250.23 89.81 10 34 4 2419.8 -30.66 94.92  
 80.00 10 18 2 3291.36 -29.67 113.19 250.06 86.51 11 12 53 2291.4 -28.10 85.88  
 90.00 11 26 43 3069.63 -27.91 96.75 249.91 85.24 12 17 52 2069.6 -27.08 69.78  
 100.00 13 0 53 2765.83 -29.67 74.56 250.06 86.51 13 46 59 1765.8 -28.10 47.24  
 110.00 14 36 31 2466.57 -34.15 52.01 250.23 89.81 15 17 37 1466.6 -30.66 23.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2981 TRA -.6788 TC3 -.1375 BAU .4751 SGT 1015.0 SGR 1619.8 SG3 1477.0 ST 23.7 SR 12.6 SS 38.5  
 RDE -.1898 RRA -.0823 RC3-1.7999 FAU .41919 RRT .2398 RRF .9315 RTF .1523 CRT .8657 CR8 .8297 CST .5470  
 FDE 2.4300 FRA-2.7970 FC-18.4358 BSP 2634 SGB 1911.5 R23 .0971 R13 .9269 LSA 42.8 MSA 18.9 S8A 3.1  
 BDE .3517 BRA .6838 BC3 1.8081 FSP 2522 SG1 1648.0 SG2 968.8 THA 76.85 EL1 26.2 EL2 5.7 ALF 28.08

LAUNCH DATE AUG 20 1973

FLIGHT TIME 192.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC DISTANCE 435.199 EARTH TO MARS  
 RL 131.37 LAL -.00 LOL 326.83 VL 32.931 GAL 3.98 AZL 88.14 HCA 131.47 SMA 198.34 ECC .24626 INC 1.8623 V1 29.435  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.124 GAP 8.44 AZP 91.23 TAL 20.37 TAP 151.84 RCA 149.50 APO 247.12 V2 23.090  
 RC 209.965 GL 13.93 GP -20.03 ZAL 53.51 ZAP 117.38 ETS 192.81 ZAE 149.21 ETE 222.96 ZAC 64.65 ETC 284.42 LVI 1.05

PLANETOCENTRIC CONIC  
 C3 19.655 VHL 4.433 DLA 20.30 RAL 11.99 RAD 6642.7 VEL 11.018 PTH 6.84 VHP 2.606 DPA -5.08 RAP 42.40 ECC 1.3235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 31 3541.63 -46.80 131.98 248.96 99.76 9 53 32 2541.6 -37.71 101.46  
 60.00 9 9 45 3501.04 -40.14 129.43 250.06 93.92 10 8 6 2501.0 -34.21 100.03  
 70.00 9 33 20 3431.59 -34.15 124.02 250.26 89.26 10 30 32 2431.6 -30.88 95.77  
 80.00 10 13 23 3306.03 -29.61 114.28 250.04 85.94 11 8 29 2306.0 -28.28 86.93  
 90.00 11 21 35 3085.88 -27.81 97.93 249.87 84.66 12 13 1 2085.9 -27.24 70.94  
 100.00 12 56 15 2780.50 -29.61 75.64 250.04 85.94 13 42 36 1780.5 -28.28 48.30  
 110.00 14 32 47 2478.41 -34.15 52.93 250.26 89.26 15 14 5 1478.4 -30.88 24.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2854 TRA -.6947 TC3 -.2434 BAU .4973 SGT 1048.4 SGR 1683.9 SG3 1516.7 ST 23.4 SR 11.4 SS 40.0  
 RDE -.1694 RRA -.0983 RC3-1.8768 FAU .42941 RRT .3227 RRF .9379 RTF .3382 CRT .8694 CR8 .8018 CST .5251  
 FDE 2.5586 FRA-2.8990 FC-18.9144 BSP 2764 SGB 1983.6 R23 .1167 R13 .9314 LSA 43.5 MSA 19.3 S8A 3.1  
 BDE .3319 BRA .7016 BC3 1.8925 FSP 2586 SG1 1733.7 SG2 963.8 THA 73.36 EL1 25.5 EL2 5.2 ALF 24.05

LAUNCH DATE AUG 20 1973 FLIGHT TIME 194.00 ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC DISTANCE 438.988 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.924 GAL 3.97 AZL 88.08 HCA 132.42 SMA 198.21 ECC .24572 INC 1.9176 V1 29.435  
 RP 238.30 LAP 1.42 LOP 99.27 VP 21.078 GAP 8.19 AZP 91.29 TAL 20.34 TAP 152.78 RCA 149.51 APO 246.92 V2 23.056  
 RC 212.919 GL 14.36 GP -20.55 ZAL 53.62 ZAP 115.77 ETS 192.36 ZAE 147.61 ETE 221.19 ZAC 64.28 ETC 284.54 LVI 1.39

PLANETOCENTRIC CONIC

C3 19.630 VHL 4.431 DLA 20.71 RAL 11.84 RAD 6642.7 VEL 11.817 PTH 6.84 VHP 2.576 DPA -5.80 RAP 41.98 ECC 1.3231  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 7 3549.94 -46.90 132.76 249.17 99.16 9 51 17 2549.9 -38.00 102.04  
 60.00 9 6 43 3511.03 -40.19 130.27 250.18 93.35 10 5 14 2511.0 -34.47 100.75  
 70.00 9 29 28 3444.04 -34.13 124.99 250.32 88.68 10 26 52 2444.0 -31.10 96.67  
 80.00 10 8 32 3321.55 -29.53 115.42 250.04 85.34 11 3 54 2321.5 -28.46 88.05  
 90.00 11 16 12 3103.12 -27.70 99.18 249.84 84.05 12 7 55 2103.1 -27.39 72.18  
 100.00 12 51 24 2796.02 -29.53 76.79 250.04 85.34 13 38 0 1796.0 -28.46 49.42  
 110.00 14 28 55 2490.86 -34.13 53.90 250.32 88.68 15 10 25 1490.9 -31.10 25.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2717 TRA -.7104 TC3 -.3516 BAU .5213 SGT 1088.6 SGR 1750.5 SG3 1555.2 ST 22.9 SR 10.3 SS 41.4  
 RDE -.1490 RRA -.1154 RC3-1.9332 FAU .43929 RRT .4018 RRF .9438 RTF .4190 CRT .8742 CRS .7618 CST .4959  
 FDE 2.6799 FRA-3.0043 FC-19.3742 B8P 2902 SGB 2061.4 R23 .1290 R13 .9360 LSA 44.2 MSA 19.6 S8A 3.0  
 BDE .3099 BRA .7197 BC3 1.9866 F8P 2636 SG1 1826.4 SG2 955.8 THA 70.44 EL1 24.7 EL2 4.6 ALF 22.19

LAUNCH DATE AUG 20 1973 FLIGHT TIME 196.00 ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC DISTANCE 442.776 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.918 GAL 3.95 AZL 88.03 HCA 133.37 SMA 198.10 ECC .24523 INC 1.9744 V1 29.435  
 RP 238.63 LAP 1.44 LOP 100.22 VP 21.033 GAP 7.94 AZP 91.36 TAL 20.29 TAP 153.66 RCA 149.52 APO 246.68 V2 23.024  
 RC 215.868 GL 14.80 GP -21.09 ZAL 53.76 ZAP 114.16 ETS 191.90 ZAE 145.98 ETE 219.54 ZAC 63.90 ETC 284.66 LVI 1.78

PLANETOCENTRIC CONIC

C3 19.609 VHL 4.428 DLA 21.13 RAL 11.70 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.549 DPA -6.52 RAP 41.56 ECC 1.3227  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 40 39 3558.67 -46.99 132.58 249.42 98.53 9 48 58 2558.7 -38.31 102.69  
 60.00 9 3 36 3521.54 -40.22 131.17 250.34 92.75 10 2 18 2521.5 -34.74 101.51  
 70.00 9 25 27 3457.18 -34.11 126.01 250.39 88.08 10 23 4 2457.2 -31.33 97.63  
 80.00 10 3 27 3338.02 -29.43 116.64 250.05 84.71 10 59 5 2338.0 -28.63 89.24  
 90.00 11 10 31 3121.50 -27.56 100.51 249.82 83.40 12 2 33 2121.5 -27.54 73.50  
 100.00 12 46 19 2812.49 -29.43 78.00 250.05 84.71 13 33 12 1812.5 -28.63 50.61  
 110.00 14 24 53 2504.00 -34.11 54.93 250.39 88.08 15 6 37 1504.0 -31.33 26.55

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2642 TRA -.7348 TC3 -.4797 BAU .5461 SGT 1155.8 SGR 1811.1 SG3 1585.8 ST 22.9 SR 8.8 SS 43.3  
 RDE -.1235 RRA -.1290 RC3-2.0269 FAU .44674 RRT .4776 RRF .9486 RTF .4948 CRT .8835 CRS .7067 CST .4781  
 FDE 2.8476 FRA-3.0651 FC-19.7231 B8P 3084 SGB 2148.5 R23 .1483 R13 .9382 LSA 45.8 MSA 19.9 S8A 2.9  
 BDE .2916 BRA .7459 BC3 2.0829 F8P 2727 SG1 1924.2 SG2 955.8 THA 87.10 EL1 24.3 EL2 3.9 ALF 19.34

LAUNCH DATE AUG 20 1973 FLIGHT TIME 198.00 ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC DISTANCE 446.586 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.913 GAL 3.94 AZL 87.97 HCA 134.32 SMA 198.00 ECC .24478 INC 2.0329 V1 29.435  
 RP 238.95 LAP 1.45 LOP 101.17 VP 20.989 GAP 7.89 AZP 91.42 TAL 20.23 TAP 154.58 RCA 149.53 APO 246.46 V2 22.991  
 RC 218.810 GL 15.26 GP -21.83 ZAL 53.90 ZAP 112.56 ETS 191.42 ZAE 144.33 ETE 218.00 ZAC 63.52 ETC 284.78 LVI 2.11

PLANETOCENTRIC CONIC

C3 19.595 VHL 4.427 DLA 21.57 RAL 11.56 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.525 DPA -7.26 RAP 41.14 ECC 1.3223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 8 3567.82 -47.08 134.45 249.89 97.87 9 46 36 2567.8 -38.63 103.30  
 60.00 9 0 22 3532.56 -40.25 132.10 250.51 92.11 9 59 15 2532.6 -35.01 102.31  
 70.00 9 21 16 3471.01 -34.07 127.09 250.48 87.44 10 19 7 2471.0 -31.56 98.64  
 80.00 9 58 7 3355.46 -29.31 117.92 250.06 84.05 10 54 2 2355.5 -28.81 90.51  
 90.00 11 4 32 3141.06 -27.40 101.92 249.81 82.71 11 56 53 2141.1 -27.69 74.81  
 100.00 12 40 59 2829.94 -29.31 79.29 250.06 84.05 13 28 9 1829.9 -28.81 51.87  
 110.00 14 20 42 2517.83 -34.07 56.01 250.48 87.44 15 2 40 1517.8 -31.56 27.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2508 TRA -.7555 TC3 -.6028 BAU .5733 SGT 1222.9 SGR 1877.9 SG3 1617.7 ST 22.6 SR 7.6 SS 48.0  
 RDE -.0992 RRA -.1452 RC3-2.1038 FAU .45475 RRT .9433 RRF .9833 RTF .3.06 CRT .8927 CRS .6162 CST .4484  
 FDE 2.8918 FRA-3.1483 FC-20.0918 B8P 3260 SGB 2241.0 R23 .1878 R13 .9416 LSA 46.7 MSA 20.2 S8A 2.8  
 BDE .2697 BRA .7693 BC3 2.1884 F8P 2767 SG1 2029.7 SG2 949.9 THA 84.87 EL1 23.7 EL2 3.3 ALF 17.09

LAUNCH DATE AUG 20 1973 FLIGHT TIME 200.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 450.386 EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.908 GAL 3.92 AZL 87.91 HCA 135.27 SMA 197.91 ECC .24438 INC 2.0932 V1 29.435  
 RP 239.28 LAP 1.47 LOP 102.12 VP 20.947 GAP 7.44 AZP 91.49 TAL 20.16 TAP 155.43 RCA 149.54 APO 246.27 V2 22.980  
 RC 221.744 GL 15.72 GP -22.17 ZAL 54.06 ZAP 110.99 ETS 190.92 ZAE 142.68 ETE 216.55 ZAC 63.13 ETC 284.90 LVI 2.47

PLANETOCENTRIC CONIC

C3 19.586 VHL 4.426 DLA 22.02 RAL 11.42 RAD 6642.7 VEL 11.815 PTH 6.84 VHP 2.503 DPA -8.00 RAP 40.71 ECC 1.3223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 32 3577.40 -47.16 135.36 249.98 97.18 9 44 9 2577.4 -38.95 103.99  
 60.00 8 57 2 3544.12 -40.28 133.08 250.70 91.45 9 56 6 2544.1 -35.30 103.16  
 70.00 9 16 54 3485.58 -34.02 128.23 250.58 86.77 10 15 0 2485.6 -31.79 99.72  
 80.00 9 52 29 3375.99 -29.17 119.28 250.09 83.34 10 48 43 2374.0 -28.98 91.86  
 90.00 10 58 9 3161.95 -27.21 103.41 249.80 81.98 11 50 51 2162.0 -27.83 76.42  
 100.00 12 35 21 2848.46 -29.17 80.65 250.09 83.34 13 22 49 1848.5 -28.98 53.22  
 110.00 14 16 20 2532.40 -34.02 57.14 250.58 86.77 14 58 33 1532.4 -31.79 28.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2356 TRA -.7776 TC3 -.7294 BAU .6021 SGT 1299.6 SGR 1945.8 SG3 1647.4 ST 22.3 SR 6.5 SS 46.7  
 RDE -.0737 RRA -.1616 RC3-2.1809 FAU .46207 RRT .8012 RRF .9575 RTF .6181 CRT .8965 CRS .4701 CST .4095  
 FDE 3.1385 FRA-3.2209 FC-20.4242 B8P 3448 SGB 2339.9 R23 .1642 R13 .9448 LSA 47.9 MSA 20.5 S8A 2.7  
 BDE .2469 BRA .7942 BC3 2.2996 F8P 2841 SG1 2141.1 SG2 943.8 THA 82.30 EL1 23.1 EL2 2.8 ALF 14.90

LAUNCH DATE AUG 20 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.804 GAL 3.90 AZL 87.84 HCA 136.22 SMA 197.83 ECC .24398 INC 2.1554 V1 29.438  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.906 GAP 7.29 AZP 91.56 TAL 20.09 TAP 156.30 RCA 149.56 APO 246.09 V2 22.928  
 RC 224.672 GL 16.20 GP -22.72 ZAL 54.24 ZAP 109.36 ETS 190.40 ZAE 140.95 ETE 215.18 ZAC 62.75 ETC 285.02 LVI 2.83

PLANETOCENTRIC CONIC  
 C3 19.583 VHL 4.425 DLA 22.49 RAL 11.29 RAD 6642.7 VEL 11.815 PTH 6.84 VHP 2.484 DPA -8.75 RAP 40.29 ECC 1.3223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 51 3587.43 -47.24 136.32 250.31 96.44 9 41 38 2587.4 -39.29 104.71  
 60.00 8 53 33 3556.26 -40.30 134.12 250.91 90.75 9 52 49 2556.3 -35.59 104.06  
 70.00 9 12 20 3500.94 -33.95 129.42 250.69 86.07 10 10 41 2500.9 -32.02 100.85  
 80.00 9 46 31 3393.71 -29.01 120.72 250.12 82.60 10 43 5 2393.7 -29.15 93.30  
 90.00 10 51 22 3184.35 -26.99 105.02 249.79 81.21 11 44 26 2184.3 -27.96 78.05  
 100.00 12 29 23 2868.18 -29.01 82.09 250.12 82.60 13 17 11 1868.2 -29.15 54.67  
 110.00 14 11 46 2547.76 -33.95 58.34 250.69 86.07 14 54 14 1547.8 -32.02 29.77

DIFFERENTIAL CORRECTIONS  
 TDE -.2189 TRA -.8009 TC3 -.8610 BAU .6323 SGT 1385.8 SGR 2013.6 SG3 1673.3 ST 22.0 SR 5.7 SS 48.4  
 RDE -.0472 RRA -.1778 RC3-2.2566 FAU .46834 RRT .6518 RRF .9612 RTF .6680 CRT .8759 CRS .2412 CST .3664  
 FDE 3.2846 FRA-3.2872 FC-20.7046 BSP 3648 SGB 2444.4 R23 .1693 R13 .9478 LSA 49.2 MSA 20.7 SSA 2.6  
 BDE .2239 BRA .8204 BC3 2.4153 FSP 2892 SG1 2257.5 SG2 937.4 THA 60.20 EL1 22.6 EL2 2.7 ALF 12.91

LAUNCH DATE AUG 20 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.901 GAL 3.88 AZL 87.78 HCA 137.16 SMA 197.78 ECC .24363 INC 2.2196 V1 29.435  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.866 GAP 6.95 AZP 91.63 TAL 20.01 TAP 157.16 RCA 149.58 APO 245.94 V2 22.897  
 RC 227.591 GL 16.69 GP -23.27 ZAL 54.43 ZAP 107.77 ETS 189.87 ZAE 139.25 ETE 213.88 ZAC 62.36 ETC 285.14 LVI 3.23

PLANETOCENTRIC CONIC  
 C3 19.586 VHL 4.426 DLA 22.98 RAL 11.16 RAD 6642.7 VEL 11.815 PTH 6.84 VHP 2.468 DPA -9.50 RAP 39.88 ECC 1.3223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 4 3597.95 -47.32 137.32 250.66 95.67 9 39 2 2597.9 -39.64 109.48  
 60.00 8 49 56 3569.00 -40.30 135.20 251.15 90.01 9 49 25 2569.0 -35.88 105.01  
 70.00 9 7 32 3517.16 -33.87 130.68 250.82 85.33 10 6 9 2517.2 -32.26 102.06  
 80.00 9 40 11 3414.75 -28.82 122.25 250.15 81.82 10 37 6 2414.7 -29.31 94.84  
 90.00 10 44 5 3208.43 -26.72 106.73 249.78 80.39 11 37 34 2208.4 -28.07 79.80  
 100.00 12 23 3 2889.22 -28.82 83.62 250.15 81.82 13 11 12 1889.2 -29.31 56.21  
 110.00 14 6 59 2563.98 -33.87 59.60 250.82 85.33 14 49 43 1564.0 -32.26 30.98

DIFFERENTIAL CORRECTIONS  
 TDE -.2003 TRA -.8250 TC3 -.9949 BAU .6643 SGT 1479.4 SGR 2083.9 SG3 1697.9 ST 21.7 SR 5.3 SS 50.1  
 RDE -.0192 RRA -.1948 RC3-2.3338 FAU .47421 RRT .6953 RRF .9647 RTF .7105 CRT .7968 CRS -.0810 CST .3162  
 FDE 3.4339 FRA-3.3528 FC-20.9608 BSP 3859 SGB 2555.6 R23 .1724 R13 .9507 LSA 50.7 MSA 20.9 SSA 2.5  
 BDE .2012 BRA .8477 BC3 2.5370 FSP 2934 SG1 2380.0 SG2 931.1 THA 58.34 EL1 22.2 EL2 3.1 ALF 11.21

LAUNCH DATE AUG 20 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.898 GAL 3.86 AZL 87.71 HCA 138.10 SMA 197.70 ECC .24332 INC 2.2859 V1 29.435  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.828 GAP 6.71 AZP 91.70 TAL 19.92 TAP 158.01 RCA 149.59 APO 245.80 V2 22.866  
 RC 230.502 GL 17.20 GP -23.83 ZAL 54.63 ZAP 106.19 ETS 189.31 ZAE 137.53 ETE 212.64 ZAC 61.97 ETC 285.26 LVI 3.62

PLANETOCENTRIC CONIC  
 C3 19.596 VHL 4.427 DLA 23.48 RAL 11.03 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.454 DPA -10.26 RAP 39.47 ECC 1.3225  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 12 3808.96 -47.39 138.38 251.04 94.86 9 38 21 2609.0 -40.00 108.29  
 60.00 8 46 10 3582.38 -40.29 136.34 251.40 89.24 9 45 53 2582.4 -36.19 106.02  
 70.00 9 2 30 3534.30 -33.77 132.01 250.95 84.55 10 1 24 2534.3 -32.49 103.34  
 80.00 9 33 26 3437.25 -28.59 123.89 250.18 80.99 10 30 43 2437.2 -29.46 96.50  
 90.00 10 36 14 3234.46 -26.42 108.57 249.76 79.52 11 30 9 2234.5 -28.17 81.70  
 100.00 12 16 18 2911.72 -28.59 85.26 250.18 80.99 13 4 49 1911.7 -29.46 57.86  
 110.00 14 1 56 2581.12 -33.77 60.92 250.95 84.55 14 44 57 1581.1 -32.49 32.26

DIFFERENTIAL CORRECTIONS  
 TDE -.1787 TRA -.8492 TC3-1.1301 BAU .6975 SGT 1378.1 SGR 2155.4 SG3 1719.7 ST 21.4 SR 5.8 SS 51.7  
 RDE .0089 RRA -.2127 RC3-2.4108 FAU .47933 RRT .7328 RRF .9678 RTF .172 CRT .6644 CRS -.4053 CST .2547  
 FDE 3.5724 FRA-3.4188 FC-21.1771 BSP 4075 SGB 2671.4 R23 .1733 R13 .9538 LSA 52.1 MSA 21.1 SSA 2.5  
 BDE .1790 BRA .8754 BC3 2.6626 FSP 2862 SG1 2306.8 SG2 923.4 THA 56.69 EL1 21.8 EL2 4.1 ALF 10.14

LAUNCH DATE AUG 20 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.895 GAL 3.84 AZL 87.65 HCA 139.04 SMA 197.65 ECC .24303 INC 2.3545 V1 29.435  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.791 GAP 6.47 AZP 91.78 TAL 19.82 TAP 158.86 RCA 149.61 APO 245.68 V2 22.836  
 RC 233.405 GL 17.73 GP -24.39 ZAL 54.85 ZAP 104.62 ETS 188.74 ZAE 135.80 ETE 211.46 ZAC 61.57 ETC 285.38 LVI 4.02

PLANETOCENTRIC CONIC  
 C3 19.612 VHL 4.429 DLA 24.00 RAL 10.90 RAD 6642.7 VEL 11.816 PTH 6.84 VHP 2.442 DPA -11.02 RAP 39.08 ECC 1.3228  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 12 3620.49 -47.45 139.49 251.45 94.01 9 33 33 2620.5 -40.36 107.15  
 60.00 8 42 14 3596.43 -40.28 137.53 251.66 88.43 9 42 11 2596.4 -36.49 107.09  
 70.00 8 57 10 3552.41 -33.64 133.41 251.09 83.73 9 56 23 2552.4 -32.72 104.70  
 80.00 9 26 11 3461.39 -28.32 125.63 250.21 80.11 10 23 53 2461.4 -29.59 98.28  
 90.00 10 27 42 3262.73 -26.05 110.56 249.73 78.59 11 22 5 2262.7 -28.24 83.76  
 100.00 12 9 3 2935.86 -28.32 87.00 250.21 80.11 12 57 59 1935.9 -29.59 59.65  
 110.00 13 56 37 2599.23 -33.64 62.32 251.09 83.73 14 39 56 1599.2 -32.72 33.62

DIFFERENTIAL CORRECTIONS  
 TDE -.1519 TRA -.8708 TC3-1.2602 BAU .7330 SGT 1674.9 SGR 2235.8 SG3 1744.3 ST 21.0 SR 6.4 SS 52.9  
 RDE .0344 RRA -.2350 RC3-2.4956 FAU .48541 RRT .7661 RRF .9708 RTF .7805 CRT .5661 CRS -.6214 CST .1719  
 FDE 3.6743 FRA-3.5180 FC-21.4272 BSP 4281 SGB 2793.6 R23 .1687 R13 .9577 LSA 53.2 MSA 21.1 SSA 2.4  
 BDE .1558 BRA .9020 BC3 2.7958 FSP 2946 SG1 2640.7 SG2 911.4 THA 55.46 EL1 21.3 EL2 5.2 ALF 10.39

LAUNCH DATE AUG 20 1973 FLIGHT TIME 210.00 ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 151.37 LAL -.00 LOL 326.83 VL 32.893 GAL 3.81 AZL 87.57 HCA 139.97 SMA 197.61 ECC .24278 INC 2.4255 V1 29.435  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.755 GAP 6.23 AZP 91.86 TAL 19.71 TAP 159.88 RCA 149.83 APO 245.56 V2 22.807  
 RC 236.297 GL 16.27 GP -24.96 ZAL 55.05 ZAP 103.08 ETS 188.16 ZAE 134.08 ETE 210.34 ZAC 61.17 ETC 285.50 LVI 4.43

Planetocentric Conic: C3 19.635 VHL 4.431 DLA 24.54 RAL 10.77 RAD 6642.7 VEL 11.817 PTH 6.84 VHP 2.433 DPA -11.79 RAP 38.67 ECC 1.3231  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 5 3632.61 -47.50 140.65 251.69 93.11 9 30 38 2632.6 -40.74 108.06  
 60.00 8 38 6 3611.25 -40.24 138.79 251.95 87.57 9 38 18 2611.2 -36.81 108.22  
 70.00 8 51 32 3571.69 -33.49 134.89 251.24 82.87 9 51 4 2571.7 -32.95 106.16  
 80.00 9 18 21 3487.53 -28.00 127.51 250.23 79.17 10 16 29 2487.5 -29.70 100.21  
 90.00 10 18 19 3293.86 -25.61 112.73 249.68 77.58 11 13 13 2293.9 -28.28 86.04  
 100.00 12 1 13 2962.00 -28.00 88.88 250.23 79.17 12 50 35 1962.0 -29.70 61.58  
 110.00 13 50 58 2618.50 -33.49 63.81 251.24 82.87 14 34 37 1618.5 -32.95 35.08

Differential Corrections: TDE -.1338 TRA -.9044 TC3-1.4163 BAU .7672 SGT 1803.0 SGR 2294.8 S63 1749.7 ST 21.2 SR 7.8 S8 55.3  
 RDE .0722 RRA -.2460 RC3-2.5568 FAU .48571 RRT .7913 RRF .9730 RTF .8030 CRT .4061 CR8 -.8082 CST .1203  
 FDE 3.8783 FRA-3.5014 FC-21.4156 BSP 4551 SGB 2919.5 R23 .1777 R13 .9581 LSA 55.7 MSA 21.4 S8A 2.3  
 BDE .1519 BRA .9373 BC3 2.9228 FSP 3034 S61 2773.0 S62 913.2 THA 53.51 EL1 21.5 EL2 7.0 ALF 9.53

LAUNCH DATE AUG 20 1973 FLIGHT TIME 212.00 ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 151.37 LAL -.00 LOL 326.83 VL 32.891 GAL 3.79 AZL 87.50 HCA 140.90 SMA 197.58 ECC .24255 INC 2.4993 V1 29.435  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.720 GAP 5.99 AZP 91.94 TAL 19.80 TAP 160.50 RCA 149.65 APO 245.50 V2 22.777  
 RC 239.179 GL 18.83 GP -25.53 ZAL 55.34 ZAP 101.55 ETS 187.55 ZAE 132.36 ETE 209.25 ZAC 60.76 ETC 285.62 LVI 4.85

Planetocentric Conic: C3 19.666 VHL 4.435 DLA 25.11 RAL 10.64 RAD 6642.7 VEL 11.819 PTH 6.84 VHP 2.427 DPA -12.56 RAP 38.30 ECC 1.3237  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 26 50 3645.30 -47.54 141.88 252.35 92.17 9 27 35 2645.3 -41.13 109.03  
 60.00 8 33 46 3626.82 -40.19 140.12 252.25 86.68 9 34 13 2626.8 -37.12 109.42  
 70.00 8 45 33 3592.12 -33.31 136.45 251.39 81.96 9 45 25 2592.1 -33.17 107.71  
 80.00 9 9 51 3515.86 -27.62 129.53 250.24 78.18 10 8 26 2515.9 -29.79 102.31  
 90.00 10 7 55 3328.31 -25.09 115.12 249.60 76.50 11 3 23 2328.3 -28.27 88.56  
 100.00 11 52 42 2990.33 -27.62 90.89 250.24 78.18 12 42 33 1990.3 -29.79 63.68  
 110.00 13 44 59 2638.94 -33.31 65.37 251.39 81.96 14 28 58 1638.9 -33.17 36.63

Differential Corrections: TDE -.1068 TRA -.9326 TC3-1.5602 BAU .8039 SGT 1924.7 SGR 2366.3 S63 1760.8 ST 21.2 SR 9.5 S8 57.1  
 RDE .1053 RRA -.2635 RC3-2.6296 FAU .48787 RRT .8144 RRF .8752 RTF .8250 CRT .3616 CR8 -.8871 CST .0384  
 FDE 4.0223 FRA-3.5382 FC-21.4768 BSP 4798 SGB 3050.2 R23 .1779 R13 .9603 LSA 57.7 MSA 21.5 S8A 2.2  
 BDE .1500 BRA .9691 BC3 3.0578 FSP 3053 S61 2912.0 S62 907.7 THA 52.17 EL1 21.6 EL2 8.7 ALF 11.03

LAUNCH DATE AUG 20 1973 FLIGHT TIME 214.00 ARRIVAL DATE MAR 22 1974

Heliocentric Conic: RL 151.37 LAL -.00 LOL 326.83 VL 32.890 GAL 3.76 AZL 87.42 HCA 141.83 SMA 197.55 ECC .24235 INC 2.5758 V1 29.435  
 RP 241.38 LAP 1.59 LOP 108.70 VP 20.687 GAP 5.75 AZP 92.03 TAL 19.48 TAP 161.32 RCA 149.68 APO 245.43 V2 22.749  
 RC 242.049 GL 19.41 GP -26.11 ZAL 55.61 ZAP 100.04 ETS 186.93 ZAE 130.64 ETE 208.21 ZAC 60.35 ETC 285.74 LVI 5.28

Planetocentric Conic: C3 19.705 VHL 4.439 DLA 25.69 RAL 10.51 RAD 6642.7 VEL 11.820 PTH 6.84 VHP 2.422 DPA -13.33 RAP 37.93 ECC 1.3243  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 23 26 3658.82 -47.56 143.17 252.84 91.18 9 24 24 2658.6 -41.53 110.06  
 60.00 8 29 12 3643.23 -40.11 141.90 252.56 85.74 9 29 55 2643.2 -37.44 110.70  
 70.00 8 39 9 3613.90 -33.09 138.12 251.54 81.00 9 39 23 2613.9 -33.38 109.38  
 80.00 9 0 30 3548.87 -27.17 131.72 250.22 77.11 9 59 37 2548.9 -29.85 104.82  
 90.00 9 56 9 3367.15 -24.44 117.78 249.48 75.31 10 52 16 2367.2 -28.20 91.40  
 100.00 11 43 22 3021.34 -27.17 93.09 250.22 77.11 12 33 44 2021.3 -29.85 65.98  
 110.00 13 38 35 2660.71 -33.09 67.03 251.54 81.00 14 22 56 1660.7 -33.38 38.30

Differential Corrections: TDE -.0782 TRA -.9620 TC3-1.7081 BAU .8419 SGT 2050.1 SGR 2437.8 S63 1780.1 ST 21.4 SR 11.4 S8 58.8  
 RDE .1400 RRA -.2811 RC3-2.7005 FAU .48896 RRT .8340 RRF .8773 RTF .8435 CRT .3570 CR8 -.9309 CST -.0487  
 FDE 4.1862 FRA-3.5678 FC-21.4822 BSP 3051 SGB 3185.2 R23 .1782 R13 .9623 LSA 59.8 MSA 21.6 S8A 2.1  
 BDE .1603 BRA 1.0023 BC3 3.1942 FSP 3065 S61 3054.6 S62 902.8 THA 50.89 EL1 21.9 EL2 10.4 ALF 14.08

LAUNCH DATE AUG 20 1973 FLIGHT TIME 216.00 ARRIVAL DATE MAR 24 1974

Heliocentric Conic: RL 151.37 LAL -.00 LOL 326.83 VL 32.889 GAL 3.74 AZL 87.34 HCA 142.76 SMA 197.54 ECC .24217 INC 2.6553 V1 29.435  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.654 GAP 5.52 AZP 92.11 TAL 19.36 TAP 162.12 RCA 149.70 APO 245.37 V2 22.720  
 RC 244.907 GL 20.00 GP -26.69 ZAL 55.89 ZAP 98.56 ETS 186.29 ZAE 128.92 ETE 207.20 ZAC 59.92 ETC 285.86 LVI 5.72

Planetocentric Conic: C3 19.754 VHL 4.445 DLA 26.29 RAL 10.38 RAD 6642.7 VEL 11.822 PTH 6.84 VHP 2.421 DPA -14.10 RAP 37.58 ECC 1.3251  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 51 3672.60 -47.58 144.52 253.35 90.14 9 21 4 2672.6 -41.94 111.15  
 60.00 8 24 22 3660.54 -40.02 142.97 252.89 84.75 9 25 23 2660.5 -37.76 112.06  
 70.00 8 32 18 3637.16 -32.82 139.88 251.69 79.99 9 32 55 2637.2 -33.58 111.17  
 80.00 8 50 9 3581.16 -26.62 134.12 250.17 75.96 9 49 50 2581.2 -29.85 107.16  
 90.00 9 42 30 3412.01 -23.63 120.82 249.28 74.00 10 39 22 2412.0 -28.04 94.67  
 100.00 11 33 0 3055.63 -26.62 95.49 250.17 75.96 12 23 56 2055.6 -29.85 68.53  
 110.00 13 31 45 2683.98 -32.82 68.80 251.69 79.99 14 16 29 1684.0 -33.58 40.08

Differential Corrections: TDE -.0471 TRA -.9924 TC3-1.8531 BAU .8801 SGT 2180.2 SGR 2509.7 S63 1772.0 ST 21.8 SR 13.6 S8 60.6  
 RDE .1760 RRA -.2987 RC3-2.7700 FAU .48919 RRT .8508 RRF .8792 RTF .8592 CRT .3816 CR8 -.9559 CST -.1403  
 FDE 4.3059 FRA-3.5881 FC-21.4395 BSP 5310 SGB 3324.4 R23 .1783 R13 .9641 LSA 62.0 MSA 21.7 S8A 2.0  
 BDE .1822 BRA 1.0364 BC3 3.3327 FSP 3071 S61 3200.7 S62 898.4 THA 49.71 EL1 22.6 EL2 12.1 ALF 18.93

LAUNCH DATE AUG 20 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

DISTANCE 484.474

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.889 GAL 3.71 AZL 87.26 HCA 143.69 SMA 197.53 ECC .24202 INC 2.7382 V1 29.435
RP 241.92 LAP 1.64 LOP 110.55 VP 20.623 GAP 5.29 AZP 92.21 TAL 19.22 TAP 162.91 RCA 149.72 APO 245.33 V2 22.692
RC 247.751 GL 20.63 GP -27.28 ZAL 56.19 ZAP 97.10 ETS 185.64 ZAE 127.22 ETE 206.23 ZAC 59.49 ETC 285.98 LVI 6.18

PLANETOCENTRIC CONIC

C3 19.811 VHL 4.451 DLA 26.91 RAL 10.24 RAD 6642.8 VEL 11.825 PTH 6.84 VHP 2.421 DPA -14.88 RAP 37.25 ECC 1.3260
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 16 5 3687.29 -47.57 145.94 253.89 89.04 9 17 32 2687.3 -42.35 112.32
60.00 8 19 16 3678.84 -39.89 144.51 253.22 83.71 9 20 34 2678.8 -38.08 113.51
70.00 8 24 56 3662.11 -32.51 141.76 251.82 78.91 9 25 58 2662.1 -33.76 113.09
80.00 8 38 27 3619.64 -25.96 136.79 250.06 74.70 9 38 47 2619.6 -29.80 110.02
90.00 9 26 0 3466.00 -22.57 124.42 248.97 72.50 10 23 46 2466.0 -27.73 98.59
100.00 11 21 19 3094.12 -25.96 98.16 250.06 74.70 12 12 53 2094.1 -29.80 71.39
110.00 13 24 22 2708.93 -32.51 70.68 251.82 78.91 14 9 31 1708.9 -33.76 42.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0137 TRA-1.0236 TC3-2.0001 BAU .9191 SGT 2313.8 SGR 2580.4 SG3 1771.4 ST 22.3 SR 15.8 SS 62.3
RDE .2138 RRA -.3168 RC3-2.8360 FAU .48814 RRT .8652 RRF .9809 RTF .8726 CRT .4241 CRS -.9709 CST -.2335
FDE 4.4437 FRA-3.6040 FC-21.3309 BSP 5579 SGB 3465.9 R23 .1783 R13 .9657 LSA 64.4 MSA 21.8 SSA 1.9
BDE .2142 BRA 1.0715 BC3 3.4703 FSP 3074 SG1 3348.6 SG2 894.0 THA 48.60 EL1 23.9 EL2 13.4 ALF 25.19

LAUNCH DATE AUG 20 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 488.263

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.889 GAL 3.68 AZL 87.18 HCA 144.61 SMA 197.52 ECC .24188 INC 2.8245 V1 29.435
RP 242.19 LAP 1.64 LOP 111.48 VP 20.592 GAP 5.05 AZP 92.30 TAL 19.08 TAP 163.70 RCA 149.75 APO 245.30 V2 22.665
RC 250.580 GL 21.27 GP -27.88 ZAL 56.50 ZAP 95.67 ETS 184.97 ZAE 125.53 ETE 205.28 ZAC 59.05 ETC 286.10 LVI 6.65

PLANETOCENTRIC CONIC

C3 19.880 VHL 4.459 DLA 27.56 RAL 10.09 RAD 6642.8 VEL 11.828 PTH 6.85 VHP 2.424 DPA -15.66 RAP 36.95 ECC 1.3272
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 12 7 3702.74 -47.54 147.43 254.45 87.89 9 13 50 2702.7 -42.77 113.56
60.00 8 13 49 3698.20 -39.73 146.13 253.56 82.62 9 15 27 2698.2 -38.39 115.06
70.00 8 16 56 3689.00 -32.14 143.77 251.94 77.78 9 18 25 2689.0 -33.91 115.17
80.00 8 24 57 3663.81 -25.13 139.81 249.88 73.32 9 26 1 2663.8 -29.65 113.30
90.00 9 4 12 3536.93 -21.05 129.06 248.44 70.56 10 3 9 2536.9 -27.13 103.89
100.00 11 7 49 3138.28 -25.13 101.18 249.88 73.32 12 0 8 2138.3 -29.65 74.66
110.00 13 16 23 2735.82 -32.14 72.69 251.94 77.78 14 1 58 1735.8 -33.91 44.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0222 TRA-1.0558 TC3-2.1472 BAU .9592 SGT 2451.4 SGR 2651.9 SG3 1767.8 ST 23.2 SR 18.2 SS 64.0
RDE .2530 RRA -.3347 RC3-2.9008 FAU .48632 RRT .8776 RRF .9824 RTF .8840 CRT .4766 CRS -.9802 CST -.3249
FDE 4.5762 FRA-3.6095 FC-21.1783 BSP 5850 SGB 3611.3 R23 .1782 R13 .9672 LSA 67.0 MSA 21.9 SSA 1.9
BDE .2540 BRA 1.1078 BC3 3.6090 FSP 3069 SG1 3499.8 SG2 890.6 THA 47.56 EL1 25.7 EL2 14.5 ALF 31.51

LAUNCH DATE AUG 20 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

DISTANCE 492.052

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.889 GAL 3.65 AZL 87.09 HCA 145.53 SMA 197.53 ECC .24178 INC 2.9146 V1 29.435
RP 242.46 LAP 1.65 LOP 112.40 VP 20.563 GAP 4.82 AZP 92.40 TAL 18.94 TAP 164.47 RCA 149.77 APO 245.28 V2 22.638
RC 253.394 GL 21.94 GP -28.49 ZAL 56.83 ZAP 94.28 ETS 184.28 ZAE 123.85 ETE 204.35 ZAC 58.60 ETC 286.22 LVI 7.13

PLANETOCENTRIC CONIC

C3 19.960 VHL 4.460 DLA 28.24 RAL 9.94 RAD 6642.8 VEL 11.831 PTH 6.85 VHP 2.429 DPA -16.44 RAP 36.66 ECC 1.3285
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 7 55 3719.01 -47.49 149.00 255.04 86.69 9 9 54 2719.0 -43.20 114.89
60.00 8 8 1 3718.73 -39.54 147.84 253.90 81.47 9 10 0 2718.7 -38.70 116.71
70.00 8 8 13 3718.14 -31.70 145.93 252.04 76.57 9 10 11 2718.1 -34.04 117.44
80.00 8 8 47 3716.37 -24.06 143.34 249.58 71.76 9 10 43 2716.4 -29.36 117.17
90.00 8 21 25 3675.47 -17.68 137.82 247.06 67.56 9 22 40 2675.5 -25.40 113.45
100.00 10 51 39 3190.84 -24.06 104.71 249.58 71.76 11 44 50 2190.8 -29.36 78.54
110.00 13 7 39 2764.96 -31.70 74.84 252.04 76.57 13 53 44 1765.0 -34.04 48.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0609 TRA-1.0886 TC3-2.2931 BAU .9999 SGT 2591.4 SGR 2723.9 SG3 1780.9 ST 24.3 SR 20.8 SS 65.7
RDE .2940 RRA -.3538 RC3-2.9637 FAU .48362 RRT .8884 RRF .9938 RTF .8539 CRT .5344 CRS -.9861 CST -.4131
FDE 4.7038 FRA-3.6139 FC-20.9765 BSP 6118 SGB 3759.7 R23 .1778 R13 .9686 LSA 69.7 MSA 21.9 SSA 1.8
BDE .3002 BRA 1.1446 BC3 3.7472 FSP 3051 SG1 3653.5 SG2 887.0 THA 46.61 EL1 28.1 EL2 19.1 ALF 36.78

LAUNCH DATE AUG 20 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

DISTANCE 495.840

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.889 GAL 3.62 AZL 86.99 HCA 146.45 SMA 197.54 ECC .24169 INC 3.0089 V1 29.435
RP 242.73 LAP 1.66 LOP 113.32 VP 20.535 GAP 4.59 AZP 92.51 TAL 18.79 TAP 165.24 RCA 149.80 APO 245.28 V2 22.612
RC 256.191 GL 22.63 GP -29.11 ZAL 57.18 ZAP 92.90 ETS 183.58 ZAE 122.19 ETE 203.45 ZAC 58.14 ETC 286.34 LVI 7.63

PLANETOCENTRIC CONIC

C3 20.052 VHL 4.478 DLA 28.94 RAL 9.78 RAD 6642.9 VEL 11.835 PTH 6.85 VHP 2.437 DPA -17.22 RAP 36.40 ECC 1.3300
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 3 27 3736.15 -47.41 150.65 255.64 85.42 9 5 44 2736.2 -43.64 116.31
60.00 8 1 49 3740.55 -39.30 149.65 254.25 80.27 9 4 9 2740.6 -39.00 118.49
70.00 7 58 37 3749.97 -31.18 148.26 252.09 75.29 9 1 7 2750.0 -34.12 119.92
80.00 7 47 54 3783.68 -22.55 147.77 249.06 69.89 8 50 58 2783.7 -28.80 122.10
83.60 7 14 1 3892.69 -16.84 153.36 246.61 66.11 8 18 53 2892.7 -25.23 129.33
100.00 10 30 46 3258.15 -22.55 109.14 249.06 69.89 11 25 4 2258.2 -28.80 83.47
110.00 12 58 3 2796.78 -31.18 77.17 252.09 75.29 13 44 40 1796.8 -34.12 48.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1024 TRA-1.1224 TC3-2.4375 BAU 1.0410 SGT 2734.2 SGR 2794.6 SG3 1749.5 ST 25.7 SR 23.4 SS 67.4
RDE .3370 RRA -.3718 RC3-3.0226 FAU .47973 RRT .8976 RRF .9851 RTF .9022 CRT .5910 CRS -.9901 CST -.4939
FDE 4.8280 FRA-3.6048 FC-20.7115 BSP 6399 SGB 3909.6 R23 .1778 R13 .9698 LSA 72.6 MSA 21.9 SSA 1.7
BDE .3522 BRA 1.1824 BC3 3.8830 FSP 3033 SG1 3808.3 SG2 884.6 THA 45.70 EL1 31.0 EL2 15.6 ALF 40.53

LAUNCH DATE AUG 20 1973 FLIGHT TIME 226.00 ARRIVAL DATE APR 3 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 32.890 GAL 3.59 AZL 86.89 HCA 147.37 SMA 197.56 ECC .24162 INC 3.1076 V1 29.435  
 RP 242.99 LAP 1.68 LOP 114.24 VP 20.908 GAP 4.37 AZP 92.62 TAL 18.63 TAP 166.00 RCA 149.82 APO 245.29 V2 22.586  
 RC 258.972 GL 23.35 GP -29.73 ZAL 57.34 ZAP 91.56 E78 182.86 ZAE 120.55 ETE 202.57 ZAC 57.66 ETC 286.47 LVI 8.14

Distance 499.627 Earth to Mars

Planeto-centric Conic: C3 20.159 VHL 4.490 DLA 29.66 RAL 9.61 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 2.447 DPA -18.00 RAP 36.16 ECC 1.3318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 58 43 3754.25 -47.30 152.39 258.27 84.09 9 1 17 2754.2 -44.07 117.83  
 60.00 7 55 8 3763.81 -39.02 151.56 254.58 79.00 8 57 52 2763.0 -39.29 120.40  
 70.00 7 47 56 3785.05 -30.54 150.79 252.10 73.91 8 51 1 2785.1 -34.15 122.66  
 80.00 7 13 39 3893.22 -19.82 154.76 247.92 67.20 8 18 33 2893.2 -27.47 129.96  
 80.66 6 50 2 3968.77 -17.20 159.15 246.71 65.45 7 56 11 2968.8 -25.83 135.12  
 100.00 9 56 31 3367.70 -19.82 116.13 247.92 67.20 10 52 39 2367.7 -27.47 91.33  
 110.00 12 47 22 2931.87 -30.54 79.71 252.10 73.91 13 34 34 1831.9 -34.15 51.58

Differential Corrections: TDE .1467 TRA-1.1571 TC3-2.5795 BAU 1.0826 SGT 2878.9 SGR 2065.9 SG3 1734.9 ST 27.4 SR 26.1 SS 69.0  
 RDE .3814 RRA -.3917 RC3-3.0793 FAU .47498 RRT .9058 RRF .9863 RTF .9097 CRT .6456 CRS -.9928 CST -.5673  
 FDE 4.9423 FRA-3.5980 FC-20.3985 B8P 6678 SGB 4062.2 R23 .1774 R13 .9709 LSA 75.6 MSA 21.8 SSA 1.6  
 BDE .4086 BRA 1.2216 BC3 4.0169 F8P 3005 SG1 3965.3 SG2 881.6 THA 44.86 EL1 34.3 EL2 15.9 ALF 42.97

LAUNCH DATE AUG 20 1973 FLIGHT TIME 228.00 ARRIVAL DATE APR 5 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 32.892 GAL 3.56 AZL 86.79 HCA 148.29 SMA 197.58 ECC .24157 INC 3.2112 V1 29.435  
 RP 243.24 LAP 1.69 LOP 115.16 VP 20.482 GAP 4.14 AZP 92.73 TAL 18.47 TAP 166.75 RCA 149.85 APO 245.31 V2 22.560  
 RC 261.736 GL 24.10 GP -30.37 ZAL 57.92 ZAP 90.26 ETS 182.13 ZAE 118.93 ETE 201.71 ZAC 57.17 ETC 286.80 LVI 8.68

Distance 503.414 Earth to Mars

Planeto-centric Conic: C3 20.281 VHL 4.503 DLA 30.42 RAL 9.42 RAD 6643.0 VEL 11.844 PTH 6.86 VHP 2.460 DPA -18.79 RAP 35.95 ECC 1.3338  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 39 3773.37 -47.15 154.21 256.90 82.69 8 56 32 2773.4 -44.51 119.47  
 60.00 7 47 55 3788.67 -38.68 153.59 254.90 77.66 8 51 4 2788.7 -39.56 122.46  
 70.00 7 35 52 3824.28 -29.77 153.59 252.03 72.43 8 39 36 2824.3 -34.11 125.72  
 78.31 6 31 34 4026.72 -17.56 163.65 246.82 64.76 7 38 41 3026.7 -26.44 139.63  
 78.31 6 31 34 4026.72 -17.56 163.65 246.82 64.76 7 38 41 3026.7 -26.44 139.63  
 78.31 6 31 34 4026.72 -17.56 163.65 246.82 64.76 7 38 41 3026.7 -26.44 139.63  
 110.00 12 35 18 2871.10 -29.77 82.50 252.03 72.43 13 23 9 1871.1 -34.11 54.64

Differential Corrections: TDE .1942 TRA-1.1925 TC3-2.7190 BAU 1.1247 SGT 3025.5 SGR 2936.9 SG3 1716.7 ST 29.4 SR 29.1 SS 70.6  
 RDE .4287 RRA -.4107 RC3-3.1326 FAU .46928 RRT .9128 RRF .9873 RTF .9159 CRT .6941 CRS -.9947 CST -.6313  
 FDE 5.0566 FRA-3.5758 FC-20.0324 B8P 6967 SGB 4216.5 R23 .1775 R13 .9719 LSA 78.8 MSA 22.0 SSA 1.5  
 BDE .4706 BRA 1.2612 BC3 4.1480 F8P 2976 SG1 4123.6 SG2 880.2 THA 44.07 EL1 38.0 EL2 16.2 ALF 44.58

LAUNCH DATE AUG 20 1973 FLIGHT TIME 230.00 ARRIVAL DATE APR 7 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 32.893 GAL 3.53 AZL 86.68 HCA 149.20 SMA 197.81 ECC .24153 INC 3.3200 V1 29.435  
 RP 243.90 LAP 1.70 LOP 116.08 VP 20.456 GAP 3.91 AZP 92.85 TAL 18.30 TAP 167.90 RCA 149.88 APO 245.33 V2 22.533  
 RC 264.483 GL 24.88 GP -31.02 ZAL 58.32 ZAP 89.00 ETS 181.38 ZAE 117.33 ETE 200.87 ZAC 56.66 ETC 286.73 LVI 9.23

Distance 507.200 Earth to Mars

Planeto-centric Conic: C3 20.420 VHL 4.519 DLA 31.20 RAL 9.22 RAD 6643.0 VEL 11.850 PTH 6.87 VHP 2.475 DPA -19.58 RAP 35.78 ECC 1.3361  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 14 3793.62 -46.95 156.13 257.54 81.22 8 51 27 2793.6 -44.94 121.22  
 60.00 7 40 5 3815.38 -38.27 155.74 255.20 76.26 8 43 40 2815.4 -39.80 124.69  
 70.00 7 21 56 3869.02 -28.81 156.71 251.85 70.81 8 26 25 2869.0 -33.95 129.21  
 76.24 6 15 50 4075.57 -17.94 167.50 246.93 64.03 7 23 46 3075.6 -27.08 143.50  
 76.24 6 15 50 4075.57 -17.94 167.50 246.93 64.03 7 23 46 3075.6 -27.08 143.50  
 76.24 6 15 50 4075.57 -17.94 167.50 246.93 64.03 7 23 46 3075.6 -27.08 143.50  
 110.00 12 21 22 2915.84 -28.81 85.63 251.85 70.81 13 9 58 1915.8 -33.95 58.12

Differential Corrections: TDE .2448 TRA-1.2288 TC3-2.8544 BAU 1.1871 SGT 3173.0 SGR 3007.8 SG3 1694.8 ST 31.7 SR 32.1 SS 72.2  
 RDE .4778 RRA -.4305 RC3-3.1825 FAU .48265 RRT .9189 RRF .9883 RTF .9214 CRT .7374 CRS -.9960 CST -.6886  
 FDE 5.1602 FRA-3.5504 FC-19.6130 B8P 7257 SGB 4372.0 R23 .1774 R13 .9728 LSA 82.2 MSA 22.0 SSA 1.5  
 BDE .5387 BRA 1.3018 BC3 4.2750 F8P 2938 SG1 4282.8 SG2 878.8 THA 43.33 EL1 42.0 EL2 16.3 ALF 45.48

LAUNCH DATE AUG 20 1973 FLIGHT TIME 232.00 ARRIVAL DATE APR 9 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.83 VL 32.899 GAL 3.50 AZL 86.57 HCA 150.11 SMA 197.84 ECC .24152 INC 3.4348 V1 29.435  
 RP 243.74 LAP 1.71 LOP 116.99 VP 20.432 GAP 3.69 AZP 92.88 TAL 18.18 TAP 168.24 RCA 149.91 APO 245.37 V2 22.511  
 RC 267.212 GL 25.70 GP -31.60 ZAL 58.73 ZAP 87.78 ETS 180.82 ZAE 115.78 ETE 200.04 ZAC 56.13 ETC 286.88 LVI 9.80

Distance 510.988 Earth to Mars

Planeto-centric Conic: C3 20.578 VHL 4.536 DLA 32.02 RAL 9.00 RAD 6643.1 VEL 11.857 PTH 6.87 VHP 2.483 DPA -20.37 RAP 35.63 ECC 1.3387  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 24 3815.10 -46.71 158.15 258.19 79.68 8 45 59 2815.1 -43.36 123.12  
 60.00 7 31 31 3844.14 -37.78 158.02 255.46 74.77 8 35 35 2844.1 -40.01 127.11  
 70.00 7 5 18 3921.74 -27.57 160.32 251.50 69.00 8 10 39 2921.7 -33.63 133.29  
 74.33 6 1 48 4118.72 -18.31 170.97 247.06 63.27 7 10 27 3118.7 -27.73 146.98  
 74.33 6 1 48 4118.72 -18.31 170.97 247.06 63.27 7 10 27 3118.7 -27.73 146.98  
 74.33 6 1 48 4118.72 -18.31 170.97 247.06 63.27 7 10 27 3118.7 -27.73 146.98  
 110.00 12 4 44 2968.56 -27.57 89.23 251.50 69.00 12 54 12 1968.6 -33.63 62.20

Differential Corrections: TDE .2988 TRA-1.2658 TC3-2.9861 BAU 1.2101 SGT 3322.3 SGR 3079.7 SG3 1670.0 ST 34.2 SR 35.2 SS 73.7  
 RDE .5290 RRA -.4518 RC3-3.2296 FAU .45525 RRT .9245 RRF .9892 RTF .9263 CRT .7753 CRS -.9970 CST -.7338  
 FDE 5.2566 FRA-3.5248 FC-19.1527 B8P 7547 SGB 4530.1 R23 .1771 R13 .9737 LSA 85.8 MSA 21.9 SSA 1.4  
 BDE .6076 BRA 1.3441 BC3 4.3985 F8P 2894 SG1 4444.3 SG2 877.5 THA 42.65 EL1 46.3 EL2 16.5 ALF 45.99



LAUNCH DATE AUG 20 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC										DISTANCE 514.769										EARTH TO MARS																																													
RL	151.37	LAL	-.00	LOL	326.83	VL	32.897	GAL	3.46	AZL	86.44	HCA	151.02	SMA	197.68	ECC	.24152	INC	3.5995	V1	29.439	RP	243.98	LAP	1.72	LOP	117.90	VP	20.409	GAP	3.47	AZP	93.11	TAL	17.95	TAP	168.97	RCA	149.93	APO	245.42	V2	22.487	RC	269.924	GL	26.95	GP	-32.36	ZAL	59.17	ZAP	86.60	ETS	179.84	ZAE	114.21	ZAE	199.23	ZAC	55.98	ETC	287.00	LVI	10.40
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.750	VHL	4.556	DLA	32.87	RAL	8.76	RAD	6643.2	VEL	11.864	PTH	6.88	VHP	2.513	DPA	-21.17	RAP	35.52	ECC	1.3416	ST	37.1	SR	38.4	SS	75.1																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8075	CRS	-.9977	CST	-.7734																																		
50.00	7	36	7	3837.93	-46.41	160.27	258.83	78.07	8	40	5	2837.9	-45.78	125.16	RT	.9294	RRF	.9900	RTF	.9306	LSA	89.5	MSA	21.9	SSA	1.3																																							
60.00	7	22	6	3875.34	-37.19	160.47	255.67	73.21	8	26	42	2875.3	-40.17	129.75	SG	4689.4	R23	.1769	R13	.9745	EL1	50.8	EL2	16.6	ALF	46.21																																							
70.00	6	44	8	3987.84	-25.88	164.71	250.87	66.90	7	50	36	2987.8	-33.01	136.35	SG1	4606.7	SG2	876.7	THA	42.02																																													
72.51	5	48	57	4157.81	-18.70	174.16	247.20	62.47	6	58	15	3157.8	-28.40	150.20																																																			
72.51	5	48	57	4157.81	-18.70	174.16	247.20	62.47	6	58	15	3157.8	-28.40	150.20																																																			
72.51	5	48	57	4157.81	-18.70	174.16	247.20	62.47	6	58	15	3157.8	-28.40	150.20																																																			
110.00	11	43	34	3034.65	-25.88	93.63	250.87	66.90	12	34	9	2034.7	-33.01	67.26																																																			

LAUNCH DATE AUG 20 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC										DISTANCE 518.551										EARTH TO MARS																																													
RL	151.37	LAL	-.00	LOL	326.83	VL	32.899	GAL	3.43	AZL	86.32	HCA	151.93	SMA	197.72	ECC	.24153	INC	3.6832	V1	29.435	RP	244.22	LAP	1.73	LOP	118.61	VP	20.387	GAP	3.24	AZP	93.25	TAL	17.76	TAP	169.69	RCA	149.96	APO	245.47	V2	22.464	RC	272.618	GL	27.44	GP	-33.08	ZAL	59.62	ZAP	85.46	ETS	179.04	ZAE	112.69	ETE	198.42	ZAC	55.00	ETC	287.15	LVI	11.02
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.961	VHL	4.578	DLA	33.75	RAL	8.50	RAD	6643.3	VEL	11.873	PTH	6.89	VHP	2.537	DPA	-21.98	RAP	35.45	ECC	1.3450	ST	40.2	SR	41.8	SS	76.5																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8345	CRS	-.9982	CST	-.8084																																		
50.00	7	29	18	3862.26	-46.04	162.51	259.46	76.39	8	33	41	2862.3	-46.18	127.38	RT	.9375	RRF	.9908	RTF	.9343	LSA	93.5	MSA	21.9	SSA	1.2																																							
60.00	7	11	39	3909.44	-36.49	163.09	255.81	71.55	8	16	48	2909.4	-40.28	132.64	SG	4768.2	SG2	876.6	THA	41.43	EL1	55.6	EL2	16.7	ALF	46.29																																							
70.00	6	12	2	4086.61	-23.09	171.02	249.54	64.11	7	20	9	3086.6	-31.68	145.74																																																			
70.76	5	36	56	4193.91	-19.08	177.17	247.34	61.62	6	46	50	3193.9	-29.09	153.24																																																			
70.76	5	36	56	4193.91	-19.08	177.17	247.34	61.62	6	46	50	3193.9	-29.09	153.24																																																			
70.76	5	36	56	4193.91	-19.08	177.17	247.34	61.62	6	46	50	3193.9	-29.09	153.24																																																			
110.00	11	11	29	3133.42	-23.09	99.94	249.54	64.11	12	3	42	2133.4	-31.68	74.65																																																			

LAUNCH DATE AUG 20 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC										DISTANCE 522.333										EARTH TO MARS																																													
RL	151.37	LAL	-.00	LOL	326.83	VL	32.901	GAL	3.39	AZL	86.18	HCA	152.84	SMA	197.77	ECC	.24157	INC	3.8185	V1	29.435	RP	244.45	LAP	1.74	LOP	119.72	VP	20.365	GAP	3.02	AZP	93.40	TAL	17.57	TAP	170.41	RCA	149.99	APO	245.50	V2	22.441	RC	275.292	GL	28.37	GP	-33.80	ZAL	60.09	ZAP	84.37	ETS	178.23	ZAE	111.20	ETE	197.63	ZAC	54.41	ETC	287.30	LVI	11.67
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	21.192	VHL	4.603	DLA	34.67	RAL	8.22	RAD	6643.4	VEL	11.882	PTH	6.89	VHP	2.563	DPA	-22.80	RAP	35.41	ECC	1.3488	ST	43.7	SR	45.3	SS	77.8																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8574	CRS	-.9986	CST	-.8339																																		
50.00	7	21	54	3888.27	-45.60	164.86	260.06	74.62	8	26	42	2888.3	-46.55	129.78	RT	.9375	RRF	.9915	RTF	.9376	LSA	97.6	MSA	21.9	SSA	1.2																																							
60.00	6	59	54	3947.05	-35.64	165.92	255.86	69.79	8	5	41	2947.1	-40.30	135.84	SG	5008.8	R23	.1770	R13	.9758	EL1	60.6	EL2	16.8	ALF	46.23																																							
69.05	5	25	34	4227.67	-19.47	180.03	247.50	60.73	6	36	2	3227.7	-29.79	156.15																																																			
69.05	5	25	34	4227.67	-19.47	180.03	247.50	60.73	6	36	2	3227.7	-29.79	156.15																																																			
69.05	5	25	34	4227.67	-19.47	180.03	247.50	60.73	6	36	2	3227.7	-29.79	156.15																																																			
69.05	5	25	34	4227.67	-19.47	180.03	247.50	60.73	6	36	2	3227.7	-29.79	156.15																																																			
69.05	5	25	34	4227.67	-19.47	180.03	247.50	60.73	6	36	2	3227.7	-29.79	156.15																																																			
110.00	11	11	29	3133.42	-23.09	99.94	249.54	64.11	12	3	42	2133.4	-31.68	74.65																																																			

LAUNCH DATE AUG 20 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC										DISTANCE 526.114										EARTH TO MARS																																													
RL	151.37	LAL	-.00	LOL	326.83	VL	32.904	GAL	3.36	AZL	86.04	HCA	153.74	SMA	197.82	ECC	.24161	INC	3.9621	V1	29.435	RP	244.68	LAP	1.75	LOP	120.63	VP	20.345	GAP	2.80	AZP	93.55	TAL	17.38	TAP	171.12	RCA	150.02	APO	245.61	V2	22.418	RC	277.948	GL	29.34	GP	-34.55	ZAL	60.59	ZAP	83.33	ETS	177.41	ZAE	109.74	ETE	196.85	ZAC	53.78	ETC	287.46	LVI	12.34
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	21.453	VHL	4.632	DLA	35.63	RAL	7.90	RAD	6643.5	VEL	11.893	PTH	6.90	VHP	2.592	DPA	-23.62	RAP	35.41	ECC	1.3531	ST	47.3	SR	48.9	SS	78.9																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8765	CRS	-.9988	CST	-.8567																																		
50.00	7	13	47	3916.15	-45.07	167.33	260.62	72.78	8	19	4	2916.2	-46.88	132.38	RT	.9410	RRF	.9921	RTF	.9405	LSA	101.9	MSA	21.9	SSA	1.1																																							
60.00	6	46	31	3989.12	-34.61	169.01	255.77	67.91	7	53	0	2989.1	-40.21	139.42	SG	5170.8	R23	.1771	R13	.9764	EL1	65.9	EL2	16.9	ALF	46.10																																							
67.36	5	14	39	4259.67	-19.86	182.80	247.66	59.79	6	25	39	3259.7	-30.52	158.97																																																			
67.36	5	14	39	4259.67	-19.86	182.80	247.66	59.79	6	25	39	3259.7	-30.52	158.97																																																			
67.36	5	14	39	4259.67	-19.86	182.80	247.66	59.79	6	25	39	3259.7	-30.52	158.97																																																			
67.36	5	14	39	4259.67	-19.86	182.80	247.66	59.79	6	25	39	3259.7	-30.52	158.97																																																			
67.36	5	14	39	4259.67	-19.86	182.80	247.66	59.79	6	25	39	3259.7	-30.52	158.97																																																			
110.00	11	11	29	3133.42	-23.09	99.94	249.54	64.11	12	3	42	2133.4	-31.68	74.65																																																			

LAUNCH DATE AUG 20 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 32.907 GAL 3.32 AZL 85.89 HCA 154.84 SMA 197.87 ECC .24167 INC 4.1149 V1 29.439  
 RP 244.90 LAP 1.76 LOP 121.53 VP 20.326 GAP 2.59 AZP 93.72 TAL 17.18 TAP 171.83 RCA 150.05 APO 245.69 V2 22.397  
 RC 280.584 GL 30.36 GP -35.32 ZAL 61.10 ZAP 82.34 ETS 176.37 ZAE 108.32 ETE 196.07 ZAC 53.12 ETC 287.63 LVI 13.05

DISTANCE 529.893

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.750 VHL 4.664 DLA 36.63 RAL 7.54 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 2.625 DPA -24.46 RAP 35.46 ECC 1.3579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 4 52 3946.17 -44.43 169.94 261.12 70.85 8 10 39 2946.2 -47.17 135.23  
 60.00 6 30 54 4037.10 -33.32 172.43 255.48 65.89 7 38 12 3037.1 -39.95 143.47  
 65.68 5 4 7 4290.14 -20.24 185.48 247.83 58.80 6 15 37 3290.1 -31.26 161.72  
 65.68 5 4 7 4290.14 -20.24 185.48 247.83 58.80 6 15 37 3290.1 -31.26 161.72  
 65.68 5 4 7 4290.14 -20.24 185.48 247.83 58.80 6 15 37 3290.1 -31.26 161.72  
 65.68 5 4 7 4290.14 -20.24 185.48 247.83 58.80 6 15 37 3290.1 -31.26 161.72  
 65.68 5 4 7 4290.14 -20.24 185.48 247.83 58.80 6 15 37 3290.1 -31.26 161.72

DIFFERENTIAL CORRECTIONS

TDE .6229 TRA-1.4668 TC3-3.9504 BAU 1.4292  
 RDE .8273 RRA -.5708 RC3-3.3990 FAU .40531  
 FDE 5.5945 FRA-3.3108 FC-16.1330 BSP 9004  
 BDE 1.0356 BRA 1.5740 BC3 4.9151 F8P 2582

MID-COURSE EXECUTION ACCURACY

SGT 4073.6 SGR 3442.1 SG3 1494.9  
 RRT .9442 RRF .9927 RTF .9431  
 SGB 5333.1 R23 .1770 R13 .9770  
 SG1 5260.3 SG2 878.2 THA 39.92

ORBIT DETERMINATION ACCURACY

ST 51.2 SR 52.7 S8 80.0  
 CRT .8928 CRS -.9991 CST -.8759  
 LSA 106.4 MSA 21.9 S8A 1.0  
 EL1 71.5 EL2 17.0 ALF 45.91

LAUNCH DATE AUG 20 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 32.910 GAL 3.28 AZL 85.72 HCA 155.54 SMA 197.93 ECC .24174 INC 4.2780 V1 29.435  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.307 GAP 2.37 AZP 93.90 TAL 16.98 TAP 172.52 RCA 150.08 APO 245.78 V2 22.375  
 RC 283.198 GL 31.43 GP -36.12 ZAL 61.64 ZAP 81.40 ETS 175.71 ZAE 106.92 ETE 195.30 ZAC 52.43 ETC 287.81 LVI 13.79

DISTANCE 533.672

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.086 VHL 4.700 DLA 37.67 RAL 7.15 RAD 6643.8 VEL 11.920 PTH 6.93 VHP 2.661 DPA -25.30 RAP 35.55 ECC 1.3635  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 0 3978.65 -43.67 172.69 261.54 68.85 8 1 19 2978.7 -47.40 138.33  
 60.00 6 12 5 4093.69 -31.68 176.33 254.89 63.66 7 20 19 3093.7 -39.46 148.20  
 64.00 4 53 47 4319.52 -20.62 188.12 248.00 57.75 6 5 47 3319.5 -32.02 164.44  
 64.00 4 53 47 4319.52 -20.62 188.12 248.00 57.75 6 5 47 3319.5 -32.02 164.44  
 64.00 4 53 47 4319.52 -20.62 188.12 248.00 57.75 6 5 47 3319.5 -32.02 164.44  
 64.00 4 53 47 4319.52 -20.62 188.12 248.00 57.75 6 5 47 3319.5 -32.02 164.44  
 64.00 4 53 47 4319.52 -20.62 188.12 248.00 57.75 6 5 47 3319.5 -32.02 164.44

DIFFERENTIAL CORRECTIONS

TDE .7003 TRA-1.5100 TC3-3.6374 BAU 1.4738  
 RDE .8977 RRA -.5981 RC3-3.4170 FAU .39288  
 FDE 5.6313 FRA-3.2516 FC-15.4001 BSP 9310  
 BDE 1.1385 BRA 1.6241 BC3 4.9906 F8P 2508

MID-COURSE EXECUTION ACCURACY

SGT 4222.1 SGR 3515.9 SG3 1450.2  
 RRT .9470 RRF .9933 RTF .9454  
 SGB 5494.3 R23 .1771 R13 .9775  
 SG1 5423.5 SG2 879.6 THA 39.50

ORBIT DETERMINATION ACCURACY

ST 55.4 SR 56.6 S8 80.9  
 CRT .9064 CRS -.9992 CST -.8919  
 LSA 111.1 MSA 21.8 S8A 1.0  
 EL1 77.3 EL2 17.1 ALF 45.72

LAUNCH DATE AUG 20 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 32.913 GAL 3.24 AZL 85.55 HCA 156.44 SMA 197.99 ECC .24183 INC 4.4523 V1 29.435  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.289 GAP 2.15 AZP 94.08 TAL 16.78 TAP 173.22 RCA 150.11 APO 245.87 V2 22.354  
 RC 285.791 GL 32.56 GP -36.95 ZAL 62.20 ZAP 80.51 ETS 174.85 ZAE 105.57 ETE 194.54 ZAC 51.71 ETC 288.01 LVI 14.56

DISTANCE 537.449

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.489 VHL 4.740 DLA 38.76 RAL 6.70 RAD 6643.9 VEL 11.936 PTH 6.94 VHP 2.701 DPA -26.17 RAP 35.69 ECC 1.3696  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 43 59 4014.00 -42.76 175.60 261.83 66.75 7 30 53 3014.0 -47.54 141.74  
 60.00 5 47 49 4184.89 -29.43 181.02 253.80 61.13 6 57 13 3164.9 -38.54 154.03  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14  
 62.31 4 43 39 4347.88 -20.99 190.71 248.17 56.64 5 56 7 3347.9 -32.79 167.14

DIFFERENTIAL CORRECTIONS

TDE .7803 TRA-1.5584 TC3-3.7160 BAU 1.5192  
 RDE .9709 RRA -.6291 RC3-3.4307 FAU .37992  
 FDE 5.6487 FRA-3.1973 FC-14.6366 BSP 9592  
 BDE 1.2456 BRA 1.6787 BC3 5.0574 F8P 2422

MID-COURSE EXECUTION ACCURACY

SGT 4372.7 SGR 3592.5 SG3 1403.2  
 RRT .9498 RRF .9937 RTF .9475  
 SGB 5659.2 R23 .1772 R13 .9779  
 SG1 5590.2 SG2 881.0 THA 39.12

ORBIT DETERMINATION ACCURACY

ST 59.7 SR 60.7 S8 81.7  
 CRT .9176 CRS -.9993 CST -.9048  
 LSA 115.9 MSA 21.8 S8A 1.0  
 EL1 83.3 EL2 17.3 ALF 45.92

LAUNCH DATE AUG 20 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

RL 151.37 LAL -.00 LOL 326.83 VL 32.916 GAL 3.20 AZL 85.38 HCA 157.34 SMA 198.06 ECC .24193 INC 4.6394 V1 29.438  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.272 GAP 1.94 AZP 94.28 TAL 16.57 TAP 173.90 RCA 150.14 APO 245.97 V2 22.334  
 RC 288.381 GL 33.74 GP -37.81 ZAL 62.79 ZAP 79.68 ETS 173.97 ZAE 104.25 ETE 193.78 ZAC 50.94 ETC 288.22 LVI 15.37

DISTANCE 541.225

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.905 VHL 4.786 DLA 39.89 RAL 6.21 RAD 6644.1 VEL 11.954 PTH 6.95 VHP 2.745 DPA -27.04 RAP 35.88 ECC 1.3770  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 31 33 4052.77 -41.67 178.69 261.96 64.57 7 39 6 3052.8 -47.57 145.49  
 60.00 5 9 31 4274.26 -25.64 187.79 251.43 57.78 6 20 45 3274.3 -36.54 162.62  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84  
 60.60 4 33 38 4375.45 -21.35 193.28 248.35 55.46 5 46 34 3375.4 -33.58 169.84

DIFFERENTIAL CORRECTIONS

TDE .8656 TRA-1.6037 TC3-3.7816 BAU 1.5649  
 RDE 1.0494 RRA -.6615 RC3-3.4374 FAU .36621  
 FDE 5.6547 FRA-3.1352 FC-13.8419 BSP 9886  
 BDE 1.3603 BRA 1.7348 BC3 5.1103 F8P 2335

MID-COURSE EXECUTION ACCURACY

SGT 4520.8 SGR 3670.0 SG3 1353.2  
 RRT .9519 RRF .9942 RTF .9493  
 SGB 5822.9 R23 .1773 R13 .9783  
 SG1 5755.6 SG2 882.8 THA 38.78

ORBIT DETERMINATION ACCURACY

ST 64.2 SR 64.9 S8 82.3  
 CRT .9271 CRS -.9994 CST -.9158  
 LSA 120.9 MSA 21.8 S8A 1.0  
 EL1 89.6 EL2 17.4 ALF 45.32

LAUNCH DATE AUG 20 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 945.080 EARTH TO MARS  
 RL 131.37 LAL -.00 LOL 326.83 VL 32.920 GAL 3.17 AZL 85.16 HCA 158.23 SMA 198.13 ECC .24204 INC 4.8407 V1 29.435  
 RP 245.73 LAP 1.79 LOP 125.14 VP 20.256 GAP 1.72 AZP 94.50 TAL 16.35 TAP 174.59 RCA 150.17 APO 246.08 V2 22.314  
 RC 290.907 GL 34.99 GP -38.71 ZAL 63.40 ZAP 78.81 ETS 175.07 ZAE 102.97 ETE 193.03 ZAC 50.14 ETC 288.48 LVI 16.23

PLANETOCENTRIC CONIC

C3 23.402 VHL 4.038 DLA 41.08 RAL 5.85 RAD 6644.3 VEL 11.974 PTH 6.97 VHP 2.794 DPA -27.94 RAP 36.12 ECC 1.3851  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 17 21 4095.74 -40.36 181.98 261.87 62.29 7 25 37 3095.7 -47.45 149.64  
 58.87 4 23 37 4402.47 -21.69 195.85 248.51 54.22 5 37 0 3402.5 -34.37 172.56  
 58.87 4 23 37 4402.47 -21.69 195.85 248.51 54.22 5 37 0 3402.5 -34.37 172.56  
 58.87 4 23 37 4402.47 -21.69 195.85 248.51 54.22 5 37 0 3402.5 -34.37 172.56  
 58.87 4 23 37 4402.47 -21.69 195.85 248.51 54.22 5 37 0 3402.5 -34.37 172.56  
 58.87 4 23 37 4402.47 -21.69 195.85 248.51 54.22 5 37 0 3402.5 -34.37 172.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .9557 TRA-1.6527 TC3-3.8331 BAV 1.6102 SGT 4666.7 SGR 3747.2 SG3 1299.7 ST 68.9 SR 69.3 SS 82.7  
 RDE 1.1333 RRA -.6963 RC3-3.4347 FAU .35155 RRT .9541 RRF .9946 RTF .9509 CRT .9352 CR8 -.9995 CST -.9250  
 FDE 5.6469 FRA-3.0676 FC-13.0054 BSP 10188 SGB 9984.9 R23 .1776 R13 .9786 LSA 126.2 MSA 21.8 SSA .8  
 BDE 1.4825 BRA 1.7934 BC3 5.1468 FSP 2244 SG1 5919.1 S62 884.9 THA 38.47 EL1 96.1 EL2 17.6 ALF 45.15

LAUNCH DATE AUG 20 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 548.773 EARTH TO MARS  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.924 GAL 3.12 AZL 84.94 HCA 159.13 SMA 198.20 ECC .24216 INC 5.0579 V1 29.435  
 RP 245.93 LAP 1.80 LOP 126.04 VP 20.241 GAP 1.51 AZP 94.73 TAL 16.13 TAP 175.26 RCA 150.20 APO 246.19 V2 22.295  
 RC 293.430 GL 36.30 GP -39.65 ZAL 64.05 ZAP 78.20 ETS 172.17 ZAE 101.73 ZAE 101.73 ETE 192.29 ZAC 49.29 ETC 288.70 LVI 17.12

PLANETOCENTRIC CONIC

C3 23.972 VHL 4.896 DLA 42.32 RAL 5.01 RAD 6644.6 VEL 11.998 PTH 6.99 VHP 2.849 DPA -28.86 RAP 36.42 ECC 1.3945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 0 52 4144.09 -38.77 185.51 261.47 59.91 7 9 56 3144.1 -47.11 154.26  
 57.10 4 13 33 4429.06 -22.01 198.42 248.67 52.90 5 27 22 3429.1 -35.17 175.32  
 57.10 4 13 33 4429.06 -22.01 198.42 248.67 52.90 5 27 22 3429.1 -35.17 175.32  
 57.10 4 13 33 4429.06 -22.01 198.42 248.67 52.90 5 27 22 3429.1 -35.17 175.32  
 57.10 4 13 33 4429.06 -22.01 198.42 248.67 52.90 5 27 22 3429.1 -35.17 175.32  
 57.10 4 13 33 4429.06 -22.01 198.42 248.67 52.90 5 27 22 3429.1 -35.17 175.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.0490 TRA-1.7049 TC3-3.8722 BAV 1.6570 SGT 4813.0 SGR 3827.9 SG3 1244.1 ST 73.7 SR 73.8 SS 82.8  
 RDE 1.2220 RRA -.7349 RC3-3.4261 FAU .33645 RRT .9561 RRF .9950 RTF .9523 CRT .9418 CR8 -.9995 CST -.9324  
 FDE 5.6189 FRA-2.9991 FC-12.1506 BSP 10475 SGB 6149.6 R23 .1779 R13 .9789 LSA 131.4 MSA 21.9 SSA .8  
 BDE 1.6105 BRA 1.8565 BC3 5.1704 FSP 2147 SG1 6085.3 S62 887.4 THA 38.21 EL1 102.8 EL2 17.6 ALF 45.01

LAUNCH DATE AUG 20 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 552.545 EARTH TO MARS  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.927 GAL 3.08 AZL 84.71 HCA 160.02 SMA 198.27 ECC .24229 INC 5.2934 V1 29.435  
 RP 246.12 LAP 1.81 LOP 126.93 VP 20.227 GAP 1.30 AZP 94.98 TAL 15.91 TAP 175.93 RCA 150.23 APO 246.31 V2 22.276  
 RC 295.928 GL 37.68 GP -40.62 ZAL 64.72 ZAP 77.56 ETS 171.25 ZAE 100.54 ZAE 100.54 ETE 191.54 ZAC 48.40 ETC 288.97 LVI 18.06

PLANETOCENTRIC CONIC

C3 24.627 VHL 4.963 DLA 43.61 RAL 4.29 RAD 6644.8 VEL 12.025 PTH 7.01 VHP 2.909 DPA -29.80 RAP 36.78 ECC 1.4053  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 41 11 4199.77 -36.80 189.38 260.64 57.40 6 51 11 3199.8 -46.48 159.49  
 55.31 4 3 21 4455.43 -22.30 201.00 248.80 51.50 5 17 36 3455.4 -35.97 178.13  
 55.31 4 3 21 4455.43 -22.30 201.00 248.80 51.50 5 17 36 3455.4 -35.97 178.13  
 55.31 4 3 21 4455.43 -22.30 201.00 248.80 51.50 5 17 36 3455.4 -35.97 178.13  
 55.31 4 3 21 4455.43 -22.30 201.00 248.80 51.50 5 17 36 3455.4 -35.97 178.13  
 55.31 4 3 21 4455.43 -22.30 201.00 248.80 51.50 5 17 36 3455.4 -35.97 178.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1463 TRA-1.7599 TC3-3.8958 BAV 1.7046 SGT 4937.4 SGR 3912.0 SG3 1186.2 ST 78.6 SR 78.4 SS 82.8  
 RDE 1.3156 RRA -.7784 RC3-3.4102 FAU .32081 RRT .9581 RRF .9953 RTF .9537 CRT .9475 CR8 -.9996 CST -.9387  
 FDE 5.5685 FRA-2.9314 FC-11.2779 BSP 10760 SGB 6315.0 R23 .1778 R13 .9793 LSA 136.8 MSA 21.9 SSA .7  
 BDE 1.7450 BRA 1.9243 BC3 5.1774 FSP 2042 SG1 6252.2 S62 888.9 THA 37.99 EL1 109.6 EL2 18.0 ALF 44.89

LAUNCH DATE AUG 20 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 556.317 EARTH TO MARS  
 RL 151.37 LAL -.00 LOL 326.83 VL 32.931 GAL 3.04 AZL 84.45 HCA 160.91 SMA 198.35 ECC .24243 INC 5.5498 V1 29.435  
 RP 246.30 LAP 1.81 LOP 127.83 VP 20.213 GAP 1.09 AZP 95.25 TAL 15.69 TAP 176.60 RCA 150.27 APO 246.44 V2 22.258  
 RC 298.401 GL 39.14 GP -41.64 ZAL 63.41 ZAP 76.96 ETS 170.33 ZAE 99.39 ZAE 99.39 ETE 190.81 ZAC 47.46 ETC 289.27 LVI 19.05

PLANETOCENTRIC CONIC

C3 25.383 VHL 5.038 DLA 44.98 RAL 3.46 RAD 6645.2 VEL 12.056 PTH 7.04 VHP 2.976 DPA -30.76 RAP 37.20 ECC 1.4177  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 16 39 4266.60 -34.25 193.73 259.13 54.70 6 27 46 3266.6 -45.40 165.57  
 53.47 3 52 58 4481.60 -22.55 203.60 248.91 50.02 5 7 39 3481.6 -36.75 181.01  
 53.47 3 52 58 4481.60 -22.55 203.60 248.91 50.02 5 7 39 3481.6 -36.75 181.01  
 53.47 3 52 58 4481.60 -22.55 203.60 248.91 50.02 5 7 39 3481.6 -36.75 181.01  
 53.47 3 52 58 4481.60 -22.55 203.60 248.91 50.02 5 7 39 3481.6 -36.75 181.01  
 53.47 3 52 58 4481.60 -22.55 203.60 248.91 50.02 5 7 39 3481.6 -36.75 181.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.2435 TRA-1.8203 TC3-3.9052 BAV 1.7571 SGT 5103.1 SGR 4011.8 SG3 1129.3 ST 83.4 SR 82.6 SS 82.0  
 RDE 1.4055 RRA -.8357 RC3-3.3999 FAU .30610 RRT .9608 RRF .9956 RTF .9561 CRT .9530 CR8 -.9996 CST -.9445  
 FDE 5.4618 FRA-2.8924 FC-10.4401 BSP 10927 SGB 6491.3 R23 .1745 R13 .9802 LSA 141.5 MSA 21.7 SSA .7  
 BDE 1.8766 BRA 2.0030 BC3 5.1778 FSP 1895 SG1 6430.9 S62 882.9 THA 37.91 EL1 116.0 EL2 18.0 ALF 44.69

LAUNCH DATE AUG 20 1973 FLIGHT TIME 250.00 ARRIVAL DATE MAY 5 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.03 VL 32.936 GAL 3.00 AZL 84.17 MCA 161.60 SMA 100.43 ECC .24258 INC 5.8293 V1 29.435  
 RP 246.48 LAP 1.82 LOP 120.72 VP 20.201 GAP .88 AZP 95.34 TAL 15.46 TAP 177.26 RCA 150.33 APO 246.97 V2 22.241  
 RC 300.850 GL 40.68 GP -42.71 ZAL 66.15 ZAP 76.48 ETS 169.40 ZAE 98.29 ETE 190.08 ZAC 46.46 ETC 289.60 LVI 20.09

Distance 560.085 Earth to Mars

Planetary Conic: C3 26.259 VHL 5.124 DLA 46.36 RAL 2.52 RAD 6645.5 VEL 12.092 PTH 7.07 VHP 3.051 DPA -31.75 RAP 37.69 ECC 1.4322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 42 43 4355.32 -30.63 199.09 256.35 51.63 5 55 18 3355.3 -43.43 173.20  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99  
 51.60 3 42 16 4507.85 -22.75 206.23 248.97 48.45 4 57 24 3507.9 -37.52 183.99

Differential Corrections: TDE 1.3480 TRA-1.8817 TC3-3.8927 BAU 1.8050 SGT 5242.4 SGR 4096.4 SG3 1064.8 ST 88.4 SR 87.6 SS 81.4  
 RDE 1.5156 RRA -.8856 RC3-3.3589 FAU .28857 RRT .9622 RRF .9958 RTF .9567 CRT .9565 CRS -.9996 CST -.9483  
 FDE 5.3811 FRA-2.8022 FC3-9.5158 BSP 11246 SGB 6653.1 R23 .1759 R13 .9802 LSA 147.0 MSA 21.9 SSA .6  
 BDE 2.0283 BRA 2.0797 BC3 5.1415 FSP 1798 SG1 6593.6 SG2 887.6 THA 37.74 EL1 123.0 EL2 18.4 ALF 44.73

LAUNCH DATE AUG 20 1973 FLIGHT TIME 260.00 ARRIVAL DATE MAY 7 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.03 VL 32.940 GAL 2.96 AZL 83.86 MCA 162.69 SMA 198.52 ECC .24275 INC 6.1363 V1 29.435  
 RP 246.65 LAP 1.82 LOP 129.61 VP 20.189 GAP .67 AZP 95.86 TAL 15.23 TAP 177.92 RCA 150.33 APO 246.71 V2 22.224  
 RC 303.274 GL 42.32 GP -43.83 ZAL 66.92 ZAP 76.05 ETS 168.47 ZAE 97.24 ETE 189.35 ZAC 45.41 ETC 289.97 LVI 21.19

Distance 563.852 Earth to Mars

Planetary Conic: C3 27.281 VHL 5.223 DLA 47.83 RAL 1.44 RAD 6645.9 VEL 12.134 PTH 7.10 VHP 3.135 DPA -32.76 RAP 38.26 ECC 1.4490  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07  
 49.67 3 31 9 4534.33 -22.89 208.90 248.97 46.78 4 46 44 3534.3 -38.25 187.07

Differential Corrections: TDE 1.4539 TRA-1.9464 TC3-3.8602 BAU 1.8542 SGT 5377.5 SGR 4184.9 SG3 990.2 ST 93.1 SR 92.6 SS 80.4  
 RDE 1.6314 RRA -.9418 RC3-3.3083 FAU .27064 RRT .9635 RRF .9960 RTF .9572 CRT .9593 CRS -.9996 CST -.9513  
 FDE 5.2684 FRA-2.7084 FC3-8.5885 BSP 11550 SGB 6814.1 R23 .1772 R13 .9802 LSA 152.4 MSA 22.1 SSA .6  
 BDE 2.1852 BRA 2.1622 BC3 5.0839 FSP 1693 SG1 6755.5 SG2 891.7 THA 37.63 EL1 129.9 EL2 18.7 ALF 44.82

LAUNCH DATE AUG 20 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 9 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.03 VL 32.944 GAL 2.91 AZL 83.52 MCA 163.57 SMA 198.60 ECC .24292 INC 6.4750 V1 29.435  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.178 GAP .46 AZP 96.21 TAL 15.00 TAP 178.37 RCA 150.36 APO 246.85 V2 22.207  
 RC 305.673 GL 44.05 GP -45.01 ZAL 67.72 ZAP 75.70 ETS 167.54 ZAE 96.25 ETE 188.64 ZAC 44.30 ETC 290.38 LVI 22.34

Distance 567.617 Earth to Mars

Planetary Conic: C3 28.479 VHL 5.337 DLA 49.35 RAL .18 RAD 6646.4 VEL 12.183 PTH 7.14 VHP 3.229 DPA -33.80 RAP 38.90 ECC 1.4687  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27  
 47.71 3 19 33 4561.12 -22.95 211.61 248.88 45.03 4 35 34 3561.1 -38.93 190.27

Differential Corrections: TDE 1.5813 TRA-2.0151 TC3-3.8043 BAU 1.9035 SGT 5508.9 SGR 4276.0 SG3 929.3 ST 97.7 SR 97.6 SS 79.0  
 RDE 1.7555 RRA -1.0053 RC3-3.2437 FAU .25200 RRT .9648 RRF .9962 RTF .9578 CRT .9616 CRS -.9996 CST -.9535  
 FDE 5.1286 FRA-2.6105 FC3-7.6604 BSP 11883 SGB 6972.1 R23 .1786 R13 .9801 LSA 157.5 MSA 22.3 SSA .8  
 BDE 2.3494 BRA 2.2519 BC3 4.9995 FSP 1584 SG1 6914.4 SG2 895.1 THA 37.58 EL1 136.8 EL2 19.1 ALF 44.87

LAUNCH DATE AUG 20 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 11 1974

Heliocentric Conic: RL 151.37 LAL -0.00 LOL 326.03 VL 32.949 GAL 2.87 AZL 83.15 MCA 164.48 SMA 198.69 ECC .24310 INC 6.8804 V1 29.438  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.168 GAP .25 AZP 96.60 TAL 14.78 TAP 179.28 RCA 150.39 APO 246.99 V2 22.191  
 RC 308.047 GL 48.88 GP -46.24 ZAL 68.56 ZAP 75.43 ETS 166.65 ZAE 95.32 ETE 187.84 ZAC 43.13 ETC 290.85 LVI 23.86

Distance 571.380 Earth to Mars

Planetary Conic: C3 29.894 VHL 5.468 DLA 50.93 RAL 358.78 RAD 6647.0 VEL 12.240 PTH 7.19 VHP 3.335 DPA -34.87 RAP 39.64 ECC 1.4920  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59  
 45.70 3 7 17 4588.47 -22.91 214.37 248.67 43.18 4 23 46 3588.5 -39.55 193.59

Differential Corrections: TDE 1.6808 TRA-2.0925 TC3-3.7309 BAU 1.9569 SGT 5637.3 SGR 4375.6 SG3 859.2 ST 101.7 SR 102.4 SS 76.9  
 RDE 1.8831 RRA -1.0805 RC3-3.1711 FAU .23325 RRT .9662 RRF .9962 RTF .9578 CRT .9629 CRS -.9995 CST -.9544  
 FDE 4.9467 FRA-2.5137 FC3-6.7548 BSP 12153 SGB 7136.2 R23 .1801 R13 .9800 LSA 161.9 MSA 22.6 SSA .5  
 BDE 2.5108 BRA 2.3550 BC3 4.8965 FSP 1464 SG1 7079.4 SG2 898.6 THA 37.58 EL1 143.0 EL2 19.7 ALF 45.22

LAUNCH DATE AUG 20 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 575.142

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.953 GAL 2.83 AZL 82.73 HCA 165.34 SMA 198.78 ECC .24329 INC 7.2693 V1 29.435  
 RP 247.14 LAP 1.84 LOP 132.28 VP 20.150 GAP .05 AZP 97.04 TAL 14.52 TAP 179.66 RCA 150.42 APO 247.14 V2 22.176  
 RC 310.395 GL 47.83 GP -47.32 ZAL 89.44 ZAP 75.26 ETS 165.73 ZAE 94.45 ETE 187.25 ZAC 41.90 ETC 291.35 LVI 24.84

PLANETOCENTRIC CONIC

C3 31.579 VHL 5.620 DLA 52.57 RAL 357.02 RAD 6647.8 VEL 12.309 PTH 7.24 VHP 3.455 DPA -35.97 RAP 40.46 ECC 1.5197  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07  
 43.65 2 54 11 4616.61 -22.76 217.16 248.30 41.24 4 11 7 3616.6 -40.07 197.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7553 TRA-2.1745 TC3-3.6312 BAU 2.0110 SGT 4758.7 SGR 4478.6 SG3 787.1 ST 105.1 SR 107.1 SS 74.3  
 RDE 2.0190 RRA-1.1646 RC3-3.0827 FAU .21387 RRT .9874 RRF .9963 RTF .9578 CRT .9634 CR8 -.9995 CST -.9544  
 FDE 4.7333 FRA-2.4036 FC3-5.8631 BSP 12462 SGB 7295.2 R23 .1822 R13 .9797 LSA 165.9 MSA 23.0 SSA .4  
 BDE 2.6754 BRA 2.4667 BC3 4.7632 FSP 1346 SG1 7239.1 SG2 902.8 THA 37.64 EL1 146.7 EL2 20.3 ALF 45.58

LAUNCH DATE AUG 20 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 578.899

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.958 GAL 2.78 AZL 82.26 HCA 166.22 SMA 198.87 ECC .24349 INC 7.7401 V1 29.435  
 RP 247.29 LAP 1.84 LOP 133.17 VP 20.150 GAP -.16 AZP 97.52 TAL 14.28 TAP 180.50 RCA 150.45 APO 247.30 V2 22.161  
 RC 312.717 GL 49.89 GP -48.87 ZAL 70.36 ZAP 75.18 ETS 164.86 ZAE 93.66 ETE 186.60 ZAC 40.59 ETC 291.92 LVI 22.18

PLANETOCENTRIC CONIC

C3 33.603 VHL 5.797 DLA 54.25 RAL 355.01 RAD 6648.4 VEL 12.390 PTH 7.30 VHP 3.593 DPA -37.09 RAP 41.39 ECC 1.5530  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68  
 41.56 2 40 4 4645.68 -22.47 219.98 247.70 39.21 3 57 29 3645.7 -40.46 200.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8359 TRA-2.2636 TC3-3.5063 BAU 2.0674 SGT 5872.2 SGR 4588.9 SG3 713.7 ST 107.6 SR 111.5 SS 71.1  
 RDE 2.1592 RRA-1.2625 RC3-2.9806 FAU .19412 RRT .9685 RRF .9962 RTF .9575 CRT .9631 CR8 -.9994 CST -.9530  
 FDE 4.4785 FRA-2.2910 FC3-5.0013 BSP 12776 SGB 7452.6 R23 .1847 R13 .9794 LSA 168.8 MSA 23.6 SSA .4  
 BDE 2.8342 BRA 2.5919 BC3 4.6020 FSP 1222 SG1 7397.3 SG2 906.5 THA 37.79 EL1 153.5 EL2 21.0 ALF 46.08

LAUNCH DATE AUG 20 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

DISTANCE 582.655

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.963 GAL 2.74 AZL 81.73 HCA 167.09 SMA 198.97 ECC .24370 INC 8.2728 V1 29.435  
 RP 247.44 LAP 1.84 LOP 134.06 VP 20.142 GAP -.37 AZP 98.07 TAL 14.04 TAP 181.13 RCA 150.48 APO 247.46 V2 22.147  
 RC 315.013 GL 52.09 GP -50.28 ZAL 71.33 ZAP 75.19 ETS 164.03 ZAE 92.94 ETE 185.97 ZAC 39.22 ETC 292.58 LVI 27.59

PLANETOCENTRIC CONIC

C3 36.060 VHL 6.005 DLA 55.97 RAL 352.63 RAD 6649.3 VEL 12.488 PTH 7.30 VHP 3.752 DPA -38.24 RAP 42.43 ECC 1.5935  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43  
 39.45 2 24 38 4676.02 -22.01 222.83 246.81 37.12 3 42 34 3676.0 -40.69 204.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8902 TRA-2.3625 TC3-3.3572 BAU 2.1273 SGT 5978.2 SGR 4707.0 SG3 839.1 ST 108.7 SR 115.3 SS 87.1  
 RDE 2.2994 RRA-1.3770 RC3-2.8638 FAU .17402 RRT .9698 RRF .9960 RTF .9587 CRT .9612 CR8 -.9992 CST -.9494  
 FDE 4.1779 FRA-2.1671 FC3-4.1779 BSP 13075 SGB 7608.8 R23 .1884 R13 .9787 LSA 170.4 MSA 24.4 SSA .4  
 BDE 2.9766 BRA 2.7345 BC3 4.4127 FSP 1095 SG1 7554.0 SG2 911.8 THA 38.01 EL1 157.0 EL2 22.0 ALF 46.76

LAUNCH DATE AUG 20 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

DISTANCE 586.409

EARTH TO MARS

RL 151.37 LAL -.00 LOL 326.83 VL 32.968 GAL 2.69 AZL 81.12 HCA 167.97 SMA 199.08 ECC .24391 INC 8.8810 V1 29.435  
 RP 247.58 LAP 1.84 LOP 134.94 VP 20.135 GAP -.37 AZP 98.69 TAL 13.80 TAP 181.77 RCA 150.51 APO 247.62 V2 22.133  
 RC 317.282 GL 84.42 GP -51.75 ZAL 72.33 ZAP 75.31 ETS 163.26 ZAE 92.30 ETE 185.39 ZAC 37.79 ETC 293.32 LVI 29.06

PLANETOCENTRIC CONIC

C3 39.078 VHL 6.251 DLA 57.72 RAL 349.80 RAD 6650.3 VEL 12.608 PTH 7.46 VHP 3.936 DPA -39.41 RAP 43.59 ECC 1.6431  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28  
 37.33 2 7 38 4707.81 -21.34 225.67 245.52 34.99 3 26 6 3707.8 -40.72 208.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8973 TRA-2.4783 TC3-3.1885 BAU 2.1955 SGT 6083.3 SGR 4843.0 SG3 564.8 ST 108.0 SR 118.0 SS 62.2  
 RDE 2.4281 RRA-1.5182 RC3-2.7375 FAU .15400 RRT .9706 RRF .9956 RTF .9554 CRT .9568 CR8 -.9989 CST -.9421  
 FDE 3.8219 FRA-2.0404 FC3-3.4117 BSP 13287 SGB 7775.7 R23 .1932 R13 .9778 LSA 169.8 MSA 25.6 SSA .3  
 BDE 3.0814 BRA 2.9064 BC3 4.2024 FSP 959 SG1 7721.3 SG2 918.2 THA 38.33 EL1 158.3 EL2 23.4 ALF 47.86

LAUNCH DATE AUG 21 1973 FLIGHT TIME 98.00 ARRIVAL DATE NOV 27 1973

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 35.231 GAL 3.50 AZL 89.97 HCA 82.58 SMA 258.88 ECC .41910 INC .0297 V1 29.441  
 RP 220.57 LAP .03 LOP 50.38 VP 26.282 GAP 23.36 AZP 90.00 TAL 11.86 TAP 94.44 RCA 150.38 APO 367.38 V2 24.923  
 RC 85.536 GL .19 GP -5.37 ZAL 66.40 ZAP 172.71 ETS 229.13 ZAE 158.96 ETE 345.28 ZAC 77.50 ETC 282.48 LVI -10.91

PLANETOCENTRIC CONIC: C3 39.060 VHL 6.250 DLA 13.10 RAL 31.88 RAD 8650.3 VEL 12.607 PTH 7.46 VHP 8.303 DPA 11.26 RAP 44.77 ECC 1.6428  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 39 46 3562.57 -47.03 133.95 278.39 98.25 11 39 8 2562.6 -38.44 102.93  
 60.00 11 4 48 3495.93 -40.12 129.00 279.43 94.22 12 3 4 2495.9 -34.07 99.66  
 70.00 11 40 33 3390.74 -34.14 120.83 279.78 91.15 12 37 3 2390.7 -30.11 92.84  
 80.00 12 33 27 3224.96 -29.85 108.26 279.79 89.09 13 27 12 2225.0 -27.18 81.16  
 90.00 13 48 3 2984.20 -28.24 90.53 279.75 88.34 14 37 47 1984.2 -26.07 63.73  
 100.00 15 16 19 2699.43 -29.85 69.63 279.79 89.09 16 1 19 1699.4 -27.18 42.52  
 110.00 16 39 59 2437.56 -34.14 49.74 279.78 91.15 17 20 36 1437.6 -30.11 21.76

Differential Corrections: TDE -.3025 TRA -.8165 TC3 .3503 BAU .1889 RDE -.6313 RRA .2329 RC3 -.0901 FAU .05772 FDE .1471 FRA .1234 FC3-1.2792 BSP 1209 BDE .7000 BRA .8491 BC3 .3617 FSP 168  
 MID-COURSE EXECUTION ACCURACY: SGT 927.0 SGR 629.0 SG3 139.0 RRT -.0983 RRF .1260 RTF -.5544 SGB 1120.3 R23 -.0265 R13 .5584 SG1 930.7 SG2 623.5 THA 173.06  
 ORBIT DETERMINATION ACCURACY: ST 18.0 SR 29.1 SS 5.3 CRT .6911 CRS .8810 CST .8664 LSA 32.5 MSA 11.9 SSA 1.6 EL1 32.2 EL2 11.8 ALF 62.87

LAUNCH DATE AUG 21 1973 FLIGHT TIME 100.00 ARRIVAL DATE NOV 29 1973

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 35.089 GAL 3.53 AZL 89.93 HCA 83.70 SMA 253.93 ECC .40793 INC .0674 V1 29.441  
 RP 220.95 LAP .07 LOP 51.49 VP 26.052 GAP 22.95 AZP 89.99 TAL 12.21 TAP 95.90 RCA 150.35 APO 357.51 V2 24.882  
 RC 87.440 GL .40 GP -5.50 ZAL 65.76 ZAP 172.02 ETS 225.21 ZAE 158.71 ETE 344.89 ZAC 77.33 ETC 282.45 LVI -10.71

PLANETOCENTRIC CONIC: C3 37.504 VHL 6.124 DLA 13.08 RAL 31.18 RAD 8649.8 VEL 12.545 PTH 7.42 VHP 8.043 DPA 11.21 RAP 45.06 ECC 1.6172  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 37 5 3551.87 -46.92 132.94 278.66 99.02 11 36 17 2551.9 -38.07 102.18  
 60.00 11 2 9 3485.16 -40.06 128.09 277.81 94.83 12 0 14 2485.2 -33.78 98.90  
 70.00 11 37 55 3379.89 -34.12 119.98 278.23 91.65 12 34 15 2379.9 -29.89 92.07  
 80.00 12 30 52 3214.01 -29.85 107.45 278.28 89.52 13 24 26 2214.0 -27.02 80.39  
 90.00 13 45 28 2973.21 -28.25 89.73 278.25 88.75 14 35 1 1973.2 -25.92 62.96  
 100.00 15 13 43 2688.48 -29.85 68.82 278.28 89.52 15 58 32 1688.5 -27.02 41.75  
 110.00 16 37 21 2426.70 -34.12 48.90 278.23 91.65 17 17 48 1426.7 -29.89 20.99

Differential Corrections: TDE -.3028 TRA -.8060 TC3 .3799 BAU .1969 RDE -.6226 RRA .2311 RC3 -.0993 FAU .06043 FDE .1539 FRA .1110 FC3-1.3949 BSP 1257 BDE .6924 BRA .8385 BC3 .3927 FSP 183  
 MID-COURSE EXECUTION ACCURACY: SGT 946.7 SGR 635.1 SG3 148.4 RRT -.1054 RRF .1353 RTF -.5647 SGB 1140.0 R23 -.0289 R13 .5691 SG1 950.9 SG2 628.8 THA 172.79  
 ORBIT DETERMINATION ACCURACY: ST 18.3 SR 29.3 SS 5.4 CRT .6956 CRS .8908 CST .8549 LSA 32.9 MSA 11.9 SSA 1.7 EL1 32.5 EL2 11.9 ALF 62.50

LAUNCH DATE AUG 21 1973 FLIGHT TIME 102.00 ARRIVAL DATE DEC 1 1973

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 34.955 GAL 3.56 AZL 89.89 HCA 84.80 SMA 249.45 ECC .39746 INC .1042 V1 29.441  
 RP 221.33 LAP .10 LOP 52.80 VP 25.831 GAP 22.56 AZP 89.99 TAL 12.56 TAP 97.37 RCA 150.31 APO 348.60 V2 24.840  
 RC 89.407 GL .61 GP -5.63 ZAL 65.12 ZAP 171.29 ETS 221.91 ZAE 158.51 ETE 344.47 ZAC 77.15 ETC 282.43 LVI -10.50

PLANETOCENTRIC CONIC: C3 36.083 VHL 6.007 DLA 13.06 RAL 30.49 RAD 8649.3 VEL 12.489 PTH 7.38 VHP 7.793 DPA 11.16 RAP 45.34 ECC 1.5938  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 34 23 3541.73 -46.80 131.99 274.99 99.75 11 33 25 2541.7 -37.71 101.47  
 60.00 10 59 28 3474.98 -40.00 127.23 276.23 95.41 11 57 23 2475.0 -33.50 98.18  
 70.00 11 35 16 3369.61 -34.10 119.18 276.72 92.12 12 31 28 2369.6 -29.68 91.35  
 80.00 12 28 14 3203.65 -29.86 106.68 276.81 89.92 13 21 38 2203.6 -26.85 79.66  
 90.00 13 42 51 2962.81 -28.27 88.97 276.79 89.13 14 32 14 1962.8 -25.78 62.23  
 100.00 15 11 6 2678.12 -29.86 68.05 276.81 89.92 15 55 44 1678.1 -26.85 41.03  
 110.00 16 34 42 2416.42 -34.10 48.09 276.72 92.12 17 14 59 1416.4 -29.68 20.28

Differential Corrections: TDE -.3030 TRA -.7954 TC3 .4104 BAU .2049 RDE -.8143 RRA .2292 RC3 -.1093 FAU .08332 FDE .1610 FRA .0873 FC3-1.5191 BSP 1297 BDE .6850 BRA .8278 BC3 .4247 FSP 198  
 MID-COURSE EXECUTION ACCURACY: SGT 966.0 SGR 641.0 SG3 158.5 RRT -.1133 RRF .1484 RTF -.5748 SGB 1159.4 R23 -.0311 R13 .5798 SG1 970.8 SG2 633.8 THA 172.48  
 ORBIT DETERMINATION ACCURACY: ST 18.6 SR 29.5 SS 5.6 CRT .7000 CRS .8998 CST .8426 LSA 33.2 MSA 12.0 MSA 1.8 EL1 32.7 EL2 12.0 ALF 62.15

LAUNCH DATE AUG 21 1973 FLIGHT TIME 104.00 ARRIVAL DATE DEC 3 1973

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 34.829 GAL 3.60 AZL 89.86 HCA 85.91 SMA 245.39 ECC .38764 INC .1397 V1 29.441  
 RP 221.71 LAP .14 LOP 53.70 VP 25.820 GAP 22.16 AZP 89.99 TAL 12.92 TAP 98.83 RCA 150.27 APO 340.51 V2 24.799  
 RC 91.438 GL .83 GP -5.77 ZAL 64.48 ZAP 170.52 ETS 219.13 ZAE 158.37 ETE 344.00 ZAC 76.97 ETC 282.41 LVI -10.30

PLANETOCENTRIC CONIC: C3 34.784 VHL 5.898 DLA 13.04 RAL 29.79 RAD 8648.8 VEL 12.437 PTH 7.34 VHP 7.552 DPA 11.10 RAP 45.61 ECC 1.5725  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 31 40 3532.14 -46.89 131.09 273.37 100.43 11 30 32 2532.1 -37.37 100.81  
 60.00 10 56 46 3465.33 -39.93 126.41 274.71 95.96 11 54 32 2465.3 -33.24 97.50  
 70.00 11 32 36 3359.90 -34.07 118.42 275.25 92.57 12 28 36 2359.9 -29.47 90.66  
 80.00 12 25 35 3193.88 -29.86 105.95 275.38 90.31 13 18 49 2193.9 -26.69 78.98  
 90.00 13 40 13 2953.00 -28.28 88.25 275.37 89.49 14 29 26 1953.0 -25.84 61.55  
 100.00 15 8 27 2668.35 -29.86 67.32 275.38 90.31 15 52 55 1668.3 -26.69 40.34  
 110.00 16 32 2 2406.72 -34.07 47.34 275.25 92.57 17 12 9 1406.7 -29.47 19.58

Differential Corrections: TDE -.3037 TRA -.7844 TC3 .4415 BAU .2127 RDE -.8063 RRA .2273 RC3 -.1199 FAU .06637 FDE .1688 FRA .0815 FC3-1.6519 BSP 1338 BDE .6781 BRA .8167 BC3 .4575 FSP 214  
 MID-COURSE EXECUTION ACCURACY: SGT 985.0 SGR 646.7 SG3 169.1 RRT -.1212 RRF .1560 RTF -.5845 SGB 1178.3 R23 -.0339 R13 .5897 SG1 990.3 SG2 638.5 THA 172.19  
 ORBIT DETERMINATION ACCURACY: ST 18.9 SR 29.6 SS 5.7 CRT .7051 CRS .9083 CST .8295 LSA 33.5 MSA 12.0 MSA 1.8 EL1 33.0 EL2 12.0 ALF 61.77

LAUNCH DATE AUG 21 1973 FLIGHT TIME 106.00 ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC												DISTANCE 279.593			EARTH TO MARS										
RL	151.34	LAL	-.00	LOL	327.80	VL	34.710	GAL	3.84	AZL	89.82	HCA	87.01	SMA	241.69	ECC	.37844	INC	.1756	V1	29.441				
RP	222.09	LAP	.18	LOP	54.80	VP	25.417	GAP	21.77	AZP	89.99	TAL	13.28	TAP	100.29	RCA	150.23	APO	333.18	V2	24.757				
RC	93.523	GL	1.05	GP	-5.92	ZAL	63.84	ZAP	169.73	ETS	216.76	ZAE	158.29	ETE	343.49	ZAC	76.79	ETC	282.39	LVI	-10.09				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	33.595	VHL	5.796	DLA	13.03	RAL	29.10	RAD	6648.4	VEL	12.390	PTH	7.30	VHP	7.320	DPA	11.03	RAP	45.87	ECC	1.8529				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	28	57	3523.11	-46.57	130.25	271.81	101.07	11	27	40	2523.1	-37.04	100.20											
60.00	10	54	4	3456.26	-39.87	125.65	273.23	96.47	11	51	40	2456.3	-32.98	96.87											
70.00	11	29	54	3350.78	-34.04	117.71	273.83	92.99	12	25	45	2350.8	-29.28	90.03											
80.00	12	22	55	3184.70	-29.85	105.27	273.99	90.66	13	16	0	2184.7	-26.54	78.34											
90.00	13	37	33	2943.80	-28.28	87.58	273.99	89.82	14	26	37	1943.8	-25.50	60.91											
100.00	15	5	47	2659.17	-29.85	66.64	273.99	90.66	15	50	6	1659.2	-26.54	39.71											
110.00	16	29	21	2397.60	-34.04	46.63	273.83	92.99	17	9	18	1397.6	-29.28	18.94											
TDE	-.3043	TRA	-.7733	TC3	.4729	BAU	.2204	SGT	1003.4	SGR	652.3	SG3	180.3	ST	19.1	SR	29.8	SS	5.9						
RDE	-.5985	RRA	.2254	RC3	-.1312	FAU	.06958	RRT	-.1297	RRF	.1671	RTF	-.5937	CRT	.7103	CR8	.9161	CST	.8157						
FDE	.1771	FRA	.0640	FC3	-1.7931	BSP	1379	SGB	1196.7	R23	-.0366	R13	.5995	LSA	33.7	MSA	12.0	SSA	1.9						
BDE	.6714	BRA	.8055	BC3	.4908	FSP	231	SG1	1009.4	SG2	642.9	THA	171.86	EL1	33.3	EL2	12.0	ALF	61.41						

LAUNCH DATE AUG 21 1973 FLIGHT TIME 108.00 ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC												DISTANCE 282.584			EARTH TO MARS										
RL	151.34	LAL	-.00	LOL	327.80	VL	34.598	GAL	3.67	AZL	89.79	HCA	88.10	SMA	238.31	ECC	.36981	INC	.2105	V1	29.441				
RP	222.48	LAP	.21	LOP	55.90	VP	25.223	GAP	21.38	AZP	89.99	TAL	13.64	TAP	101.75	RCA	150.18	APO	326.44	V2	24.715				
RC	95.665	GL	1.28	GP	-6.07	ZAL	63.21	ZAP	168.92	ETS	214.72	ZAE	158.26	ETE	342.92	ZAC	76.60	ETC	282.37	LVI	-9.89				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	32.507	VHL	5.701	DLA	13.02	RAL	28.41	RAD	6648.0	VEL	12.346	PTH	7.27	VHP	7.098	DPA	10.95	RAP	46.12	ECC	1.5350				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	26	14	3514.64	-46.46	129.46	270.30	101.67	11	24	48	2514.6	-36.73	99.62											
60.00	10	51	21	3447.75	-39.80	124.94	271.80	96.95	11	48	49	2447.8	-32.74	96.27											
70.00	11	27	13	3342.24	-34.01	117.04	272.45	93.38	12	22	55	2342.2	-29.09	89.43											
80.00	12	20	14	3176.12	-29.84	104.63	272.64	91.00	13	13	10	2176.1	-26.40	77.74											
90.00	13	34	53	2935.20	-28.28	86.95	272.66	90.14	14	23	48	1935.2	-25.37	60.31											
100.00	15	3	6	2650.59	-29.84	66.00	272.64	91.00	15	47	16	1650.6	-26.40	39.11											
110.00	16	26	39	2389.06	-34.01	45.96	272.45	93.38	17	6	28	1389.1	-29.09	18.35											
TDE	-.3049	TRA	-.7624	TC3	.5048	BAU	.2281	SGT	1021.6	SGR	657.7	SG3	192.2	ST	19.4	SR	29.9	SS	6.1						
RDE	-.5911	RRA	.2233	RC3	-.1433	FAU	.07299	RRT	-.1388	RRF	.1791	RTF	-.6026	CRT	.7154	CR8	.9225	CST	.8015						
FDE	.1857	FRA	.0450	FC3	-1.9439	BSP	1419	SGB	1215.0	R23	-.0397	R13	.6089	LSA	34.0	MSA	12.1	SSA	2.0						
BDE	.6651	BRA	.7944	BC3	.5248	FSP	250	SG1	1028.4	SG2	647.1	THA	171.51	EL1	33.5	EL2	12.1	ALF	61.05						

LAUNCH DATE AUG 21 1973 FLIGHT TIME 110.00 ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC												DISTANCE 285.649			EARTH TO MARS										
RL	151.34	LAL	-.00	LOL	327.80	VL	34.492	GAL	3.71	AZL	89.75	HCA	89.20	SMA	235.22	ECC	.36171	INC	.2458	V1	29.441				
RP	222.86	LAP	.25	LOP	56.99	VP	25.036	GAP	21.00	AZP	89.00	TAL	14.01	TAP	103.20	RCA	150.14	APO	320.31	V2	24.673				
RC	97.860	GL	1.51	GP	-6.22	ZAL	62.59	ZAP	168.03	ETS	212.96	ZAE	158.29	ETE	342.30	ZAC	76.41	ETC	282.33	LVI	-9.68				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	31.909	VHL	5.613	DLA	13.02	RAL	27.72	RAD	6647.6	VEL	12.306	PTH	7.24	VHP	6.883	DPA	10.87	RAP	46.36	ECC	1.5186				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	23	31	3506.70	-46.35	128.73	268.86	102.22	11	21	57	2506.7	-36.44	99.09											
60.00	10	48	39	3439.80	-39.73	124.27	270.42	97.40	11	45	58	2439.8	-32.51	95.73											
70.00	11	24	30	3334.27	-33.97	116.43	271.12	93.74	12	20	5	2334.3	-28.92	88.88											
80.00	12	17	32	3168.13	-29.83	104.04	271.34	91.31	13	10	20	2168.1	-26.26	77.19											
90.00	13	32	11	2927.21	-28.28	86.36	271.36	90.43	14	20	58	1927.2	-25.25	59.76											
100.00	15	0	24	2642.60	-29.83	65.41	271.34	91.31	15	44	26	1642.6	-26.26	38.56											
110.00	16	23	57	2381.09	-33.97	45.34	271.12	93.74	17	3	38	1381.1	-28.92	17.79											
TDE	-.3057	TRA	-.7515	TC3	.5366	BAU	.2394	SGT	1039.3	SGR	663.0	SG3	204.8	ST	19.6	SR	30.0	SS	6.3						
RDE	-.5838	RRA	.2212	RC3	-.1582	FAU	.07857	RRT	-.1482	RRF	.1918	RTF	-.6108	CRT	.7209	CR8	.9281	CST	.7867						
FDE	.1951	FRA	.0237	FC3	-2.1037	BSP	1459	SGB	1232.8	R23	-.0430	R13	.8178	LSA	34.3	MSA	12.1	SSA	2.1						
BDE	.6591	BRA	.7834	BC3	.5589	FSP	269	SG1	1046.9	SG2	650.9	THA	171.16	EL1	33.7	EL2	12.1	ALF	60.68						

LAUNCH DATE AUG 21 1973 FLIGHT TIME 112.00 ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC												DISTANCE 288.781			EARTH TO MARS										
RL	151.34	LAL	-.00	LOL	327.80	VL	34.392	GAL	3.74	AZL	89.72	HCA	90.29	SMA	232.39	ECC	.35410	INC	.2806	V1	29.441				
RP	223.25	LAP	.28	LOP	58.08	VP	24.857	GAP	20.62	AZP	90.00	TAL	14.37	TAP	104.66	RCA	150.10	APO	314.67	V2	24.631				
RC	100.104	GL	1.74	GP	-6.39	ZAL	61.97	ZAP	167.22	ETS	211.43	ZAE	158.36	ETE	341.62	ZAC	76.22	ETC	282.33	LVI	-9.47				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	30.595	VHL	5.531	DLA	13.02	RAL	27.04	RAD	6647.2	VEL	12.269	PTH	7.21	VHP	6.676	DPA	10.77	RAP	46.59	ECC	1.5035				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00	10	20	48	3499.28	-46.24	128.05	267.46	102.74	11	19	7	2499.3	-36.16	98.80											
60.00	10	45	36	3432.38	-39.66	123.65	269.09	97.81	11	43	8	2432.4	-32.29	95.22											
70.00	11	21	48	3326.85	-33.94	115.85	269.83	94.08	12	17	14	2326.8	-28.75	88.36											
80.00	12	14	49	3160.70	-29.82	103.49	270.08	91.60	13	7	30	2160.7	-26.13	76.67											
90.00	13	29	28	2919.78	-28.27	85.82	270.11	90.70	14	18	8	1919.8	-25.13	59.25											
100.00	14	57	41	2635.18	-29.82	64.86	270.08	91.60	15	41	36	1635.2	-26.13	38.04											
110.00	16	21	14	2373.67	-33.94	44.77	269.83	94.08	17	0	48	1373.7	-28.75	17.28											
TDE	-.2950	TRA	-.7292	TC3	.5833	BAU	.2484	SGT	1054.0	SGR	668.1	SG3	217.8	ST	19.2	SR	30.1	SS	6.6						
RDE	-.5767	RRA	.2192	RC3	-.1696	FAU	.08022	RRT	-.1692	RRF	.2039	RTF	-.6357	CRT	.7185	CR8	.9337	CST	.7695						
FDE	.2077	FRA	.0033	FC3	-2.2700	BSP	1357	SGB	1247.9	R23	-.0298	R13	.6425	LSA	34.2	MSA	12.0	SSA	2.1						
BDE	.6478	BRA	.7615	BC3	.6074	FSP	294	SG1	1063.7	SG2	652.4	THA	170.13	EL1	33.6	EL2	12.0	ALF	61.38						

LAUNCH DATE AUG 21 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC

DISTANCE 291.976

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 34.298 GAL 3.78 AZL 89.68 HCA 91.37 SMA 229.78 ECC .34687 INC .3152 V1 29.441
RP 223.64 LAP .32 LOP 59.17 VP 24.684 GAP 20.25 AZP 90.01 TAL 14.73 TAP 106.10 RCA 130.06 APO 309.51 V2 24.590
RC 102.397 GL 1.98 GP -6.56 ZAL 61.37 ZAP 166.34 ETS 210.08 ZAE 158.49 ETE 340.87 ZAC 76.02 ETC 282.32 LVI -9.25

PLANETOCENTRIC CONIC

C3 29.756 VHL 5.455 DLA 13.02 RAL 26.37 RAD 6646.9 VEL 12.235 PTH 7.18 VHP 6.477 DPA 10.66 RAP 46.80 ECC 1.4897
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 18 6 3492.43 -46.14 127.42 266.13 103.21 11 16 19 2492.4 -35.91 98.14
60.00 10 43 14 3425.55 -39.60 123.08 267.82 98.20 11 40 19 2425.5 -32.09 94.75
70.00 11 19 5 3320.04 -33.90 115.32 268.80 94.39 12 14 25 2320.0 -28.60 87.89
80.00 12 12 6 3153.92 -29.80 102.99 268.86 91.87 13 4 40 2153.9 -26.01 76.21
90.00 13 26 45 2913.00 -28.27 85.32 268.91 90.95 14 15 18 1913.0 -25.03 58.78
100.00 14 54 58 2628.39 -29.80 64.35 268.86 91.87 15 38 47 1628.4 -26.01 37.57
110.00 16 18 31 2366.86 -33.90 44.24 268.60 94.39 16 57 58 1366.9 -28.60 16.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3000 TRA -.7226 TC3 .6096 BAU .2533 SGT 1071.6 SGR 673.4 SG3 232.0 ST 19.6 SR 30.1 SS 6.0
RDE -.5700 RRA .2168 RC3 -.1842 FAU .08429 RRT -.1761 RRF .2186 RTF -.6366 CRT .7269 CRS .9367 CST .7547
FDE .2172 FRA -.0232 FC3-2.4525 B8P 1444 SGB 1265.6 R23 -.0395 R13 .6445 LSA 34.5 MSA 12.0 SSA 2.2
BDE .6441 BRA .7544 BC3 .6368 F8P 315 SG1 1082.1 S62 656.5 THA 169.95 EL1 33.9 EL2 12.0 ALF 60.64

LAUNCH DATE AUG 21 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC

DISTANCE 295.226

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 34.209 GAL 3.81 AZL 89.65 HCA 92.45 SMA 227.39 ECC .34027 INC .3498 V1 29.441
RP 224.03 LAP .35 LOP 60.25 VP 24.519 GAP 19.88 AZP 90.01 TAL 15.08 TAP 107.53 RCA 150.01 APO 304.76 V2 24.548
RC 104.735 GL 2.22 GP -6.73 ZAL 60.77 ZAP 165.44 ETS 208.90 ZAE 158.66 ETE 340.06 ZAC 75.82 ETC 282.31 LVI -9.04

PLANETOCENTRIC CONIC

C3 28.986 VHL 5.384 DLA 13.03 RAL 25.71 RAD 6646.6 VEL 12.204 PTH 7.16 VHP 6.285 DPA 10.54 RAP 47.01 ECC 1.4770
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 15 26 3486.10 -46.03 126.84 264.85 103.65 11 13 32 2486.1 -35.67 97.73
60.00 10 40 33 3419.25 -39.54 122.56 266.59 98.55 11 37 32 2419.3 -31.90 94.32
70.00 11 16 23 3313.79 -33.87 114.83 267.41 94.68 12 11 37 2313.8 -28.46 87.46
80.00 12 9 23 3147.72 -29.79 102.53 267.69 92.11 13 1 51 2147.7 -25.90 75.78
90.00 13 24 1 2906.83 -28.26 84.87 267.74 91.18 14 12 28 1906.8 -24.93 58.36
100.00 14 52 15 2622.19 -29.79 63.89 267.69 92.11 15 35 57 1622.2 -25.90 37.15
110.00 16 15 49 2360.61 -33.87 43.75 267.41 94.68 16 55 10 1360.6 -28.46 16.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3037 TRA -.7144 TC3 .6371 BAU .2587 SGT 1088.1 SGR 678.7 SG3 247.0 ST 20.0 SR 30.2 SS 7.0
RDE -.5635 RRA .2143 RC3 -.1997 FAU .08856 RRT -.1846 RRF .2339 RTF -.6391 CRT .7346 CRS .9387 CST .7398
FDE .2277 FRA -.0516 FC3-2.6451 B8P 1514 SGB 1282.5 R23 -.0478 R13 .6481 LSA 34.8 MSA 12.0 SSA 2.3
BDE .6401 BRA .7459 BC3 .6677 F8P 337 SG1 1099.5 S62 660.1 THA 169.67 EL1 34.2 EL2 12.0 ALF 60.01

LAUNCH DATE AUG 21 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC

DISTANCE 298.525

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 34.125 GAL 3.85 AZL 89.62 HCA 93.53 SMA 225.18 ECC .33398 INC .3844 V1 29.441
RP 224.42 LAP .38 LOP 61.33 VP 24.359 GAP 19.51 AZP 90.02 TAL 15.43 TAP 108.98 RCA 149.97 APO 300.38 V2 24.506
RC 107.119 GL 2.46 GP -6.92 ZAL 60.20 ZAP 164.52 ETS 207.84 ZAE 158.87 ETE 339.16 ZAC 75.61 ETC 282.30 LVI -8.82

PLANETOCENTRIC CONIC

C3 28.278 VHL 5.318 DLA 13.05 RAL 25.06 RAD 6646.3 VEL 12.175 PTH 7.14 VHP 6.100 DPA 10.40 RAP 47.20 ECC 1.4654
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 12 46 3480.27 -45.94 126.31 263.64 104.05 11 10 47 2480.3 -35.45 97.35
60.00 10 37 52 3413.48 -39.48 122.08 265.42 98.87 11 34 46 2413.5 -31.73 93.93
70.00 11 13 41 3308.09 -33.84 114.39 266.27 94.94 12 8 49 2308.1 -28.32 87.07
80.00 12 6 40 3142.10 -29.78 102.11 266.57 92.33 12 59 2 2142.1 -25.80 75.39
90.00 13 21 17 2901.24 -28.25 84.46 266.63 91.36 14 9 39 1901.2 -24.83 57.97
100.00 14 49 32 2616.57 -29.78 63.48 266.57 92.33 15 33 8 1616.6 -25.80 36.76
110.00 16 13 7 2354.91 -33.84 43.31 266.27 94.94 16 52 22 1354.9 -26.32 15.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3082 TRA -.7093 TC3 .6652 BAU .2644 SGT 1103.8 SGR 684.0 SG3 262.8 ST 20.3 SR 30.2 SS 7.2
RDE -.5571 RRA .2118 RC3 -.2181 FAU .09304 RRT -.1948 RRF .2500 RTF -.6286 CRT .7413 CRS .9397 CST .7240
FDE .2391 FRA -.0823 FC3-2.0488 B8P 1569 SGB 1298.4 R23 -.0547 R13 .6528 LSA 35.0 MSA 12.0 SSA 2.4
BDE .6387 BRA .7384 BC3 .6894 F8P 362 SG1 1116.1 S62 663.4 THA 169.29 EL1 34.4 EL2 12.0 ALF 60.50

LAUNCH DATE AUG 21 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC

DISTANCE 301.869

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 34.046 GAL 3.88 AZL 89.58 HCA 94.61 SMA 223.13 ECC .32808 INC .4189 V1 29.441
RP 224.81 LAP .42 LOP 62.40 VP 24.206 GAP 19.15 AZP 90.03 TAL 15.78 TAP 110.38 RCA 149.93 APO 296.34 V2 24.484
RC 108.544 GL 2.71 GP -7.11 ZAL 59.63 ZAP 163.59 ETS 206.90 ZAE 159.12 ETE 338.18 ZAC 75.41 ETC 282.29 LVI -8.60

PLANETOCENTRIC CONIC

C3 27.628 VHL 5.258 DLA 13.07 RAL 24.43 RAD 6646.1 VEL 12.148 PTH 7.12 VHP 5.921 DPA 10.26 RAP 47.38 ECC 1.4547
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 9 3474.95 -45.85 125.83 262.47 104.41 11 8 4 2474.9 -38.24 97.00
60.00 10 35 12 3408.23 -39.42 121.65 264.29 99.16 11 32 1 2408.2 -31.57 93.58
70.00 11 10 59 3302.94 -33.81 113.99 265.17 95.17 12 6 2 2302.9 -28.20 86.72
80.00 12 3 56 3137.05 -29.76 101.73 265.49 92.52 12 56 13 2137.1 -25.70 75.03
90.00 13 18 33 2896.24 -28.24 84.10 265.55 91.56 14 6 49 1896.2 -24.75 57.63
100.00 14 46 48 2611.52 -29.76 63.10 265.49 92.52 15 30 19 1611.5 -25.70 36.41
110.00 16 10 26 2349.78 -33.81 42.91 265.17 95.17 16 49 35 1349.8 -26.20 15.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3302 TRA -.6988 TC3 .6934 BAU .2702 SGT 1118.2 SGR 689.5 SG3 279.5 ST 20.5 SR 30.2 SS 7.5
RDE -.5509 RRA .2088 RC3 -.2333 FAU .09775 RRT -.2062 RRF .2668 RTF -.8468 CRT .7476 CRS .9400 CST .7093
FDE .2520 FRA -.1151 FC3-3.0632 B8P 1616 SGB 1313.7 R23 -.0809 R13 .6582 LSA 35.2 MSA 12.0 SSA 2.5
BDE .6312 BRA .7264 BC3 .7316 F8P 389 SG1 1132.2 S62 666.3 THA 168.85 EL1 34.5 EL2 11.9 ALF 60.04



LAUNCH DATE AUG 21 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC DISTANCE 309.253 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 33.971 GAL 3.91 AZL 89.55 HCA 95.88 SMA 221.24 ECC .32253 INC .4534 V1 29.441  
 RP 225.20 LAP .48 LOP 83.47 VP 24.038 GAP 18.79 AZP 90.04 TAL 16.12 TAP 111.79 RCA 149.89 APO 292.60 V2 24.422  
 RC 112.011 GL 2.96 GP -7.30 ZAL 59.09 ZAP 162.64 ETS 206.06 ZAE 159.42 ETE 337.10 ZAC 75.19 ETC 282.29 LVI -8.38

PLANETOCENTRIC CONIC  
 CS 27.029 VHL 5.199 DLA 13.10 RAL 23.80 RAD 6645.8 VEL 12.124 PTH 7.10 VHP 5.749 DPA 10.10 RAP 47.54 ECC 1.4448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 7 32 3470.11 -45.77 125.39 261.36 104.74 11 3 22 2470.1 -35.06 96.69  
 60.00 10 32 34 3403.50 -39.37 121.25 263.22 99.42 11 29 17 2403.5 -31.43 93.26  
 70.00 11 8 18 3298.33 -33.78 113.64 264.12 95.38 12 3 16 2298.3 -28.10 86.40  
 80.00 12 1 12 3132.58 -29.75 101.40 264.46 92.70 12 53 25 2132.6 -25.62 74.74  
 90.00 13 15 40 2891.83 -26.23 83.78 264.52 91.72 14 4 0 1891.8 -24.68 57.33  
 100.00 14 44 4 2607.05 -29.75 62.77 264.46 92.70 15 27 31 1607.0 -25.62 36.11  
 110.00 16 7 44 2345.15 -33.78 42.56 264.12 95.38 16 46 50 1345.1 -28.10 15.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3103 TRA -.6863 TC3 .7208 BAU .2759 SGT 1132.2 SGR 695.0 SG3 297.0 ST 20.7 SR 30.2 SS 7.8  
 RDE -.5447 RRA .2038 RC3 -.2516 FAU .10270 RRT -.2181 RRF .2843 RTF -.6507 CRT .7539 CRS .9396 CST .6956  
 FDE .2661 FRA -.1497 FC3-3.2894 BSP 1660 SGB 1328.5 R23 -.0673 R13 .6635 LSA 35.4 MSA 12.0 SSA 2.6  
 BDE .6269 BRA .7165 BC3 .7634 FSP 417 SG1 1147.7 SG2 669.1 THA 168.37 EL1 34.7 EL2 11.9 ALF 58.57

LAUNCH DATE AUG 21 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC DISTANCE 308.675 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 33.901 GAL 3.94 AZL 89.51 HCA 96.74 SMA 219.49 ECC .31732 INC .4880 V1 29.441  
 RP 225.39 LAP .48 LOP 84.54 VP 23.916 GAP 18.43 AZP 90.06 TAL 16.45 TAP 113.19 RCA 149.84 APO 289.14 V2 24.360  
 RC 114.516 GL 3.21 GP -7.51 ZAL 58.56 ZAP 161.67 ETS 205.30 ZAE 159.75 ETE 335.92 ZAC 74.98 ETC 282.29 LVI -8.16

PLANETOCENTRIC CONIC  
 CS 26.478 VHL 5.146 DLA 13.14 RAL 23.20 RAD 6645.6 VEL 12.101 PTH 7.08 VHP 5.584 DPA 9.94 RAP 47.68 ECC 1.4358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 4 58 3465.76 -45.69 125.00 260.30 105.03 11 2 43 2465.8 -34.89 96.41  
 60.00 10 29 57 3399.26 -39.32 120.90 262.19 99.65 11 26 36 2399.3 -31.30 92.97  
 70.00 11 5 38 3294.25 -33.75 113.32 263.12 95.56 12 0 32 2294.3 -28.00 86.13  
 80.00 11 58 29 3128.66 -29.73 101.11 263.47 92.85 12 50 37 2128.7 -25.55 74.47  
 90.00 13 13 3 2887.99 -28.22 83.50 263.54 91.86 14 1 11 1888.0 -24.61 57.06  
 100.00 14 41 21 2603.13 -29.73 62.48 263.47 92.85 15 24 44 1603.1 -25.55 35.84  
 110.00 16 5 4 2341.07 -33.75 42.24 263.12 95.56 16 44 5 1341.1 -28.00 15.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3118 TRA -.6762 TC3 .7474 BAU .2814 SGT 1144.6 SGR 700.8 SG3 315.5 ST 20.9 SR 30.2 SS 8.2  
 RDE -.5387 RRA .2026 RC3 -.2708 FAU .10792 RRT -.2310 RRF .3027 RTF -.6546 CRT .7600 CRS .9384 CST .6816  
 FDE .2814 FRA -.1881 FC3-3.5285 BSP 1695 SGB 1342.1 R23 -.0734 R13 .6688 LSA 35.6 MSA 12.0 SSA 2.7  
 BDE .6224 BRA .7059 BC3 .7950 FSP 448 SG1 1161.9 SG2 671.7 THA 167.83 EL1 34.8 EL2 11.8 ALF 58.16

LAUNCH DATE AUG 21 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC DISTANCE 312.130 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 33.834 GAL 3.97 AZL 89.48 HCA 97.81 SMA 217.87 ECC .31242 INC .5225 V1 29.441  
 RP 225.98 LAP .52 LOP 85.60 VP 23.779 GAP 18.08 AZP 90.07 TAL 16.78 TAP 114.58 RCA 149.80 APO 285.94 V2 24.338  
 RC 117.057 GL 3.46 GP -7.72 ZAL 58.04 ZAP 160.68 ETS 204.61 ZAE 160.11 ETE 334.61 ZAC 74.76 ETC 282.29 LVI -7.94

PLANETOCENTRIC CONIC  
 CS 25.971 VHL 5.096 DLA 13.19 RAL 22.80 RAD 6645.4 VEL 12.080 PTH 7.06 VHP 5.424 DPA 9.75 RAP 47.82 ECC 1.4274  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 2 25 3461.87 -45.62 124.65 259.30 105.29 11 0 7 2461.9 -34.74 96.18  
 60.00 10 27 21 3395.52 -39.28 120.59 261.22 99.86 11 23 56 2395.5 -31.18 92.72  
 70.00 11 2 58 3290.70 -33.73 113.05 262.16 95.73 11 57 48 2290.7 -27.92 85.88  
 80.00 11 55 45 3125.30 -29.72 100.86 262.52 92.98 12 47 50 2125.3 -25.48 74.24  
 90.00 13 10 17 2884.73 -28.22 83.26 262.59 91.98 13 58 22 1884.7 -24.56 56.84  
 100.00 14 38 37 2599.77 -29.72 62.23 262.52 92.98 15 21 57 1599.8 -25.48 35.61  
 110.00 16 2 24 2337.52 -33.73 41.97 262.16 95.73 16 41 22 1337.5 -27.92 14.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3131 TRA -.6665 TC3 .7729 BAU .2868 SGT 1156.2 SGR 706.9 SG3 334.9 ST 21.1 SR 30.1 SS 8.5  
 RDE -.5327 RRA .1992 RC3 -.2912 FAU .11340 RRT -.2447 RRF .3220 RTF -.6581 CRT .7658 CRS .9364 CST .6883  
 FDE .2974 FRA -.2285 FC3-3.7803 BSP 1729 SGB 1355.2 R23 -.0798 R13 .6740 LSA 35.7 MSA 11.9 SSA 2.8  
 BDE .6179 BRA .6957 BC3 .8259 FSP 479 SG1 1175.7 SG2 674.1 THA 167.23 EL1 34.9 EL2 11.7 ALF 57.75

LAUNCH DATE AUG 21 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC DISTANCE 315.615 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 33.772 GAL 4.00 AZL 89.44 HCA 98.87 SMA 216.38 ECC .30782 INC .5571 V1 29.441  
 RP 226.37 LAP .55 LOP 86.66 VP 23.647 GAP 17.74 AZP 90.09 TAL 17.10 TAP 115.96 RCA 149.76 APO 282.97 V2 24.297  
 RC 119.633 GL 3.72 GP -7.94 ZAL 57.55 ZAP 159.67 ETS 203.98 ZAE 160.51 ETE 333.18 ZAC 74.53 ETC 282.30 LVI -7.71

PLANETOCENTRIC CONIC  
 CS 25.504 VHL 5.050 DLA 13.24 RAL 22.02 RAD 6645.2 VEL 12.061 PTH 7.04 VHP 5.270 DPA 9.56 RAP 47.93 ECC 1.4197  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 54 3458.44 -45.56 124.34 258.35 105.52 10 57 33 2458.4 -34.60 95.94  
 60.00 10 24 46 3392.25 -39.24 120.33 260.29 100.04 11 21 18 2392.3 -31.08 92.51  
 70.00 11 0 19 3287.65 -33.71 112.81 261.25 95.86 11 55 6 2287.7 -27.84 85.68  
 80.00 11 53 2 3122.49 -29.71 100.65 261.62 93.09 12 45 4 2122.5 -25.43 74.05  
 90.00 13 7 32 2882.03 -28.21 83.06 261.69 92.08 13 55 34 1882.0 -24.51 56.66  
 100.00 14 35 53 2596.96 -29.71 62.02 261.62 93.09 15 19 10 1597.0 -25.43 35.42  
 110.00 15 59 45 2334.47 -33.71 41.73 261.25 95.86 16 38 39 1334.5 -27.84 14.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3147 TRA -.6570 TC3 .7969 BAU .2919 SGT 1166.9 SGR 713.3 SG3 355.4 ST 21.3 SR 30.1 SS 8.9  
 RDE -.5268 RRA .1956 RC3 -.3126 FAU .11917 RRT -.2587 RRF .3422 RTF -.6611 CRT .7718 CRS .9341 CST .6563  
 FDE .3151 FRA -.2720 FC3-4.0452 BSP 1758 SGB 1367.6 R23 -.0868 R13 .6789 LSA 35.8 MSA 11.9 SSA 2.9  
 BDE .6136 BRA .6855 BC3 .8560 FSP 514 SG1 1188.6 SG2 676.4 THA 166.60 EL1 35.0 EL2 11.6 ALF 57.32

LAUNCH DATE AUG 21 1973      FLIGHT TIME 130.00      ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC												DISTANCE 319.128												EARTH TO MARS																																																																																
RL	151.34	LAL	-.00	LOL	327.80	VL	33.712	GAL	4.03	AZL	89.41	HCA	99.92	SMA	214.96	ECC	.30350	INC	.5917	V1	29.441	RP	226.76	LAP	.58	LOP	67.72	VP	23.519	GAP	17.39	AZP	90.10	TAL	17.41	TAP	117.33	RCA	149.72	APO	280.21	V2	24.255	RC	122.240	GL	3.98	GP	-8.17	ZAL	57.07	ZAP	158.64	ETS	203.40	ZAE	160.93	ETE	331.59	ZAC	74.30	ETC	282.31	LVI	-7.49																																							
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
C3	25.073	VHL	5.007	DLA	13.30	RAL	21.46	RAD	6645.0	VEL	12.043	PTH	7.03	VHP	5.121	DPA	9.35	RAP	48.03	ECC	1.4126	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	57	25	3459.45	-45.51	124.07	257.45	105.72	10	55	1	2455.4	-34.49	95.75	60.00	10	22	13	3389.46	-39.21	120.10	259.41	100.19	11	18	42	2389.5	-31.00	92.32	70.00	10	57	40	3285.12	-33.69	112.62	260.38	95.98	11	52	25	2285.1	-27.78	85.51	80.00	11	50	18	3120.22	-29.70	100.49	260.76	93.18	12	42	18	2120.2	-25.39	73.90	90.00	13	4	46	2879.88	-28.20	82.90	260.84	92.16	13	52	46	1879.9	-24.47	56.51	100.00	14	33	10	2594.69	-29.70	61.85	260.76	93.18	15	16	25	1594.7	-25.39	35.26	110.00	15	57	7	2331.93	-33.69	41.53	260.38	95.98	16	35	58	1331.9	-27.78	14.42
TDE	-.3160	TRA	-.6474	TC3	.8189	BAU	.2866	SGT	1175.9	SGR	720.2	SG3	376.9	ST	21.4	SR	30.0	SS	9.3	RDE	-.5209	RRA	.1918	RC3	-.3351	FAU	.12520	RRT	-.2732	RRF	.3632	RTF	-.6634	CRT	.7775	CR8	.9310	CST	.6443	FDE	.3336	FRA	-.3189	FC3	-4.3231	BSP	1786	SG8	1378.9	R23	-.0940	R13	.6834	LSA	36.0	MSA	11.9	SSA	3.0	BDE	.6092	BRA	.6752	BC3	.8848	FSP	549	SG1	1200.3	SG2	678.7	THA	165.91	EL1	35.0	EL2	11.5	ALF	56.91																									

LAUNCH DATE AUG 21 1973      FLIGHT TIME 132.00      ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC												DISTANCE 322.667												EARTH TO MARS																																																																																
RL	151.34	LAL	-.00	LOL	327.80	VL	33.657	GAL	4.05	AZL	89.37	HCA	100.97	SMA	213.66	ECC	.29944	INC	.6265	V1	29.441	RP	227.15	LAP	.62	LOP	68.77	VP	23.396	GAP	17.06	AZP	90.12	TAL	17.71	TAP	118.68	RCA	149.68	APO	277.64	V2	24.214	RC	124.878	GL	4.24	GP	-8.40	ZAL	56.62	ZAP	157.60	ETS	202.87	ZAE	161.38	ETE	329.84	ZAC	74.07	ETC	282.32	LVI	-7.26																																							
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
C3	24.875	VHL	4.967	DLA	13.37	RAL	20.91	RAD	6644.9	VEL	12.027	PTH	7.02	VHP	4.978	DPA	9.13	RAP	48.12	ECC	1.4061	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	54	58	3452.89	-45.46	123.85	256.60	105.89	10	52	31	2452.9	-34.39	95.59	60.00	10	19	41	3387.13	-39.18	119.90	256.57	100.32	11	16	8	2387.1	-30.92	92.17	70.00	10	55	2	3283.07	-33.67	112.46	259.56	96.07	11	49	45	2283.1	-27.73	85.37	80.00	11	47	34	3118.48	-29.70	100.36	259.94	93.24	12	39	33	2118.5	-25.35	73.78	90.00	13	2	0	2878.29	-28.20	82.79	260.02	92.22	13	49	58	1878.3	-24.45	56.40	100.00	14	30	26	2592.95	-29.70	61.73	259.94	93.24	15	13	39	1592.9	-25.35	35.14	110.00	15	54	29	2329.89	-33.67	41.38	259.56	96.07	16	33	19	1329.9	-27.73	14.28
TDE	-.3173	TRA	-.6383	TC3	.8392	BAU	.3011	SGT	1183.9	SGR	727.6	SG3	399.6	ST	21.6	SR	29.9	SS	9.7	RDE	-.5149	RRA	.1877	RC3	-.3589	FAU	.13157	RRT	-.2882	RRF	.3850	RTF	-.6652	CRT	.7832	CR8	.9279	CST	.6338	FDE	.3541	FRA	-.3686	FC3	-4.6161	BSP	1811	SG8	1389.6	R23	-.1017	R13	.6877	LSA	36.1	MSA	11.9	SSA	3.1	BDE	.6049	BRA	.6653	BC3	.9128	FSP	587	SG1	1211.4	SG2	681.0	THA	165.17	EL1	35.0	EL2	11.4	ALF	56.48																									

LAUNCH DATE AUG 21 1973      FLIGHT TIME 134.00      ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC												DISTANCE 326.228												EARTH TO MARS																																																																																
RL	151.34	LAL	-.00	LOL	327.80	VL	33.604	GAL	4.08	AZL	89.34	HCA	102.02	SMA	212.45	ECC	.29562	INC	.6614	V1	29.441	RP	227.54	LAP	.65	LOP	69.82	VP	23.278	GAP	16.72	AZP	90.14	TAL	18.00	TAP	120.02	RCA	149.65	APO	275.26	V2	24.172	RC	127.544	GL	4.50	GP	-8.65	ZAL	56.18	ZAP	156.53	ETS	202.38	ZAE	161.84	ETE	327.90	ZAC	73.83	ETC	282.33	LVI	-7.03																																							
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
C3	24.308	VHL	4.930	DLA	13.44	RAL	20.36	RAD	6644.7	VEL	12.012	PTH	7.00	VHP	4.840	DPA	8.89	RAP	48.18	ECC	1.4000	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	52	34	3450.76	-45.42	123.66	257.79	106.04	10	50	4	2450.8	-34.30	95.46	60.00	10	17	11	3385.25	-39.15	119.75	257.78	100.42	11	13	36	2385.2	-30.86	92.04	70.00	10	52	25	3281.52	-33.66	112.34	258.77	96.14	11	47	7	2281.3	-27.69	85.26	80.00	11	44	51	3117.28	-29.69	100.27	259.18	93.29	12	38	48	2117.3	-25.33	73.69	90.00	12	59	13	2877.24	-28.20	82.71	259.24	92.26	13	47	10	1877.2	-24.43	56.33	100.00	14	27	43	2591.73	-29.69	61.64	259.16	93.29	15	10	54	1591.7	-25.33	35.08	110.00	15	51	52	2328.34	-33.66	41.26	258.77	96.14	16	30	40	1328.3	-27.69	14.18
TDE	-.3189	TRA	-.6296	TC3	.8572	BAU	.3052	SGT	1190.7	SGR	733.6	SG3	423.3	ST	21.7	SR	29.8	SS	10.2	RDE	-.5080	RRA	.1833	RC3	-.3840	FAU	.13822	RRT	-.3032	RRF	.4074	RTF	-.6662	CRT	.7889	CR8	.9247	CST	.6249	FDE	.3767	FRA	-.4215	FC3	-4.9228	BSP	1833	SG8	1399.8	R23	-.1102	R13	.6915	LSA	36.2	MSA	11.9	SSA	3.2	BDE	.6006	BRA	.6557	BC3	.9393	FSP	627	SG1	1221.4	SG2	683.3	THA	164.39	EL1	35.1	EL2	11.3	ALF	56.03																									

LAUNCH DATE AUG 21 1973      FLIGHT TIME 136.00      ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC												DISTANCE 329.811												EARTH TO MARS																																																																																
RL	151.34	LAL	-.00	LOL	327.80	VL	33.584	GAL	4.10	AZL	89.30	HCA	103.07	SMA	211.33	ECC	.29203	INC	.6984	V1	29.441	RP	227.93	LAP	.68	LOP	70.86	VP	23.183	GAP	16.39	AZP	90.16	TAL	18.28	TAP	121.35	RCA	149.81	APO	273.04	V2	24.131	RC	130.237	GL	4.77	GP	-8.90	ZAL	55.77	ZAP	155.45	ETS	201.92	ZAE	162.32	ETE	325.76	ZAC	73.58	ETC	282.35	LVI	-6.80																																							
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
C3	23.988	VHL	4.896	DLA	13.53	RAL	19.87	RAD	6644.6	VEL	11.998	PTH	6.99	VHP	4.707	DPA	8.84	RAP	48.23	ECC	1.3945	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	50	11	3449.04	-45.39	123.50	255.03	106.19	10	47	40	2449.0	-34.24	95.35	60.00	10	14	42	3383.80	-39.14	119.63	257.03	100.90	11	11	5	2383.8	-30.82	91.95	70.00	10	49	49	3280.44	-33.66	112.26	258.03	96.19	11	44	29	2280.4	-27.67	85.19	80.00	11	42	7	3116.56	-29.69	100.22	258.42	93.32	12	34	4	2116.6	-25.32	73.65	90.00	12	58	26	2876.72	-28.20	82.67	258.50	92.28	13	44	23	1876.7	-24.42	56.30	100.00	14	24	59	2591.04	-29.69	61.58	258.42	93.32	15	8	10	1591.0	-25.32	35.01	110.00	15	49	15	2327.25	-33.66	41.17	258.03	96.19	16	28	3	1327.3	-27.67	14.11
TDE	-.3202	TRA	-.6212	TC3	.8732	BAU	.3092	SGT	1196.0	SGR	744.4	SG3	448.3	ST	21.9	SR	29.6	SS	10.8	RDE	-.5030	RRA	.1786	RC3	-.4103	FAU	.14520	RRT	-.3186	RRF	.4308	RTF	-.6666	CRT	.7942	CR8	.9212	CST	.6164	FDE	.4003	FRA	-.4771	FC3	-5.2444	BSP	1854	SG8	1408.8	R23	-.1190	R13	.6952	LSA	36.3	MSA	11.9	SSA	3.3	BDE	.5962	BRA	.6464	BC3	.9648	FSP	670	SG1	1230.6	SG2	685.8	THA	163.54	EL1	35.1	EL2	11.2	ALF	55.58																									

LAUNCH DATE AUG 21 1973

FLIGHT TIME 139.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC

DISTANCE 333.413

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.808 GAL 4.12 AZL 89.27 HCA 104.11 SMA 210.27 ECC .28867 INC .7316 V1 29.441  
 RP 226.32 LAP .71 LOP 71.91 VP 23.052 GAP 16.08 AZP 90.18 TAL 18.55 TAP 122.66 RCA 149.58 APO 270.97 V2 24.090  
 RC 132.954 GL 5.03 GP -9.16 ZAL 55.37 ZAP 154.34 ETS 201.49 ZAE 162.80 ETE 323.39 ZAC 73.33 ETC 282.37 LVI -6.56

PLANETOCENTRIC CONIC

C3 23.653 VHL 4.864 DLA 13.62 RAL 19.37 RAD 6644.4 VEL 11.983 PTH 6.98 VHP 4.579 DPA 8.38 RAP 48.26 ECC 1.3893  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 47 50 3447.72 -45.36 123.39 254.32 106.24 10 45 18 2447.7 -34.18 95.27  
 60.00 10 12 14 3382.79 -39.12 119.55 256.33 100.55 11 8 37 2382.8 -30.79 91.88  
 70.00 10 47 13 3279.82 -33.65 112.21 257.33 96.22 11 41 53 2279.8 -27.65 85.15  
 80.00 11 39 23 3116.37 -29.69 100.20 257.72 93.33 12 31 20 2116.4 -25.31 75.63  
 90.00 12 53 38 2876.73 -28.20 82.67 257.80 92.28 13 41 35 1876.7 -24.42 56.30  
 100.00 14 22 15 2590.85 -29.69 61.57 257.72 93.33 15 5 26 1590.8 -25.31 35.00  
 110.00 15 46 39 2326.64 -33.65 41.13 257.33 96.22 16 25 26 1326.6 -27.65 14.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3219 TRA -.6132 TC3 .8862 BAU .3126 SGT 1199.7 SGR 753.9 SG3 474.4 ST 22.0 SR 29.4 SS 11.1  
 RDE -.4968 RRA .1737 RC3 -.4380 FAU .15249 RRT -.3336 RRF .4546 RTF -.6659 CRT .7998 CRS .9179 CST .6096  
 FDE .4268 FRA -.5368 FC3-5.5810 BSP 1869 SGB 1416.9 R23 -.1288 R13 .6983 LSA 36.4 NSA 12.0 S8A 3.4  
 BDE .5920 BRA .6373 BC3 .9885 FSP 714 SG1 1238.4 SG2 688.5 THA 162.64 EL1 35.1 EL2 11.1 ALF 55.09

LAUNCH DATE AUG 21 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC

DISTANCE 337.033

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.463 GAL 4.14 AZL 89.23 HCA 105.15 SMA 209.30 ECC .28550 INC .7670 V1 29.441  
 RP 226.70 LAP .74 LOP 72.94 VP 22.945 GAP 15.73 AZP 90.20 TAL 18.81 TAP 123.95 RCA 149.54 APO 269.05 V2 24.049  
 RC 135.694 GL 5.30 GP -9.44 ZAL 55.00 ZAP 153.21 ETS 201.09 ZAE 163.28 ETE 320.76 ZAC 73.08 ETC 282.40 LVI -6.33

PLANETOCENTRIC CONIC

C3 23.365 VHL 4.834 DLA 13.72 RAL 18.90 RAD 6644.3 VEL 11.973 PTH 6.97 VHP 4.456 DPA 8.10 RAP 48.27 ECC 1.3845  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 45 32 3446.79 -45.34 123.30 253.66 106.30 10 42 58 2446.8 -34.15 95.21  
 60.00 10 9 48 3382.20 -39.12 119.50 255.67 100.58 11 6 10 2382.2 -30.77 91.84  
 70.00 10 44 38 3279.67 -33.65 112.20 256.77 96.22 11 39 17 2279.7 -27.65 85.14  
 80.00 11 36 39 3116.69 -29.69 100.23 257.06 93.31 12 28 36 2116.7 -25.32 73.65  
 90.00 12 50 50 2877.27 -28.20 82.71 257.14 92.26 13 38 47 1877.3 -24.43 56.33  
 100.00 14 19 31 2591.16 -29.69 61.59 257.06 93.31 15 2 42 1591.2 -25.32 35.02  
 110.00 15 44 4 2326.49 -33.65 41.11 256.67 96.22 16 22 51 1326.5 -27.65 14.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3233 TRA -.6056 TC3 .8964 BAU .3157 SGT 1201.6 SGR 764.4 SG3 501.7 ST 22.2 SR 29.2 SS 11.7  
 RDE -.4906 RRA .1683 RC3 -.4671 FAU .16011 RRT -.3486 RRF .4789 RTF -.6643 CRT .8051 CRS .9144 CST .6030  
 FDE .4546 FRA -.6001 FC3-5.9324 BSP 1885 SGB 1424.2 R23 -.1392 R13 .7012 LSA 36.4 NSA 12.0 S8A 3.5  
 BDE .5876 BRA .6286 BC3 1.0108 FSP 761 SG1 1245.0 SG2 691.5 THA 161.66 EL1 35.0 EL2 11.0 ALF 54.60

LAUNCH DATE AUG 21 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC

DISTANCE 340.669

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.422 GAL 4.16 AZL 89.20 HCA 106.18 SMA 208.38 ECC .28252 INC .8026 V1 29.441  
 RP 229.09 LAP .77 LOP 73.98 VP 22.842 GAP 15.41 AZP 90.22 TAL 19.06 TAP 125.24 RCA 149.51 APO 267.26 V2 24.008  
 RC 136.457 GL 5.58 GP -9.72 ZAL 54.65 ZAP 152.07 ETS 200.72 ZAE 163.74 ETE 317.66 ZAC 72.82 ETC 282.43 LVI -6.09

PLANETOCENTRIC CONIC

C3 23.098 VHL 4.806 DLA 13.83 RAL 18.44 RAD 6644.2 VEL 11.962 PTH 6.96 VHP 4.338 DPA 7.80 RAP 48.28 ECC 1.3801  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 15 3446.24 -45.33 123.25 253.04 106.33 10 40 41 2446.2 -34.13 95.17  
 60.00 10 7 23 3382.01 -39.11 119.48 255.04 100.59 11 3 45 2382.0 -30.76 91.83  
 70.00 10 42 3 3279.97 -33.65 112.22 256.05 96.21 11 36 43 2280.0 -27.66 85.16  
 80.00 11 33 54 3117.49 -29.69 100.28 256.43 93.28 12 25 52 2117.5 -25.34 73.71  
 90.00 12 48 0 2878.32 -28.20 82.79 256.51 92.22 13 35 59 1878.3 -24.45 56.40  
 100.00 14 16 46 2591.97 -29.69 61.65 256.43 93.28 14 59 58 1592.0 -25.34 35.08  
 110.00 15 41 29 2326.79 -33.65 41.14 256.05 96.21 16 20 16 1326.8 -27.66 14.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3247 TRA -.5987 TC3 .9042 BAU .3187 SGT 1202.3 SGR 775.9 SG3 530.2 ST 22.3 SR 29.0 SS 12.2  
 RDE -.4843 RRA .1827 RC3 -.4976 FAU .16805 RRT -.3634 RRF .5038 RTF -.6620 CRT .8101 CRS .9111 CST .5977  
 FDE .4846 FRA -.6660 FC3-6.2992 BSP 1898 SGB 1431.0 R23 -.1502 R13 .7039 LSA 36.5 NSA 12.1 S8A 3.8  
 BDE .5831 BRA .6205 BC3 1.0320 FSP 810 SG1 1251.0 SG2 694.8 THA 160.60 EL1 35.0 EL2 10.9 ALF 54.10

LAUNCH DATE AUG 21 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC

DISTANCE 344.320

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.383 GAL 4.18 AZL 89.18 HCA 107.21 SMA 207.93 ECC .27973 INC .8388 V1 29.441  
 RP 229.48 LAP .80 LOP 75.01 VP 22.742 GAP 15.10 AZP 90.25 TAL 19.29 TAP 126.30 RCA 149.48 APO 265.59 V2 23.967  
 RC 141.241 GL 5.85 GP -10.01 ZAL 54.31 ZAP 150.90 ETS 200.36 ZAE 164.19 ETE 314.65 ZAC 72.56 ETC 282.48 LVI -5.85

PLANETOCENTRIC CONIC

C3 22.847 VHL 4.780 DLA 13.95 RAL 17.99 RAD 6644.1 VEL 11.951 PTH 6.95 VHP 4.223 DPA 7.48 RAP 48.23 ECC 1.3760  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 41 0 3446.06 -45.33 123.24 252.46 106.35 10 38 26 2446.1 -34.12 95.16  
 60.00 10 4 59 3382.23 -39.12 119.50 254.46 100.58 11 1 21 2382.2 -30.77 91.84  
 70.00 10 39 28 3280.72 -33.66 112.28 255.46 96.18 11 34 9 2280.7 -27.68 85.21  
 80.00 11 31 9 3118.79 -29.70 100.38 255.84 93.23 12 23 8 2118.8 -25.36 73.80  
 90.00 12 45 10 2879.89 -28.20 82.90 255.92 92.16 13 33 10 1879.9 -24.47 56.51  
 100.00 14 14 1 2593.26 -29.70 61.75 255.84 93.23 14 57 14 1593.3 -25.36 35.17  
 110.00 15 38 55 2327.54 -33.66 41.19 255.46 96.18 16 17 42 1327.5 -27.67 14.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3265 TRA -.5922 TC3 .9087 BAU .3213 SGT 1201.1 SGR 788.6 SG3 560.1 ST 22.5 SR 28.8 SS 12.9  
 RDE -.4777 RRA .1567 RC3 -.5298 FAU .17637 RRT -.3773 RRF .5288 RTF -.6584 CRT .8153 CRS .9081 CST .5939  
 FDE .5184 FRA -.7370 FC3-6.6828 BSP 1909 SGB 1436.9 R23 -.1621 R13 .7063 LSA 36.6 NSA 12.2 S8A 3.6  
 BDE .5786 BRA .6125 BC3 1.0518 FSP 861 SG1 1255.6 SG2 698.8 THA 159.47 EL1 34.9 EL2 10.7 ALF 53.54

LAUNCH DATE AUG 21 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 33.346 GAL 4.20 AZL 89.13 HCA 108.24 SMA 206.74 ECC .27710 INC .8747 V1 29.441
RP 229.86 LAP .83 LOP 76.04 VP 22.645 GAP 14.78 AZP 90.27 TAL 19.32 TAP 127.76 RCA 149.45 APO 264.02 V2 23.927
RC 144.048 GL 6.13 GP -10.31 ZAL 54.00 ZAP 149.70 ETS 200.02 ZAE 184.61 ETE 311.12 ZAC 72.29 ETC 282.30 LVI -5.61

PLANETOCENTRIC CONIC

C3 22.617 VHL 4.756 DLA 14.08 RAL 17.56 RAD 6644.0 VEL 11.942 PTH 6.94 VHP 4.114 DPA 7.15 RAP 48.18 ECC 1.3722
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 38 47 3446.23 -45.33 123.25 251.91 106.34 10 36 13 2446.2 -34.13 95.17
60.00 10 2 36 3382.83 -39.12 119.58 253.92 100.55 10 58 59 2382.8 -30.79 91.88
70.00 10 36 54 3281.88 -33.67 112.37 254.91 96.12 11 31 36 2281.9 -27.70 85.29
80.00 11 28 23 3120.55 -29.71 100.51 255.29 93.16 12 20 24 2120.6 -25.39 73.92
90.00 12 42 19 2881.93 -28.21 83.05 255.37 92.09 13 30 21 1881.9 -24.51 56.65
100.00 14 11 15 2593.02 -29.71 61.88 255.29 93.16 14 54 30 1595.0 -25.39 35.29
110.00 15 36 20 2328.70 -33.67 41.28 254.91 96.12 16 15 9 1328.7 -27.70 14.20

DIFFERENTIAL CORRECTIONS

TDE -.3191 TRA -.5775 TC3 .9253 BAU .3277
RDE -.4715 RRA .1500 RC3 -.5641 FAU .18525
FDE .5473 FRA -.8164 FC3-7.0908 BSP 1811
BDE .5693 BRA .5967 BC3 1.0637 FSP 908

MID-COURSE EXECUTION ACCURACY

SGT 1198.7 SGR 803.3 SG3 592.0
RRT -.4024 RRF .5551 RTF -.6650
SGB 1443.0 R23 -.1601 R13 .7177
SG1 1262.9 SG2 697.9 THA 157.81

ORBIT DETERMINATION ACCURACY

ST 22.1 SR 26.5 SS 13.4
CRT .8170 CRS .9021 CST .5811
LSA 36.3 MSA 12.2 SSA 3.7
EL1 34.5 EL2 10.5 ALF 53.84

LAUNCH DATE AUG 21 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 33.311 GAL 4.21 AZL 89.09 HCA 109.26 SMA 206.00 ECC .27464 INC .9112 V1 29.441
RP 230.25 LAP .86 LOP 77.06 VP 22.551 GAP 14.47 AZP 90.30 TAL 19.73 TAP 128.99 RCA 149.42 APO 262.57 V2 23.887
RC 146.870 GL 6.41 GP -10.62 ZAL 53.71 ZAP 148.49 ETS 199.69 ZAE 164.99 ETE 307.26 ZAC 72.02 ETC 282.54 LVI -5.37

PLANETOCENTRIC CONIC

C3 22.403 VHL 4.733 DLA 14.22 RAL 17.15 RAD 6643.9 VEL 11.933 PTH 6.94 VHP 4.008 DPA 6.81 RAP 48.12 ECC 1.3687
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 36 35 3446.78 -45.34 123.30 251.42 106.30 10 34 2 2446.8 -34.15 95.21
60.00 10 0 14 3383.84 -39.14 119.63 253.41 100.49 10 56 38 2383.8 -30.82 91.95
70.00 10 34 20 3283.50 -33.68 112.49 254.40 96.05 11 29 3 2283.5 -27.74 85.40
80.00 11 25 37 3122.82 -29.71 100.68 254.77 93.08 12 17 39 2122.8 -25.44 74.07
90.00 12 39 26 2884.52 -28.22 83.24 254.85 91.99 13 27 31 1884.5 -24.55 56.83
100.00 14 8 28 2597.30 -29.71 62.05 254.77 93.08 14 51 46 1597.3 -25.44 35.44
110.00 15 33 46 2330.32 -33.68 41.41 254.40 96.05 16 12 36 1330.3 -27.74 14.31

DIFFERENTIAL CORRECTIONS

TDE -.3243 TRA -.5761 TC3 .9185 BAU .3280
RDE -.4644 RRA .1434 RC3 -.5991 FAU .19409
FDE .5879 FRA -.8914 FC3-7.5003 BSP 1863
BDE .5684 BRA .5937 BC3 1.0950 FSP 967

MID-COURSE EXECUTION ACCURACY

SGT 1193.5 SGR 818.4 SG3 624.0
RRT -.4098 RRF .5799 RTF -.6542
SGB 1447.1 R23 -.1793 R13 .7160
SG1 1263.8 SG2 705.0 THA 156.66

ORBIT DETERMINATION ACCURACY

ST 22.4 SR 26.2 SS 14.1
CRT .8230 CR8 .9005 CST .5824
LSA 36.5 MSA 12.4 SSA 3.7
EL1 34.5 EL2 10.4 ALF 52.89

LAUNCH DATE AUG 21 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 33.279 GAL 4.23 AZL 89.05 HCA 110.26 SMA 205.31 ECC .27232 INC .9481 V1 29.441
RP 230.63 LAP .89 LOP 78.08 VP 22.461 GAP 14.16 AZP 90.33 TAL 19.93 TAP 130.21 RCA 149.40 APO 261.22 V2 23.847
RC 149.713 GL 6.69 GP -10.94 ZAL 53.44 ZAP 147.25 ETS 199.37 ZAE 165.31 ETE 303.07 ZAC 71.74 ETC 282.59 LVI -5.12

PLANETOCENTRIC CONIC

C3 22.205 VHL 4.712 DLA 14.37 RAL 16.76 RAD 6643.8 VEL 11.925 PTH 6.93 VHP 3.907 DPA 6.44 RAP 48.03 ECC 1.3654
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 34 26 3447.67 -45.36 123.38 250.96 106.24 10 31 53 2447.7 -34.18 95.26
60.00 9 57 53 3385.23 -39.15 119.75 252.94 100.42 10 54 18 2385.2 -30.86 92.04
70.00 10 31 45 3285.55 -33.69 112.65 253.92 95.96 11 26 31 2285.5 -27.79 85.53
80.00 11 22 49 3125.57 -29.72 100.88 254.28 92.97 12 14 54 2125.6 -25.49 74.26
90.00 12 36 32 2887.60 -28.22 83.47 254.36 91.88 13 24 40 1887.6 -24.61 57.04
100.00 14 5 41 2600.04 -29.72 62.25 254.28 92.97 14 49 1 1600.0 -25.49 35.63
110.00 15 31 12 2332.37 -33.69 41.57 253.92 95.96 16 10 4 1332.4 -27.79 14.45

DIFFERENTIAL CORRECTIONS

TDE -.3279 TRA -.5741 TC3 .9067 BAU .3288
RDE -.4571 RRA .1364 RC3 -.6360 FAU .20334
FDE .6309 FRA -.9701 FC3-7.9277 BSP 1893
BDE .5425 BRA .5900 BC3 1.1075 FSP 1028

MID-COURSE EXECUTION ACCURACY

SGT 1186.7 SGR 835.2 SG3 657.4
RRT -.4177 RRF .8049 RTF -.637
SGB 1451.1 R23 -.1967 R13 .7159
SG1 1264.3 SG2 712.3 THA 155.32

ORBIT DETERMINATION ACCURACY

ST 22.7 SR 27.9 SS 14.8
CRT .8279 CR8 .8988 CST .5828
LSA 36.6 MSA 12.6 SSA 3.8
EL1 34.5 EL2 10.3 ALF 52.88

LAUNCH DATE AUG 21 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 33.248 GAL 4.24 AZL 89.01 HCA 111.30 SMA 204.66 ECC .27015 INC .9852 V1 29.441
RP 231.01 LAP .92 LOP 79.10 VP 22.373 GAP 13.86 AZP 90.36 TAL 20.12 TAP 131.42 RCA 149.37 APO 259.95 V2 23.807
RC 192.572 GL 6.98 GP -11.27 ZAL 53.19 ZAP 146.00 ETS 199.07 ZAE 165.56 ETE 298.54 ZAC 71.45 ETC 282.64 LVI -4.87

PLANETOCENTRIC CONIC

C3 22.021 VHL 4.693 DLA 14.83 RAL 16.39 RAD 6643.7 VEL 11.917 PTH 6.92 VHP 3.809 DPA 6.06 RAP 47.92 ECC 1.3624
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 32 18 3448.90 -45.38 123.49 250.54 106.16 10 29 47 2448.9 -34.23 95.34
60.00 9 58 33 3386.99 -39.18 119.89 252.51 100.32 10 52 0 2387.0 -30.92 92.16
70.00 10 29 11 3288.01 -33.71 112.84 253.47 95.85 11 23 59 2288.0 -27.85 85.70
80.00 11 20 0 3128.78 -29.73 101.12 253.83 92.84 12 12 9 2128.8 -25.55 74.48
90.00 12 33 37 2891.18 -28.23 83.73 253.90 91.75 13 21 48 1891.2 -24.67 57.28
100.00 14 2 52 2603.26 -29.73 62.49 253.83 92.84 14 46 15 1603.3 -25.55 35.65
110.00 15 28 37 2334.83 -33.71 41.76 253.47 95.85 16 7 32 1334.8 -27.85 14.62

DIFFERENTIAL CORRECTIONS

TDE -.3308 TRA -.5718 TC3 .8941 BAU .3297
RDE -.4496 RRA .1289 RC3 -.6746 FAU .21287
FDE .6764 FRA -1.0539 FC3-8.3689 BSP 1914
BDE .5581 BRA .5861 BC3 1.1200 FSP 1091

MID-COURSE EXECUTION ACCURACY

SGT 1177.8 SGR 853.5 SG3 692.0
RRT -.4245 RRF .8295 RTF -.6324
SGB 1454.6 R23 -.2134 R13 .7165
SG1 1263.7 SG2 720.3 THA 153.83

ORBIT DETERMINATION ACCURACY

ST 22.9 SR 27.6 SS 15.6
CRT .8326 CR8 .8968 CST .5827
LSA 36.8 MSA 12.8 SSA 3.8
EL1 34.4 EL2 10.2 ALF 51.26

LAUNCH DATE AUG 21 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC

DISTANCE 362.750

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.220 GAL 4.25 AZL 88.90 MCA 112.31 SMA 204.06 ECC .26611 INC 1.0229 V1 29.441
RP 231.39 LAP .95 LOP 80.11 VP 22.208 GAP 13.55 AZP 90.39 TAL 20.29 TAP 132.80 RCA 149.35 APO 258.77 V2 23.767
RC 155.447 GL 7.27 GP -11.61 ZAL 52.96 ZAP 144.71 ETS 198.77 ZAE 165.73 EYE 293.71 ZAC 71.16 ETC 282.70 LVI -4.62

PLANETOCENTRIC CONIC

C3 21.850 VHL 4.674 DLA 14.70 RAL 16.03 RAD 6643.7 VEL 11.910 PTH 6.92 VHP 3.716 DPA 5.67 RAP 47.80 ECC 1.3596
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 30 11 3450.46 -45.41 123.63 250.15 106.06 10 27 41 2450.5 -34.29 95.44
60.00 9 33 13 3389.12 -39.20 120.07 252.11 100.21 10 49 43 2389.1 -30.98 92.30
70.00 10 26 36 3290.89 -33.73 113.06 253.06 95.72 11 21 27 2290.9 -27.92 85.90
80.00 11 17 10 3132.47 -29.75 101.39 253.41 92.70 12 9 22 2132.5 -25.62 74.73
90.00 12 30 39 2895.26 -28.24 84.03 253.47 91.60 13 18 54 1895.3 -24.74 57.56
100.00 14 0 1 2606.94 -29.75 62.76 253.41 92.70 14 43 28 1606.9 -25.62 36.10
110.00 15 26 2 2337.71 -33.73 41.98 253.06 95.72 16 5 0 1337.7 -27.92 14.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3329 TRA -.5699 TC3 .8790 BAU .3310 SGT 1167.6 SGR 873.9 S63 728.0 ST 23.1 SR 27.2 S8 16.4
RDE -.4418 RRA .1210 RC3 -.7151 FAU .22282 RRT -.4304 RRF .6539 RTF -.6201 CRT .8366 CRS .8950 CST .5825
FDE .7245 FRA-1.1406 FC3-8.8287 BSP 1923 SGB 1458.4 R23 -.2293 R13 .7182 LSA 36.8 MSA 13.0 SSA 3.8
BDE .5532 BRA .5826 BC3 1.1332 FSP 1154 SGI 1263.0 S62 729.2 THA 152.16 EL1 34.3 EL2 10.1 ALF 50.49

LAUNCH DATE AUG 21 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

DISTANCE 366.475

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.193 GAL 4.26 AZL 88.94 MCA 113.32 SMA 203.50 ECC .26619 INC 1.0608 V1 29.441
RP 231.77 LAP .97 LOP 81.12 VP 22.208 GAP 13.26 AZP 90.42 TAL 20.46 TAP 133.78 RCA 149.33 APO 257.67 V2 23.728
RC 158.336 GL 7.56 GP -11.96 ZAL 52.76 ZAP 143.41 ETS 198.47 ZAE 165.80 ETE 288.63 ZAC 70.87 ETC 282.76 LVI -4.37

PLANETOCENTRIC CONIC

C3 21.691 VHL 4.657 DLA 14.87 RAL 15.68 RAD 6643.6 VEL 11.903 PTH 6.91 VHP 3.626 DPA 5.25 RAP 47.65 ECC 1.3570
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 28 5 3452.34 -45.45 123.80 249.80 105.93 10 25 38 2452.3 -34.37 95.56
60.00 9 50 54 3391.61 -39.23 120.27 251.74 100.07 10 47 26 2391.6 -31.06 92.46
70.00 10 24 0 3294.19 -33.75 113.32 252.68 95.57 11 18 55 2294.2 -28.00 86.12
80.00 11 14 18 3136.62 -29.76 101.70 253.01 92.54 12 6 34 2136.6 -25.70 75.02
90.00 12 27 39 2899.83 -28.25 84.36 253.07 91.43 13 15 59 1899.8 -24.81 57.88
100.00 13 57 9 2611.09 -29.76 63.07 253.01 92.54 14 40 40 1611.1 -25.70 36.38
110.00 15 23 27 2341.01 -33.75 42.24 252.68 95.57 16 2 28 1341.0 -28.00 15.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3347 TRA -.5682 TC3 .8600 BAU .3323 SGT 1155.1 SGR 895.9 S63 765.1 ST 23.3 SR 26.8 S8 17.2
RDE -.4336 RRA .1127 RC3 -.7573 FAU .23301 RRT -.4340 RRF .6776 RTF -.6061 CRT .8405 CRS .8934 CST .5829
FDE .7775 FRA-1.2315 FC3-9.2999 BSP 1928 SGB 1461.9 R23 -.2443 R13 .7207 LSA 36.9 MSA 13.3 SSA 3.9
BDE .5477 BRA .5793 BC3 1.1459 FSP 1222 SGI 1261.1 S62 739.3 THA 150.31 EL1 34.1 EL2 9.9 ALF 49.71

LAUNCH DATE AUG 21 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC

DISTANCE 370.200

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.167 GAL 4.27 AZL 88.90 MCA 114.33 SMA 202.98 ECC .26439 INC 1.0993 V1 29.441
RP 232.14 LAP 1.00 LOP 82.13 VP 22.126 GAP 12.96 AZP 90.45 TAL 20.61 TAP 134.94 RCA 149.31 APO 256.64 V2 23.689
RC 161.238 GL 7.88 GP -12.32 ZAL 52.57 ZAP 142.08 ETS 198.18 ZAE 165.76 ETE 283.37 ZAC 70.57 ETC 282.82 LVI -4.11

PLANETOCENTRIC CONIC

C3 21.543 VHL 4.641 DLA 15.06 RAL 15.35 RAD 6643.5 VEL 11.897 PTH 6.91 VHP 3.541 DPA 4.82 RAP 47.48 ECC 1.3545
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 26 1 3454.55 -45.49 123.99 249.49 105.78 10 23 36 2454.6 -34.45 95.70
60.00 9 48 36 3394.46 -39.27 120.51 251.41 99.91 10 45 10 2394.5 -31.15 92.65
70.00 10 21 24 3297.89 -33.78 113.60 252.33 95.40 11 16 22 2297.9 -28.09 86.37
80.00 11 11 24 3141.24 -29.77 102.05 252.65 92.36 12 3 45 2141.2 -25.78 75.33
90.00 12 24 37 2904.90 -28.25 84.73 252.70 91.25 13 13 2 1904.9 -24.89 58.22
100.00 13 54 16 2615.71 -29.77 63.41 252.65 92.36 14 37 51 1615.7 -25.78 36.70
110.00 15 20 50 2344.71 -33.78 42.52 252.33 95.40 15 59 55 1344.7 -28.09 15.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3359 TRA -.5674 TC3 .8374 BAU .3339 SGT 1141.2 SGR 920.1 S63 803.4 ST 23.4 SR 26.3 S8 18.0
RDE -.4291 RRA .1039 RC3 -.8015 FAU .24352 RRT -.4353 RRF .7007 RTF -.5999 CRT .8439 CRS .8917 CST .5828
FDE .8332 FRA-1.3257 FC3-9.7862 BSP 1929 SGB 1465.9 R23 -.2584 R13 .7241 LSA 37.0 MSA 13.5 SSA 3.9
BDE .5418 BRA .5768 BC3 1.1392 FSP 1290 SGI 1259.1 S62 750.8 THA 148.25 EL1 33.9 EL2 9.8 ALF 48.93

LAUNCH DATE AUG 21 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

DISTANCE 373.933

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.144 GAL 4.27 AZL 88.86 MCA 115.33 SMA 202.49 ECC .26271 INC 1.1382 V1 29.441
RP 232.51 LAP 1.03 LOP 83.13 VP 22.049 GAP 12.67 AZP 90.49 TAL 20.75 TAP 136.08 RCA 149.30 APO 255.69 V2 23.650
RC 164.150 GL 8.16 GP -12.89 ZAL 52.40 ZAP 140.73 ETS 197.89 ZAE 165.60 ETE 278.01 ZAC 70.26 ETC 282.89 LVI -3.85

PLANETOCENTRIC CONIC

C3 21.405 VHL 4.627 DLA 15.26 RAL 15.04 RAD 6643.5 VEL 11.891 PTH 6.90 VHP 3.458 DPA 4.37 RAP 47.29 ECC 1.3523
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 23 58 3457.08 -45.54 124.22 249.21 105.61 10 21 35 2457.1 -34.55 95.66
60.00 9 46 17 3397.67 -39.30 120.77 251.11 99.74 10 42 54 2397.7 -31.25 92.87
70.00 10 18 47 3302.01 -33.80 113.92 252.01 95.21 11 13 49 2302.0 -28.18 86.65
80.00 11 8 28 3146.33 -29.79 102.42 252.31 92.16 12 0 54 2146.3 -25.87 75.68
90.00 12 21 32 2910.47 -28.26 85.14 252.36 91.04 13 10 3 1910.5 -24.96 58.61
100.00 13 51 20 2620.80 -29.79 63.79 252.31 92.16 14 35 0 1620.8 -25.87 37.05
110.00 15 18 13 2348.83 -33.80 42.84 252.01 95.21 15 57 22 1348.8 -28.18 15.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3369 TRA -.5672 TC3 .8108 BAU .3357 SGT 1125.7 SGR 946.4 S63 842.9 ST 23.6 SR 25.9 S8 18.9
RDE -.4162 RRA .0946 RC3 -.8477 FAU .25435 RRT -.4336 RRF .7230 RTF -.5712 CRT .8470 CRS .8900 CST .5827
FDE .8927 FRA-1.4232 FC-10.2872 BSP 1926 SGB 1470.7 R23 -.2710 R13 .7288 LSA 37.1 MSA 13.8 SSA 3.9
BDE .5355 BRA .5751 BC3 1.1731 FSP 1359 SGI 1256.7 S62 763.9 THA 145.95 EL1 33.6 EL2 9.6 ALF 48.12

LAUNCH DATE AUG 21 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 30 1974

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 33.121 GAL 4.28 AZL 88.82 HCA 116.33 SMA 202.04 ECC .26112 INC 1.1777 V1 29.441  
 RP 232.89 LAP 1.06 LOP 84.14 VP 21.974 GAP 12.38 AZP 90.92 TAL 20.87 TAP 137.21 RCA 149.20 APO 254.79 V2 23.612  
 RC 187.073 GL 8.46 GP -13.08 ZAL 52.25 ZAP 139.36 ETS 197.80 ZAE 185.31 ETE 272.66 ZAC 69.95 ETC 282.96 LVI -3.59

Planetocentric Conic: C3 21.278 VHL 4.613 DLA 15.47 RAL 14.74 RAD 8643.4 VEL 11.886 PTH 6.90 VHP 3.300 DPA 3.90 RAP 47.08 ECC 1.3502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 55 3459.93 -45.59 124.48 248.97 105.42 10 19 35 2459.9 -34.66 96.04  
 60.00 9 43 58 3401.23 -39.34 121.07 250.84 99.54 10 40 39 2401.2 -31.36 93.11  
 70.00 10 16 9 3306.53 -33.83 114.27 251.72 95.01 11 11 15 2306.5 -28.29 86.96  
 80.00 11 5 29 3151.90 -29.80 102.84 252.00 91.94 11 58 1 2151.9 -25.97 76.07  
 90.00 12 18 24 2916.55 -28.27 85.58 252.05 90.82 13 7 1 1916.5 -25.08 59.02  
 100.00 13 48 21 2626.37 -29.80 64.20 252.00 91.94 14 32 8 1626.4 -25.97 37.43  
 110.00 15 15 35 2353.35 -33.83 43.19 251.72 95.01 15 54 48 1353.3 -28.29 15.88

Differential Corrections: TDE -.3378 TRA -.5683 TC3 .7793 BAU .3377 SGT 1108.8 SGR 974.7 SG3 883.2 ST 23.7 SR 25.3 SS 19.9  
 RDE -.4068 RRA .0849 RC3 -.8957 FAU .26538 RRT -.4277 RRF .7443 RTF -.5490 CRT .8498 CR8 .8866 CST .5829  
 FDE .9569 FRA-1.5230 FC-10.7978 BSP 1929 SGB 1476.3 R23 -.2818 R13 .7348 LSA 37.2 MSA 14.1 SSA 3.9  
 BDE .5287 BRA .5746 BC3 1.1873 FSP 1434 SGI 1254.1 SG2 779.0 THA 143.40 EL1 33.4 EL2 9.5 ALF 47.25

Mid-course Execution Accuracy: SGT 1108.8 SGR 974.7 SG3 883.2 ST 23.7 SR 25.3 SS 19.9  
 RRT -.4277 RRF .7443 RTF -.5490 CRT .8498 CR8 .8866 CST .5829  
 SGB 1476.3 R23 -.2818 R13 .7348 LSA 37.2 MSA 14.1 SSA 3.9  
 SGI 1254.1 SG2 779.0 THA 143.40 EL1 33.4 EL2 9.5 ALF 47.25

LAUNCH DATE AUG 21 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 1 1974

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 33.101 GAL 4.28 AZL 88.78 HCA 117.33 SMA 201.61 ECC .25964 INC 1.2177 V1 29.441  
 RP 233.25 LAP 1.08 LOP 85.13 VP 21.902 GAP 12.09 AZP 90.56 TAL 20.99 TAP 136.32 RCA 149.27 APO 253.96 V2 23.573  
 RC 170.003 GL 8.77 GP -13.47 ZAL 52.12 ZAP 137.96 ETS 197.30 ZAE 184.90 ETE 267.40 ZAC 69.64 ETC 283.04 LVI -3.32

Planetocentric Conic: C3 21.159 VHL 4.600 DLA 15.69 RAL 14.45 RAD 8643.4 VEL 11.881 PTH 6.89 VHP 3.305 DPA 3.41 RAP 46.86 ECC 1.3482  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 19 53 3463.08 -45.84 124.76 248.75 105.21 10 17 36 2463.1 -34.78 96.24  
 60.00 9 41 39 3405.15 -39.39 121.39 250.60 99.33 10 38 24 2405.1 -31.48 93.37  
 70.00 10 13 29 3311.46 -33.86 114.65 251.45 94.78 11 8 40 2311.5 -28.40 87.30  
 80.00 11 2 28 3157.94 -29.81 103.28 251.72 91.71 11 55 6 2157.9 -26.00 76.48  
 90.00 12 15 13 2923.13 -28.27 86.06 251.76 90.58 13 3 56 1923.1 -25.19 59.48  
 100.00 13 45 20 2632.41 -29.81 64.85 251.72 91.71 14 29 13 1632.4 -26.08 37.85  
 110.00 15 12 55 2358.28 -33.86 43.57 251.45 94.78 15 52 13 1358.3 -28.40 16.22

Differential Corrections: TDE -.3382 TRA -.5703 TC3 .7429 BAU .3402 SGT 1090.4 SGR 1005.4 SG3 924.9 ST 23.8 SR 24.8 SS 20.8  
 RDE -.3970 RRA .0748 RC3 -.9457 FAU .27685 RRT -.4175 RRF .7646 RTF -.5231 CRT .8522 CR8 .8889 CST .5824  
 FDE 1.0245 FRA-1.6257 FC-11.3198 BSP 1928 SGB 1483.1 R23 -.2898 R13 .7424 LSA 37.3 MSA 14.8 SSA 3.8  
 BDE .5215 BRA .5751 BC3 1.2028 FSP 1508 SGI 1251.5 SG2 799.9 THA 140.51 EL1 33.1 EL2 9.3 ALF 46.36

Mid-course Execution Accuracy: SGT 1090.4 SGR 1005.4 SG3 924.9 ST 23.8 SR 24.8 SS 20.8  
 RRT -.4175 RRF .7646 RTF -.5231 CRT .8522 CR8 .8889 CST .5824  
 SGB 1483.1 R23 -.2898 R13 .7424 LSA 37.3 MSA 14.8 SSA 3.8  
 SGI 1251.5 SG2 799.9 THA 140.51 EL1 33.1 EL2 9.3 ALF 46.36

LAUNCH DATE AUG 21 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 3 1974

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 33.081 GAL 4.28 AZL 88.74 HCA 118.33 SMA 201.22 ECC .25825 INC 1.2593 V1 29.441  
 RP 233.62 LAP 1.11 LOP 86.13 VP 21.831 GAP 11.80 AZP 90.60 TAL 21.09 TAP 139.42 RCA 149.26 APO 253.19 V2 23.838  
 RC 172.941 GL 9.09 GP -13.87 ZAL 52.00 ZAP 136.55 ETS 197.01 ZAE 184.35 ETE 262.32 ZAC 69.32 ETC 283.12 LVI -3.08

Planetocentric Conic: C3 21.048 VHL 4.588 DLA 15.82 RAL 14.18 RAD 8643.3 VEL 11.876 PTH 6.89 VHP 3.233 DPA 2.80 RAP 46.81 ECC 1.3484  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 52 3466.55 -45.71 125.07 248.57 104.98 10 15 39 2466.8 -34.92 96.46  
 60.00 9 39 20 3409.41 -39.43 121.74 250.39 99.09 10 36 9 2409.4 -31.61 93.88  
 70.00 10 10 47 3316.81 -33.89 115.07 251.21 94.54 11 6 4 2316.8 -28.53 87.67  
 80.00 10 59 24 3164.46 -29.83 103.77 251.46 91.46 11 52 9 2164.3 -26.20 76.93  
 90.00 12 11 58 2930.24 -28.28 86.58 251.49 90.32 13 0 48 1930.2 -25.30 59.87  
 100.00 13 42 16 2638.93 -29.83 65.14 251.46 91.46 14 26 15 1638.9 -26.20 38.30  
 110.00 15 10 14 2363.63 -33.89 43.99 251.21 94.54 15 49 37 1363.6 -28.53 16.59

Differential Corrections: TDE -.3384 TRA -.5734 TC3 .7019 BAU .3433 SGT 1071.4 SGR 1038.4 SG3 968.8 ST 23.9 SR 24.2 SS 21.8  
 RDE -.3867 RRA .0642 RC3 -.9977 FAU .28816 RRT -.4024 RRF .7839 RTF -.4429 CRT .8543 CR8 .8852 CST .5817  
 FDE 1.0964 FRA-1.7307 FC-11.8526 BSP 1933 SGB 1492.1 R23 -.2930 R13 .7524 LSA 37.4 MSA 14.8 SSA 3.8  
 BDE .5138 BRA .5770 BC3 1.2199 FSP 1584 SGI 1249.8 SG2 814.9 THA 137.23 EL1 32.8 EL2 9.2 ALF 45.41

Mid-course Execution Accuracy: SGT 1071.4 SGR 1038.4 SG3 968.8 ST 23.9 SR 24.2 SS 21.8  
 RRT -.4024 RRF .7839 RTF -.4429 CRT .8543 CR8 .8852 CST .5817  
 SGB 1492.1 R23 -.2930 R13 .7524 LSA 37.4 MSA 14.8 SSA 3.8  
 SGI 1249.8 SG2 814.9 THA 137.23 EL1 32.8 EL2 9.2 ALF 45.41

LAUNCH DATE AUG 21 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic: RL 151.34 LAL -.00 LOL 327.80 VL 33.063 GAL 4.28 AZL 88.70 HCA 119.32 SMA 200.88 ECC .25685 INC 1.2898 V1 29.441  
 RP 233.99 LAP 1.13 LOP 87.12 VP 21.763 GAP 11.52 AZP 90.84 TAL 21.18 TAP 140.60 RCA 149.25 APO 252.47 V2 23.498  
 RC 175.888 GL 9.40 GP -14.28 ZAL 51.91 ZAP 135.11 ETS 196.71 ZAE 183.88 ETE 287.48 ZAC 69.00 ETC 283.20 LVI -2.78

Planetocentric Conic: C3 20.945 VHL 4.577 DLA 16.16 RAL 13.92 RAD 8643.3 VEL 11.872 PTH 6.89 VHP 3.168 DPA 2.38 RAP 46.34 ECC 1.3447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 15 51 3470.31 -45.77 125.41 248.42 104.78 10 13 41 2470.3 -35.06 96.70  
 60.00 9 36 59 3414.02 -39.48 122.13 250.20 98.84 10 33 53 2414.0 -31.75 93.97  
 70.00 10 8 4 3322.55 -33.92 115.52 251.00 94.28 11 3 26 2322.6 -28.66 88.07  
 80.00 10 56 17 3171.45 -29.84 104.29 251.23 91.18 11 49 8 2171.4 -26.32 77.42  
 90.00 12 8 39 2937.85 -28.28 87.14 251.25 90.04 12 57 37 1937.8 -25.41 60.50  
 100.00 13 39 9 2645.92 -29.84 65.66 251.23 91.18 14 23 15 1645.9 -26.32 38.78  
 110.00 15 7 30 2369.37 -33.92 44.43 251.00 94.28 15 47 0 1369.4 -28.66 16.98

Differential Corrections: TDE -.3328 TRA -.5718 TC3 .6667 BAU .3491 SGT 1049.5 SGR 1075.4 SG3 1011.4 ST 23.7 SR 23.6 SS 22.7  
 RDE -.3787 RRA .0522 RC3-1.0532 FAU .30033 RRT -.3922 RRF .8026 RTF -.4674 CRT .8552 CR8 .8801 CST .5735  
 FDE 1.1821 FRA-1.8508 FC-12.4136 BSP 1888 SGB 1502.6 R23 -.2823 R13 .7695 LSA 37.3 MSA 15.2 SSA 3.8  
 BDE .5026 BRA .5742 BC3 1.2465 FSP 1650 SGI 1253.9 SG2 828.0 THA 133.23 EL1 32.2 EL2 9.0 ALF 44.98

Mid-course Execution Accuracy: SGT 1049.5 SGR 1075.4 SG3 1011.4 ST 23.7 SR 23.6 SS 22.7  
 RRT -.3922 RRF .8026 RTF -.4674 CRT .8552 CR8 .8801 CST .5735  
 SGB 1502.6 R23 -.2823 R13 .7695 LSA 37.3 MSA 15.2 SSA 3.8  
 SGI 1253.9 SG2 828.0 THA 133.23 EL1 32.2 EL2 9.0 ALF 44.98

LAUNCH DATE AUG 21 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

DISTANCE 392.684

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.00 VL 33.046 GAL 4.28 AZL 88.66 HCA 120.31 SMA 200.52 ECC .25573 INC 1.3415 V1 29.441
RP 234.35 LAP 1.16 LOP 89.11 VP 21.697 GAP 11.24 AZP 90.68 TAL 21.26 TAP 141.87 RCA 149.24 APO 251.80 V2 23.461
RC 178.836 GL 9.73 GP -14.71 ZAL 51.83 ZAP 133.85 ETS 106.40 ZAE 162.88 ETE 252.94 ZAC 68.67 ETC 283.29 LVI -2.91

PLANETOCENTRIC CONIC

C3 20.850 VHL 4.566 DLA 16.41 RAL 13.67 RAD 6643.2 VEL 11.868 PTH 6.88 VHP 3.101 DPA 1.84 RAP 46.06 ECC 1.3431
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 13 30 3474.40 -45.84 125.78 248.30 104.45 10 11 44 2474.4 -35.22 96.97
60.00 9 34 39 3419.00 -39.53 122.54 250.05 98.56 10 31 38 2419.0 -31.90 94.30
70.00 10 5 18 3328.74 -33.95 116.00 250.82 94.00 11 0 47 2328.7 -28.80 88.49
80.00 10 53 6 3178.96 -29.85 104.85 251.02 90.89 11 46 5 2179.0 -26.45 77.94
90.00 12 5 16 2946.03 -28.28 87.74 251.03 89.74 12 54 22 1946.0 -25.53 61.06
100.00 13 35 58 2693.43 -29.85 66.21 251.02 90.89 14 20 11 1653.4 -26.45 39.31
110.00 15 4 45 2375.58 -33.95 44.91 250.82 94.00 15 44 20 1375.6 -28.80 17.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3368 TRA -.5817 TC3 .607D BAU .3521 SGT 1031.9 SGR 1111.5 SG3 1053.4 ST 24.0 SR 22.9 SS 23.9
RDE -.3645 RRA .0415 RC3-1.1078 FAU .31167 RRT -.3564 RRF .8189 RTF -.4193 CRT .8577 CRS .8810 CST .5784
FDE 1.2537 FRA-1.9491 FC-12.9413 BSP 1943 SGB 1516.7 R23 -.2784 R13 .7021 LSA 37.7 HSA 15.6 SSA 3.7
BDE .4962 BRA .5832 BC3 1.2632 FSP 1739 SG1 1252.1 SG2 855.9 THA 129.10 EL1 32.0 EL2 8.8 ALF 43.44

LAUNCH DATE AUG 21 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC

DISTANCE 396.449

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.030 GAL 4.28 AZL 88.62 HCA 121.29 SMA 200.20 ECC .25459 INC 1.3842 V1 29.441
RP 234.71 LAP 1.18 LOP 89.09 VP 21.633 GAP 10.97 AZP 90.72 TAL 21.33 TAP 142.62 RCA 149.23 APO 251.17 V2 23.424
RC 181.791 GL 10.06 GP -15.14 ZAL 51.77 ZAP 132.17 ETS 196.09 ZAE 161.98 ETE 248.72 ZAC 68.34 ETC 283.38 LVI -2.23

PLANETOCENTRIC CONIC

C3 20.761 VHL 4.556 DLA 16.67 RAL 13.44 RAD 6643.2 VEL 11.864 PTH 6.88 VHP 3.039 DPA 1.29 RAP 45.75 ECC 1.3417
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 11 49 3478.80 -45.92 126.18 248.21 104.15 10 9 48 2478.8 -35.39 97.25
60.00 9 32 16 3424.33 -39.59 122.98 249.92 98.26 10 29 21 2424.3 -32.06 94.67
70.00 10 2 30 3335.34 -33.98 116.51 250.65 93.69 10 58 6 2335.3 -28.94 88.95
80.00 10 49 51 3186.97 -29.85 105.44 250.84 90.58 11 42 58 2187.0 -26.58 78.50
90.00 12 1 48 2954.75 -28.27 88.38 250.84 89.42 12 51 2 1954.7 -25.66 61.67
100.00 13 32 43 2661.44 -29.85 66.81 250.84 90.58 14 17 4 1661.4 -26.58 39.88
110.00 15 1 57 2382.16 -33.98 45.43 250.65 93.69 15 41 39 1382.2 -28.94 17.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3368 TRA -.5890 TC3 .5489 BAU .3575 SGT 1013.6 SGR 1151.2 SG3 1097.0 ST 24.2 SR 22.2 SS 25.1
RDE -.3522 RRA .0296 RC3-1.1652 FAU .32342 RRT -.3202 RRF .8346 RTF -.3709 CRT .8593 CRS .8792 CST .5774
FDE 1.3422 FRA-2.0581 FC-13.4867 BSP 1970 SGB 1533.8 R23 -.2590 R13 .8009 LSA 37.9 HSA 16.0 SSA 3.7
BDE .4873 BRA .5898 BC3 1.2880 FSP 1822 SG1 1256.4 SG2 879.8 THA 124.13 EL1 31.6 EL2 8.7 ALF 42.21

LAUNCH DATE AUG 21 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC

DISTANCE 400.218

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.016 GAL 4.28 AZL 88.57 HCA 122.27 SMA 199.91 ECC .25352 INC 1.4276 V1 29.441
RP 235.06 LAP 1.21 LOP 90.08 VP 21.571 GAP 10.69 AZP 90.76 TAL 21.38 TAP 143.66 RCA 149.23 APO 250.59 V2 23.387
RC 184.750 GL 10.39 GP -15.58 ZAL 51.73 ZAP 130.67 ETS 195.77 ZAE 160.97 ETE 244.82 ZAC 68.01 ETC 283.47 LVI -1.94

PLANETOCENTRIC CONIC

C3 20.678 VHL 4.547 DLA 16.94 RAL 13.21 RAD 6643.1 VEL 11.861 PTH 6.88 VHP 2.981 DPA .71 RAP 45.43 ECC 1.3403
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 9 48 3483.50 -45.99 126.60 248.15 103.83 10 7 51 2483.5 -35.57 97.56
60.00 9 29 53 3430.01 -39.64 123.46 249.82 97.95 10 27 3 2430.0 -32.22 95.05
70.00 9 59 40 3342.37 -34.01 117.06 250.52 93.37 10 55 22 2342.4 -29.10 89.44
80.00 10 46 31 3195.49 -29.86 106.07 250.67 90.24 11 39 47 2195.5 -26.72 79.09
90.00 11 58 14 2984.02 -28.27 89.05 250.66 89.08 12 47 38 1964.0 -25.80 62.32
100.00 13 29 23 2669.96 -29.86 67.44 250.67 90.24 14 13 53 1670.0 -26.72 40.46
110.00 14 59 6 2389.19 -34.01 45.97 250.52 93.37 15 38 55 1389.2 -29.10 18.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3341 TRA -.5956 TC3 .4893 BAU .3648 SGT 995.4 SGR 1194.0 SG3 1141.5 ST 24.1 SR 21.5 SS 26.2
RDE -.3398 RRA .0170 RC3-1.2253 FAU .33544 RRT -.2805 RRF .8493 RTF -.5.94 CRT .8600 CRS .8758 CST .5728
FDE 1.4299 FRA-2.1717 FC-14.0438 BSP 1987 SGB 1554.5 R23 -.2261 R13 .8230 LSA 38.0 HSA 16.4 SSA 3.7
BDE .4765 BRA .5938 BC3 1.3194 FSP 1900 SG1 1267.4 SG2 900.1 THA 118.45 EL1 31.2 EL2 8.5 ALF 41.14

LAUNCH DATE AUG 21 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC

DISTANCE 403.989

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 33.002 GAL 4.27 AZL 88.53 HCA 123.25 SMA 199.64 ECC .25253 INC 1.4719 V1 29.441
RP 235.42 LAP 1.23 LOP 91.06 VP 21.511 GAP 10.42 AZP 90.81 TAL 21.43 TAP 144.68 RCA 149.23 APO 250.06 V2 23.331
RC 187.714 GL 10.73 GP -16.03 ZAL 51.71 ZAP 129.15 ETS 195.44 ZAE 159.87 ETE 241.24 ZAC 67.87 ETC 283.57 LVI -1.65

PLANETOCENTRIC CONIC

C3 20.602 VHL 4.539 DLA 17.23 RAL 13.00 RAD 6643.1 VEL 11.858 PTH 6.87 VHP 2.928 DPA .12 RAP 45.10 ECC 1.3391
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 7 46 3488.51 -46.07 127.06 248.12 103.48 10 5 55 2488.5 -35.76 97.89
60.00 9 27 28 3436.06 -39.70 123.96 249.74 97.61 10 24 44 2436.1 -32.40 95.47
70.00 9 56 46 3349.83 -34.04 117.64 250.40 93.03 10 52 35 2349.8 -29.26 89.96
80.00 10 43 7 3204.55 -29.86 106.75 250.53 89.89 11 36 32 2204.5 -26.87 79.72
90.00 11 54 34 2973.89 -28.25 89.78 250.50 88.72 12 44 8 1973.9 -25.93 63.01
100.00 13 25 59 2679.02 -29.86 68.12 250.53 89.89 14 10 38 1679.0 -26.87 41.09
110.00 14 56 12 2396.65 -34.04 46.55 250.40 93.03 15 36 9 1396.7 -29.26 18.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3332 TRA -.6053 TC3 .4209 BAU .3728 SGT 981.2 SGR 1238.2 SG3 1185.6 ST 24.2 SR 20.7 SS 27.4
RDE -.3261 RRA .0042 RC3-1.2865 FAU .34723 RRT -.2284 RRF .8626 RTF -.2570 CRT .8612 CRS .8731 CST .5707
FDE 1.5303 FRA-2.2832 FC-14.5912 BSP 2030 SGB 1579.9 R23 -.1826 R13 .8453 LSA 38.3 HSA 16.8 SSA 3.6
BDE .4662 BRA .6053 BC3 1.3536 FSP 1983 SG1 1283.0 SG2 922.0 THA 112.11 EL1 30.7 EL2 8.3 ALF 39.74

LAUNCH DATE AUG 21 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.990 GAL 4.27 AZL 88.48 HCA 124.23 SMA 199.39 ECC .25160 INC 1.5169 V1 29.441  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.453 GAP 10.15 AZP 90.85 TAL 21.46 TAP 145.69 RCA 149.23 APO 249.56 V2 23.315  
 RC 190.680 GL 11.08 GP -16.48 ZAL 51.70 ZAP 127.62 ETS 195.10 ZAE 158.68 ETE 237.95 ZAC 67.33 ETC 283.67 LVI -1.36

DISTANCE 407.764 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.932 VHL 4.531 DLA 17.52 RAL 12.60 RAD 8643.1 VEL 11.855 PTH 6.87 VHP 2.674 DPA -1.48 RAP 44.75 ECC 1.3379  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 44 3493.84 -46.16 127.55 248.12 103.12 10 3 57 2493.8 -35.96 98.24  
 60.00 9 25 1 3442.48 -39.75 124.50 249.69 97.25 10 22 24 2442.5 -32.59 95.91  
 70.00 9 53 48 3357.74 -34.06 118.25 250.31 92.67 10 49 46 2357.7 -29.43 90.51  
 80.00 10 39 37 3214.14 -29.85 107.46 250.40 89.51 11 33 11 2214.1 -27.02 80.40  
 90.00 11 50 48 2984.35 -28.24 90.54 250.37 88.34 12 40 33 1984.3 -26.08 63.74  
 100.00 13 22 29 2688.62 -29.85 68.83 250.40 89.51 14 7 18 1688.6 -27.02 41.76  
 110.00 14 53 14 2404.56 -34.06 47.17 250.31 92.67 15 33 19 1404.6 -29.43 19.43

DIFFERENTIAL CORRECTIONS  
 TDE -.3293 TRA -.6142 TC3 .3513 BAU .3830 SGT 968.5 SGR 1286.0 SG3 1230.5 ST 24.1 SR 19.8 SS 28.6  
 RDE -.3123 RRA -.0083 RC3-1.3504 FAU .35928 RRT -.1727 RRF .8792 RTF -.1913 CRT .8614 CR8 .8683 CST .5638  
 FDE 1.6265 FRA-2.3972 FC-15.1492 B8P 2087 SGB 1809.9 R23 -.1306 R13 .8663 LSA 38.5 MSA 17.2 SSA 3.5  
 BDE .4538 BRA .6143 BC3 1.3954 F8P 2061 SG1 1309.0 SG2 937.2 THA 105.51 EL1 30.2 EL2 8.1 ALF 38.53

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 21 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.978 GAL 4.26 AZL 88.44 HCA 125.20 SMA 199.16 ECC .25073 INC 1.5630 V1 29.441  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.396 GAP 9.88 AZP 90.90 TAL 21.49 TAP 146.69 RCA 149.23 APO 249.10 V2 23.279  
 RC 193.649 GL 11.44 GP -16.95 ZAL 51.71 ZAP 126.07 ETS 194.74 ZAE 157.41 ETE 234.94 ZAC 66.98 ETC 283.78 LVI -1.07

DISTANCE 411.542 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.468 VHL 4.524 DLA 17.83 RAL 12.61 RAD 8643.0 VEL 11.852 PTH 6.87 VHP 2.825 DPA -1.11 RAP 44.38 ECC 1.3368  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 3 40 3499.48 -46.24 128.06 248.15 102.73 10 2 0 2499.5 -36.17 98.61  
 60.00 9 22 32 3449.25 -39.81 125.06 249.66 96.87 10 20 1 2449.2 -32.78 96.38  
 70.00 9 50 47 3366.09 -34.09 118.90 250.24 92.28 10 46 53 2366.1 -29.60 91.10  
 80.00 10 36 1 3224.28 -29.85 108.21 250.30 89.12 11 29 46 2224.3 -27.17 81.11  
 90.00 11 46 56 2995.41 -28.21 91.35 250.25 87.93 12 36 51 1995.4 -26.22 64.52  
 100.00 13 18 53 2698.76 -29.85 69.58 250.30 89.12 14 3 52 1698.8 -27.17 42.48  
 110.00 14 50 13 2412.91 -34.09 47.82 250.24 92.28 15 30 26 1412.9 -29.60 20.02

DIFFERENTIAL CORRECTIONS  
 TDE -.3190 TRA -.6187 TC3 .2873 BAU .3961 SGT 953.0 SGR 1339.1 SG3 1278.0 ST 23.7 SR 19.1 SS 29.6  
 RDE -.2994 RRA -.0250 RC3-1.4189 FAU .37205 RRT -.1200 RRF .8872 RTF -.1278 CRT .8605 CR8 .8581 CST .5482  
 FDE 1.7075 FRA-2.5340 FC-15.7369 B8P 2079 SGB 1843.6 R23 -.0819 R13 .8837 LSA 38.4 MSA 17.6 SSA 3.5  
 BDE .4375 BRA .6192 BC3 1.4477 F8P 2115 SG1 1348.7 SG2 939.4 THA 99.55 EL1 29.4 EL2 7.6 ALF 37.88

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 21 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.967 GAL 4.25 AZL 88.39 HCA 126.17 SMA 198.95 ECC .24992 INC 1.6099 V1 29.441  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.341 GAP 9.62 AZP 90.95 TAL 21.50 TAP 147.67 RCA 149.23 APO 248.68 V2 23.244  
 RC 196.619 GL 11.80 GP -17.43 ZAL 51.74 ZAP 124.51 ETS 194.38 ZAE 158.07 ETE 232.19 ZAC 66.64 ETC 283.88 LVI -.77

DISTANCE 415.321 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.408 VHL 4.517 DLA 18.15 RAL 12.42 RAD 8643.0 VEL 11.850 PTH 6.87 VHP 2.779 DPA -1.74 RAP 44.00 ECC 1.3359  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 36 3505.46 -46.33 128.61 248.20 102.31 10 0 1 2505.5 -36.40 99.01  
 60.00 9 20 0 3456.43 -39.87 125.67 249.66 96.48 10 17 37 2456.4 -32.99 96.88  
 70.00 9 47 41 3374.95 -34.11 119.59 250.19 91.87 10 43 56 2374.9 -29.79 91.72  
 80.00 10 32 19 3235.06 -29.83 109.01 250.21 88.70 11 26 14 2235.1 -27.33 81.67  
 90.00 11 42 54 3007.19 -28.18 92.21 250.15 87.50 12 33 2 2007.2 -26.37 65.34  
 100.00 13 15 11 2709.53 -29.83 70.38 250.21 88.70 14 0 20 1709.5 -27.33 43.24  
 110.00 14 47 7 2421.77 -34.11 48.51 250.19 91.87 15 27 29 1421.8 -29.79 20.64

DIFFERENTIAL CORRECTIONS  
 TDE -.3233 TRA -.6399 TC3 .1877 BAU .4073 SGT 962.3 SGR 1383.9 SG3 1317.1 ST 24.2 SR 18.0 SS 31.2  
 RDE -.2815 RRA -.0367 RC3-1.4811 FAU .38231 RRT -.0290 RRF .8967 RTF -.1117 CRT .8625 CR8 .8581 CST .5316  
 FDE 1.8457 FRA-2.8141 FC-16.2185 B8P 2204 SGB 1887.3 R23 -.0184 R13 .8966 LSA 39.3 MSA 18.1 SSA 3.4  
 BDE .4287 BRA .6409 BC3 1.4930 F8P 2227 SG1 1386.4 SG2 961.7 THA 92.22 EL1 29.2 EL2 7.5 ALF 35.39

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 21 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.957 GAL 4.24 AZL 88.34 HCA 127.14 SMA 198.78 ECC .24917 INC 1.6581 V1 29.441  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.288 GAP 9.35 AZP 91.00 TAL 21.50 TAP 148.64 RCA 149.24 APO 248.29 V2 23.209  
 RC 199.589 GL 12.17 GP -17.91 ZAL 51.79 ZAP 122.93 ETS 194.00 ZAE 154.68 ETE 229.67 ZAC 66.29 ETC 283.99 LVI -.46

DISTANCE 419.103 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 20.353 VHL 4.511 DLA 18.48 RAL 12.25 RAD 8643.0 VEL 11.847 PTH 6.88 VHP 2.738 DPA -2.39 RAP 43.61 ECC 1.3350  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 59 30 3511.76 -46.42 129.20 248.28 101.87 9 58 1 2511.8 -36.63 99.43  
 60.00 9 17 26 3463.99 -39.92 126.30 249.69 96.03 10 15 10 2464.0 -33.20 97.41  
 70.00 9 44 31 3384.27 -34.13 120.32 250.16 91.44 10 40 55 2384.3 -29.98 92.38  
 80.00 10 28 29 3246.42 -29.81 109.86 250.13 88.25 11 22 36 2246.4 -27.50 82.67  
 90.00 11 38 45 3019.62 -28.14 93.11 250.07 87.05 12 29 5 2019.6 -26.52 66.22  
 100.00 13 11 21 2720.89 -29.81 71.23 250.15 88.25 13 56 42 1720.9 -27.50 44.04  
 110.00 14 43 57 2431.09 -34.13 49.24 250.16 91.44 15 24 28 1431.1 -29.98 21.30

DIFFERENTIAL CORRECTIONS  
 TDE -.3184 TRA -.6537 TC3 .0993 BAU .4223 SGT 968.4 SGR 1439.0 SG3 1359.6 ST 24.1 SR 17.0 SS 32.6  
 RDE -.2648 RRA -.0513 RC3-1.5488 FAU .39353 RRT .0509 RRF .9061 RTF .0545 CRT .8631 CR8 .8581 CST .5424  
 FDE 1.9619 FRA-2.7235 FC-16.7389 B8P 2289 SGB 1734.5 R23 .0294 R13 .9057 LSA 39.7 MSA 18.5 SSA 3.3  
 BDE .4142 BRA .6557 BC3 1.5520 F8P 2307 SG1 1440.6 SG2 966.1 THA 86.43 EL1 28.6 EL2 7.2 ALF 33.74

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 21 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC DISTANCE 422.887 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.948 GAL 4.23 AZL 88.29 HCA 128.10 SMA 198.58 ECC .24847 INC 1.7071 VI 29.441  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.236 GAP 9.09 AZP 91.05 TAL 21.49 TAP 149.60 RCA 149.24 APO 247.93 V2 23.174  
 RC 202.557 GL 12.55 GP -18.40 ZAL 51.84 ZAP 121.35 ETS 193.61 ZAE 153.22 ETE 227.35 ZAC 65.94 ETC 284.10 LVI -.15

PLANETOCENTRIC CONIC  
 CS 20.304 VHL 4.506 DLA 18.83 RAL 12.09 RAD 6643.0 VEL 11.845 PTH 6.86 VHP 2.696 DPA -3.05 RAP 43.21 ECC 1.3342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 57 22 3518.39 -46.51 129.81 248.39 101.41 9 56 0 2518.4 -36.87 99.88  
 60.00 9 14 48 3471.95 -30.98 126.97 249.73 95.58 10 12 40 2471.9 -33.42 97.96  
 70.00 9 41 15 3394.09 -34.14 121.09 250.15 90.99 10 37 49 2394.1 -30.17 93.08  
 80.00 10 24 32 3258.42 -29.76 110.75 250.09 87.79 11 18 50 2258.4 -27.67 83.52  
 90.00 11 34 26 3032.77 -28.09 94.07 250.00 86.58 12 24 59 2032.8 -26.68 67.15  
 100.00 13 7 24 2732.89 -29.78 72.12 250.09 87.79 13 52 57 1732.9 -27.67 44.89  
 110.00 14 40 41 2440.91 -34.14 50.01 250.15 90.99 15 21 22 1440.9 -30.17 22.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3128 TRA -.6690 TC3 .0057 BAU .4392 SGT 982.8 SGR 1494.5 S63 1401.4 ST 24.0 SR 15.9 SS 34.0  
 RDE -.2475 RRA -.0661 RC3-1.6181 FAU .40454 RRT .1344 RRF .9147 RTF .1433 CRT .8638 CRS .8402 CST .5312  
 FDE 2.0811 FRA-2.8292 FC-17.2486 BSP 2385 SGB 1788.7 R23 .0687 R13 .9124 LSA 40.2 MSA 19.0 SSA 3.3  
 BDE .3988 BRA .6723 BC3 1.6181 FSP 2383 SG1 1504.5 SG2 967.4 THA 81.35 EL1 28.0 EL2 6.9 ALF 31.99

LAUNCH DATE AUG 21 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC DISTANCE 426.673 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.940 GAL 4.22 AZL 88.24 HCA 129.07 SMA 198.42 ECC .24782 INC 1.7575 VI 29.441  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.186 GAP 8.83 AZP 91.11 TAL 21.48 TAP 150.54 RCA 149.25 APO 247.59 V2 23.140  
 RC 205.523 GL 12.93 GP -18.89 ZAL 51.92 ZAP 119.75 ETS 193.20 ZAE 151.72 ETE 225.22 ZAC 65.58 ETC 284.21 LVI .17

PLANETOCENTRIC CONIC  
 CS 20.260 VHL 4.501 DLA 19.19 RAL 11.93 RAD 6643.0 VEL 11.843 PTH 6.86 VHP 2.659 DPA -3.72 RAP 42.80 ECC 1.3334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 55 12 3525.37 -46.60 130.46 248.53 100.91 9 53 57 2525.4 -37.13 100.35  
 60.00 9 12 7 3480.32 -40.03 127.68 249.80 95.11 10 10 8 2480.3 -33.65 98.55  
 70.00 9 37 54 3404.43 -34.15 121.89 250.16 90.51 10 34 38 2404.4 -30.37 93.82  
 80.00 10 20 26 3271.09 -29.75 111.69 250.06 87.29 11 14 57 2271.1 -27.84 84.43  
 90.00 11 29 57 3046.68 -28.03 95.09 249.95 86.07 12 20 44 2046.7 -26.84 68.14  
 100.00 13 3 18 2745.56 -29.75 73.06 250.06 87.29 13 49 3 1745.6 -27.84 45.79  
 110.00 14 37 20 2451.25 -34.15 50.81 250.16 90.51 15 18 11 1451.2 -30.37 22.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3038 TRA -.6854 TC3 -.0925 BAU .4581 SGT 1005.9 SGR 1531.7 S63 1442.0 ST 23.9 SR 14.8 SS 35.4  
 RDE -.2291 RRA -.0812 RC3-1.6886 FAU .41517 RRT .2186 RRF .9225 RTF .2316 CRT .8648 CRS .8272 CST .5176  
 FDE 2.2056 FRA-2.9325 FC-17.7405 BSP 2499 SGB 1849.2 R23 .0990 R13 .9177 LSA 40.8 MSA 19.4 SSA 3.2  
 BDE .3820 BRA .6902 BC3 1.6911 FSP 2459 SG1 1576.9 SG2 965.8 THA 76.97 EL1 27.4 EL2 6.5 ALF 30.14

LAUNCH DATE AUG 21 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC DISTANCE 430.480 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.933 GAL 4.20 AZL 88.19 HCA 130.02 SMA 198.28 ECC .24721 INC 1.8090 VI 29.441  
 RP 237.81 LAP 1.39 LOP 97.83 VP 21.137 GAP 8.58 AZP 91.16 TAL 21.45 TAP 151.47 RCA 149.26 APO 247.29 V2 23.106  
 RC 208.485 GL 13.33 GP -19.39 ZAL 52.01 ZAP 118.15 ETS 192.78 ZAE 150.17 ETE 223.25 ZAC 65.23 ETC 284.33 LVI .49

PLANETOCENTRIC CONIC  
 CS 20.221 VHL 4.497 DLA 19.56 RAL 11.78 RAD 6642.9 VEL 11.842 PTH 6.86 VHP 2.625 DPA -4.41 RAP 42.38 ECC 1.3328  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 0 3532.70 -46.70 131.14 248.69 100.39 9 51 53 2532.7 -37.39 100.85  
 60.00 9 9 22 3489.11 -40.08 128.42 249.89 94.61 10 7 31 2489.1 -33.89 99.18  
 70.00 9 34 26 3415.31 -34.15 122.74 250.19 90.01 10 31 21 2415.3 -30.58 94.60  
 80.00 10 16 10 3284.47 -29.70 112.68 250.04 86.77 11 10 55 2284.5 -28.01 85.38  
 90.00 11 25 16 3061.40 -27.95 96.16 249.90 85.54 12 16 18 2061.4 -26.99 69.19  
 100.00 12 59 2 2758.94 -29.70 74.05 250.04 86.77 13 45 1 1758.9 -28.01 46.75  
 110.00 14 33 52 2462.13 -34.15 51.66 250.19 90.01 15 14 54 1462.1 -30.58 23.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2974 TRA -.7028 TC3 -.1954 BAU .4788 SGT 1038.0 SGR 1611.1 S63 1481.6 ST 23.7 SR 13.7 SS 36.9  
 RDE -.2101 RRA -.0968 RC3-1.7604 FAU .42548 RRT .3015 RRF .9296 RTF .5.78 CRT .8666 CRS .8095 CST .5003  
 FDE 2.3297 FRA-3.0351 FC-18.2161 BSP 2822 SGB 1916.5 R23 .1218 R13 .9224 LSA 41.4 MSA 19.8 SSA 3.1  
 BDE .3642 BRA .7094 BC3 1.7712 FSP 2528 SG1 1657.6 SG2 981.9 THA 73.20 EL1 26.7 EL2 6.1 ALF 28.25

LAUNCH DATE AUG 21 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC DISTANCE 434.248 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.928 GAL 4.19 AZL 88.14 HCA 130.98 SMA 198.14 ECC .24666 INC 1.8619 VI 29.441  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.090 GAP 8.32 AZP 91.22 TAL 21.41 TAP 152.39 RCA 149.27 APO 247.02 V2 23.073  
 RC 211.443 GL 13.74 GP -19.90 ZAL 52.12 ZAP 116.55 ETS 192.35 ZAE 148.59 ETE 221.42 ZAC 64.87 ETC 284.44 LVI .81

PLANETOCENTRIC CONIC  
 CS 20.187 VHL 4.493 DLA 19.94 RAL 11.64 RAD 6642.9 VEL 11.840 PTH 6.86 VHP 2.593 DPA -5.11 RAP 41.96 ECC 1.3322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 45 3540.39 -46.79 131.86 248.88 99.85 9 49 46 2540.4 -37.67 101.38  
 60.00 9 6 33 3498.33 -40.13 129.20 250.00 94.08 10 4 51 2498.3 -34.14 99.84  
 70.00 9 30 51 3426.75 -34.15 123.64 250.23 89.48 10 27 58 2426.8 -30.79 95.42  
 80.00 10 11 44 3298.59 -29.64 113.73 250.03 86.23 11 6 43 2298.6 -28.19 86.39  
 90.00 11 20 23 3076.99 -27.87 97.29 249.88 84.98 12 11 40 2077.0 -27.15 70.30  
 100.00 12 54 36 2773.06 -29.64 75.09 250.03 86.23 13 40 49 1773.1 -28.19 47.76  
 110.00 14 30 17 2473.57 -34.15 52.56 250.23 89.48 15 11 31 1473.6 -30.79 24.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2873 TRA -.7208 TC3 -.3018 BAU .5015 SGT 1078.8 SGR 1672.5 S63 1519.9 ST 23.5 SR 12.6 SS 38.3  
 RDE -.1905 RRA -.1132 RC3-1.8336 FAU .43541 RRT .3802 RRF .9360 RTF .3987 CRT .8695 CRS .7852 CST .4787  
 FDE 2.4533 FRA-3.1372 FC-18.6726 BSP 2757 SGB 1990.3 R23 .1377 R13 .9270 LSA 42.0 MSA 20.1 SSA 3.1  
 BDE .3447 BRA .7296 BC3 1.8582 FSP 2589 SG1 1745.6 SG2 956.0 THA 69.99 EL1 26.0 EL2 5.6 ALF 26.36

LAUNCH DATE AUG 21 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.920 GAL 4.17 AZL 88.08 MCA 131.93 SMA 198.02 ECC .24614 INC 1.9162 V1 29.441
RP 236.47 LAP 1.43 LOP 99.79 VP 21.045 GAP 8.07 AZP 91.28 TAL 21.37 TAP 153.30 RCA 149.28 APO 246.76 V2 23.040
RC 214.394 GL 14.15 GP -20.41 ZAL 52.24 ZAP 114.94 ETS 191.89 ZAE 146.97 ETE 219.72 ZAC 64.51 ETC 284.56 LVI 1.15

DISTANCE 438.038

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.150 VHL 4.490 DLA 20.34 RAL 11.50 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 2.565 DPA -5.81 RAP 41.53 ECC 1.3318
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 48 27 3548.45 -46.88 132.62 249.09 99.27 9 47 36 2548.4 -37.95 101.94
80.00 9 3 38 3508.01 -40.17 130.02 250.13 93.52 10 2 6 2508.0 -34.39 100.53
70.00 9 27 9 3438.78 -34.14 124.58 250.29 88.93 10 24 28 2438.8 -31.01 96.29
80.00 10 7 6 3313.51 -29.57 114.83 250.04 85.65 11 2 20 2313.5 -26.37 87.47
90.00 11 15 15 3093.51 -27.76 98.49 249.86 84.39 12 6 49 2093.5 -27.31 71.49
100.00 12 49 58 2767.98 -29.57 76.20 250.04 85.65 13 36 26 1768.0 -28.37 48.84
110.00 14 26 35 2465.60 -34.14 53.49 250.29 88.93 15 8 1 1465.6 -31.01 25.21

DIFFERENTIAL CORRECTIONS

TDE -.2740 TRA -.7380 TC3 -.4089 BAU .5263
RDE -.1709 RRA -.1307 RC3-1.9096 FAU .44537
FDE 2.5704 FRA-3.2461 FC-19.1274 B8P 2901
BDE .3230 BRA .7495 BC3 1.9529 F8P 2638

MID-COURSE EXECUTION ACCURACY

SGT 1125.2 SGR 1737.7 SG3 1588.3
RRR .4525 RRF .9420 RTF .4729
SGB 2070.2 R23 .1463 R13 .9320
SG1 1840.8 SG2 947.3 THA 87.37

ORBIT DETERMINATION ACCURACY

ST 23.1 SR 11.5 SS 39.6
CRT .8736 CR8 .7306 CST .4498
LSA 42.5 M8A 20.4 88A 3.0
EL1 25.3 EL2 5.1 ALF 24.62

LAUNCH DATE AUG 21 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.914 GAL 4.16 AZL 88.03 HCA 132.89 SMA 197.92 ECC .24567 INC 1.9719 V1 29.441
RP 236.79 LAP 1.44 LOP 100.70 VP 21.001 GAP 7.82 AZP 91.34 TAL 21.31 TAP 154.20 RCA 149.30 APO 246.54 V2 23.008
RC 217.340 GL 14.58 GP -20.93 ZAL 52.37 ZAP 113.33 ETS 191.43 ZAE 145.33 ETE 218.13 ZAC 64.15 ETC 284.67 LVI 1.48

DISTANCE 441.827

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.134 VHL 4.487 DLA 20.75 RAL 11.37 RAD 6642.9 VEL 11.838 PTH 6.86 VHP 2.539 DPA -6.52 RAP 41.10 ECC 1.3314
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 46 6 3556.91 -46.97 133.42 249.34 98.66 9 45 23 2556.9 -38.25 102.53
80.00 9 0 39 3518.19 -40.21 130.88 250.28 92.94 9 59 17 2518.2 -34.65 101.27
70.00 9 23 18 3451.47 -34.12 125.57 250.37 88.34 10 20 49 2451.5 -31.23 97.21
80.00 10 2 16 3329.32 -29.48 116.00 250.05 85.04 10 57 45 2329.3 -28.54 88.61
90.00 11 9 51 3111.08 -27.64 99.76 249.85 83.78 12 1 43 2111.1 -27.46 72.75
100.00 12 45 7 2803.79 -29.48 77.36 250.05 85.04 13 31 51 1803.8 -28.54 49.98
110.00 14 22 44 2498.29 -34.12 54.48 250.37 88.34 15 4 23 1498.3 -31.23 26.13

DIFFERENTIAL CORRECTIONS

TDE -.2875 TRA -.7847 TC3 -.5375 BAU .5517
RDE -.1462 RRA -.1445 RC3-1.9780 FAU .45259
FDE 2.7350 FRA-3.3054 FC-19.4611 B8P 3087
BDE .3048 BRA .7782 BC3 2.0496 F8P 2729

MID-COURSE EXECUTION ACCURACY

SGT 1199.8 SGR 1795.7 SG3 1587.5
RRR .9225 RRF .9468 RTF .5417
SGB 2159.6 R23 .1635 R13 .9342
SG1 1941.3 SG2 946.3 THA 84.21

ORBIT DETERMINATION ACCURACY

ST 23.2 SR 10.1 SS 41.5
CRT .8829 CR8 .7085 CST .4340
LSA 43.8 M8A 20.6 88A 2.9
EL1 24.9 EL2 4.4 ALF 21.85

LAUNCH DATE AUG 21 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.909 GAL 4.14 AZL 87.97 HCA 133.83 SMA 197.82 ECC .24523 INC 2.0293 V1 29.441
RP 239.10 LAP 1.46 LOP 101.65 VP 20.958 GAP 7.57 AZP 91.41 TAL 21.25 TAP 155.08 RCA 149.31 APO 246.33 V2 22.975
RC 220.278 GL 15.02 GP -21.45 ZAL 52.53 ZAP 111.73 ETS 190.94 ZAE 143.67 ETE 216.64 ZAC 63.78 ETC 284.79 LVI 1.83

DISTANCE 445.618

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.115 VHL 4.485 DLA 21.18 RAL 11.24 RAD 6642.9 VEL 11.837 PTH 6.86 VHP 2.515 DPA -7.24 RAP 40.67 ECC 1.3310
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 41 3569.77 -47.06 134.26 249.61 98.02 9 43 7 2569.8 -38.56 103.16
80.00 8 57 33 3528.84 -40.25 131.79 250.46 92.33 9 58 22 2528.8 -34.92 102.04
70.00 9 19 18 3464.80 -34.09 126.81 250.46 87.73 10 17 3 2464.8 -31.45 98.19
80.00 9 57 11 3348.03 -29.38 117.23 250.08 84.41 10 52 57 2348.0 -28.72 89.82
90.00 11 4 10 3129.74 -27.49 101.10 249.85 83.11 11 56 20 2129.7 -27.61 74.09
100.00 12 40 2 2820.50 -29.38 78.59 250.08 84.41 13 27 3 1820.5 -28.72 51.19
110.00 14 18 44 2511.61 -34.09 55.92 250.46 87.73 15 0 36 1511.6 -31.45 27.11

DIFFERENTIAL CORRECTIONS

TDE -.2548 TRA -.7873 TC3 -.6595 BAU .5795
RDE -.1227 RRA -.1608 RC3-2.0514 FAU .46041
FDE 2.8759 FRA-3.3852 FC-19.8158 B8P 3268
BDE .2826 BRA .8037 BC3 2.1548 F8P 2788

MID-COURSE EXECUTION ACCURACY

SGT 1272.7 SGR 1859.8 SG3 1618.6
RRR .5819 RRF .9815 RTF .5008
SGB 2253.6 R23 .1705 R13 .9379
SG1 2048.3 SG2 939.8 THA 81.87

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 8.9 SS 43.1
CRT .8932 CR8 .6408 CST .4038
LSA 44.8 M8A 21.1 88A 2.8
EL1 24.3 EL2 3.8 ALF 19.88

LAUNCH DATE AUG 21 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.908 GAL 4.12 AZL 87.91 HCA 134.78 SMA 197.74 ECC .24483 INC 2.0883 V1 29.441
RP 239.42 LAP 1.48 LOP 102.60 VP 20.916 GAP 7.32 AZP 91.47 TAL 21.18 TAP 155.96 RCA 149.33 APO 246.15 V2 22.944
RC 223.209 GL 15.47 GP -21.97 ZAL 52.69 ZAP 110.13 ETS 190.44 ZAE 141.98 ETE 215.24 ZAC 63.42 ETC 284.91 LVI 2.18

DISTANCE 448.409

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.101 VHL 4.483 DLA 21.62 RAL 11.12 RAD 6642.9 VEL 11.837 PTH 6.85 VHP 2.494 DPA -7.97 RAP 40.24 ECC 1.3308
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 41 12 3575.04 -47.14 135.14 249.90 97.35 9 40 47 2575.0 -38.87 103.82
80.00 8 54 21 3540.02 -40.27 132.74 250.66 91.68 9 53 21 2540.0 -35.20 102.86
70.00 9 15 8 3478.82 -34.04 127.70 250.57 87.08 10 13 6 2478.8 -31.88 99.22
80.00 9 51 50 3363.74 -29.25 118.53 250.11 83.75 10 47 53 2363.7 -28.89 91.11
90.00 10 58 9 3149.81 -27.32 102.53 249.85 82.41 11 50 39 2149.6 -27.75 75.53
100.00 12 34 41 2838.22 -29.25 79.90 250.11 83.75 13 22 0 1838.2 -28.89 52.48
110.00 14 14 34 2525.64 -34.04 56.82 250.57 87.08 14 56 40 1525.6 -31.88 28.14

DIFFERENTIAL CORRECTIONS

TDE -.2402 TRA -.8115 TC3 -.7859 BAU .6088
RDE -.0986 RRA -.1775 RC3-2.1249 FAU .46751
FDE 3.0142 FRA-3.4608 FC-20.1352 B8P 3460
BDE .2596 BRA .8307 BC3 2.2658 F8P 2841

MID-COURSE EXECUTION ACCURACY

SGT 1354.7 SGR 1925.1 SG3 1647.2
RRR .6341 RRF .9558 RTF .6524
SGB 2353.9 R23 .1753 R13 .9415
SG1 2161.1 SG2 933.1 THA 59.75

ORBIT DETERMINATION ACCURACY

ST 22.7 SR 7.8 SS 44.6
CRT .9048 CR8 .5394 CST .3680
LSA 45.9 M8A 21.4 88A 2.7
EL1 23.8 EL2 3.2 ALF 17.63

LAUNCH DATE AUG 21 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC												DISTANCE 453.201			EARTH TO MARS										
RL	151.34	LAL	-0.00	LOL	327.80	VL	32.901	GAL	4.10	AZL	87.85	HCA	135.72	SMA	197.67	ECC	.24446	INC	2.1493	V1	29.441				
RP	239.73	LAP	1.50	LOP	103.54	VP	20.876	GAP	7.07	AZP	91.54	TAL	21.10	TAP	156.82	RCA	149.34	APO	245.99	V2	22.913				
RC	226.132	GL	15.94	GP	-22.50	ZAL	52.87	ZAP	106.54	ETS	189.92	ZAE	140.28	ETE	213.91	ZAC	63.05	ETC	285.02	LVI	2.94				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	20.093	VHL	4.483	DLA	22.08	RAL	11.00	RAD	6642.9	VEL	11.836	PTH	6.85	VHP	2.476	DPA	-8.70	RAP	39.81	ECC	1.3307				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	36	38	3584.75	-47.22		136.06		250.22		96.64		9	38	23	2584.8		-39.20			104.52			
60.00		8	51	2	3551.74	-40.29		133.73		250.86		91.01		9	50	13	2551.7		-35.48			103.75			
70.00		9	10	48	3493.60	-33.99		128.85		250.69		86.40		10	9	0	2493.6		-31.91			100.31			
80.00		9	46	13	3382.55	-29.10		119.91		250.16		83.02		10	42	33	2382.6		-29.06			92.48			
90.00		10	51	45	3170.84	-27.12		104.05		249.85		81.67		11	44	36	2170.8		-27.88			77.07			
100.00		12	29	2	2857.02	-29.10		81.27		250.16		83.02		13	16	40	1857.0		-29.06			53.85			
110.00		14	10	12	2540.42	-33.99		57.77		250.69		86.40		14	52	33	1540.4		-31.91			29.23			
TDE	-0.2241	TRA	-0.8365	TC3	-0.9157	BAU	.6396	SGT	1444.8	SGR	1990.7	SG3	1672.9	ST	22.5	SR	6.8	SS	46.3	CRT	.9110	CRS	.3834	CST	.3273
RDE	-0.0729	RRA	-0.1941	RC3	-2.1979	FAU	.47377	RRT	.6792	RRF	.9596	RTF	.6965	LSA	47.1	MSA	21.6	SSA	2.7	EL1	23.4	EL2	2.7	ALF	15.67
FDE	3.1580	FRA	-3.5281	FC	-20.4128	BSP	3665	SGB	2459.8	R23	.1787	R13	.9448	SG1	2278.6	SG2	926.5	THA	57.82						
BDE	.2356	BRA	.8587	BC3	2.3810	FSP	2890																		

LAUNCH DATE AUG 21 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC												DISTANCE 456.993			EARTH TO MARS										
RL	151.34	LAL	-0.00	LOL	327.80	VL	32.898	GAL	4.08	AZL	87.79	HCA	136.67	SMA	197.60	ECC	.24413	INC	2.2120	V1	29.441				
RP	240.03	LAP	1.52	LOP	104.48	VP	20.837	GAP	6.83	AZP	91.61	TAL	21.01	TAP	157.68	RCA	149.36	APO	245.84	V2	22.882				
RC	229.048	GL	16.41	GP	-23.04	ZAL	53.07	ZAP	106.95	ETS	189.38	ZAE	138.57	ETE	212.66	ZAC	62.68	ETC	285.14	LVI	2.91				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	20.091	VHL	4.482	DLA	22.56	RAL	10.88	RAD	6642.9	VEL	11.836	PTH	6.85	VHP	2.460	DPA	-9.44	RAP	39.39	ECC	1.3306				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	35	59	3594.91	-47.30		137.03		250.57		95.90		9	35	54	2594.9		-39.54			105.25			
60.00		8	47	35	3564.03	-40.30		134.78		251.10		90.30		9	46	59	2564.0		-35.77			104.64			
70.00		9	6	12	3509.17	-33.91		130.06		250.82		85.69		10	4	41	2509.2		-32.14			101.46			
80.00		9	40	12	3402.57	-28.93		121.37		250.20		82.27		10	36	54	2402.6		-29.22			93.95			
90.00		10	44	55	3193.59	-26.89		105.67		249.86		80.89		11	38	9	2193.6		-28.00			78.72			
100.00		12	23	3	2877.04	-28.93		82.74		250.20		82.27		13	11	0	1877.0		-29.22			55.31			
110.00		14	5	36	2555.99	-33.91		58.98		250.82		85.69		14	48	14	1556.0		-32.14			30.38			
TDE	-0.2062	TRA	-0.8626	TC3	-1.0486	BAU	.6720	SGT	1542.2	SGR	2058.2	SG3	1696.3	ST	22.3	SR	6.1	SS	47.9	CRT	.8955	CRS	.1556	CST	.2796
RDE	-0.0465	RRA	-0.2113	RC3	-2.2716	FAU	.47948	RRT	.7180	RRF	.9631	RTF	.7343	LSA	48.4	MSA	21.8	SSA	2.6	EL1	23.0	EL2	2.6	ALF	14.00
FDE	3.2988	FRA	-3.5924	FC	-20.6612	BSP	3874	SGB	2571.9	R23	.1807	R13	.9480	SG1	2401.7	SG2	919.9	THA	56.09						
BDE	.2114	BRA	.8881	BC3	2.5020	FSP	2927																		

LAUNCH DATE AUG 21 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC												DISTANCE 460.785			EARTH TO MARS										
RL	151.34	LAL	-0.00	LOL	327.80	VL	32.895	GAL	4.06	AZL	87.72	HCA	137.60	SMA	197.55	ECC	.24383	INC	2.2769	V1	29.441				
RP	240.34	LAP	1.54	LOP	105.42	VP	20.799	GAP	6.59	AZP	91.68	TAL	20.91	TAP	158.52	RCA	149.38	APO	245.72	V2	22.851				
RC	231.955	GL	16.91	GP	-23.58	ZAL	53.28	ZAP	105.39	ETS	188.83	ZAE	136.85	ETE	211.46	ZAC	62.31	ETC	285.25	LVI	3.28				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	20.095	VHL	4.484	DLA	23.05	RAL	10.76	RAD	6642.9	VEL	11.837	PTH	6.85	VHP	2.447	DPA	-10.18	RAP	38.98	ECC	1.3307				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	33	14	3805.55	-47.37		138.05		250.95		95.11		9	33	20	2605.6		-39.89			106.03			
60.00		8	43	59	3576.93	-40.30		135.88		251.35		89.55		9	43	36	2576.9		-36.06			105.61			
70.00		9	1	24	3525.60	-33.82		131.33		250.96		84.94		10	0	10	2525.6		-32.37			102.69			
80.00		9	33	49	3423.91	-28.72		122.92		250.25		81.48		10	30	53	2423.9		-29.37			95.51			
90.00		10	37	35	3218.06	-26.61		107.41		249.86		80.06		11	31	13	2218.1		-28.11			80.50			
100.00		12	16	41	2898.38	-28.72		84.29		250.25		81.48		13	5	0	1898.4		-29.37			56.88			
110.00		14	0	50	2572.42	-33.82		60.25		250.96		84.94		14	43	43	1572.4		-32.37			31.61			
TDE	-0.1856	TRA	-0.8886	TC3	-1.1823	BAU	.7037	SGT	1644.3	SGR	2127.2	SG3	1717.9	ST	22.0	SR	5.9	SS	49.4	CRT	.8392	CRS	-1.2882	CST	.2221
RDE	-0.0198	RRA	-0.2294	RC3	-2.3457	FAU	.48454	RRT	.7816	RRF	.9663	RTF	.7369	LSA	49.7	MSA	22.0	SSA	2.5	EL1	22.6	EL2	3.1	ALF	12.83
FDE	3.4313	FRA	-3.6582	FC	-20.8753	BSP	4095	SGB	2688.6	R23	.1808	R13	.9512	SG1	2529.1	SG2	912.3	THA	54.55						
BDE	.1867	BRA	.9178	BC3	2.6269	FSP	2956																		

LAUNCH DATE AUG 21 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC												DISTANCE 464.578			EARTH TO MARS										
RL	151.34	LAL	-0.00	LOL	327.80	VL	32.893	GAL	4.03	AZL	87.66	HCA	138.54	SMA	197.51	ECC	.24355	INC	2.3440	V1	29.441				
RP	240.63	LAP	1.55	LOP	106.38	VP	20.783	GAP	6.35	AZP	91.76	TAL	20.81	TAP	159.35	RCA	149.40	APO	245.61	V2	22.821				
RC	234.852	GL	17.41	GP	-24.12	ZAL	53.50	ZAP	103.82	ETS	188.26	ZAE	135.13	ETE	210.31	ZAC	61.93	ETC	285.37	LVI	3.66				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	20.105	VHL	4.484	DLA	23.55	RAL	10.64	RAD	6642.9	VEL	11.837	PTH	6.85	VHP	2.436	DPA	-10.93	RAP	38.57	ECC	1.3309				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	30	23	3816.68	-47.43		139.12		251.35		94.29		9	30	39	2616.7		-40.24			106.86			
60.00		8	40	13	3590.45	-40.29		137.03		251.61		88.77		9	40	4	2590.4		-36.36			106.63			
70.00		8	56	21	3542.94	-33.71		132.67		251.10		84.16		9	55	24	2542.9		-32.60			103.99			
80.00		9	27	1	3446.71	-28.48		124.57		250.29		80.64		10	24	28	2446.7		-29.51			97.19			
90.00		10	29	39	3244.48	-26.29		109.28		249.85		79.18		11	23	44	2244.5		-28.20			82.43			
100.00		12	9	53	2921.1																				

LAUNCH DATE AUG 21 1973 FLIGHT TIME 210.00 ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 151.34 LAL -0.00 LOL 327.80 VL 32.891 GAL 4.01 AZL 87.59 HCA 139.48 SMA 197.47 ECC .24331 INC 2.4133 V1 29.441  
 RP 240.93 LAP 1.37 LOP 107.30 VP 20.728 GAP 6.11 AZP 91.93 TAL 20.70 TAP 160.18 RCA 149.43 APO 245.52 V2 22.792  
 RC 237.739 GL 17.94 GP -24.67 ZAL 53.74 ZAP 102.29 ETS 187.86 ZAE 133.41 ETE 209.22 ZAC 61.59 ETC 285.48 LVI 4.06

Planetocentric Conic: C3 20.121 VHL 4.486 DLA 24.08 RAL 10.53 RAD 6642.9 VEL 11.838 PTH 6.86 VHP 2.427 DPA -11.67 RAP 36.18 ECC 1.3311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 25 3628.38 -47.48 140.25 251.78 93.43 9 27 53 2628.4 -40.61 107.74  
 60.00 8 36 17 3604.71 -40.26 138.24 251.00 87.95 9 36 22 2604.7 -36.67 107.72  
 70.00 8 51 0 3561.36 -33.57 134.09 251.26 83.33 9 50 22 2561.4 -32.83 105.38  
 80.00 9 19 42 3471.33 -28.20 126.35 250.33 79.75 10 17 33 2471.3 -29.64 99.01  
 90.00 10 21 0 3273.38 -25.90 111.30 249.83 78.24 11 13 33 2273.4 -28.26 84.54  
 100.00 12 2 34 2945.80 -28.20 87.71 250.33 79.75 12 51 40 1945.8 -29.64 60.38  
 110.00 13 50 27 2808.18 -33.57 63.01 251.26 83.33 14 33 55 1608.2 -32.83 34.30

Differential Corrections: TDE -.1428 TRA -.9479 TC3-1.4660 BAU .7761 SGT 1876.6 SGR 2259.9 SG3 1746.3 ORBIT DETERMINATION ACCURACY ST 22.0 SR 7.0 88 52.9  
 RDE .0413 RRA -.2624 RC3-2.4848 FAU .49055 RRT .8039 RRF .9716 RTF .8162 CRT .6026 CR8 -.6568 C8T .1003  
 FDE 3.7324 FRA-3.7322 FC-21.1060 B8P 4574 SGB 2937.4 R23 .1839 R13 .9558 L8A 53.2 M8A 22.3 88A 2.3  
 BDE .1464 BRA .9835 BC3 2.8850 F8P 3027 SG1 2795.4 SG2 902.3 THA 51.54 EL1 22.4 EL2 5.4 ALF 11.50

LAUNCH DATE AUG 21 1973 FLIGHT TIME 212.00 ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 151.34 LAL -0.00 LOL 327.80 VL 32.890 GAL 3.98 AZL 87.51 HCA 140.41 SMA 197.44 ECC .24309 INC 2.4833 V1 29.441  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.693 GAP 5.87 AZP 91.92 TAL 20.58 TAP 160.99 RCA 149.45 APO 245.44 V2 22.763  
 RC 240.615 GL 18.48 GP -25.22 ZAL 54.00 ZAP 100.78 ETS 187.08 ZAE 131.69 ETE 208.17 ZAC 61.16 ETC 285.59 LVI 4.46

Planetocentric Conic: C3 20.146 VHL 4.488 DLA 24.63 RAL 10.41 RAD 6642.9 VEL 11.839 PTH 6.86 VHP 2.421 DPA -12.42 RAP 37.80 ECC 1.3315  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 19 3640.61 -47.53 141.43 252.23 92.52 9 24 59 2640.6 -40.99 108.67  
 60.00 8 32 10 3619.67 -40.21 139.51 252.20 87.09 9 32 30 2619.7 -36.98 108.87  
 70.00 8 45 20 3580.84 -33.41 135.59 251.42 82.46 9 45 1 2580.8 -33.05 106.86  
 80.00 9 11 48 3497.85 -27.86 128.24 250.36 78.81 10 10 5 2497.8 -29.74 100.98  
 90.00 10 11 30 3305.04 -25.45 113.51 249.78 77.23 11 6 35 2305.0 -28.28 86.86  
 100.00 11 54 39 2972.32 -27.86 89.61 250.36 78.81 12 44 12 1972.3 -29.74 62.35  
 110.00 13 44 47 2627.66 -33.41 64.51 251.42 82.46 14 28 34 1627.7 -33.05 35.77

Differential Corrections: TDE -.1166 TRA -.9775 TC3-1.6076 BAU .8129 SGT 1997.3 SGR 2328.6 SG3 1757.0 ORBIT DETERMINATION ACCURACY ST 22.0 SR 8.2 88 54.6  
 RDE .0723 RRA -.2800 RC3-2.5547 FAU .49264 RRT .8247 RRF .9739 RTF .8359 CRT .5214 CR8 -.7939 C8T .0248  
 FDE 3.8677 FRA-3.7689 FC-21.1707 B8P 4819 SGB 3087.8 R23 .1834 R13 .9582 L8A 55.0 M8A 22.4 88A 2.2  
 BDE .1372 BRA 1.0168 BC3 3.0184 F8P 3039 SG1 2933.9 SG2 896.6 THA 50.29 EL1 22.5 EL2 6.9 ALF 12.21

LAUNCH DATE AUG 21 1973 FLIGHT TIME 214.00 ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 151.34 LAL -0.00 LOL 327.80 VL 32.889 GAL 3.96 AZL 87.44 HCA 141.34 SMA 197.43 ECC .24290 INC 2.5599 V1 29.441  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.661 GAP 5.63 AZP 92.00 TAL 20.46 TAP 161.79 RCA 149.47 APO 245.38 V2 22.734  
 RC 243.479 GL 19.04 GP -25.77 ZAL 54.27 ZAP 99.27 ETS 186.46 ZAE 129.98 ETE 207.15 ZAC 60.76 ETC 285.71 LVI 4.87

Planetocentric Conic: C3 20.178 VHL 4.492 DLA 25.20 RAL 10.30 RAD 6642.9 VEL 11.840 PTH 6.86 VHP 2.417 DPA -13.17 RAP 37.43 ECC 1.3321  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 4 3653.43 -47.56 142.66 252.71 91.57 9 21 57 2653.4 -41.38 109.65  
 60.00 8 27 49 3635.43 -40.15 140.84 252.51 86.18 9 28 25 2635.4 -37.29 110.09  
 70.00 8 39 19 3601.56 -33.21 137.18 251.58 81.54 9 39 20 2601.6 -33.26 108.43  
 80.00 9 3 11 3526.68 -27.46 130.29 250.36 77.80 10 1 57 2526.7 -29.82 103.12  
 90.00 10 0 54 3340.25 -24.89 115.94 249.70 76.13 10 56 34 2340.2 -28.25 89.43  
 100.00 11 46 2 3001.15 -27.46 91.66 250.36 77.80 12 36 4 2001.1 -29.82 64.48  
 110.00 13 36 45 2646.37 -33.21 66.09 251.58 81.54 14 22 54 1648.4 -33.26 37.35

Differential Corrections: TDE -.0898 TRA -1.0089 TC3-1.7523 BAU .8508 SGT 2124.6 SGR 2396.8 SG3 1763.8 ORBIT DETERMINATION ACCURACY ST 22.2 SR 9.9 88 56.2  
 RDE .1053 RRA -.2876 RC3-2.6224 FAU .49362 RRT .8425 RRF .9760 RTF .525 CRT .4781 CR8 -.8743 C8T -.0534  
 FDE 4.0069 FRA-3.7940 FC-21.1791 B8P 5072 SGB 3202.8 R23 .1835 R13 .9603 L8A 56.9 M8A 22.6 88A 2.2  
 BDE .1382 BRA 1.0519 BC3 3.1540 F8P 3053 SG1 3076.2 SG2 891.8 THA 49.08 EL1 22.8 EL2 8.5 ALF 13.88

LAUNCH DATE AUG 21 1973 FLIGHT TIME 216.00 ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 151.34 LAL -0.00 LOL 327.80 VL 32.888 GAL 3.93 AZL 87.36 HCA 142.28 SMA 197.41 ECC .24273 INC 2.6374 V1 29.441  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.629 GAP 5.40 AZP 92.09 TAL 20.33 TAP 162.59 RCA 149.50 APO 245.33 V2 22.708  
 RC 246.330 GL 18.62 GP -26.34 ZAL 54.55 ZAP 97.79 ETS 185.83 ZAE 128.27 ETE 206.17 ZAC 60.36 ETC 285.82 LVI 5.30

Planetocentric Conic: C3 20.218 VHL 4.496 DLA 25.78 RAL 10.18 RAD 6642.9 VEL 11.842 PTH 6.86 VHP 2.418 DPA -13.92 RAP 37.08 ECC 1.3327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 40 3666.89 -47.57 143.97 253.21 90.58 9 18 47 2666.9 -41.77 110.70  
 60.00 8 23 15 3652.03 -40.07 142.25 252.83 85.23 9 24 7 2652.0 -37.61 111.39  
 70.00 8 32 53 3623.63 -32.98 138.86 251.74 80.57 9 33 16 2623.6 -33.46 110.12  
 80.00 8 53 42 3558.27 -26.99 132.52 250.35 76.72 9 53 0 2558.3 -29.86 105.46  
 90.00 9 48 52 3380.06 -24.22 118.66 249.57 74.93 10 45 12 2380.1 -28.16 92.34  
 100.00 11 36 34 3032.74 -26.99 93.89 250.35 76.72 12 27 6 2032.7 -29.86 66.83  
 110.00 13 32 19 2670.44 -32.98 67.77 251.74 80.57 14 16 49 1670.4 -33.46 39.04

Differential Corrections: TDE -.0600 TRA -1.0411 TC3-1.8977 BAU .8895 SGT 2255.9 SGR 2465.0 SG3 1767.2 ORBIT DETERMINATION ACCURACY ST 22.6 SR 11.7 88 58.0  
 RDE .1400 RRA -.3152 RC3-2.6885 FAU .49365 RRT .8577 RRF .9780 RTF .8666 CRT .4651 CR8 -.9215 C8T -.1359  
 FDE 4.1457 FRA-3.8113 FC-21.1384 B8P 5332 SGB 3341.4 R23 .1834 R13 .9621 L8A 59.1 M8A 22.6 88A 2.1  
 BDE .1523 BRA 1.0878 BC3 3.2908 F8P 3061 SG1 3221.4 SG2 887.4 THA 47.95 EL1 23.4 EL2 10.0 ALF 16.74

LAUNCH DATE AUG 21 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC DISTANCE 483.932 EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.888 GAL 3.90 AZL 87.28 HCA 143.19 SMA 197.41 ECC .24258 INC 2.7180 V1 29.441  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.598 GAP 5.17 AZP 92.18 TAL 20.19 TAP 163.38 RCA 149.52 APO 245.30 V2 22.679  
 RC 249.187 GL 20.22 GP -26.90 ZAL 54.85 ZAP 96.34 ETS 185.18 ZAE 126.57 ETE 205.21 ZAC 59.93 ETC 285.93 LVI 5.73

PLANETOCENTRIC CONIC

C3 20.267 VHL 4.502 DLA 26.39 RAL 10.05 RAD 8643.0 VEL 11.844 PTH 6.86 VHP 2.416 DPA -14.67 RAP 36.75 ECC 1.3335  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 5 3681.01 -47.57 145.33 253.74 89.51 9 15 26 2681.0 -42.18 111.82  
 60.00 8 18 24 3689.54 -39.98 143.73 253.17 84.24 9 19 33 2669.5 -37.92 112.77  
 70.00 8 25 58 3647.22 -32.70 140.64 251.89 79.55 9 26 45 2647.2 -33.65 111.94  
 80.00 8 43 9 3593.28 -26.42 134.97 250.29 75.56 9 43 2 2593.3 -29.84 108.06  
 90.00 9 34 50 3426.29 -23.36 121.78 249.36 72.60 10 31 56 2426.3 -27.97 95.71  
 100.00 11 26 1 3067.75 -26.42 96.33 250.29 75.56 12 17 8 2067.8 -29.84 69.43  
 110.00 13 25 24 2694.04 -32.70 69.56 251.89 79.55 14 10 18 1694.0 -33.65 40.86

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.0278 TRA-1.0739 TC3-2.0427 BAU .9288 SGT 2390.0 SGR 2532.2 SG3 1766.4 ST 23.1 SR 13.8 SS 59.6  
 RDE .1759 RRA -.3324 RC3-2.7518 FAU .49256 RRT .8708 RRF .9797 RTF .8785 CRT .4796 CRS -.9492 CST -.2208  
 FDE 4.2799 FRA-3.8175 FC-21.0399 BSP 5601 SGB 3482.0 R23 .1833 R13 .9638 LSA 61.3 MSA 22.7 S3A 2.0  
 BDE .1781 BRA 1.1241 BC3 3.4272 FSP 3064 SG1 3368.0 SG2 883.6 THA 46.90 EL1 24.3 EL2 11.5 ALF 20.74

LAUNCH DATE AUG 21 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC DISTANCE 487.322 EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.888 GAL 3.87 AZL 87.20 HCA 144.11 SMA 197.41 ECC .24246 INC 2.8021 V1 29.441  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.568 GAP 4.93 AZP 92.27 TAL 20.04 TAP 164.16 RCA 149.55 APO 245.28 V2 22.652  
 RC 251.989 GL 20.84 GP -27.48 ZAL 55.17 ZAP 94.92 ETS 184.52 ZAE 124.89 ETE 204.29 ZAC 59.53 ETC 286.05 LVI 6.18

PLANETOCENTRIC CONIC

C3 20.327 VHL 4.509 DLA 27.02 RAL 9.92 RAD 8643.0 VEL 11.846 PTH 6.86 VHP 2.419 DPA -15.43 RAP 36.44 ECC 1.3345  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 19 3695.86 -47.56 146.77 254.30 88.41 9 11 55 2695.9 -42.59 113.01  
 60.00 8 13 15 3688.04 -39.82 145.28 253.51 83.19 9 14 43 2688.0 -38.23 114.24  
 70.00 8 18 31 3672.54 -32.37 142.54 252.03 78.47 9 19 43 2672.5 -33.82 113.90  
 80.00 8 31 12 3632.71 -25.72 137.69 250.18 74.29 9 31 44 2632.7 -29.76 110.99  
 90.00 9 17 40 3482.53 -22.23 125.51 249.03 72.06 10 15 42 2482.5 -27.61 99.78  
 100.00 11 14 3 3107.18 -23.72 99.05 250.18 74.29 12 5 51 2107.2 -29.76 72.36  
 110.00 13 17 57 2719.36 -32.37 71.46 252.03 78.47 14 3 16 1719.4 -33.82 42.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .0068 TRA-1.1074 TC3-2.1875 BAU .9684 SGT 2527.2 SGR 2599.7 SG3 1762.3 ST 23.9 SR 16.0 SS 61.3  
 RDE .2135 RRA -.3503 RC3-2.8133 FAU .49054 RRT .8821 RRF .9813 RTF .8889 CRT .5109 CRS -.9661 CST -.3058  
 FDE 4.4113 FRA-3.8205 FC-20.8927 BSP 5873 SGB 3625.6 R23 .1831 R13 .9653 LSA 63.8 MSA 22.7 S3A 1.9  
 BDE .2136 BRA 1.1615 BC3 3.5637 FSP 3058 SG1 3517.3 SG2 879.8 THA 45.92 EL1 25.8 EL2 12.7 ALF 25.49

LAUNCH DATE AUG 21 1973

FLIGHT TIME 222.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC DISTANCE 491.111 EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.888 GAL 3.84 AZL 87.11 HCA 145.03 SMA 197.42 ECC .24236 INC 2.8897 V1 29.441  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.540 GAP 4.70 AZP 92.37 TAL 19.89 TAP 164.93 RCA 149.58 APO 245.27 V2 22.625  
 RC 254.795 GL 21.49 GP -28.06 ZAL 55.50 ZAP 93.51 ETS 183.84 ZAE 123.22 ETE 203.39 ZAC 59.10 ETC 286.20 LVI 6.65

PLANETOCENTRIC CONIC

C3 20.397 VHL 4.516 DLA 27.68 RAL 9.78 RAD 8643.0 VEL 11.849 PTH 6.87 VHP 2.424 DPA -16.18 RAP 36.16 ECC 1.3357  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 20 3711.47 -47.52 148.28 254.87 87.25 9 8 12 2711.5 -43.01 114.27  
 60.00 8 7 47 3707.64 -39.65 146.92 253.86 82.09 9 9 34 2707.6 -38.54 115.82  
 70.00 8 10 25 3699.85 -31.98 144.58 252.14 77.33 9 12 5 2699.9 -33.97 116.02  
 80.00 8 17 19 3678.18 -24.85 140.78 249.99 72.89 9 18 37 2678.2 -29.58 114.36  
 90.00 8 54 21 3558.41 -20.56 130.44 248.43 70.14 9 53 40 2558.4 -26.91 103.22  
 100.00 11 0 11 3152.65 -24.85 102.15 249.99 72.89 11 52 43 2152.7 -29.58 75.73  
 110.00 13 9 51 2746.67 -31.98 73.49 252.14 77.33 13 55 38 1746.7 -33.97 44.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .0437 TRA-1.1421 TC3-2.3320 BAU 1.0091 SGT 2667.7 SGR 2688.0 SG3 1755.3 ST 24.9 SR 18.3 SS 63.0  
 RDE .2525 RRA -.3865 RC3-2.8735 FAU .48777 RRT .8920 RRF .9828 RTF .8778 CRT .5514 CRS -.9767 CST -.3875  
 FDE 4.5371 FRA-3.8177 FC-20.7031 BSP 6142 SGB 3772.9 R23 .1828 R13 .9667 LSA 66.3 MSA 22.8 S3A 1.8  
 BDE .2563 BRA 1.2000 BC3 3.7007 FSP 3043 SG1 3669.6 SG2 876.8 THA 45.00 EL1 27.7 EL2 13.7 ALF 30.19

LAUNCH DATE AUG 21 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC DISTANCE 494.899 EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.888 GAL 3.81 AZL 87.02 HCA 145.95 SMA 197.44 ECC .24227 INC 2.9813 V1 29.441  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.512 GAP 4.47 AZP 92.47 TAL 19.74 TAP 165.89 RCA 149.60 APO 245.27 V2 22.599  
 RC 257.584 GL 22.18 GP -28.66 ZAL 55.85 ZAP 92.17 ETS 183.14 ZAE 121.58 ETE 202.51 ZAC 58.66 ETC 286.28 LVI 7.12

PLANETOCENTRIC CONIC

C3 20.479 VHL 4.525 DLA 28.38 RAL 9.64 RAD 8643.1 VEL 11.853 PTH 6.87 VHP 2.432 DPA -16.94 RAP 35.89 ECC 1.3370  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 2 7 3727.91 -47.45 149.86 255.47 86.03 9 4 15 2727.9 -43.43 115.62  
 60.00 8 1 56 3728.42 -39.44 148.65 254.21 80.94 9 4 4 2728.4 -38.84 117.50  
 70.00 8 1 34 3729.49 -31.52 146.76 252.24 76.11 9 3 44 2729.5 -34.08 118.32  
 80.00 8 0 31 3732.82 -23.70 144.43 249.66 71.29 9 2 43 2732.8 -29.24 118.38  
 87.80 7 44 8 3785.79 -16.38 145.31 246.65 66.52 8 47 14 2785.8 -24.65 121.32  
 100.00 10 43 22 3207.29 -23.70 105.80 249.66 71.29 11 36 50 2207.3 -29.24 79.75  
 110.00 13 1 0 2776.31 -31.52 75.68 252.24 76.11 13 47 17 1776.3 -34.08 47.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .0834 TRA-1.1772 TC3-2.4748 BAU 1.0502 SGT 2810.1 SGR 2735.6 SG3 1744.3 ST 26.2 SR 20.7 SS 64.9  
 RDE .2928 RRA -.3869 RC3-2.9308 FAU .48396 RRT .9006 RRF .9841 RTF .9053 CRT .5965 CRS -.9836 CST -.4648  
 FDE 4.6543 FRA-3.8068 FC-20.4589 BSP 6423 SGB 3921.7 R23 .1825 R13 .9680 LSA 69.0 MSA 22.8 S3A 1.7  
 BDE .3044 BRA 1.2391 BC3 3.8359 FSP 3027 SG1 3823.1 SG2 873.9 THA 44.15 EL1 30.1 EL2 14.5 ALF 34.22

LAUNCH DATE AUG 21 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.890 GAL 3.78 AZL 86.92 HCA 146.97 SMA 197.46 ECC .24221 INC 3.0771 V1 29.441
RP 243.12 LAP 1.68 LOP 114.70 VP 20.486 GAP 4.25 AZP 92.36 TAL 19.57 TAP 166.44 RCA 149.63 APO 245.28 VE 22.573
RC 260.356 GL 22.85 GP -29.26 ZAL 56.21 ZAP 90.85 ETS 182.43 ZAE 118.95 ETE 201.65 ZAC 56.20 ETC 286.39 LVI 7.62

DISTANCE 498.687

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.574 VHL 4.538 DLA 29.06 RAL 9.48 RAD 6643.1 VEL 11.857 PTH 6.87 VHP 2.442 DPA -17.70 RAP 39.66 ECC 1.5386
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 57 38 3745.24 -47.35 151.53 256.08 84.75 9 0 4 2745.2 -43.86 117.07
60.00 7 55 39 3750.52 -39.19 150.47 254.55 79.72 8 58 10 2750.5 -39.13 119.31
70.00 7 51 48 3761.90 -30.97 149.12 252.29 74.82 8 54 30 2761.9 -34.14 120.85
80.00 7 38 19 3804.34 -22.06 149.11 249.07 69.35 8 41 44 2804.3 -28.59 123.60
83.00 7 4 3 3914.43 -16.74 154.92 246.75 65.89 8 9 17 2914.5 -25.23 130.93
100.00 10 21 11 3276.81 -22.06 110.48 249.07 69.35 11 15 50 2278.8 -28.59 84.96
110.00 12 31 14 2808.72 -30.97 78.04 252.29 74.82 13 38 3 1808.7 -34.14 49.77

DIFFERENTIAL CORRECTIONS

TDE .1259 TRA-1.2131 TC3-2.6153 BAU 1.0917
RDE .3356 RRA -.4054 RC3-2.9854 FAU .47921
FDE 4.7726 FRA-3.7883 FC-20.1647 BSP 6703
BDE .3585 BRA 1.2790 BC3 3.9689 FSP 3002

MID-COURSE EXECUTION ACCURACY

SGT 2954.2 SGR 2803.2 SG3 1730.0
RRR .9081 RRF .9853 RTF .9121
SGB 4072.5 R23 .1824 R13 .9692
SG1 3978.1 SG2 871.8 THA 43.35

ORBIT DETERMINATION ACCURACY

BT 27.7 SR 23.3 SS 66.2
CRT .6415 CRS -.9883 CST -.5357
LSA 71.9 MSA 22.8 SBA 1.7
EL1 32.9 EL2 15.0 ALF 37.42

LAUNCH DATE AUG 21 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.892 GAL 3.75 AZL 86.82 HCA 147.78 SMA 197.48 ECC .24216 INC 3.1774 V1 29.441
RP 243.37 LAP 1.69 LOP 115.62 VP 20.460 GAP 4.02 AZP 92.69 TAL 19.41 TAP 167.19 RCA 149.66 APO 245.31 V2 22.548
RC 263.112 GL 23.56 GP -29.87 ZAL 56.59 ZAP 89.56 ETS 181.71 ZAE 118.34 ETE 200.81 ZAC 57.73 ETC 286.51 LVI 8.13

DISTANCE 502.474

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.684 VHL 4.548 DLA 29.80 RAL 9.32 RAD 6643.1 VEL 11.861 PTH 6.88 VHP 2.454 DPA -18.46 RAP 35.45 ECC 1.3404
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 52 3763.53 -47.23 153.28 256.71 83.41 8 55 35 2763.5 -44.26 118.62
60.00 7 48 54 3774.09 -38.88 152.40 254.89 78.44 8 51 48 2774.1 -39.41 121.25
70.00 7 40 54 3797.73 -30.30 151.70 252.28 73.43 8 44 12 2797.7 -34.15 123.65
80.00 6 55 52 3940.01 -18.56 157.66 247.55 66.18 8 1 32 2940.0 -26.76 133.26
80.20 6 41 26 3986.12 -17.09 160.39 246.85 65.22 7 47 52 2986.1 -25.83 136.41
100.00 9 38 44 3414.48 -18.56 119.03 247.55 66.18 10 35 39 2414.5 -26.76 94.62
110.00 12 40 20 2844.55 -30.30 80.62 252.28 73.43 13 27 45 1844.5 -34.15 52.57

DIFFERENTIAL CORRECTIONS

TDE .1710 TRA-1.2501 TC3-2.7537 BAU 1.1338
RDE .3795 RRA -.4251 RC3-3.0380 FAU .47370
FDE 4.8790 FRA-3.7696 FC-19.8270 BSP 6979
BDE .4163 BRA 1.3204 BC3 4.1003 FSP 2967

MID-COURSE EXECUTION ACCURACY

SGT 3100.7 SGR 2871.5 SG3 1712.8
RRR .9148 RRF .9884 RTF .9180
SGB 4826.1 R23 .1821 R13 .9703
SG1 4135.6 SG2 869.8 THA 42.60

ORBIT DETERMINATION ACCURACY

BT 29.5 SR 26.0 SS 67.7
CRT .6851 CRS -.9914 CST -.5993
LSA 74.9 MSA 22.8 SBA 1.6
EL1 36.2 EL2 15.4 ALF 39.69

LAUNCH DATE AUG 21 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.893 GAL 3.71 AZL 86.72 HCA 148.70 SMA 197.52 ECC .24213 INC 3.2829 V1 29.441
RP 243.62 LAP 1.71 LOP 116.53 VP 20.435 GAP 3.80 AZP 92.81 TAL 19.23 TAP 167.93 RCA 149.69 APO 245.34 V2 22.523
RC 265.850 GL 24.33 GP -30.50 ZAL 56.99 ZAP 88.31 ETS 180.97 ZAE 116.75 ETE 199.98 ZAC 57.24 ETC 286.83 LVI 8.66

DISTANCE 506.260

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.810 VHL 4.562 DLA 30.56 RAL 9.13 RAD 6643.2 VEL 11.866 PTH 6.88 VHP 2.469 DPA -19.22 RAP 35.27 ECC 1.3425
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 45 3782.88 -47.06 155.11 257.35 82.00 8 50 48 2782.9 -44.71 120.29
60.00 7 41 36 3799.31 -38.52 154.45 255.21 77.10 8 44 55 2799.3 -39.66 123.35
70.00 7 28 32 3837.90 -29.48 154.54 252.19 71.93 8 32 30 2837.9 -34.07 126.78
77.91 6 23 35 4042.12 -17.46 164.75 246.97 64.52 7 30 57 3042.1 -26.45 140.78
77.91 6 23 35 4042.12 -17.46 164.75 246.97 64.52 7 30 57 3042.1 -26.45 140.78
110.00 12 27 58 2884.72 -29.48 83.46 252.19 71.93 13 16 3 1884.7 -34.07 55.70

DIFFERENTIAL CORRECTIONS

TDE .2197 TRA-1.2872 TC3-2.8881 BAU 1.1761
RDE .4261 RRA -.4444 RC3-3.0872 FAU .46724
FDE 4.9835 FRA-3.7387 FC-19.4383 BSP 7266
BDE .4794 BRA 1.3617 BC3 4.2275 FSP 2930

MID-COURSE EXECUTION ACCURACY

SGT 3247.1 SGR 2939.4 SG3 1691.8
RRR .9206 RRF .9875 RTF .5231
SGB 4379.9 R23 .1819 R13 .9712
SG1 4293.0 SG2 868.4 THA 41.91

ORBIT DETERMINATION ACCURACY

BT 31.6 SR 28.8 SS 69.2
CRT .7252 CRS -.9936 CST -.6597
LSA 78.1 MSA 22.7 SBA 1.8
EL1 39.7 EL2 15.8 ALF 41.31

LAUNCH DATE AUG 21 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.895 GAL 3.68 AZL 86.61 HCA 149.81 SMA 197.55 ECC .24212 INC 3.3937 V1 29.441
RP 243.86 LAP 1.72 LOP 117.43 VP 20.412 GAP 3.57 AZP 92.93 TAL 19.06 TAP 168.86 RCA 149.72 APO 245.38 V2 22.499
RC 268.570 GL 25.12 GP -31.14 ZAL 57.41 ZAP 87.10 ETS 180.22 ZAE 115.19 ETE 199.17 ZAC 56.73 ETC 286.76 LVI 9.22

DISTANCE 510.045

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.953 VHL 4.577 DLA 31.35 RAL 8.94 RAD 6643.3 VEL 11.872 PTH 6.89 VHP 2.486 DPA -19.99 RAP 35.12 ECC 1.3448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 42 17 3803.37 -46.85 157.05 258.00 80.52 8 45 40 2803.4 -45.14 122.08
60.00 7 33 39 3826.40 -38.08 156.62 255.50 75.68 8 37 25 2826.4 -39.89 125.62
70.00 7 14 10 3883.97 -28.47 157.74 251.98 70.28 8 18 54 2884.0 -33.87 130.37
75.87 6 8 13 4089.85 -17.83 168.52 247.09 63.78 7 16 22 3089.8 -27.08 144.58
75.87 6 8 13 4089.85 -17.83 168.52 247.09 63.78 7 16 22 3089.8 -27.08 144.58
110.00 12 13 37 2930.78 -28.47 86.66 251.98 70.28 13 2 27 1930.8 -33.87 59.28

DIFFERENTIAL CORRECTIONS

TDE .2711 TRA-1.3257 TC3-3.0194 BAU 1.2192
RDE .4742 RRA -.4651 RC3-3.1344 FAU .46010
FDE 5.0765 FRA-3.7075 FC-19.0101 BSP 7548
BDE .5462 BRA 1.4049 BC3 4.3522 FSP 2885

MID-COURSE EXECUTION ACCURACY

SGT 3395.8 SGR 3008.5 SG3 1668.2
RRR .9258 RRF .9884 RTF .9277
SGB 4536.9 R23 .1817 R13 .9722
SG1 4453.2 SG2 867.4 THA 41.26

ORBIT DETERMINATION ACCURACY

BT 34.0 SR 31.7 SS 70.7
CRT .7612 CRS -.9952 CST -.7043
LSA 81.5 MSA 22.7 SBA 1.4
EL1 43.6 EL2 16.0 ALF 42.37

LAUNCH DATE AUG 21 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 12 1974

**HELIOCENTRIC CONIC**  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.898 GAL 3.65 AZL 86.49 HCA 150.52 SMA 197.59 ECC .24212 INC 3.5104 V1 29.441  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.389 GAP 3.95 AZP 93.06 TAL 18.87 TAP 189.39 RCA 149.75 APO 245.44 V2 22.475  
 RC 271.273 GL 25.94 GP -31.80 ZAL 57.84 ZAP 85.93 ETS 179.45 ZAE 113.66 ETE 198.38 ZAC 55.20 ETC 286.89 LVI 9.76

**PLANETOCENTRIC CONIC**  
 C3 21.117 VHL 4.595 DLA 32.17 RAL 8.72 RAD 6643.3 VEL 11.879 PTH 6.89 VHP 2.506 DPA -20.76 RAP 38.01 ECC 1.3478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 23 3825.11 -46.58 159.08 258.64 78.97 8 40 8 2825.1 -45.55 124.01  
 60.00 7 24 57 3855.64 -37.57 158.93 255.75 74.19 8 29 12 2855.6 -40.08 128.08  
 70.00 6 58 52 3936.73 -27.15 161.46 251.59 68.44 8 2 31 2938.7 -33.49 134.59  
 73.98 5 54 26 4132.17 -18.21 171.93 247.22 63.00 7 3 18 3132.2 -27.74 148.01  
 73.98 5 54 26 4132.17 -18.21 171.93 247.22 63.00 7 3 18 3132.2 -27.74 148.01  
 73.98 5 54 26 4132.17 -18.21 171.93 247.22 63.00 7 3 18 3132.2 -27.74 148.01  
 110.00 11 56 18 2985.55 -27.15 90.38 251.59 68.44 12 46 4 1985.5 -33.49 63.51

**DIFFERENTIAL CORRECTIONS**  
 TDE .3257 TRA-1.3691 TC3-3.1460 BAU 1.2623 SGT 3545.2 SGR 3076.8 SG3 1640.7 ST 36.6 SR 34.7 SS 72.1  
 RDE .5250 RRA -.4861 RC3-3.1770 FAU .45191 RRT .9303 RRF .9893 RTF .9315 CRT .7923 CRS -.9963 CST -.7457  
 FDE 5.1653 FRA-3.6682 FC-18.5269 BSP 7832 SGB 4894.2 R23 .1818 R13 .9729 LSA 85.0 MSA 22.7 SSA 1.4  
 BDE .6178 BRA 1.4491 BC3 4.4711 FSP 2836 SG1 4813.4 SG2 867.1 THA 40.65 EL1 47.8 EL2 16.2 ALF 43.08

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 21 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 14 1974

**HELIOCENTRIC CONIC**  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.900 GAL 3.61 AZL 86.37 HCA 151.42 SMA 197.64 ECC .24214 INC 3.6337 V1 29.441  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.368 GAP 3.13 AZP 93.19 TAL 18.68 TAP 170.11 RCA 149.78 APO 245.50 V2 22.452  
 RC 273.957 GL 26.80 GP -32.48 ZAL 58.29 ZAP 84.81 ETS 178.67 ZAE 112.15 ETE 197.59 ZAC 55.65 ETC 287.03 LVI 10.39

**PLANETOCENTRIC CONIC**  
 C3 21.303 VHL 4.616 DLA 33.03 RAL 8.49 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 2.528 DPA -21.54 RAP 34.94 ECC 1.3506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 1 3848.25 -46.26 161.22 259.28 77.35 8 34 9 2848.2 -45.95 126.10  
 60.00 7 15 21 3887.40 -36.95 161.40 255.95 72.61 8 20 8 2887.4 -40.22 130.77  
 70.00 6 34 25 4008.74 -25.32 166.07 250.86 66.27 7 41 13 3008.7 -32.77 139.93  
 72.18 5 41 45 4170.69 -18.59 175.09 247.36 62.19 6 51 16 3170.7 -28.41 151.20  
 72.18 5 41 45 4170.69 -18.59 175.09 247.36 62.19 6 51 16 3170.7 -28.41 151.20  
 72.18 5 41 45 4170.69 -18.59 175.09 247.36 62.19 6 51 16 3170.7 -28.41 151.20  
 110.00 11 33 51 3055.56 -25.32 94.99 250.86 66.27 12 24 47 2055.6 -32.77 68.85

**DIFFERENTIAL CORRECTIONS**  
 TDE .3842 TRA-1.4049 TC3-3.2859 BAU 1.3052 SGT 3693.7 SGR 3144.5 SG3 1609.6 ST 39.5 SR 37.9 SS 73.5  
 RDE .5786 RRA -.5077 RC3-3.2148 FAU .44275 RRT .9344 RRF .9901 RTF .9350 CRT .8198 CRS -.9971 CST -.7813  
 FDE 5.2468 FRA-3.6234 FC-17.9929 BSP 8121 SGB 4850.9 R23 .1818 R13 .9737 LSA 88.8 MSA 22.7 SSA 1.3  
 BDE .6945 BRA 1.4938 BC3 4.5827 FSP 2781 SG1 4772.8 SG2 866.8 THA 40.09 EL1 52.2 EL2 16.4 ALF 43.53

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 21 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 16 1974

**HELIOCENTRIC CONIC**  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.903 GAL 3.57 AZL 86.24 HCA 152.33 SMA 197.69 ECC .24218 INC 3.7641 V1 29.441  
 RP 244.56 LAP 1.75 LOP 120.17 VP 20.347 GAP 2.91 AZP 93.33 TAL 18.49 TAP 170.82 RCA 149.81 APO 245.57 V2 22.430  
 RC 276.623 GL 27.70 GP -33.18 ZAL 58.77 ZAP 83.73 ETS 177.87 ZAE 110.68 ETE 196.81 ZAC 55.07 ETC 287.17 LVI 11.01

**PLANETOCENTRIC CONIC**  
 C3 21.514 VHL 4.638 DLA 33.92 RAL 8.23 RAD 6643.5 VEL 11.896 PTH 6.91 VHP 2.553 DPA -22.33 RAP 34.90 ECC 1.3541  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 23 8 3872.92 -45.87 163.47 259.90 75.66 8 27 39 2872.9 -46.33 128.36  
 60.00 7 4 40 3922.17 -36.21 164.05 256.07 70.95 8 10 2 2922.2 -40.29 133.72  
 70.00 5 57 13 4122.86 -22.00 173.26 249.21 63.19 7 5 56 3122.9 -31.08 148.39  
 70.43 5 29 52 4206.37 -18.97 178.07 247.51 61.33 6 39 59 3206.4 -29.10 154.21  
 70.43 5 29 52 4206.37 -18.97 178.07 247.51 61.33 6 39 59 3206.4 -29.10 154.21  
 70.43 5 29 52 4206.37 -18.97 178.07 247.51 61.33 6 39 59 3206.4 -29.10 154.21  
 110.00 10 56 40 3169.68 -22.00 102.18 249.21 63.19 11 49 29 2169.7 -31.08 77.31

**DIFFERENTIAL CORRECTIONS**  
 TDE .4457 TRA-1.4461 TC3-3.3808 BAU 1.3490 SGT 3843.7 SGR 3214.3 SG3 1576.3 ST 42.7 SR 41.2 SS 74.7  
 RDE .6343 RRA -.5310 RC3-3.2908 FAU .43307 RRT .9381 RRF .9908 RTF .9381 CRT .8433 CRS -.9978 CST -.8111  
 FDE 5.3163 FRA-3.5776 FC-17.4270 BSP 8406 SGB 5010.6 R23 .1818 R13 .9743 LSA 92.7 MSA 22.6 SSA 1.2  
 BDE .7752 BRA 1.5405 BC3 4.6900 FSP 2720 SG1 4835.0 SG2 867.0 THA 39.58 EL1 56.9 EL2 16.6 ALF 43.78

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 21 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 18 1974

**HELIOCENTRIC CONIC**  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.905 GAL 3.54 AZL 86.10 HCA 153.23 SMA 197.74 ECC .24222 INC 3.9023 V1 29.441  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.327 GAP 2.69 AZP 93.49 TAL 18.29 TAP 171.52 RCA 149.85 APO 245.64 V2 22.407  
 RC 279.288 GL 28.64 GP -33.89 ZAL 59.26 ZAP 82.69 ETS 177.06 ZAE 109.23 ETE 196.05 ZAC 54.47 ETC 287.32 LVI 11.66

**PLANETOCENTRIC CONIC**  
 C3 21.754 VHL 4.664 DLA 34.85 RAL 7.94 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 2.581 DPA -23.12 RAP 34.90 ECC 1.3580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 15 34 3899.31 -45.40 165.84 260.49 73.89 8 20 33 2899.3 -46.69 130.80  
 60.00 6 52 37 3960.63 -35.32 168.93 256.08 69.17 7 58 38 2960.6 -40.28 137.00  
 68.72 5 18 35 4239.83 -19.35 180.92 247.67 60.43 6 29 15 3239.8 -29.81 157.11  
 68.72 5 18 35 4239.83 -19.35 180.92 247.67 60.43 6 29 15 3239.8 -29.81 157.11  
 68.72 5 18 35 4239.83 -19.35 180.92 247.67 60.43 6 29 15 3239.8 -29.81 157.11  
 68.72 5 18 35 4239.83 -19.35 180.92 247.67 60.43 6 29 15 3239.8 -29.81 157.11  
 68.72 5 18 35 4239.83 -19.35 180.92 247.67 60.43 6 29 15 3239.8 -29.81 157.11

**DIFFERENTIAL CORRECTIONS**  
 TDE .5117 TRA-1.4877 TC3-3.4875 BAU 1.3924 SGT 392.3 SGR 3283.0 SG3 1539.1 ST 46.1 SR 44.6 SS 76.0  
 RDE .6939 RRA -.5541 RC3-3.2803 FAU .42235 RRT .9413 RRF .9915 RTF .9407 CRT .8634 CRS -.9982 CST -.8365  
 FDE 5.3815 FRA-3.5204 FC-16.8083 BSP 8702 SGB 5168.8 R23 .1821 R13 .9749 LSA 96.9 MSA 22.8 SSA 1.2  
 BDE .8622 BRA 1.5875 BC3 4.7878 FSP 2658 SG1 5095.4 SG2 868.0 THA 39.09 EL1 62.0 EL2 16.8 ALF 43.91

**MID-COURSE EXECUTION ACCURACY**  
**ORBIT DETERMINATION ACCURACY**

LAUNCH DATE AUG 21 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 528.955

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.908 GAL 3.50 AZL 85.95 HCA 184.13 SMA 107.80 ECC .24228 INC 4.0493 V1 29.441
RP 245.01 LAP 1.77 LOP 121.99 VP 20.308 GAP 2.47 AZP 93.64 TAL 18.09 TAP 172.22 RCA 149.88 APO 245.73 V2 22.386
RC 201.893 GL 29.62 GP -34.64 ZAL 59.77 ZAP 81.71 ETS 176.24 ZAE 107.82 ETE 195.29 ZAC 53.83 ETC 287.48 LVI 12.34

PLANETOCENTRIC CONIC

C3 22.026 VHL 4.693 DLA 35.02 RAL 7.61 RAD 6643.7 VEL 11.917 PTH 6.92 VHP 2.612 DPA -23.93 RAP 34.94 ECC 1.3685
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 7 18 3927.63 -44.83 168.34 261.04 72.04 8 12 46 2927.6 -47.00 133.47
60.00 6 38 50 4003.79 -34.23 170.07 255.95 67.28 7 43 34 3003.8 -40.15 140.66
67.03 5 7 45 4271.53 -19.73 183.67 247.83 59.48 6 18 57 3271.5 -30.53 159.92
67.03 5 7 45 4271.53 -19.73 183.67 247.83 59.48 6 18 57 3271.5 -30.53 159.92
67.03 5 7 45 4271.53 -19.73 183.67 247.83 59.48 6 18 57 3271.5 -30.53 159.92
67.03 5 7 45 4271.53 -19.73 183.67 247.83 59.48 6 18 57 3271.5 -30.53 159.92
67.03 5 7 45 4271.53 -19.73 183.67 247.83 59.48 6 18 57 3271.5 -30.53 159.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5811 TRA-1.5304 TC3-3.5867 BAU 1.4367 SGT 4140.9 SGR 3354.4 SG3 1499.8 ST 49.8 SR 48.2 SS 77.1
RDE .7558 RRA -.5795 RC3-3.3076 FAU .41120 RRT .9444 RRF .9921 RTF .9432 CRT .8807 CRS -.9986 CST -.8578
FDE 5.4309 FRA-3.4647 FC-16.1622 B8P 8993 SGB 5329.1 R23 .1820 R13 .9755 LSA 101.1 MSA 22.6 SSA 1.1
BDE .9534 BRA 1.8365 BC3 4.8790 F8P 2588 SG1 5257.8 SG2 868.8 THA 38.67 EL1 67.2 EL2 16.9 ALF 43.94

LAUNCH DATE AUG 21 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

DISTANCE 532.734

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.912 GAL 3.46 AZL 85.79 HCA 195.03 SMA 197.86 ECC .24236 INC 4.2057 V1 29.441
RP 245.22 LAP 1.77 LOP 122.89 VP 20.290 GAP 2.25 AZP 93.81 TAL 17.88 TAP 172.92 RCA 149.91 APO 245.62 V2 22.385
RC 284.497 GL 30.65 GP -35.41 ZAL 60.31 ZAP 80.77 ETS 175.40 ZAE 106.44 ETE 194.53 ZAC 53.17 ETC 287.65 LVI 13.06

PLANETOCENTRIC CONIC

C3 22.335 VHL 4.726 DLA 36.83 RAL 7.25 RAD 6643.9 VEL 11.930 PTH 6.93 VHP 2.647 DPA -24.74 RAP 35.02 ECC 1.3678
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 58 12 3958.17 -44.16 170.97 261.51 70.10 8 4 10 2958.2 -47.27 136.37
60.00 6 22 40 4053.31 -32.87 173.56 255.60 65.23 7 30 14 3053.3 -39.83 144.84
65.35 4 57 15 4301.83 -20.11 186.34 248.00 58.47 6 8 56 3301.8 -31.28 162.67
65.35 4 57 15 4301.83 -20.11 186.34 248.00 58.47 6 8 56 3301.8 -31.28 162.67
65.35 4 57 15 4301.83 -20.11 186.34 248.00 58.47 6 8 56 3301.8 -31.28 162.67
65.35 4 57 15 4301.83 -20.11 186.34 248.00 58.47 6 8 56 3301.8 -31.28 162.67
65.35 4 57 15 4301.83 -20.11 186.34 248.00 58.47 6 8 56 3301.8 -31.28 162.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6541 TRA-1.5752 TC3-3.6773 BAU 1.4810 SGT 4289.8 SGR 3425.1 SG3 1456.8 ST 53.7 SR 51.9 SS 78.0
RDE .8214 RRA -.6063 RC3-3.3282 FAU .39905 RRT .9471 RRF .9927 RTF .9453 CRT .8950 CRS -.9988 CST -.8754
FDE 5.4706 FRA-3.4038 FC-15.4677 B8P 9282 SGB 5489.4 R23 .1824 R13 .9759 LSA 105.6 MSA 22.5 SSA 1.0
BDE 1.0500 BRA 1.6879 BC3 4.9598 F8P 2514 SG1 5420.0 SG2 870.4 THA 38.26 EL1 72.7 EL2 17.1 ALF 43.92

LAUNCH DATE AUG 21 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 536.511

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.915 GAL 3.42 AZL 85.63 HCA 155.93 SMA 197.93 ECC .24244 INC 4.3726 V1 29.441
RP 245.43 LAP 1.78 LOP 123.79 VP 20.273 GAP 2.04 AZP 93.99 TAL 17.67 TAP 173.60 RCA 149.94 APO 245.92 V2 22.344
RC 287.079 GL 31.73 GP -36.21 ZAL 60.87 ZAP 79.89 ETS 174.54 ZAE 105.10 ETE 193.78 ZAC 52.47 ETC 287.83 LVI 13.80

PLANETOCENTRIC CONIC

C3 22.688 VHL 4.763 DLA 37.89 RAL 6.85 RAD 6644.0 VEL 11.945 PTH 6.95 VHP 2.685 DPA -25.58 RAP 35.15 ECC 1.3734
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 48 6 3991.25 -43.35 173.74 261.89 68.09 7 54 37 2991.2 -47.46 139.55
60.00 6 2 58 4112.29 -31.11 177.58 254.92 62.97 7 11 30 3112.3 -39.25 149.74
63.66 4 46 58 4330.99 -20.49 188.97 248.17 57.41 5 59 9 3331.0 -32.04 165.39
63.66 4 46 58 4330.99 -20.49 188.97 248.17 57.41 5 59 9 3331.0 -32.04 165.39
63.66 4 46 58 4330.99 -20.49 188.97 248.17 57.41 5 59 9 3331.0 -32.04 165.39
63.66 4 46 58 4330.99 -20.49 188.97 248.17 57.41 5 59 9 3331.0 -32.04 165.39
63.66 4 46 58 4330.99 -20.49 188.97 248.17 57.41 5 59 9 3331.0 -32.04 165.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7313 TRA-1.6210 TC3-3.7577 BAU 1.5259 SGT 4437.6 SGR 3488.7 SG3 1411.9 ST 57.8 SR 55.7 SS 78.8
RDE .8907 RRA -.6355 RC3-3.3452 FAU .38645 RRT .9498 RRF .9932 RTF .5-73 CRT .9075 CRS -.9990 CST -.8904
FDE 5.4971 FRA-3.3422 FC-14.7473 B8P 9569 SGB 5651.0 R23 .1824 R13 .9764 LSA 110.3 MSA 22.5 SSA 1.0
BDE 1.1525 BRA 1.7411 BC3 5.0310 F8P 2432 SG1 5583.3 SG2 871.9 THA 37.91 EL1 78.4 EL2 17.2 ALF 43.88

LAUNCH DATE AUG 21 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 540.287

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.918 GAL 3.38 AZL 85.45 HCA 196.83 SMA 198.00 ECC .24254 INC 4.5517 V1 29.441
RP 245.63 LAP 1.79 LOP 124.69 VP 20.258 GAP 1.82 AZP 94.19 TAL 17.46 TAP 174.29 RCA 149.98 APO 246.02 V2 22.324
RC 289.637 GL 32.87 GP -37.04 ZAL 61.45 ZAP 79.08 ETS 173.68 ZAE 103.79 ETE 193.04 ZAC 51.73 ETC 288.03 LVI 14.59

PLANETOCENTRIC CONIC

C3 23.087 VHL 4.805 DLA 38.99 RAL 6.40 RAD 6644.2 VEL 11.961 PTH 6.96 VHP 2.727 DPA -26.42 RAP 35.33 ECC 1.3799
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 36 48 4027.32 -42.39 176.87 262.14 65.99 7 43 55 3027.3 -47.57 143.03
60.00 5 36 57 4188.20 -28.66 182.51 253.84 60.36 6 46 45 3188.2 -38.17 159.90
61.96 4 36 50 4359.27 -20.85 191.56 248.34 56.28 5 49 30 3359.3 -32.81 168.09
61.96 4 36 50 4359.27 -20.85 191.56 248.34 56.28 5 49 30 3359.3 -32.81 168.09
61.96 4 36 50 4359.27 -20.85 191.56 248.34 56.28 5 49 30 3359.3 -32.81 168.09
61.96 4 36 50 4359.27 -20.85 191.56 248.34 56.28 5 49 30 3359.3 -32.81 168.09
61.96 4 36 50 4359.27 -20.85 191.56 248.34 56.28 5 49 30 3359.3 -32.81 168.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8131 TRA-1.6685 TC3-3.8271 BAU 1.5709 SGT 4584.5 SGR 3572.6 SG3 1363.7 ST 62.1 SR 59.7 SS 79.6
RDE .9846 RRA -.6864 RC3-3.3551 FAU .37298 RRT .9518 RRF .9937 RTF .9490 CRT .9180 CRS -.9992 CST -.9030
FDE 5.5128 FRA-3.2748 FC-13.9866 B8P 9854 SGB 5812.1 R23 .1827 R13 .9768 LSA 115.1 MSA 22.5 SSA .9
BDE 1.2615 BRA 1.7966 BC3 5.0896 F8P 2347 SG1 5746.0 SG2 874.0 THA 37.59 EL1 84.4 EL2 17.4 ALF 43.79



LAUNCH DATE AUG 21 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 544.062

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.922 GAL 3.34 AZL 85.26 HCA 157.72 SMA 198.07 ECC .24265 INC 4.7438 V1 29.441
RP 245.83 LAP 1.80 LOP 125.59 VP 20.241 GAP 1.61 AZP 94.39 TAP 17.24 TAP 174.96 RCA 150.01 APO 246.13 V2 22.305
RC 292.172 GL 34.07 GP -37.91 ZAL 62.07 ZAP 78.29 ETS 172.80 ZAE 102.92 ETE 192.30 ZAC 50.95 ETC 288.24 LVI 15.41

PLANETOCENTRIC CONIC

C3 23.543 VHL 4.852 DLA 40.14 RAL 5.89 RAD 6644.4 VEL 11.980 PTH 6.98 VHP 2.774 DPA -27.29 RAP 35.97 ECC 1.3875
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 24 0 4066.97 -41.25 179.79 262.22 63.80 7 31 47 3067.0 -47.55 146.86
60.00 4 30 18 4320.66 -23.93 190.52 250.52 56.55 6 2 19 3320.7 -35.49 166.11
60.24 4 26 48 4386.76 -21.20 194.13 248.51 55.09 5 39 55 3386.8 -33.59 170.80
60.24 4 26 48 4386.76 -21.20 194.13 248.51 55.09 5 39 55 3386.8 -33.59 170.80
60.24 4 26 48 4386.76 -21.20 194.13 248.51 55.09 5 39 55 3386.8 -33.59 170.80
60.24 4 26 48 4386.76 -21.20 194.13 248.51 55.09 5 39 55 3386.8 -33.59 170.80
60.24 4 26 48 4386.76 -21.20 194.13 248.51 55.09 5 39 55 3386.8 -33.59 170.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8987 TRA-1.7179 TC3-3.8650 BAU 1.6166 SGT 4730.7 SGR 3648.6 SG3 1313.0 ST 66.6 SR 63.9 SS 80.1
RDE 1.0430 RRA -.6995 RC3-3.3594 FAU .35894 RRT .9539 RRF .9942 RTF .9504 CRT .9268 CRS -.9993 CST -.9134
FDE 5.5136 FRA-3.2031 FC-13.1990 BSP 10140 SGB 5974.3 R23 .1831 R13 .9772 LSA 120.1 MSA 22.5 SSA .8
BDE 1.3767 BRA 1.8548 BC3 5.1360 FSP 2258 SG1 5909.6 S62 876.8 THA 37.30 EL1 90.5 EL2 17.6 ALF 43.72

LAUNCH DATE AUG 21 1973

FLIGHT TIME 252.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

DISTANCE 547.836

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.926 GAL 3.30 AZL 85.05 HCA 158.62 SMA 198.15 ECC .24277 INC 4.9509 V1 29.441
RP 246.02 LAP 1.80 LOP 126.48 VP 20.226 GAP 1.40 AZP 94.61 TAP 17.02 TAP 175.63 RCA 150.04 APO 246.25 V2 22.286
RC 294.682 GL 35.33 GP -38.81 ZAL 62.70 ZAP 77.58 ETS 171.90 ZAE 101.29 ETE 191.57 ZAC 50.13 ETC 288.47 LVI 16.28

PLANETOCENTRIC CONIC

C3 24.066 VHL 4.906 DLA 41.34 RAL 5.31 RAD 6644.6 VEL 12.002 PTH 7.00 VHP 2.825 DPA -28.18 RAP 35.85 ECC 1.3961
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 21 4111.06 -39.87 183.11 262.05 61.52 7 17 52 3111.1 -47.36 151.11
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53
58.50 4 16 45 4413.74 -21.53 196.70 248.67 53.82 5 30 19 3413.7 -34.38 173.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9887 TRA-1.7691 TC3-3.9288 BAU 1.6624 SGT 4874.7 SGR 3726.4 SG3 1259.6 ST 71.2 SR 68.2 SS 80.9
RDE 1.1262 RRA -.7362 RC3-3.3564 FAU .34419 RRT .9559 RRF .9945 RTF .9518 CRT .9344 CRS -.9993 CST -.9223
FDE 5.4979 FRA-3.1307 FC-12.3820 BSP 10431 SGB 6135.8 R23 .1833 R13 .9775 LSA 125.3 MSA 22.5 SSA .8
BDE 1.4986 BRA 1.9162 BC3 5.1671 FSP 2165 SG1 6072.6 S62 878.9 THA 37.06 EL1 96.9 EL2 17.8 ALF 43.66

LAUNCH DATE AUG 21 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

DISTANCE 551.611

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.930 GAL 3.26 AZL 84.83 HCA 159.51 SMA 198.22 ECC .24290 INC 5.1747 V1 29.441
RP 246.21 LAP 1.81 LOP 127.38 VP 20.213 GAP 1.18 AZP 94.85 TAP 16.80 TAP 176.30 RCA 150.08 APO 246.37 V2 22.287
RC 297.167 GL 36.66 GP -39.78 ZAL 63.37 ZAP 76.93 ETS 171.00 ZAE 100.10 ETE 190.83 ZAC 49.27 ETC 288.72 LVI 17.19

PLANETOCENTRIC CONIC

C3 24.666 VHL 4.966 DLA 42.59 RAL 4.65 RAD 6644.9 VEL 12.027 PTH 7.02 VHP 2.862 DPA -29.08 RAP 36.19 ECC 1.4089
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 52 14 4180.83 -38.19 186.70 261.55 59.13 7 1 35 3160.8 -46.95 153.83
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31
56.73 4 6 38 4440.33 -21.84 199.27 248.82 52.49 5 20 39 3440.3 -35.17 176.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0761 TRA-1.8279 TC3-3.9648 BAU 1.7139 SGT 5025.2 SGR 3828.6 SG3 1210.5 ST 75.7 SR 71.8 SS 79.8
RDE 1.1994 RRA -.7913 RC3-3.3701 FAU .33158 RRT .9591 RRF .9950 RTF .9530 CRT .9421 CRS -.9994 CST -.9308
FDE 5.4041 FRA-3.1141 FC-11.6378 BSP 10554 SGB 6317.5 R23 .1783 R13 .9789 LSA 129.5 MSA 22.2 SSA .7
BDE 1.8113 BRA 1.9918 BC3 5.2034 FSP 2006 SG1 6257.2 S62 870.7 THA 36.99 EL1 102.8 EL2 17.7 ALF 43.39

LAUNCH DATE AUG 21 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

DISTANCE 555.381

EARTH TO MARS

RL 151.34 LAL -.00 LOL 327.80 VL 32.934 GAL 3.22 AZL 84.58 HCA 160.40 SMA 198.31 ECC .24304 INC 5.4177 V1 29.441
RP 246.39 LAP 1.82 LOP 128.27 VP 20.200 GAP .97 AZP 95.11 TAP 16.57 TAP 176.96 RCA 150.11 APO 246.50 V2 22.249
RC 299.628 GL 38.08 GP -40.75 ZAL 64.07 ZAP 76.35 ETS 170.09 ZAE 98.97 ETE 190.11 ZAC 48.35 ETC 289.00 LVI 18.14

PLANETOCENTRIC CONIC

C3 25.356 VHL 5.036 DLA 43.89 RAL 3.91 RAD 6645.1 VEL 12.055 PTH 7.04 VHP 2.945 DPA -30.01 RAP 36.60 ECC 1.4173
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 31 38 4218.65 -36.10 190.64 260.57 56.60 6 41 56 3218.7 -46.21 161.23
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14
54.92 3 56 22 4466.70 -22.11 201.85 248.94 51.06 5 10 49 3466.7 -35.96 179.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1745 TRA-1.8834 TC3-3.9765 BAU 1.7614 SGT 5164.0 SGR 3904.6 SG3 1149.8 ST 80.6 SR 76.6 SS 79.9
RDE 1.2973 RRA -.8312 RC3-3.3445 FAU .31475 RRT .9604 RRF .9953 RTF .9555 CRT .9469 CRS -.9994 CST -.9363
FDE 5.3674 FRA-3.0147 FC-10.7463 BSP 10873 SGB 6474.1 R23 .1802 R13 .9788 LSA 135.0 MSA 22.3 SSA .7
BDE 1.7499 BRA 2.0586 BC3 5.1960 FSP 1921 SG1 6414.5 S62 876.3 THA 36.78 EL1 109.7 EL2 18.1 ALF 43.46

LAUNCH DATE AUG 21 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.936 GAL 3.17 AZL 84.32 HCA 161.29 SMA 198.39 ECC .24319 INC 5.6623 V1 29.441
RP 246.57 LAP 1.82 LOP 129.17 VP 20.188 GAP .76 AZP 95.38 TAL 16.33 TAP 177.62 RCA 150.14 APO 246.64 V2 22.232
RC 302.065 GL 39.55 GP -41.78 ZAL 64.80 ZAP 75.84 ETS 169.17 ZAE 97.87 ETE 189.39 ZAC 47.39 ETC 289.30 LVI 19.15

DISTANCE 559.150

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.155 VHL 5.114 DLA 45.26 RAL 3.05 RAD 6645.5 VEL 12.088 PTH 7.07 VHP 3.015 DPA -30.97 RAP 37.07 ECC 1.4305
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 5 31 4289.14 -33.36 195.14 258.82 53.87 6 17 0 3289.1 -44.95 197.56
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06
53.07 3 45 51 4493.03 -22.35 204.47 249.03 49.56 5 0 44 3493.0 -36.74 182.06

DIFFERENTIAL CORRECTIONS

TDE 1.2754 TRA-1.9427 TC3-3.9723 BAU 1.8085
RDE 1.4003 RRA -.8771 RC3-3.3123 FAU .29765
FDE 5.3039 FRA-2.9179 FC3-9.8521 BSP 11183
BDE 1.8941 BRA 2.1316 BC3 5.1721 F8P 1828

MID-COURSE EXECUTION ACCURACY

SGT 5301.9 SGR 3986.1 SG3 1087.5
RRT .9617 RRF .9955 RTF .9559
SGB 6633.2 R23 .1818 R13 .9788
SG1 6574.3 SG2 881.5 THA 36.63

ORBIT DETERMINATION ACCURACY

ST 85.4 SR 81.3 SS 79.6
CRT .9510 CR8 -.9994 CST -.9409
LSA 140.5 MSA 22.5 S8A .6
EL1 116.5 EL2 18.4 ALF 43.54

LAUNCH DATE AUG 21 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.943 GAL 3.13 AZL 84.03 HCA 162.17 SMA 198.47 ECC .24335 INC 5.9719 V1 29.441
RP 246.74 LAP 1.83 LOP 130.06 VP 20.176 GAP .56 AZP 95.69 TAL 16.10 TAP 178.27 RCA 150.18 APO 246.77 V2 22.215
RC 304.476 GL 41.12 GP -42.87 ZAL 65.56 ZAP 75.40 ETS 168.24 ZAE 96.83 ETE 188.67 ZAC 46.36 ETC 289.64 LVI 20.22

DISTANCE 562.917

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.084 VHL 5.204 DLA 46.88 RAL 2.07 RAD 6645.8 VEL 12.126 PTH 7.10 VHP 3.093 DPA -31.95 RAP 37.61 ECC 1.4457
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 27 44 4386.92 -29.28 200.89 255.51 50.66 5 40 51 3386.9 -42.60 173.78
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06
51.17 3 35 2 4519.37 -22.53 207.11 249.07 47.96 4 50 21 3519.4 -37.49 185.06

DIFFERENTIAL CORRECTIONS

TDE 1.3785 TRA-2.0060 TC3-3.9489 BAU 1.8565
RDE 1.5097 RRA -.9296 RC3-3.2703 FAU .28001
FDE 5.2136 FRA-2.8213 FC3-8.9305 BSP 11488
BDE 2.0444 BRA 2.2109 BC3 5.1272 F8P 1728

MID-COURSE EXECUTION ACCURACY

SGT 5436.9 SGR 4071.1 SG3 1023.2
RRT .9630 RRF .9957 RTF .9564
SGB 6792.2 R23 .1832 R13 .9788
SG1 6734.2 SG2 885.9 THA 36.53

ORBIT DETERMINATION ACCURACY

ST 90.2 SR 86.2 SS 78.9
CRT .9544 CR8 -.9995 CST -.9446
LSA 145.9 MSA 22.6 S8A .6
EL1 123.3 EL2 18.8 ALF 43.66

LAUNCH DATE AUG 21 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.947 GAL 3.09 AZL 83.71 HCA 163.06 SMA 198.58 ECC .24352 INC 6.2905 V1 29.441
RP 246.90 LAP 1.83 LOP 130.95 VP 20.166 GAP .35 AZP 96.02 TAL 15.86 TAP 178.92 RCA 150.21 APO 246.92 V2 22.199
RC 306.863 GL 42.78 GP -44.01 ZAL 66.36 ZAP 75.04 ETS 187.32 ZAE 95.85 ETE 187.96 ZAC 45.28 ETC 290.02 LVI 21.34

DISTANCE 566.883

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.169 VHL 5.307 DLA 48.18 RAL .04 RAD 6646.3 VEL 12.170 PTH 7.13 VHP 3.180 DPA -32.97 RAP 38.23 ECC 1.4636
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17
49.24 3 23 45 4546.03 -22.64 209.79 249.03 46.28 4 39 31 3546.0 -38.20 188.17

DIFFERENTIAL CORRECTIONS

TDE 1.4830 TRA-2.0720 TC3-3.9037 BAU 1.9052
RDE 1.6286 RRA -.9878 RC3-3.2178 FAU .28187
FDE 5.0948 FRA-2.7183 FC3-8.0481 BSP 11821
BDE 2.2004 BRA 2.2954 BC3 5.0588 F8P 1828

MID-COURSE EXECUTION ACCURACY

SGT 5585.9 SGR 4189.4 SG3 956.6
RRT .9843 RRF .9959 RTF .9587
SGB 6948.4 R23 .1848 R13 .9787
SG1 6891.1 SG2 890.2 THA 36.48

ORBIT DETERMINATION ACCURACY

ST 94.7 SR 91.1 SS 77.8
CRT .9571 CR8 -.9995 CST -.9474
LSA 151.0 MSA 22.8 S8A .8
EL1 130.0 EL2 19.2 ALF 43.93

LAUNCH DATE AUG 21 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

RL 151.34 LAL -.00 LOL 327.80 VL 32.958 GAL 3.04 AZL 83.38 HCA 163.94 SMA 198.68 ECC .24370 INC 6.6424 V1 29.441
RP 247.08 LAP 1.83 LOP 131.84 VP 20.156 GAP .14 AZP 96.39 TAL 15.82 TAP 179.56 RCA 150.24 APO 247.07 V2 22.183
RC 309.224 GL 44.84 GP -45.20 ZAL 67.20 ZAP 74.76 ETS 186.40 ZAE 94.92 ETE 187.26 ZAC 44.14 ETC 290.44 LVI 22.32

DISTANCE 570.447

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.447 VHL 5.426 DLA 49.71 RAL 359.83 RAD 6646.8 VEL 12.222 PTH 7.17 VHP 3.278 DPA -34.01 RAP 38.93 ECC 1.4846
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41
47.25 3 11 56 4573.03 -22.67 212.51 248.90 44.50 4 28 9 3573.0 -38.88 191.41

DIFFERENTIAL CORRECTIONS

TDE 1.5849 TRA-2.1450 TC3-3.8391 BAU 1.9581
RDE 1.7483 RRA -1.0561 RC3-3.1543 FAU .24334
FDE 4.9449 FRA-2.8167 FC3-7.1542 BSP 12118
BDE 2.3898 BRA 2.3909 BC3 4.9687 F8P 1514

MID-COURSE EXECUTION ACCURACY

SGT 5894.2 SGR 4254.4 SG3 888.7
RRT .9853 RRF .9960 RTF .9570
SGB 7108.1 R23 .1861 R13 .9788
SG1 7051.6 SG2 894.0 THA 36.48

ORBIT DETERMINATION ACCURACY

ST 99.0 SR 96.0 SS 76.2
CRT .9591 CR8 -.9994 CST -.9492
LSA 155.9 MSA 23.1 S8A .8
EL1 136.5 EL2 19.7 ALF 44.08

LAUNCH DATE AUG 21 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 14 1974

**HELIOCENTRIC CONIC** DISTANCE 574.207 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.987 GAL 3.00 AZL 82.97 HCA 164.82 SMA 190.75 ECC .24389 INC 7.0336 V1 29.441  
 RP 247.22 LAP 1.84 LOP 132.73 VP 20.147 GAP -.06 AZP 96.79 TAL 15.38 TAP 180.20 RCA 150.27 APO 247.22 V2 22.168  
 RC 311.559 GL 46.41 GP -46.45 ZAL 68.08 ZAP 74.57 ETS 165.50 ZAE 94.05 ETE 186.57 ZAC 42.94 ETC 290.91 LVI 23.76

**PLANETOCENTRIC CONIC**  
 C3 30.960 VHL 5.564 DLA 51.30 RAL 358.10 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 3.390 DPA -35.08 RAP 39.72 ECC 1.5095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77  
 49.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77  
 49.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77  
 49.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77  
 49.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77  
 49.23 2 59 23 4600.70 -22.60 215.27 248.64 42.62 4 16 4 3600.7 -39.45 194.77

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6807 TRA-2.2239 TC3-3.7524 BAU 2.0093 SGT 5818.1 SGR 4355.0 SG3 819.0 ST 102.7 SR 100.8 SS 74.1  
 RDE 1.8771 RRA-1.1333 RC3-3.0796 FAU .22442 RRT .9667 RRF .9960 RTF .9569 CRT .9601 CRS -.9994 CST -.9498  
 FDE 4.7600 FRA-2.5070 FC3-6.2755 BSP 12406 SGB 7267.4 R23 .1882 R13 .9784 LSA 160.1 MSA 23.5 SSA .5  
 BDE 2.5196 BRA 2.4960 BC3 4.8544 FSP 1397 SG1 7211.6 SG2 899.1 THA 36.55 EL1 142.4 EL2 20.3 ALF 44.43

LAUNCH DATE AUG 21 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 16 1974

**HELIOCENTRIC CONIC** DISTANCE 577.968 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.962 GAL 2.95 AZL 82.33 HCA 165.70 SMA 198.84 ECC .24409 INC 7.4714 V1 29.441  
 RP 247.37 LAP 1.84 LOP 133.61 VP 20.139 GAP -.27 AZP 97.24 TAL 15.13 TAP 180.83 RCA 150.31 APO 247.38 V2 22.154  
 RC 313.869 GL 48.40 GP -47.77 ZAL 69.00 ZAP 74.47 ETS 164.62 ZAE 93.25 ETE 185.90 ZAC 41.67 ETC 291.45 LVI 25.07

**PLANETOCENTRIC CONIC**  
 C3 32.769 VHL 5.724 DLA 52.96 RAL 356.31 RAD 6648.1 VEL 12.357 PTH 7.28 VHP 3.516 DPA -36.18 RAP 40.61 ECC 1.5393  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28  
 43.16 2 45 58 4629.12 -22.41 218.07 248.19 40.66 4 3 8 3629.1 -39.93 198.28

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7665 TRA-2.3085 TC3-3.6398 BAU 2.0637 SGT 5933.2 SGR 4460.6 SG3 747.4 ST 105.7 SR 105.2 SS 71.3  
 RDE 2.0102 RRA-1.2226 RC3-2.9905 FAU .20499 RRT .9679 RRF .9960 RTF .9567 CRT .9603 CRS -.9993 CST -.9492  
 FDE 4.5347 FRA-2.3919 FC3-5.4159 BSP 12719 SGB 7422.9 R23 .1904 R13 .9781 LSA 163.6 MSA 23.9 SSA .4  
 BDE 2.6761 BRA 2.6123 BC3 4.7108 FSP 1278 SG1 7367.8 SG2 902.7 THA 36.68 EL1 147.6 EL2 21.0 ALF 44.88

LAUNCH DATE AUG 21 1973 FLIGHT TIME 270.00 ARRIVAL DATE MAY 18 1974

**HELIOCENTRIC CONIC** DISTANCE 581.725 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.968 GAL 2.91 AZL 82.04 HCA 166.58 SMA 198.94 ECC .24429 INC 7.9644 V1 29.441  
 RP 247.51 LAP 1.84 LOP 134.50 VP 20.132 GAP -.47 AZP 97.75 TAL 14.89 TAP 181.47 RCA 150.34 APO 247.52 V2 22.140  
 RC 316.151 GL 50.50 GP -49.14 ZAL 69.96 ZAP 74.47 ETS 163.77 ZAE 92.52 ETE 185.26 ZAC 40.33 ETC 292.05 LVI 26.45

**PLANETOCENTRIC CONIC**  
 C3 34.951 VHL 5.912 DLA 54.66 RAL 354.19 RAD 6648.9 VEL 12.444 PTH 7.34 VHP 3.661 DPA -37.31 RAP 41.60 ECC 1.5752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93  
 41.06 2 31 26 4658.63 -22.06 220.90 247.50 38.62 3 49 5 3658.6 -40.27 201.93

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8308 TRA-2.4041 TC3-3.5063 BAU 2.1231 SGT 6046.4 SGR 4377.0 SG3 675.1 ST 107.5 SR 109.3 SS 67.9  
 RDE 2.1460 RRA-1.3276 RC3-2.8900 FAU .18536 RRT .9690 RRF .9958 RTF .9560 CRT .9590 CRS -.9991 CST -.9464  
 FDE 4.2689 FRA-2.2701 FC3-4.5915 BSP 12982 SGB 7503.3 R23 .1938 R13 .9775 LSA 165.9 MSA 24.7 SSA .4  
 BDE 2.8208 BRA 2.7463 BC3 4.5438 FSP 1152 SG1 7528.7 SG2 908.7 THA 36.89 EL1 151.8 EL2 21.9 ALF 45.50

LAUNCH DATE AUG 21 1973 FLIGHT TIME 272.00 ARRIVAL DATE MAY 20 1974

**HELIOCENTRIC CONIC** DISTANCE 585.480 EARTH TO MARS  
 RL 151.34 LAL -.00 LOL 327.80 VL 32.971 GAL 2.86 AZL 81.48 HCA 167.45 SMA 199.04 ECC .24450 INC 8.5245 V1 29.441  
 RP 247.65 LAP 1.85 LOP 135.38 VP 20.125 GAP -.68 AZP 98.32 TAL 14.64 TAP 182.09 RCA 150.37 APO 247.70 V2 22.126  
 RC 318.406 GL 52.75 GP -50.58 ZAL 70.97 ZAP 74.56 ETS 162.97 ZAE 91.88 ETE 184.66 ZAC 38.92 ETC 292.73 LVI 27.90

**PLANETOCENTRIC CONIC**  
 C3 37.611 VHL 6.133 DLA 56.39 RAL 351.67 RAD 6649.8 VEL 12.550 PTH 7.42 VHP 3.829 DPA -38.47 RAP 42.71 ECC 1.6190  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70  
 38.95 2 15 31 4689.46 -21.54 223.75 246.48 36.52 3 33 40 3689.5 -40.44 205.70

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8632 TRA-2.5093 TC3-3.3472 BAU 2.1864 SGT 6149.9 SGR 4703.1 SG3 601.7 ST 107.9 SR 112.7 SS 63.7  
 RDE 2.2781 RRA-1.4514 RC3-2.7755 FAU .16544 RRT .9700 RRF .9955 RTF .9549 CRT .9560 CRS -.9988 CST -.9409  
 FDE 3.9548 FRA-2.1394 FC3-3.8080 BSP 13243 SGB 7742.1 R23 .1980 R13 .9767 LSA 166.6 MSA 25.7 SSA .4  
 BDE 2.9429 BRA 2.8988 BC3 4.3482 FSP 1022 SG1 7687.8 SG2 915.0 THA 37.18 EL1 154.3 EL2 23.1 ALF 46.29

LAUNCH DATE AUG 22 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 28 1973

Heliocentric Conic: RL 131.31 LAL -.00 LOL 328.78 VL 35.180 GAL 3.79 AZL 89.95 HCA 82.18 SMA 258.88 ECC .41537 INC .0499 V1 29.447  
 RP 220.78 LAP .05 LOP 50.94 VP 26.186 GAP 23.25 AZP 89.99 TAL 12.95 TAP 95.13 RCA 130.18 APO 363.58 V2 24.902  
 RC 86.480 GL .29 GP -5.40 ZAL 64.60 ZAP 172.42 ETS 227.14 ZAE 158.80 ETE 345.21 ZAC 77.44 ETC 282.46 LVI -10.83

Planetocentric Conic: C3 39.232 VHL 6.264 DLA 12.91 RAL 31.03 RAD 8650.4 VEL 12.614 PTH 7.47 VHP 8.220 DPA 11.28 RAP 44.95 ECC 1.6457  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 33 12 3559.81 -47.00 133.69 277.46 98.45 11 32 32 2539.8 -38.35 102.73  
 60.00 10 58 28 3492.56 -40.10 128.71 278.53 94.41 11 56 41 2492.6 -33.98 99.42  
 70.00 11 34 29 3386.57 -34.13 120.50 278.90 91.34 12 30 56 2386.6 -30.02 92.55  
 80.00 12 27 40 3219.95 -29.85 107.89 278.93 89.29 13 21 20 2219.9 -27.11 80.80  
 90.00 13 42 23 2978.79 -28.25 90.13 278.90 88.54 14 32 2 1978.8 -26.00 63.35  
 100.00 15 10 32 2694.42 -29.85 69.26 278.93 89.29 15 55 26 1694.4 -27.11 42.17  
 110.00 16 33 56 2433.38 -34.13 49.42 278.90 91.34 17 14 29 1433.4 -30.02 21.46

Differential Corrections: TDE -.3013 TRA -.8042 TC3 .3577 BAU .1937 SGT 919.9 SGR 630.3 SG3 140.8 ST 17.8 SR 29.2 SS 4.9  
 RDE -.6337 RRA .2336 RC3 -.0917 FAU .05871 RRT -.0986 RRF .1272 RTF -.5499 CRT .6955 CRS .8911 CST .8362  
 FDE .1394 FRA .0880 FC3-1.2956 B8P 1198 SGB 1115.1 R23 -.0266 R13 .5542 LSA 32.5 MSA 11.7 S8A 1.7  
 BDE .7016 BRA .8374 BC3 .3692 F8P 171 SG1 923.8 SG2 624.5 THA 172.86 EL1 32.2 EL2 11.6 ALF 63.18

LAUNCH DATE AUG 22 1973

FLIGHT TIME 100.00

ARRIVAL DATE NOV 30 1973

Heliocentric Conic: RL 131.31 LAL -.00 LOL 328.78 VL 35.040 GAL 3.82 AZL 89.91 HCA 83.29 SMA 252.08 ECC .40442 INC .0868 V1 29.447  
 RP 221.14 LAP .09 LOP 52.05 VP 25.958 GAP 22.85 AZP 89.99 TAL 13.32 TAP 96.80 RCA 150.14 APO 354.03 V2 24.861  
 RC 86.416 GL .50 GP -5.53 ZAL 63.95 ZAP 171.71 ETS 223.48 ZAE 158.58 ETE 344.81 ZAC 77.27 ETC 282.43 LVI -10.63

Planetocentric Conic: C3 37.713 VHL 6.141 DLA 12.88 RAL 30.33 RAD 8649.9 VEL 12.554 PTH 7.43 VHP 7.962 DPA 11.24 RAP 45.23 ECC 1.6207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 30 31 3549.32 -46.89 132.70 275.75 99.21 11 29 40 2549.3 -37.98 102.00  
 60.00 10 55 49 3481.98 -40.04 127.82 276.92 95.01 11 53 51 2482.0 -33.70 98.67  
 70.00 11 31 52 3375.89 -34.11 119.67 277.37 91.83 12 28 8 2375.9 -29.81 91.79  
 80.00 12 25 5 3209.16 -29.86 107.09 277.44 88.71 13 18 34 2209.2 -26.94 80.05  
 90.00 13 39 49 2967.95 -28.26 89.34 277.41 86.94 14 29 17 1967.9 -25.85 62.59  
 100.00 15 7 57 2683.63 -29.86 68.46 277.44 89.71 15 52 40 1683.6 -26.94 41.41  
 110.00 16 31 18 2422.71 -34.11 48.58 277.37 91.83 17 11 41 1422.7 -29.81 20.71

Differential Corrections: TDE -.3017 TRA -.7934 TC3 .3867 BAU .2015 SGT 938.9 SGR 636.4 SG3 150.4 ST 18.1 SR 29.4 SS 5.1  
 RDE -.6294 RRA .2317 RC3 -.1010 FAU .06152 RRT -.1055 RRF .1367 RTF -.5599 CRT .7003 CRS .8997 CST .8220  
 FDE .1456 FRA .0735 FC3-1.4122 B8P 1237 SGB 1134.2 R23 -.0293 R13 .5646 LSA 32.8 MSA 11.7 S8A 1.7  
 BDE .6944 BRA .8286 BC3 .3996 F8P 186 SG1 943.2 SG2 629.9 THA 172.59 EL1 32.5 EL2 11.7 ALF 62.81

LAUNCH DATE AUG 22 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 2 1973

Heliocentric Conic: RL 131.31 LAL -.00 LOL 328.78 VL 34.908 GAL 3.86 AZL 89.88 HCA 84.39 SMA 247.75 ECC .39416 INC .1223 V1 29.447  
 RP 221.92 LAP .12 LOP 53.15 VP 25.740 GAP 22.45 AZP 89.99 TAL 13.68 TAP 98.07 RCA 150.09 APO 345.40 V2 24.819  
 RC 90.414 GL .71 GP -5.66 ZAL 63.31 ZAP 170.96 ETS 220.41 ZAE 158.42 ETE 344.36 ZAC 77.09 ETC 282.41 LVI -10.43

Planetocentric Conic: C3 36.327 VHL 6.027 DLA 12.86 RAL 29.63 RAD 8649.4 VEL 12.499 PTH 7.39 VHP 7.714 DPA 11.18 RAP 45.50 ECC 1.5978  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 27 49 3539.39 -46.78 131.77 274.10 99.92 11 26 48 2539.4 -37.63 101.31  
 60.00 10 53 8 3471.98 -39.98 126.97 275.37 95.98 11 51 0 2472.0 -33.42 97.97  
 70.00 11 29 14 3365.79 -34.09 118.88 275.88 92.30 12 25 19 2365.8 -29.60 91.08  
 80.00 12 22 29 3198.96 -29.86 106.33 275.98 90.11 13 15 47 2199.0 -26.78 79.33  
 90.00 13 37 14 2957.70 -28.27 88.59 275.97 89.31 14 26 31 1957.7 -25.71 61.88  
 100.00 15 5 20 2673.43 -29.86 67.70 275.98 90.11 15 49 54 1673.4 -26.78 40.70  
 110.00 16 28 40 2412.61 -34.09 47.80 275.88 92.30 17 8 53 1412.6 -29.60 20.00

Differential Corrections: TDE -.3024 TRA -.7829 TC3 .4169 BAU .2093 SGT 957.9 SGR 642.4 SG3 160.6 ST 18.4 SR 29.5 SS 5.2  
 RDE -.6178 RRA .2298 RC3 -.1109 FAU .06447 RRT -.1129 RRF .1466 RTF -.5596 CRT .7053 CRS .9078 CST .8067  
 FDE .1525 FRA .0571 FC3-1.5364 B8P 1279 SGB 1153.3 R23 -.0319 R13 .5747 LSA 33.1 MSA 11.8 S8A 1.8  
 BDE .6878 BRA .8159 BC3 .4311 F8P 201 SG1 962.8 SG2 635.0 THA 172.31 EL1 32.8 EL2 11.8 ALF 62.45

LAUNCH DATE AUG 22 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 4 1973

Heliocentric Conic: RL 131.31 LAL -.00 LOL 328.78 VL 34.784 GAL 3.89 AZL 89.84 HCA 85.50 SMA 243.81 ECC .38455 INC .1581 V1 29.447  
 RP 221.90 LAP .16 LOP 54.25 VP 25.531 GAP 22.05 AZP 89.99 TAL 14.05 TAP 99.84 RCA 150.05 APO 337.56 V2 24.778  
 RC 92.473 GL .93 GP -5.80 ZAL 62.66 ZAP 170.18 ETS 217.81 ZAE 158.31 ETE 343.87 ZAC 76.91 ETC 282.39 LVI -10.23

Planetocentric Conic: C3 35.059 VHL 5.921 DLA 12.84 RAL 28.94 RAD 8648.9 VEL 12.448 PTH 7.35 VHP 7.475 DPA 11.12 RAP 45.76 ECC 1.5770  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 25 6 3530.02 -46.66 130.89 272.50 100.58 11 23 57 2530.0 -37.29 100.67  
 60.00 10 50 27 3462.54 -39.91 126.18 273.86 96.12 11 48 10 2462.5 -33.16 97.30  
 70.00 11 26 34 3356.27 -34.06 118.14 274.43 92.73 12 22 31 2356.3 -29.40 90.41  
 80.00 12 19 51 3189.35 -29.85 105.62 274.57 90.48 13 13 0 2189.4 -26.62 78.66  
 90.00 13 34 37 2948.06 -28.28 87.89 274.57 89.67 14 23 45 1948.1 -25.56 61.21  
 100.00 15 2 43 2663.83 -29.85 66.99 274.57 90.48 15 47 7 1663.8 -26.62 40.03  
 110.00 16 26 1 2403.09 -34.06 47.06 274.43 92.73 17 6 4 1403.1 -29.40 19.33

Differential Corrections: TDE -.3027 TRA -.7719 TC3 .4470 BAU .2171 SGT 976.1 SGR 648.2 SG3 171.4 ST 18.6 SR 29.7 SS 5.4  
 RDE -.6099 RRA .2278 RC3 -.1215 FAU .06761 RRT -.1210 RRF .1573 RTF -.5793 CRT .7101 CRS .9143 CST .7906  
 FDE .1595 FRA .0392 FC3-1.6698 B8P 1318 SGB 1171.7 R23 -.0345 R13 .5849 LSA 33.4 MSA 11.8 S8A 1.9  
 BDE .6809 BRA .8048 BC3 .4632 F8P 217 SG1 981.7 SG2 639.8 THA 171.98 EL1 33.0 EL2 11.8 ALF 62.13

LAUNCH DATE AUG 22 1973 FLIGHT TIME 106.00 ARRIVAL DATE DEC 6 1973

Heliocentric Conic: RL 151.31 LAL -0.00 LOL 326.76 VL 34.667 GAL 3.92 AZL 89.81 HCA 86.59 SMA 240.22 ECC .37554 INC .1933 V1 29.447  
 RP 222.28 LAP .19 LOP 55.33 VP 25.330 GAP 21.66 AZP 89.99 TAL 14.42 TAP 101.01 RCA 150.01 APO 330.43 V2 24.738  
 RC 94.587 GL 1.15 GP -5.95 ZAL 62.02 ZAP 189.37 ETS 215.59 ZAE 138.26 ETE 343.33 ZAC 76.73 ETC 282.37 LVI -10.02

Distance 278.233 Earth to Mars  
 PLANETOCENTRIC CONIC: C3 33.800 VHL 5.822 DLA 12.82 RAL 26.24 RAD 6646.5 VEL 12.402 PTH 7.31 VHP 7.246 DPA 11.04 RAP 46.01 ECC 1.9579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 22 24 3521.20 -46.55 130.07 270.97 101.21 11 21 5 2521.2 -36.97 100.07  
 60.00 10 47 46 3453.68 -39.85 125.43 272.41 96.82 11 45 20 2453.7 -32.91 96.69  
 70.00 11 23 54 3347.33 -34.03 117.44 273.03 93.14 12 19 42 2347.3 -29.21 89.78  
 80.00 12 17 12 3180.35 -29.85 104.95 273.20 90.83 13 10 13 2180.3 -26.47 78.03  
 90.00 13 31 59 2939.02 -28.28 87.23 273.21 90.00 14 20 58 1939.0 -25.43 60.58  
 100.00 15 0 4 2654.82 -29.85 66.32 273.20 90.83 15 44 19 1654.8 -26.47 39.40  
 110.00 16 23 21 2394.15 -34.03 46.36 273.03 93.14 17 3 15 1394.1 -29.21 18.70

Differential Corrections: TDE -.3033 TRA -.7611 TC3 .4780 BAU .2248 SGT 994.5 SGR 653.8 SG3 182.7 ST 18.9 SR 29.8 SS 5.5  
 RDE -.6026 RRA .2258 RC3 -.1328 FAU .07091 RRT -.1295 RRF .1686 RTF -.5884 CRT .7152 CRS .9199 CST .7736  
 FDE .1669 FRA .0192 FC3-1.8108 BSP 1398 SGB 1190.1 R23 -.0375 R13 .5945 LSA 33.7 MSA 11.8 SSA 1.9  
 BDE .6746 BRA .7939 BC3 .4961 FSP 235 SG1 1000.7 SG2 644.3 THA 171.65 EL1 33.3 EL2 11.8 ALF 61.78

LAUNCH DATE AUG 22 1973 FLIGHT TIME 108.00 ARRIVAL DATE DEC 8 1973

Heliocentric Conic: RL 151.31 LAL -0.00 LOL 326.76 VL 34.556 GAL 3.96 AZL 89.77 HCA 87.69 SMA 236.94 ECC .36709 INC .2285 V1 29.447  
 RP 222.67 LAP .23 LOP 56.45 VP 25.138 GAP 21.27 AZP 89.99 TAL 14.79 TAP 102.48 RCA 149.96 APO 323.92 V2 24.694  
 RC 96.756 GL 1.38 GP -6.10 ZAL 61.39 ZAP 168.94 ETS 213.68 ZAE 158.27 ETE 342.74 ZAC 76.55 ETC 282.35 LVI -9.82

Distance 281.255 Earth to Mars  
 PLANETOCENTRIC CONIC: C3 32.838 VHL 5.730 DLA 12.81 RAL 27.55 RAD 6648.1 VEL 12.359 PTH 7.28 VHP 7.025 DPA 10.96 RAP 46.25 ECC 1.5404  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 19 42 3512.93 -46.44 129.30 269.49 101.79 11 18 15 2512.9 -36.67 99.51  
 60.00 10 45 5 3445.37 -39.78 124.74 271.00 97.09 11 42 30 2445.4 -32.67 96.11  
 70.00 11 21 14 3338.97 -33.99 116.79 271.67 93.53 12 16 53 2339.0 -29.02 89.20  
 80.00 12 14 33 3171.94 -29.84 104.32 271.87 91.16 13 7 25 2171.9 -26.33 77.45  
 90.00 13 29 20 2930.58 -28.28 86.61 271.90 90.31 14 18 11 1930.6 -25.30 59.99  
 100.00 14 57 25 2646.41 -29.84 65.69 271.87 91.16 15 41 31 1646.4 -26.33 38.82  
 110.00 16 20 41 2385.79 -33.99 45.71 271.67 93.53 17 0 26 1385.8 -29.02 18.12

Differential Corrections: TDE -.3039 TRA -.7502 TC3 .5088 BAU .2322 SGT 1011.9 SGR 659.3 SG3 194.8 ST 19.1 SR 30.0 SS 5.7  
 RDE -.5953 RRA .2237 RC3 -.1449 FAU .07440 RRT -.1384 RRF .1804 RTF -.5969 CRT .7205 CRS .9248 CST .7562  
 FDE .1752 FRA -.0027 FC3-1.9614 BSP 1397 SGB 1207.8 R23 -.0404 R13 .6036 LSA 33.9 MSA 11.8 SSA 2.0  
 BDE .6886 BRA .7828 BC3 .5290 FSP 254 SG1 1018.9 SG2 648.5 THA 171.30 EL1 33.5 EL2 11.8 ALF 61.45

LAUNCH DATE AUG 22 1973 FLIGHT TIME 110.00 ARRIVAL DATE DEC 10 1973

Heliocentric Conic: RL 151.31 LAL -0.00 LOL 326.76 VL 34.452 GAL 3.99 AZL 89.74 HCA 88.78 SMA 233.94 ECC .35917 INC .2632 V1 29.447  
 RP 223.06 LAP .26 LOP 57.54 VP 24.953 GAP 20.89 AZP 89.99 TAL 15.16 TAP 103.94 RCA 149.92 APO 317.96 V2 24.652  
 RC 98.976 GL 1.61 GP -6.26 ZAL 60.77 ZAP 167.69 ETS 212.02 ZAE 158.32 ETE 342.09 ZAC 76.36 ETC 282.34 LVI -9.61

Distance 284.351 Earth to Mars  
 PLANETOCENTRIC CONIC: C3 31.866 VHL 5.645 DLA 12.81 RAL 26.87 RAD 6647.7 VEL 12.320 PTH 7.25 VHP 6.812 DPA 10.87 RAP 46.48 ECC 1.5244  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 17 0 3505.21 -46.33 128.59 268.07 102.33 11 15 25 2505.2 -36.59 98.99  
 60.00 10 42 24 3437.82 -39.71 124.09 269.65 97.32 11 39 41 2437.8 -32.45 95.58  
 70.00 11 18 34 3331.20 -33.96 116.19 270.37 93.88 12 14 5 2331.2 -28.85 88.66  
 80.00 12 11 53 3164.12 -29.82 103.74 270.59 91.47 13 4 37 2164.1 -26.19 76.91  
 90.00 13 26 40 2922.75 -28.27 86.04 270.63 90.59 14 15 23 1922.8 -25.18 59.45  
 100.00 14 54 45 2638.60 -29.82 65.11 270.59 91.47 15 38 44 1638.6 -26.19 38.28  
 110.00 16 18 0 2376.01 -33.96 45.10 270.37 93.88 16 57 38 1376.0 -28.85 17.58

Differential Corrections: TDE -.3044 TRA -.7393 TC3 .5396 BAU .2395 SGT 1029.0 SGR 664.8 SG3 207.6 ST 19.3 SR 30.1 SS 5.9  
 RDE -.5887 RRA .2215 RC3 -.1576 FAU .07809 RRT -.1480 RRF .1933 RTF -.6448 CRT .7257 CRS .9274 CST .7378  
 FDE .1833 FRA -.0268 FC3-2.1215 BSP 1434 SGB 1225.0 R23 -.0439 R13 .6123 LSA 34.2 MSA 11.9 SSA 2.1  
 BDE .6628 BRA .7718 BC3 .5622 FSP 274 SG1 1036.8 SG2 652.5 THA 170.92 EL1 33.7 EL2 11.8 ALF 61.13

LAUNCH DATE AUG 22 1973 FLIGHT TIME 112.00 ARRIVAL DATE DEC 12 1973

Heliocentric Conic: RL 151.31 LAL -0.00 LOL 326.76 VL 34.354 GAL 4.02 AZL 89.70 HCA 89.87 SMA 231.18 ECC .35172 INC .2978 V1 29.447  
 RP 223.44 LAP .30 LOP 58.63 VP 24.776 GAP 20.51 AZP 90.00 TAL 15.93 TAP 105.39 RCA 149.87 APO 312.49 V2 24.611  
 RC 101.244 GL 1.84 GP -6.42 ZAL 60.16 ZAP 166.81 ETS 210.57 ZAE 158.43 ETE 341.38 ZAC 76.17 ETC 282.32 LVI -9.40

Distance 287.512 Earth to Mars  
 PLANETOCENTRIC CONIC: C3 30.974 VHL 5.565 DLA 12.80 RAL 26.19 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 6.607 DPA 10.76 RAP 46.69 ECC 1.5098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 14 19 3498.00 -46.22 127.93 266.70 102.83 11 12 37 2498.0 -36.12 98.51  
 60.00 10 39 43 3430.40 -39.65 123.49 268.34 97.92 11 36 53 2430.4 -32.23 95.08  
 70.00 11 15 53 3323.96 -33.92 115.62 269.10 94.21 12 11 17 2324.0 -28.69 89.16  
 80.00 12 9 13 3156.87 -29.81 103.21 269.36 91.75 13 1 50 2156.9 -26.06 76.41  
 90.00 13 24 0 2915.50 -28.27 85.51 269.40 90.86 14 12 36 1915.5 -25.06 58.95  
 100.00 14 52 5 2631.35 -29.81 64.57 269.36 91.75 15 35 56 1631.3 -26.06 37.78  
 110.00 16 15 20 2370.78 -33.92 44.54 269.10 94.21 16 54 50 1370.8 -28.69 17.08

Differential Corrections: TDE -.2951 TRA -.7183 TC3 .5835 BAU .2518 SGT 1043.7 SGR 669.9 SG3 220.8 ST 19.0 SR 30.2 SS 6.2  
 RDE -.5819 RRA .2194 RC3 -.1710 FAU .08187 RRT -.1677 RRF .2056 RTF -.6280 CRT .7246 CRS .9312 CST .7191  
 FDE .1954 FRA -.0505 FC3-2.2883 BSP 1346 SGB 1240.2 R23 -.0324 R13 .6354 LSA 34.1 MSA 11.8 SSA 2.2  
 BDE .6525 BRA .7510 BC3 .6080 FSP 298 SG1 1053.6 SG2 654.2 THA 169.95 EL1 33.7 EL2 11.7 ALF 61.72

LAUNCH DATE AUG 22 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 34.281 GAL 4.05 AZL 89.87 HCA 90.95 SMA 228.65 ECC .34475 INC .3324 V1 29.447
RP 223.83 LAP .33 LOP 59.71 VP 24.805 GAP 20.13 AZP 90.01 TAL 15.89 TAP 106.84 RCA 149.83 APO 307.48 V2 24.569
RC 103.580 GL 2.07 GP -6.89 ZAL 59.56 ZAP 165.92 ETS 209.30 ZAE 158.58 ETE 340.61 ZAC 75.97 ETC 282.31 LVI -9.19

DISTANCE 290.732

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.157 VHL 5.492 DLA 12.80 RAL 25.53 RAD 6847.1 VEL 12.231 PTH 7.20 VHP 6.410 DPA 10.65 RAP 46.90 ECC 1.4883
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 11 40 3491.35 -46.12 127.32 265.40 103.29 11 9 51 2491.3 -35.67 98.07
60.00 10 37 3 3423.76 -39.58 122.93 267.10 98.29 11 34 7 2423.8 -32.04 94.63
70.00 11 13 13 3317.33 -33.89 115.11 267.89 94.52 12 8 31 2317.3 -28.94 87.71
80.00 12 6 33 3150.26 -29.80 102.71 268.17 92.01 12 59 3 2150.3 -25.94 75.99
90.00 13 21 20 2908.89 -28.26 85.02 268.21 91.10 14 9 49 1908.9 -24.96 58.50
100.00 14 49 25 2624.73 -29.80 64.08 268.17 92.01 15 33 9 1624.7 -25.94 37.32
110.00 16 12 40 2364.15 -33.89 44.03 267.89 94.52 16 52 4 1364.1 -28.54 16.62

DIFFERENTIAL CORRECTIONS

TDE -.2995 TRA -.7112 TC3 .6092 BAU .2587
RDE -.5757 RRA .2168 RC3 -.1855 FAU .08604
FDE .2042 FRA -.0798 FC3 -2.4700 BSP 1426
BDE .6489 BRA .7435 BC3 .6368 FSP 319

MID-COURSE EXECUTION ACCURACY

SGT 1060.4 SGR 875.3 SG3 235.2
RRT -.1748 RRF .2203 RTF -.6293
SGB 1257.4 R23 -.0417 R13 .6378
SG1 1071.0 SG2 658.3 THA 169.73

ORBIT DETERMINATION ACCURACY

ST 19.4 SR 30.2 SS 6.4
CRT .7327 CR8 .9314 CST .7013
LSA 34.4 MSA 11.8 S8A 2.3
EL1 33.9 EL2 11.7 ALF 61.05

LAUNCH DATE AUG 22 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 34.174 GAL 4.09 AZL 89.83 HCA 92.03 SMA 228.32 ECC .33820 INC .3688 V1 29.447
RP 224.22 LAP .37 LOP 60.79 VP 24.442 GAP 19.76 AZP 90.01 TAL 16.25 TAP 108.28 RCA 149.78 APO 302.87 V2 24.527
RC 105.921 GL 2.31 GP -6.77 ZAL 58.97 ZAP 165.01 ETS 208.17 ZAE 158.78 ETE 339.76 ZAC 75.77 ETC 282.30 LVI -8.98

DISTANCE 294.005

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.406 VHL 5.423 DLA 12.81 RAL 24.88 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 6.220 DPA 10.53 RAP 47.09 ECC 1.4839
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 9 1 3485.21 -46.02 126.76 264.15 103.71 11 7 7 2485.2 -35.63 97.67
60.00 10 34 24 3417.65 -39.92 122.43 265.90 98.63 11 31 22 2417.6 -31.86 94.21
70.00 11 10 34 3311.26 -33.86 114.64 266.73 94.79 12 5 45 2311.3 -28.40 87.29
80.00 12 3 52 3144.22 -29.78 102.27 267.02 92.24 12 56 17 2144.2 -25.84 75.54
90.00 13 18 40 2902.87 -28.25 84.58 267.08 91.32 14 7 3 1902.9 -24.86 58.08
100.00 14 46 44 2618.69 -29.78 63.63 267.02 92.24 15 30 23 1618.7 -25.84 36.91
110.00 16 10 0 2358.07 -33.86 43.56 266.73 94.79 16 49 18 1358.1 -28.40 16.21

DIFFERENTIAL CORRECTIONS

TDE -.3029 TRA -.7029 TC3 .6358 BAU .2821
RDE -.5695 RRA .2142 RC3 -.2008 FAU .09042
FDE .2139 FRA -.1116 FC3 -2.6619 BSP 1492
BDE .6450 BRA .7348 BC3 .6668 FSP 343

MID-COURSE EXECUTION ACCURACY

SGT 1078.2 SGR 880.7 SG3 250.4
RRT -.1834 RRF .2356 RTF -.6319
SGB 1273.4 R23 -.0496 R13 .6416
SG1 1087.7 SG2 662.0 THA 169.42

ORBIT DETERMINATION ACCURACY

ST 19.7 SR 30.3 SS 6.8
CRT .7400 CR8 .9305 CST .6830
LSA 34.7 MSA 11.8 S8A 2.4
EL1 34.2 EL2 11.7 ALF 60.49

LAUNCH DATE AUG 22 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 34.092 GAL 4.12 AZL 89.80 HCA 93.11 SMA 224.17 ECC .33208 INC .4015 V1 29.447
RP 224.61 LAP .40 LOP 61.87 VP 24.284 GAP 19.39 AZP 90.02 TAL 16.80 TAP 109.71 RCA 149.73 APO 298.61 V2 24.485
RC 108.326 GL 2.55 GP -6.95 ZAL 58.40 ZAP 164.08 ETS 207.17 ZAE 159.02 ETE 336.82 ZAC 75.57 ETC 282.29 LVI -8.77

DISTANCE 297.325

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.716 VHL 5.359 DLA 12.83 RAL 24.23 RAD 8646.5 VEL 12.193 PTH 7.15 VHP 6.037 DPA 10.39 RAP 47.27 ECC 1.4726
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 6 25 3479.58 -45.93 126.25 262.96 104.10 11 4 24 2479.6 -35.42 97.30
60.00 10 31 46 3412.08 -39.46 121.98 264.75 98.94 11 28 38 2412.1 -31.69 93.83
70.00 11 7 54 3305.73 -33.82 114.21 265.61 95.04 12 3 0 2305.7 -28.27 86.91
80.00 12 1 12 3138.76 -29.77 101.86 265.93 92.46 12 53 31 2138.8 -25.74 75.16
90.00 13 15 58 2897.44 -28.24 84.19 265.99 91.52 14 4 18 1897.4 -24.77 57.71
100.00 14 44 4 2613.23 -29.77 63.23 265.93 92.46 15 27 37 1613.2 -25.74 36.53
110.00 16 7 21 2352.55 -33.82 43.13 265.61 95.04 16 46 33 1352.6 -28.27 15.83

DIFFERENTIAL CORRECTIONS

TDE -.3052 TRA -.6939 TC3 .6827 BAU .2877
RDE -.5635 RRA .2114 RC3 -.2170 FAU .09499
FDE .2250 FRA -.1452 FC3 -2.8638 BSP 1544
BDE .6408 BRA .7254 BC3 .6873 FSP 368

MID-COURSE EXECUTION ACCURACY

SGT 1090.9 SGR 886.1 SG3 266.4
RRT -.1937 RRF .2315 RTF -.6356
SGB 1288.7 R23 -.0562 R13 .6465
SG1 1103.7 SG2 665.3 THA 169.02

ORBIT DETERMINATION ACCURACY

ST 19.9 SR 30.3 SS 6.8
CRT .7465 CR8 .9290 CST .6857
LSA 34.9 MSA 11.8 S8A 2.8
EL1 34.4 EL2 11.7 ALF 60.02

LAUNCH DATE AUG 22 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 34.014 GAL 4.15 AZL 89.58 HCA 94.18 SMA 222.19 ECC .32829 INC .4356 V1 29.447
RP 225.00 LAP .43 LOP 62.94 VP 24.132 GAP 19.03 AZP 90.03 TAL 16.95 TAP 111.13 RCA 149.89 APO 294.68 V2 24.443
RC 110.773 GL 2.79 GP -7.14 ZAL 57.85 ZAP 163.13 ETS 206.27 ZAE 159.30 ETE 337.80 ZAC 75.36 ETC 282.29 LVI -8.56

DISTANCE 300.889

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.082 VHL 5.299 DLA 12.85 RAL 23.61 RAD 6646.2 VEL 12.187 PTH 7.13 VHP 5.860 DPA 10.24 RAP 47.43 ECC 1.4822
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 3 49 3474.43 -45.84 125.78 261.82 104.45 11 1 44 2474.4 -35.22 96.97
60.00 10 29 10 3406.99 -39.41 121.54 263.66 99.22 11 25 57 2407.0 -31.93 93.49
70.00 11 5 18 3300.75 -33.79 113.82 264.54 95.27 12 0 17 2300.7 -28.15 86.57
80.00 11 58 32 3133.87 -29.75 101.50 264.87 92.65 12 50 46 2133.9 -25.65 74.63
90.00 13 13 17 2892.59 -28.23 83.83 264.94 91.70 14 1 30 1892.6 -24.69 57.38
100.00 14 41 24 2608.34 -29.75 62.87 264.87 92.65 15 24 52 1608.3 -25.65 36.20
110.00 16 4 42 2347.57 -33.79 42.74 264.54 95.27 16 43 50 1347.6 -28.15 15.49

DIFFERENTIAL CORRECTIONS

TDE -.3072 TRA -.6845 TC3 .6893 BAU .2733
RDE -.5577 RRA .2084 RC3 -.2341 FAU .09983
FDE .2363 FRA -.1815 FC3 -3.0777 BSP 1590
BDE .6367 BRA .7156 BC3 .7280 FSP 395

MID-COURSE EXECUTION ACCURACY

SGT 1104.7 SGR 891.7 SG3 283.2
RRT -.2047 RRF .2684 RTF -.6393
SGB 1303.4 R23 -.0628 R13 .6516
SG1 1118.9 SG2 668.5 THA 168.57

ORBIT DETERMINATION ACCURACY

ST 20.2 SR 30.3 SS 7.1
CRT .7529 CR8 .9262 CST .6483
LSA 35.1 MSA 11.8 S8A 2.5
EL1 34.5 EL2 11.7 ALF 59.58

LAUNCH DATE AUG 22 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC

DISTANCE 304.091

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.78 VL 33.940 GAL 4.18 AZL 89.33 HCA 98.28 SMA 220.38 ECC .92087 INC .4700 V1 29.447  
 RP 225.39 LAP .47 LOP 64.01 VP 23.988 GAP 18.87 AZP 90.04 TAL 17.30 TAP 112.55 RCA 149.64 APO 291.05 V2 24.401  
 RC 113.259 GL 3.04 GP -7.34 ZAL 57.31 ZAP 162.17 E78 205.46 ZAE 159.82 ETE 336.87 ZAC 75.15 ETC 282.29 LVI -8.34

PLANETOCENTRIC CONIC

C3 27.499 VHL 5.244 DLA 12.88 RAL 22.99 RAD 6646.0 VEL 12.143 PTH 7.11 VHP 5.690 DPA 10.08 RAP 47.88 ECC 1.4826  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 16 3489.78 -45.76 125.36 260.74 104.78 10 59 6 2489.8 -35.04 96.87  
 60.00 10 26 34 3402.42 -39.36 121.16 262.61 99.48 11 23 17 2402.4 -31.39 93.19  
 70.00 11 2 38 3296.30 -33.77 113.48 263.52 95.47 11 57 34 2296.3 -28.05 86.27  
 80.00 11 55 52 3129.55 -29.74 101.18 263.86 92.81 12 48 1 2129.5 -25.56 74.53  
 90.00 13 10 36 2888.33 -26.22 83.52 263.94 91.85 13 58 44 1888.3 -24.62 57.09  
 100.00 14 38 43 2604.02 -29.74 62.55 263.86 92.81 15 22 7 1604.0 -25.56 35.90  
 110.00 16 2 4 2343.12 -33.77 42.40 263.52 95.47 16 41 7 1343.1 -28.05 15.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3089 TRA -.6751 TC3 .7154 BAU .2789 SGT 1117.7 SGR 697.4 S63 301.0 ST 20.4 SR 30.3 SS 7.4  
 RDE -.5519 RRA .2052 RC3 -.2521 FAU .10493 RRT -.2187 RRF .2860 RTF -.6431 CRT .7590 CRS .9231 CST .6320  
 FDE .2494 FRA -.2208 FC3-3.3035 BSP 1630 SGB 1317.5 R23 -.0691 R13 .6568 LSA 35.3 MSA 11.8 SSA 2.6  
 BDE .6324 BRA .7056 BC3 .7585 FSP 424 SGI 1133.6 S62 671.3 THA 168.06 EL1 34.7 EL2 11.6 ALF 59.17

LAUNCH DATE AUG 22 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC

DISTANCE 307.520

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.78 VL 33.871 GAL 4.21 AZL 89.50 HCA 96.31 SMA 218.65 ECC .31579 INC .5044 V1 29.447  
 RP 225.78 LAP .50 LOP 65.07 VP 23.846 GAP 18.32 AZP 90.06 TAL 17.63 TAP 113.95 RCA 149.60 APO 287.69 V2 24.359  
 RC 115.782 GL 3.28 GP -7.54 ZAL 56.79 ZAP 161.19 ETS 204.73 ZAE 159.97 ETE 335.43 ZAC 74.94 ETC 282.29 LVI -8.12

PLANETOCENTRIC CONIC

C3 26.962 VHL 5.193 DLA 12.91 RAL 22.40 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 5.526 DPA 9.91 RAP 47.72 ECC 1.4437  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 58 45 3465.59 -45.69 124.98 259.72 105.04 10 56 30 2465.6 -34.88 96.40  
 60.00 10 24 0 3398.35 -39.31 120.83 261.61 99.70 11 20 39 2398.3 -31.27 92.91  
 70.00 11 0 1 3292.37 -33.74 113.18 262.55 95.65 11 54 53 2292.4 -27.96 86.00  
 80.00 11 53 11 3125.77 -29.72 100.90 262.90 92.96 12 45 17 2125.8 -25.49 74.27  
 90.00 13 7 54 2884.63 -26.22 83.25 262.98 91.99 13 55 59 1884.6 -24.56 56.83  
 100.00 14 36 3 2600.25 -29.72 62.27 262.90 92.96 15 19 24 1600.2 -25.49 35.64  
 110.00 15 59 27 2339.19 -33.74 42.09 262.55 95.65 16 38 26 1339.2 -27.96 14.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3103 TRA -.6654 TC3 .7405 BAU .2842 SGT 1129.6 SGR 703.3 S63 319.7 ST 20.5 SR 30.3 SS 7.7  
 RDE -.5462 RRA .2019 RC3 -.2711 FAU .11028 RRT -.2294 RRF .3044 RTF -.6468 CRT .7650 CRS .9194 CST .6168  
 FDE .2636 FRA -.2622 FC3-3.5409 BSP 1662 SGB 1330.6 R23 -.0753 R13 .6621 LSA 35.4 MSA 11.8 SSA 2.7  
 BDE .6282 BRA .6953 BC3 .7885 FSP 454 SGI 1147.3 S62 674.0 THA 167.49 EL1 34.8 EL2 11.5 ALF 58.79

LAUNCH DATE AUG 22 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC

DISTANCE 310.999

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.78 VL 33.806 GAL 4.23 AZL 89.46 HCA 97.37 SMA 217.07 ECC .31101 INC .5386 V1 29.447  
 RP 226.17 LAP .53 LOP 66.13 VP 23.710 GAP 17.97 AZP 90.07 TAL 17.96 TAP 115.34 RCA 149.56 APO 284.58 V2 24.318  
 RC 118.341 GL 3.53 GP -7.75 ZAL 56.29 ZAP 160.18 ETS 204.07 ZAE 160.36 ETE 334.07 ZAC 74.72 ETC 282.29 LVI -7.90

PLANETOCENTRIC CONIC

C3 26.468 VHL 5.145 DLA 12.98 RAL 21.81 RAD 6645.6 VEL 12.101 PTH 7.08 VHP 5.368 DPA 9.72 RAP 47.83 ECC 1.4356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 15 3481.86 -45.82 124.63 258.74 105.29 10 53 57 2461.9 -34.74 96.16  
 60.00 10 21 28 3394.76 -39.27 120.53 260.66 99.90 11 18 2 2394.8 -31.16 92.67  
 70.00 10 57 25 3288.96 -33.72 112.91 261.61 95.80 11 52 14 2289.0 -27.87 85.77  
 80.00 11 50 32 3122.55 -29.71 100.66 261.98 93.09 12 42 34 2122.5 -25.43 74.05  
 90.00 13 5 13 2881.49 -26.21 83.02 262.06 92.10 13 53 14 1881.5 -24.50 56.62  
 100.00 14 33 24 2597.02 -29.71 62.03 261.98 93.09 15 16 41 1597.0 -25.43 35.42  
 110.00 15 56 51 2335.78 -33.72 41.83 261.61 95.80 16 35 47 1335.8 -27.87 14.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3117 TRA -.6559 TC3 .7639 BAU .2893 SGT 1140.2 SGR 709.5 S63 339.5 ST 20.7 SR 30.3 SS 8.1  
 RDE -.5405 RRA .1982 RC3 -.2911 FAU .11591 RRT -.2427 RRF .3236 RTF -.6498 CRT .7708 CRS .9151 CST .6023  
 FDE .2788 FRA -.3071 FC3-3.7912 BSP 1693 SGB 1343.0 R23 -.0820 R13 .6669 LSA 35.6 MSA 11.8 SSA 2.8  
 BDE .6239 BRA .6852 BC3 .8175 FSP 487 SGI 1160.1 S62 676.5 THA 166.88 EL1 34.9 EL2 11.5 ALF 58.40

LAUNCH DATE AUG 22 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC

DISTANCE 314.499

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.78 VL 33.745 GAL 4.26 AZL 89.43 HCA 98.43 SMA 215.60 ECC .30652 INC .5730 V1 29.447  
 RP 226.56 LAP .57 LOP 67.19 VP 23.580 GAP 17.82 AZP 90.08 TAL 18.28 TAP 116.71 RCA 149.52 APO 281.69 V2 24.278  
 RC 120.933 GL 3.78 GP -7.97 ZAL 55.81 ZAP 159.16 ETS 203.46 ZAE 160.78 ETE 332.56 ZAC 74.50 ETC 282.30 LVI -7.68

PLANETOCENTRIC CONIC

C3 26.012 VHL 5.100 DLA 13.01 RAL 21.25 RAD 6645.4 VEL 12.082 PTH 7.06 VHP 5.216 DPA 9.52 RAP 47.94 ECC 1.4281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 53 48 3458.58 -45.56 124.35 257.82 105.51 10 51 26 2458.6 -34.61 95.95  
 60.00 10 18 57 3391.64 -39.23 120.28 259.76 100.07 11 15 28 2391.6 -31.06 92.47  
 70.00 10 54 49 3286.06 -33.70 112.69 260.73 95.94 11 49 35 2286.1 -27.80 85.57  
 80.00 11 47 52 3119.86 -29.70 100.46 261.10 93.19 12 39 52 2119.9 -25.38 73.87  
 90.00 13 2 31 2878.91 -26.20 82.83 261.18 92.20 13 50 30 1878.9 -24.46 56.44  
 100.00 14 30 44 2594.34 -29.70 61.83 261.10 93.19 15 13 58 1594.3 -25.38 35.24  
 110.00 15 54 16 2332.88 -33.70 41.61 260.73 95.94 16 33 9 1332.9 -27.80 14.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3130 TRA -.6466 TC3 .7861 BAU .2941 SGT 1149.9 SGR 716.1 S63 360.2 ST 20.9 SR 30.2 SS 8.4  
 RDE -.5349 RRA .1944 RC3 -.3122 FAU .12181 RRT -.2565 RRF .3438 RTF -.6524 CRT .7766 CRS .9105 CST .5889  
 FDE .2951 FRA -.3349 FC3-4.0541 BSP 1721 SGB 1354.7 R23 -.0890 R13 .6716 LSA 35.7 MSA 11.8 SSA 2.9  
 BDE .6198 BRA .6752 BC3 .8458 FSP 521 SGI 1172.2 S62 679.0 THA 166.22 EL1 34.9 EL2 11.4 ALF 58.02

LAUNCH DATE AUG 22 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC DISTANCE 318.025 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 33.887 GAL 4.28 AZL 89.39 HCA 99.48 SMA 214.24 ECC .30231 INC .6074 V1 29.447  
 RP 226.95 LAP .60 LOP 68.24 VP 23.454 GAP 17.27 AZP 90.10 TAL 18.59 TAP 118.08 RCA 149.47 APO 279.01 V2 24.234  
 RC 123.556 GL 4.04 GP -8.20 ZAL 53.34 ZAP 158.12 ETS 202.91 ZAE 161.22 ETE 330.90 ZAC 74.27 ETC 282.31 LVI -7.46

PLANETOCENTRIC CONIC  
 C3 25.592 VHL 5.059 DLA 13.06 RAL 20.70 RAD 6645.2 VEL 12.065 PTH 7.05 VHP 5.069 DPA 9.31 RAP 48.02 ECC 1.4212  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 22 3455.74 -45.51 124.10 256.94 105.70 10 48 58 2455.7 -34.50 95.77  
 60.00 10 16 27 3388.99 -39.20 120.06 258.91 100.21 11 12 56 2389.0 -30.98 92.29  
 70.00 10 52 15 3283.65 -33.68 112.50 259.89 96.04 11 46 58 2283.6 -27.75 85.41  
 80.00 11 45 13 3117.71 -29.69 100.30 260.27 93.27 12 37 10 2117.7 -25.34 73.72  
 90.00 12 59 50 2876.88 -26.20 82.68 260.35 92.27 13 47 47 1876.9 -24.42 56.31  
 100.00 14 28 4 2592.18 -29.69 61.67 260.27 93.27 15 11 17 1592.2 -25.34 35.09  
 110.00 15 51 41 2330.47 -33.68 41.42 259.89 96.04 16 30 32 1330.5 -27.75 14.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3145 TRA -.6376 TC3 .8063 BAU .2986 SGT 1158.4 SGR 723.1 S63 382.0 ST 21.0 SR 30.2 S8 8.8  
 RDE -.5293 RRA .1903 RC3 -.3345 FAU .12802 RRT -.2705 RRF .3647 RTF -.6543 CRT .7823 CR8 .9059 CST .5774  
 FDE .3131 FRA -.4056 FC3-4.3307 BSP 1745 SGB 1365.8 R23 -.0966 R13 .8759 L8A 35.8 H8A 11.8 S8A 3.0  
 BDE .6157 BRA .6654 BC3 .8729 F8P 558 S61 1183.4 S62 681.4 THA 165.52 EL1 35.0 EL2 11.3 ALF 57.61

LAUNCH DATE AUG 22 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC DISTANCE 321.575 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 33.632 GAL 4.31 AZL 89.36 HCA 100.53 SMA 212.97 ECC .29835 INC .6419 V1 29.447  
 RP 227.34 LAP .63 LOP 69.29 VP 23.332 GAP 16.93 APL 90.12 TAL 18.89 TAP 119.43 RCA 149.43 APO 276.52 V2 24.193  
 RC 126.208 GL 4.29 GP -8.44 ZAL 54.90 ZAP 157.07 ETS 202.39 ZAE 161.68 ETE 329.05 ZAC 74.04 ETC 282.32 LVI -7.24

PLANETOCENTRIC CONIC  
 C3 25.203 VHL 5.020 DLA 13.13 RAL 20.16 RAD 6645.1 VEL 12.049 PTH 7.03 VHP 4.927 DPA 9.09 RAP 48.09 ECC 1.4148  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 59 3453.31 -45.47 123.88 256.12 105.87 10 48 33 2453.3 -34.40 95.62  
 60.00 10 13 59 3386.78 -39.17 119.87 258.10 100.33 11 10 26 2386.8 -30.91 92.14  
 70.00 10 49 41 3281.72 -33.66 112.35 259.09 96.13 11 44 23 2281.7 -27.70 85.28  
 80.00 11 42 33 3116.08 -29.69 100.18 259.48 93.34 12 34 29 2116.1 -25.31 73.61  
 90.00 12 57 8 2875.39 -26.19 82.58 259.56 92.32 13 45 3 1875.4 -24.40 56.20  
 100.00 14 25 25 2590.55 -29.69 61.55 259.48 93.34 15 8 36 1590.5 -25.31 34.98  
 110.00 15 49 7 2328.54 -33.66 41.27 259.09 96.13 16 27 56 1328.5 -27.70 14.19

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3158 TRA -.6289 TC3 .8248 BAU .3029 SGT 1165.8 SGR 730.6 S63 404.9 ST 21.2 SR 30.1 S8 9.3  
 RDE -.5237 RRA .1860 RC3 -.3379 FAU .13453 RRT -.2850 RRF .3864 RTF -.6556 CRT .7879 CR8 .9010 CST .5867  
 FDE .3324 FRA -.4597 FC3-4.6211 BSP 1768 SGB 1375.7 R23 -.1046 R13 .8799 L8A 35.9 H8A 11.8 S8A 3.1  
 BDE .6116 BRA .6598 BC3 .8989 F8P 598 S61 1193.7 S62 683.9 THA 164.76 EL1 35.0 EL2 11.2 ALF 57.21

LAUNCH DATE AUG 22 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC DISTANCE 325.148 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 33.880 GAL 4.33 AZL 89.32 HCA 101.58 SMA 211.80 ECC .29463 INC .8766 V1 29.447  
 RP 227.75 LAP .66 LOP 70.34 VP 23.215 GAP 16.60 APL 90.14 TAL 19.18 TAP 120.77 RCA 149.39 APO 274.20 V2 24.182  
 RC 128.887 GL 4.55 GP -8.68 ZAL 54.48 ZAP 155.99 ETS 201.92 ZAE 162.18 ETE 327.02 ZAC 73.80 ETC 282.34 LVI -7.01

PLANETOCENTRIC CONIC  
 C3 24.845 VHL 4.984 DLA 13.20 RAL 19.65 RAD 6644.9 VEL 12.034 PTH 7.02 VHP 4.791 DPA 8.85 RAP 48.14 ECC 1.4089  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 46 36 3451.30 -45.43 123.70 255.34 106.00 10 44 10 2451.3 -34.32 95.49  
 60.00 10 11 33 3385.01 -39.15 119.73 257.33 100.43 11 7 58 2385.0 -30.86 92.03  
 70.00 10 47 8 3280.27 -33.65 112.24 258.33 96.20 11 41 48 2280.3 -27.66 85.18  
 80.00 11 39 54 3114.96 -29.68 100.10 258.72 93.38 12 31 49 2115.0 -25.29 73.54  
 90.00 12 54 25 2874.43 -26.19 82.51 258.81 92.36 13 42 20 1874.4 -24.38 56.14  
 100.00 14 22 46 2589.43 -29.68 61.47 258.72 93.38 15 5 55 1589.4 -25.29 34.91  
 110.00 15 46 34 2327.09 -33.65 41.16 258.33 96.20 16 25 22 1327.1 -27.66 14.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3174 TRA -.6207 TC3 .8405 BAU .3067 SGT 1171.4 SGR 738.8 S63 428.9 ST 21.3 SR 30.0 S8 9.7  
 RDE -.5180 RRA .1813 RC3 -.3825 FAU .14134 RRT -.2994 RRF .4088 RTF -.6560 CRT .7936 CR8 .8964 CST .5977  
 FDE .3537 FRA -.5172 FC3-4.9252 BSP 1789 SGB 1384.9 R23 -.1134 R13 .8834 L8A 36.0 H8A 11.9 S8A 3.2  
 BDE .6075 BRA .6466 BC3 .9235 F8P 637 S61 1202.8 S62 688.5 THA 163.95 EL1 35.1 EL2 11.1 ALF 56.77

LAUNCH DATE AUG 22 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC DISTANCE 328.741 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 33.832 GAL 4.35 AZL 89.29 HCA 102.62 SMA 210.70 ECC .29114 INC .7113 V1 29.447  
 RP 228.12 LAP .69 LOP 71.38 VP 23.101 GAP 16.27 AZP 90.16 TAL 19.46 TAP 122.09 RCA 149.36 APO 272.04 V2 24.110  
 RC 131.592 GL 4.81 GP -8.93 ZAL 54.08 ZAP 154.89 ETS 201.47 ZAE 162.65 ETE 324.76 ZAC 73.56 ETC 282.36 LVI -6.79

PLANETOCENTRIC CONIC  
 C3 24.514 VHL 4.951 DLA 13.29 RAL 19.15 RAD 6644.8 VEL 12.020 PTH 7.01 VHP 4.660 DPA 8.59 RAP 48.18 ECC 1.4034  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 44 19 3449.70 -45.40 123.56 254.61 106.11 10 41 49 2449.7 -34.26 95.39  
 60.00 10 9 8 3383.67 -39.14 119.62 256.61 100.50 11 5 31 2383.7 -30.81 91.94  
 70.00 10 44 36 3279.29 -33.65 112.17 257.62 96.24 11 39 15 2279.3 -27.64 85.11  
 80.00 11 37 15 3114.34 -29.68 100.05 258.01 93.40 12 29 9 2114.3 -25.28 73.50  
 90.00 12 51 43 2873.99 -26.19 82.47 258.09 92.38 13 39 37 1874.0 -24.37 56.11  
 100.00 14 20 7 2588.82 -29.68 61.42 258.01 93.40 15 3 15 1588.8 -25.28 34.86  
 110.00 15 44 2 2326.11 -33.65 41.08 257.62 96.24 16 22 48 1326.1 -27.64 14.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3187 TRA -.6126 TC3 .8545 BAU .3104 SGT 1175.8 SGR 747.6 S63 454.1 ST 21.5 SR 29.8 S8 10.2  
 RDE -.5123 RRA .1763 RC3 -.4084 FAU .14848 RRT -.3142 RRF .4319 RTF -.6559 CRT .7990 CR8 .8916 CST .5493  
 FDE .3763 FRA -.5785 FC3-5.2439 BSP 1808 SGB 1393.3 R23 -.1225 R13 .8868 L8A 36.1 H8A 11.9 S8A 3.3  
 BDE .6033 BRA .6374 BC3 .9470 F8P 680 S61 1211.0 S62 689.1 THA 163.07 EL1 35.1 EL2 11.0 ALF 56.35



LAUNCH DATE AUG 22 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC												DISTANCE 332.353												EARTH TO MARS																																																																																
RL	151.31	LAL	-0.00	LOL	320.76	VL	33.486	GAL	4.37	AZL	89.25	HCA	103.68	SMA	209.68	ECC	.28786	INC	.7461	V1	29.447	RP	228.51	LAP	.73	LOP	72.42	VP	22.992	GAP	13.94	AZP	90.18	TAL	19.73	TAP	123.40	RCA	149.32	APO	270.04	V2	24.069	RC	134.321	GL	5.07	GP	-9.20	ZAL	53.69	ZAP	153.77	ETS	201.06	ZAE	163.14	ETE	322.26	ZAC	73.32	ETC	288.39	LVI	-6.56																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	24.207	VHL	4.920	DLA	13.38	RAL	18.67	RAD	6644.7	VEL	12.008	PTH	7.00	VHP	4.533	DPA	8.32	RAP	48.19	ECC	1.3984	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	42	3	3448.48	-45.38	123.45	253.93	108.19	10	39	31	2448.5	-34.21	95.31	60.00	10	6	44	3382.76	-39.12	119.54	255.93	100.55	11	3	7	2382.8	-30.79	91.88	70.00	10	42	4	3278.76	-33.64	112.13	256.94	96.26	11	36	43	2278.8	-27.63	85.08	80.00	11	34	35	3114.23	-29.68	100.04	257.33	93.41	12	26	30	2114.2	-25.27	73.49	90.00	12	49	0	2874.07	-28.19	82.48	257.42	92.37	13	36	54	1874.1	-24.37	56.11	100.00	14	17	27	2588.70	-29.68	61.41	257.33	93.41	15	0	36	1588.7	-25.27	34.86	110.00	15	41	31	2325.58	-33.64	41.04	256.94	96.26	16	20	16	1325.6	-27.63	13.99
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
TDE	-0.3201	TRA	-0.6053	TC3	.8653	BAU	.3135	SGT	1178.6	SGR	757.3	SG3	480.5	ST	21.6	SR	29.7	SS	10.7	RDE	-0.9065	RRA	.1710	RC3	-.4355	FAU	.15595	RRT	-.3287	RRF	.4557	RTF	-.6544	CRT	.8042	CR8	.8870	C8T	.5422	FDE	.4007	FRA	-.6429	FC3	-5.5773	BSP	1825	SG8	1400.9	R23	-.1327	R13	.6896	LSA	36.1	MSA	12.0	SSA	3.4	BDE	.5992	BRA	.6290	BC3	.9687	F8P	725	SG1	1218.0	SG2	692.1	THA	162.13	EL1	35.1	EL2	10.9	ALF	55.90																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC												DISTANCE 335.981												EARTH TO MARS																																																																																
RL	151.31	LAL	-0.00	LOL	320.76	VL	33.443	GAL	4.39	AZL	89.22	HCA	104.70	SMA	208.73	ECC	.28478	INC	.7813	V1	29.447	RP	228.90	LAP	.76	LOP	73.46	VP	22.886	GAP	15.61	AZP	90.20	TAL	19.99	TAP	124.69	RCA	149.29	APO	268.17	V2	24.028	RC	137.073	GL	5.33	GP	-9.47	ZAL	53.33	ZAP	152.63	ETS	200.67	ZAE	163.62	ETE	319.49	ZAC	73.07	ETC	282.41	LVI	-6.33																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	23.924	VHL	4.891	DLA	13.48	RAL	18.21	RAD	6644.5	VEL	11.996	PTH	6.99	VHP	4.412	DPA	8.04	RAP	48.19	ECC	1.3937	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	39	48	3447.64	-45.36	123.38	253.29	106.24	10	37	16	2447.6	-34.18	95.26	60.00	10	4	22	3382.25	-39.12	119.50	255.30	100.58	11	0	44	2382.2	-30.77	91.84	70.00	10	39	34	3278.68	-33.64	112.12	256.30	96.27	11	34	12	2278.7	-27.63	85.07	80.00	11	31	56	3114.60	-29.68	100.07	256.70	93.39	12	23	50	2114.6	-25.28	73.51	90.00	12	46	16	2874.66	-28.19	82.52	256.78	92.35	13	34	11	1874.7	-24.38	56.15	100.00	14	14	48	2589.07	-29.68	61.44	256.70	93.39	14	57	57	1589.1	-25.28	34.88	110.00	15	39	0	2325.50	-33.64	41.04	256.30	96.27	16	17	45	1325.5	-27.63	13.99
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
TDE	-0.3217	TRA	-0.5983	TC3	.8738	BAU	.3165	SGT	1179.9	SGR	767.9	SG3	508.1	ST	21.8	SR	29.5	SS	11.2	RDE	-0.5006	RRA	.1854	RC3	-.4641	FAU	.18375	RRT	-.3430	RRF	.4799	RTF	-.6523	CRT	.8094	CR8	.8830	C8T	.5369	FDE	.4278	FRA	-.7111	FC3	-5.9237	BSP	1837	SG8	1407.8	R23	-.1433	R13	.6924	LSA	36.2	MSA	12.1	SSA	3.5	BDE	.5950	BRA	.6208	BC3	.9894	F8P	772	SG1	1224.1	SG2	695.3	THA	161.12	EL1	35.0	EL2	10.8	ALF	55.43																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC												DISTANCE 339.625												EARTH TO MARS																																																																																
RL	151.31	LAL	-0.00	LOL	320.76	VL	33.402	GAL	4.41	AZL	89.18	HCA	105.73	SMA	207.84	ECC	.28188	INC	.8168	V1	29.447	RP	229.28	LAP	.79	LOP	74.49	VP	22.784	GAP	15.29	AZP	90.22	TAL	20.23	TAP	125.97	RCA	149.25	APO	266.43	V2	23.988	RC	139.847	GL	5.60	GP	-9.75	ZAL	53.00	ZAP	151.47	ETS	200.30	ZAE	164.09	ETE	316.42	ZAC	72.81	ETC	282.45	LVI	-6.10																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	23.661	VHL	4.864	DLA	13.59	RAL	17.78	RAD	6644.4	VEL	11.985	PTH	6.98	VHP	4.295	DPA	7.73	RAP	48.16	ECC	1.3894	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	37	35	3447.17	-45.35	123.34	252.69	106.27	10	35	3	2447.2	-34.16	95.23	60.00	10	2	1	3382.14	-39.12	119.49	254.70	100.59	10	58	23	2382.1	-30.77	91.83	70.00	10	37	3	3279.04	-33.65	112.15	255.70	96.25	11	31	42	2279.0	-27.63	85.09	80.00	11	29	16	3115.46	-29.69	100.13	256.10	93.36	12	21	11	2115.5	-25.30	73.57	90.00	12	43	32	2875.75	-28.19	82.60	256.18	92.31	13	31	28	1875.8	-24.40	56.23	100.00	14	12	8	2589.93	-29.69	61.50	256.10	93.36	14	55	18	1589.9	-25.30	34.94	110.00	15	36	30	2325.88	-33.65	41.07	255.70	96.25	16	15	15	1325.9	-27.63	14.01
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
TDE	-0.3233	TRA	-0.5922	TC3	.8793	BAU	.3191	SGT	1179.9	SGR	779.8	SG3	537.0	ST	21.9	SR	29.3	SS	11.8	RDE	-0.4945	RRA	.1595	RC3	-.4942	FAU	.17190	RRT	-.3567	RRF	.5046	RTF	-.6590	CRT	.8144	CR8	.8791	C8T	.5324	FDE	.4566	FRA	-.7824	FC3	-6.2896	BSP	1849	SG8	1414.1	R23	-.1550	R13	.6947	LSA	36.3	MSA	12.2	SSA	3.5	BDE	.5908	BRA	.6133	BC3	1.0086	F8P	822	SG1	1229.2	SG2	699.0	THA	160.04	EL1	35.0	EL2	10.6	ALF	54.92																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC												DISTANCE 343.284												EARTH TO MARS																																																																																
RL	151.31	LAL	-0.00	LOL	320.76	VL	33.384	GAL	4.43	AZL	89.15	HCA	106.76	SMA	207.01	ECC	.27918	INC	.8522	V1	29.447	RP	229.87	LAP	.82	LOP	75.32	VP	22.685	GAP	14.97	AZP	90.25	TAL	20.47	TAP	127.23	RCA	149.22	APO	264.80	V2	23.947	RC	142.641	GL	5.87	GP	-10.04	ZAL	52.67	ZAP	150.28	ETS	199.94	ZAE	164.54	ETE	315.03	ZAC	72.55	ETC	282.48	LVI	-5.86																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	23.418	VHL	4.839	DLA	13.71	RAL	17.33	RAD	6644.3	VEL	11.975	PTH	6.97	VHP	4.182	DPA	7.42	RAP	48.12	ECC	1.3854	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	35	24	3447.04	-45.35	123.33	252.13	106.28	10	32	51	2447.0	-34.16	95.22	60.00	9	59	42	3382.40	-39.12	119.51	254.14	100.57	10	56	4	2382.4	-30.77	91.85	70.00	10	34	33	3279.81	-33.65	112.21	255.14	96.22	11	29	13	2279.8	-27.65	85.15	80.00	11	26	36	3116.75	-29.69	100.23	255.53	93.31	12	18	32	2116.8	-25.32	73.68	90.00	12	40	47	2877.30	-28.20	82.72	255.61	92.25	13	28	44	1877.3	-24.43	56.34	100.00	14	9	27	2591.23	-29.69	61.60	255.53	93.31	14	52	39	1591.2	-25.32	35.03	110.00	15	33	59	2326.63	-33.65	41.12	255.14	96.22	16	12	46	1326.6	-27.65	14.06
DIFFERENTIAL CORRECTIONS												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																																																
TDE	-0.3117	TRA	-.5734	TC3	.9037	BAU	.3274	SGT	1178.8	SGR	793.2	SG3	568.2	ST	21.3	SR	29.1	SS	12.3	RDE	-0.4889	RRA	.1523	RC3	-.5264	FAU	.18070	RRT	-.3871	RRF	.5309	RTF	-.6613	CRT	.8146	CR8	.8698	C8T	.5134	FDE	.4794	FRA	-.8669	FC3	-6.6803	BSP	1705	SG8	1420.8	R23	-.1459	R13	.7106	LSA	35.9	MSA	12.2	SSA	3.6	BDE	.5798	BRA	.5933	BC3	1.0459	F8P	865	SG1	1238.6	SG2	696.0	THA	158.20	EL1	34.5	EL2	10.4	ALF	55.68																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC										DISTANCE 346.956										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LQ	328.78	VL	33.328	GAL	4.44	AZL	89.11	HCA	107.79	SMA	206.24	ECC	.27861	INC	.8880	V1	29.447	RP	230.05	LAP	.85	LOP	78.55	VP	22.589	GAP	14.66	AZP	90.27	TAL	20.69	TAP	128.48	RCA	149.19	APO	293.29	V2	23.907	RC	145.456	GL	6.14	GP	-10.34	ZAL	52.38	ZAP	149.08	ETS	199.61	ZAE	164.95	ETE	309.32	ZAC	72.29	ETC	282.52	LVI	-5.63
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	23.192	VHL	4.816	DLA	13.83	RAL	16.82	RAD	8644.2	VEL	11.966	PTH	6.98	VHP	4.073	DPA	7.08	RAP	48.05	ECC	1.3817	ST	21.7	SR	28.8	SS	12.9	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	21.7	SR	28.8	SS	12.9	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																						
50.00	9	31	6	3447.29	-45.35	123.35	251.62	106.27	10	30	43	2447.3	-34.17	95.24	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
60.00	9	57	23	3383.07	-39.13	119.57	253.62	100.54	10	53	46	2383.1	-30.80	91.90	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
70.00	10	32	3	3281.04	-33.66	112.30	254.61	96.16	11	26	45	2281.0	-27.68	85.23	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
80.00	11	23	55	3118.57	-29.70	100.36	255.00	93.24	12	15	53	2118.6	-25.36	73.78	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
90.00	12	38	1	2879.40	-28.20	82.87	255.08	92.18	13	26	0	1879.4	-24.47	56.48	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
100.00	14	6	47	2593.04	-29.70	61.73	255.00	93.24	14	50	0	1593.0	-25.36	35.15	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							
110.00	15	31	30	2327.86	-33.66	41.22	254.61	96.16	16	10	18	1327.9	-27.68	14.15	SGT	1174.4	SGR	807.1	SG3	599.2	CRT	.8213	CRS	.8694	CST	.5165																																							

LAUNCH DATE AUG 22 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC										DISTANCE 350.639										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LQ	328.78	VL	33.294	GAL	4.45	AZL	89.08	HCA	108.81	SMA	205.52	ECC	.27421	INC	.9242	V1	29.447	RP	230.44	LAP	.87	LOP	77.57	VP	22.497	GAP	14.35	AZP	90.30	TAL	20.90	TAP	129.71	RCA	149.16	APO	281.88	V2	23.867	RC	148.289	GL	6.41	GP	-10.65	ZAL	52.10	ZAP	147.85	ETS	199.28	ZAE	165.30	ETE	305.25	ZAC	72.02	ETC	282.57	LVI	-5.39
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.982	VHL	4.794	DLA	13.97	RAL	16.53	RAD	8644.1	VEL	11.957	PTH	6.96	VHP	3.969	DPA	6.73	RAP	47.97	ECC	1.3782	ST	22.1	SR	28.5	SS	13.6	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.1	SR	28.5	SS	13.6	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																						
50.00	9	31	9	3447.88	-45.36	123.40	251.14	106.23	10	28	37	2447.9	-34.19	95.28	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
60.00	9	55	6	3364.12	-39.14	119.66	253.13	100.48	10	51	30	2384.1	-30.83	91.97	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
70.00	10	29	34	3282.69	-33.67	112.43	254.12	96.09	11	24	17	2282.7	-27.72	85.34	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
80.00	11	21	13	3120.85	-29.71	100.53	254.50	93.15	12	13	14	2120.8	-25.40	73.94	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
90.00	12	35	14	2881.99	-28.21	83.06	254.58	92.08	13	23	15	1882.0	-24.51	56.65	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
100.00	14	4	5	2595.32	-29.71	61.90	254.50	93.15	14	47	20	1595.3	-25.40	35.31	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							
110.00	15	29	0	2329.50	-33.67	41.35	254.12	96.09	16	7	50	1329.5	-27.72	14.26	SGT	1168.2	SGR	822.3	SG3	631.5	CRT	.8269	CRS	.8667	CST	.5184																																							

LAUNCH DATE AUG 22 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC										DISTANCE 354.333										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LQ	328.78	VL	33.282	GAL	4.46	AZL	89.04	HCA	109.83	SMA	204.85	ECC	.27196	INC	.9607	V1	29.447	RP	230.82	LAP	.90	LOP	78.59	VP	22.407	GAP	14.04	AZP	90.33	TAL	21.09	TAP	130.92	RCA	149.14	APO	280.56	V2	23.827	RC	151.140	GL	6.69	GP	-10.96	ZAL	51.85	ZAP	146.00	ETS	198.97	ZAE	165.60	ETE	300.84	ZAC	71.74	ETC	282.62	LVI	-5.15
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.786	VHL	4.774	DLA	14.12	RAL	16.15	RAD	8644.1	VEL	11.949	PTH	6.95	VHP	3.970	DPA	6.37	RAP	47.87	ECC	1.3750	ST	22.3	SR	28.2	SS	14.3	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.3	SR	28.2	SS	14.3	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																						
50.00	9	29	3	3448.81	-45.38	123.48	250.70	106.16	10	28	32	2448.8	-34.23	93.33	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
60.00	9	52	50	3385.53	-39.16	119.77	252.69	100.40	10	49	19	2385.5	-30.67	92.08	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
70.00	10	27	5	3284.74	-33.69	112.59	253.67	95.99	11	21	49	2284.7	-27.77	85.40	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
80.00	11	18	31	3123.59	-29.72	100.74	254.04	93.05	12	10	34	2123.6	-25.45	74.13	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
90.00	12	32	25	2885.05	-28.22	83.28	254.11	91.97	13	20	30	1885.1	-24.56	56.86	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
100.00	14	1	22	2598.06	-29.72	62.10	254.04	93.05	14	44	40	1598.1	-25.45	35.49	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							
110.00	15	26	31	2331.58	-33.69	41.51	253.67	95.99	16	5	22	1331.6	-27.77	14.40	SGT	1160.7	SGR	839.1	SG3	685.0	CRT	.8317	CRS	.8651	CST	.5198																																							

LAUNCH DATE AUG 22 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC										DISTANCE 358.038										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LQ	328.78	VL	33.233	GAL	4.47	AZL	89.00	HCA	110.84	SMA	204.25	ECC	.26985	INC	.9975	V1	29.447	RP	231.20	LAP	.93	LOP	79.61	VP	22.321	GAP	13.73	AZP	90.38	TAL	21.28	TAP	132.12	RCA	149.12	APO	259.34	V2	23.787	RC	154.008	GL	6.97	GP	-11.29	ZAL	51.61	ZAP	145.33	ETS	198.66	ZAE	165.82	ETE	296.11	ZAC	71.47	ETC	282.67	LVI	-4.91
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.608	VHL	4.754	DLA	14.28	RAL	15.79	RAD	8644.0	VEL	11.941	PTH	6.94	VHP	3.774	DPA	5.98	RAP	47.75	ECC	1.3720	ST	22.6	SR	27.9	SS	15.0	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CBT	TIM	INJ	2	LAT	INJ	2	LONG	ST	22.6	SR	27.9	SS	15.0	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																						
50.00	9	27	0	3450.08	-45.41	123.59	250.30	106.08	10	24	30	2450.1	-34.28	95.41	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																																							
60.00	9	50	34	3387.30	-39.18	119.92	252.27	100.31	10	47	2	2387.3	-30.93	92.18	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																																							
70.00	10	24	35	3287.20	-33.70	112.78	253.24	95.88	11	19	22	2287.2	-27.83	85.65	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																																							
80.00	11	15	47	3126.78	-29.73	100.97	253.60	92.92	12	7	54	2126.8	-25.51	74.34	SGT	1151.4	SGR	857.5	SG3	699.8	CRT	.8360	CRS	.8637	CST	.5213																																							
90.00	12	29	35	2886.60	-28.22	83.54	253.67	91.84																																																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 194.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC										DISTANCE 361.751										EARTH TO MARS																																																																																				
RL	151.31	LAL	-.00	L0L	328.78	VL	33.205	GAL	4.48	AZL	88.97	HCA	111.86	SMA	203.64	ECC	.26787	INC	1.0348	V1	29.447	RP	231.98	LAP	.98	LOP	80.62	VP	22.237	GAP	13.43	AZP	90.39	TAL	21.45	TAP	133.30	RCA	149.09	APO	258.19	V2	23.748	RC	158.890	GL	7.25	GP	-11.83	ZAL	51.40	ZAP	144.03	ETL	198.38	ZAE	165.95	ETE	291.08	ZAC	71.18	ETC	282.72	LVI	-4.67																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	22.436	VHL	4.737	DLA	14.44	RAL	15.44	RAD	8643.9	VEL	11.934	PTH	6.94	VHP	3.682	DPA	5.58	RAP	47.60	ECC	1.3692	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	24	57	3451.63	-45.43	123.73	249.94	105.98	10	22	29	2451.6	-34.34	95.51	60.00	9	48	19	3389.43	-39.21	120.09	251.89	100.19	10	44	49	2389.4	-30.99	92.32	70.00	10	22	5	3290.07	-33.72	113.00	252.85	95.75	11	16	55	2290.1	-27.90	85.84	80.00	11	13	2	3130.42	-29.74	101.24	253.20	92.78	12	5	12	2130.4	-25.58	74.59	90.00	12	26	43	2892.62	-28.23	83.83	253.27	91.70	13	14	55	1892.6	-24.69	57.38	100.00	13	55	54	2604.89	-29.74	62.61	253.20	92.78	14	39	19	1604.9	-25.58	35.96	110.00	15	21	31	2336.89	-33.72	41.92	252.85	95.75	16	0	28	1336.9	-27.90	14.76
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3317	TRA	-.5687	TC3	.8410	BAU	.3295	SGT	1140.3	SGR	877.7	SG3	736.0	ST	22.7	SR	27.5	SS	15.8	RDE	-.4537	RRA	.1153	RC3	-.7088	FAU	.22768	RRT	-.4152	RRF	.6534	RTF	-.5989	CR7	.8400	CR8	.8620	CST	.5222	FDE	.6880	FRA	-1.2916	FC3	-8.7853	BSP	1866	SG8	1439.0	R23	-.2369	R13	.7075	LSA	36.5	MSA	13.3	SSA	3.8	BDE	.5621	BRA	.5803	BC3	1.0986	FSP	1171	SG1	1236.2	SG2	736.5	THA	151.26	EL1	34.3	EL2	9.9	ALF	51.46																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 196.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC										DISTANCE 365.473										EARTH TO MARS																																																																																				
RL	151.31	LAL	-.00	L0L	328.78	VL	33.178	GAL	4.49	AZL	88.93	HCA	112.86	SMA	203.10	ECC	.26601	INC	1.0722	V1	29.447	RP	231.95	LAP	.99	LOP	81.63	VP	22.156	GAP	13.13	AZP	90.42	TAL	21.61	TAP	134.47	RCA	149.07	APO	257.13	V2	23.708	RC	159.785	GL	7.54	GP	-11.98	ZAL	51.20	ZAP	142.71	ETL	198.07	ZAE	165.97	ETE	285.83	ZAC	70.89	ETC	282.79	LVI	-4.42																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	22.279	VHL	4.720	DLA	14.62	RAL	15.11	RAD	8643.8	VEL	11.928	PTH	6.93	VHP	3.593	DPA	5.17	RAP	47.44	ECC	1.3667	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	22	56	3453.52	-45.47	123.90	249.61	105.85	10	20	30	2453.5	-34.41	95.63	60.00	9	46	5	3391.92	-39.24	120.30	251.55	100.05	10	42	37	2391.9	-31.07	92.48	70.00	10	19	35	3293.33	-33.75	113.25	252.49	95.61	11	14	28	2293.3	-27.98	86.06	80.00	11	10	16	3134.52	-29.75	101.55	252.82	92.62	12	2	30	2134.5	-25.66	74.87	90.00	12	23	49	2897.12	-28.24	84.16	252.89	91.53	13	12	6	1897.1	-24.77	57.69	100.00	13	53	7	2608.99	-29.75	62.91	252.82	92.62	14	36	36	1609.0	-25.66	36.24	110.00	15	19	1	2340.15	-33.75	42.17	252.49	95.61	15	58	1	1340.2	-27.98	14.98
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3333	TRA	-.5682	TC3	.8205	BAU	.3307	SGT	1127.7	SGR	899.8	SG3	773.3	ST	22.9	SR	27.2	SS	16.6	RDE	-.4459	RRA	.1066	RC3	-.7482	FAU	.23809	RRT	-.4172	RRF	.6770	RTF	-.5830	CR7	.8435	CR8	.8604	CST	.5230	FDE	.7359	FRA	-1.3882	FC3	-9.2516	BSP	1869	SG8	1442.7	R23	-.2520	R13	.7101	LSA	36.6	MSA	13.6	SSA	3.8	BDE	.5567	BRA	.5781	BC3	1.1104	FSP	1237	SG1	1234.1	SG2	747.3	THA	149.31	EL1	34.2	EL2	9.8	ALF	50.72																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 198.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC										DISTANCE 369.203										EARTH TO MARS																																																																																				
RL	151.31	LAL	-.00	L0L	328.78	VL	33.154	GAL	4.50	AZL	88.89	HCA	113.87	SMA	202.59	ECC	.26426	INC	1.1102	V1	29.447	RP	232.33	LAP	1.02	LOP	82.63	VP	22.077	GAP	12.84	AZP	90.45	TAL	21.75	TAP	135.62	RCA	149.03	APO	256.13	V2	23.670	RC	162.693	GL	7.82	GP	-12.34	ZAL	51.02	ZAP	141.37	ETL	197.73	ZAE	165.88	ETE	280.44	ZAC	70.60	ETC	282.85	LVI	-4.17																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	22.133	VHL	4.705	DLA	14.80	RAL	14.80	RAD	8643.8	VEL	11.922	PTH	6.93	VHP	3.509	DPA	4.73	RAP	47.25	ECC	1.3643	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	20	56	3455.72	-45.51	124.10	249.31	105.71	10	18	32	2455.7	-34.50	95.77	60.00	9	43	51	3394.74	-39.27	120.53	251.23	99.90	10	40	26	2394.7	-31.16	92.87	70.00	10	17	4	3296.99	-33.77	113.53	252.15	95.44	11	12	1	2297.0	-28.06	86.31	80.00	11	7	27	3139.07	-29.77	101.88	252.48	92.44	11	59	47	2139.1	-25.74	75.18	90.00	12	20	52	2902.11	-28.25	84.53	252.54	91.35	13	9	15	1902.1	-24.85	58.03	100.00	13	50	19	2613.54	-29.77	63.25	252.48	92.44	14	33	53	1613.5	-25.74	36.55	110.00	15	16	30	2343.81	-33.77	42.45	252.15	95.44	15	55	34	1343.8	-28.06	15.23
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3347	TRA	-.5684	TC3	.7960	BAU	.3321	SGT	1113.5	SGR	923.9	SG3	811.8	ST	23.1	SR	26.7	SS	17.4	RDE	-.4377	RRA	.0973	RC3	-.7914	FAU	.24878	RRT	-.4162	RRF	.6999	RTF	-.5446	CR7	.8467	CR8	.8590	CST	.5238	FDE	.7894	FRA	-1.4885	FC3	-9.7313	BSP	1865	SG8	1446.9	R23	-.2660	R13	.7138	LSA	36.6	MSA	13.9	SSA	3.8	BDE	.5510	BRA	.5767	BC3	1.1224	FSP	1305	SG1	1231.4	SG2	759.6	THA	147.14	EL1	34.0	EL2	9.7	ALF	49.97																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 180.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC										DISTANCE 372.940										EARTH TO MARS																																																																																				
RL	151.31	LAL	-.00	L0L	328.78	VL	33.131	GAL	4.50	AZL	88.85	HCA	114.87	SMA	202.12	ECC	.26263	INC	1.1487	V1	29.447	RP	232.70	LAP	1.04	LOP	83.64	VP	22.001	GAP	12.54	AZP	90.48	TAL	21.89	TAP	136.76	RCA	149.04	APO	255.20	V2	23.631	RC	165.610	GL	8.12	GP	-12.70	ZAL	50.87	ZAP	140.01	ETL	197.48	ZAE	165.66	ETE	274.99	ZAC	70.30	ETC	282.92	LVI	-3.92																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	21.996	VHL	4.690	DLA	15.00	RAL	14.50	RAD	8643.7	VEL	11.916	PTH	6.92	VHP	3.428	DPA	4.28	RAP	47.05	ECC	1.3620	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	18	57	3458.23	-45.56	124.32	249.05	105.54	10	16	36	2458.2	-34.60	95.93	60.00	9	41	37	3397.92	-39.31	120.79	250.95	99.72	10	38	15	2397.9	-31.26	92.88	70.00	10	14	32	3301.05	-33.80	113.85	251.85	95.26	11	9	33	2301.0	-28.16	86.59	80.00	11	4	37	3144.07	-29.78	102.26	252.16	92.25	11	57	1	2144.1	-25.83	75.53	90.00	12	17	54	2907.58	-28.26	84.93	252.21	91.15	13	6	21	1907.6	-24.94	58.41	100.00	13	47	29	2618.55	-29.78	63.62	252.16	92.25	14	31	8	1618.5	-25.83	36.90	110.00	15	13	58	2347.87	-33.80	42.77	251.85	95.26	15	53	6	1347.9	-28.16	15.51
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3359	TRA	-.5698	TC3	.7672	BAU	.3338	SGT	1098.0	SGR	950.0	SG3	851.3	ST	23.2	SR	26.3	SS	18.2	RDE	-.4291	RRA	.0876	RC3	-.8364	FAU	.25976	RRT	-.4116	RRF	.7220	RTF	-.5431	CR7	.8496	CR8	.8578	CST	.5248	FDE	.8466	FRA	-1.5911	FC3	-10.2238	BSP	1866	SG8	1451.9	R23	-.2784	R13	.7187	LSA	36.7	MSA	14.2	SSA	3.8	BDE	.5449	BRA	.5765	BC3	1.1350	FSP	1376	SG1	1228.5	SG2	773.8	THA	144.72	EL1	33.8	EL2	9.5	ALF	49.18																									

LAUNCH DATE AUG 22 1973

FLIGHT TIME 162.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -0.00 LOL 328.76 VL 33.109 GAL 4.30 AZL 88.81 MCA 115.87 SMA 201.68 ECC .26109 INC 1.1878 V1 29.447  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.927 GAP 12.25 AZP 90.52 TAL 22.01 TAP 137.88 RCA 148.02 APO 254.34 VE 23.593  
 RC 168.537 GL 8.41 GP -13.08 ZAL 50.73 ZAP 138.82 ETS 197.19 ZAE 165.31 ETE 269.60 ZAC 70.00 ETC 282.99 LVI -3.67

DISTANCE 376.883

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.869 VHL 4.676 DLA 15.20 RAL 14.21 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 3.351 DPA 3.81 RAP 46.82 ECC 1.3599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 59 3461.04 -45.61 124.58 248.82 105.35 10 14 40 2461.0 -34.71 96.11  
 60.00 9 39 23 3401.43 -39.35 121.08 250.69 99.53 10 36 4 2401.4 -31.36 93.12  
 70.00 10 11 59 3305.50 -33.82 114.19 251.57 95.05 11 7 4 2305.5 -26.26 86.89  
 80.00 11 1 45 3149.93 -29.79 102.66 251.87 92.04 11 54 15 2149.5 -25.93 75.90  
 90.00 12 14 52 2913.53 -28.27 85.36 251.91 90.93 13 3 26 1913.5 -25.03 58.82  
 100.00 13 44 37 2624.00 -29.79 64.03 251.87 92.04 14 28 21 1624.0 -25.93 37.27  
 110.00 15 11 25 2352.32 -33.82 43.11 251.57 98.05 15 50 37 1352.3 -26.26 15.81

DIFFERENTIAL CORRECTIONS

TDE -.3368 TRA -.5719 TC3 .7339 BAU .3337  
 RDE -.4201 RRA .0775 RC3 -.8830 FAU .27092  
 FDE .9082 FRA -1.6969 FC -10.7248 BSP 1867  
 BDE .5384 BRA .5771 BC3 1.1482 FSP 1450

MID-COURSE EXECUTION ACCURACY

SGT 1081.0 SGR 978.1 SG3 891.6  
 RRT -.4029 RRF .7430 RTF -.5181  
 SGB 1457.8 R23 -.2882 R13 .7254  
 SG1 1225.4 SG2 789.7 THA 141.98

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 25.8 SS 19.1  
 CRT .8522 CR8 .8567 CST .5258  
 LSA 36.8 MSA 14.6 S8A 3.8  
 EL1 33.5 EL2 9.4 ALF 48.35

LAUNCH DATE AUG 22 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -0.00 LOL 328.76 VL 33.089 GAL 4.31 AZL 88.77 MCA 116.87 SMA 201.27 ECC .25966 INC 1.2273 V1 29.447  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.856 GAP 11.97 AZP 90.55 TAL 22.12 TAP 138.98 RCA 149.01 APO 253.54 VE 23.534  
 RC 171.472 GL 8.71 GP -13.47 ZAL 50.61 ZAP 137.22 ETS 196.89 ZAE 164.83 ETE 264.36 ZAC 69.70 ETC 283.07 LVI -3.41

DISTANCE 380.431

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.751 VHL 4.664 DLA 15.42 RAL 13.94 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 3.277 DPA 3.32 RAP 46.58 ECC 1.3580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 15 2 3464.16 -45.66 124.85 248.62 105.14 10 12 46 2464.2 -34.83 96.31  
 60.00 9 37 9 3405.28 -39.39 121.40 250.47 99.32 10 33 54 2405.3 -31.48 93.38  
 70.00 10 9 24 3310.34 -33.85 114.57 251.32 94.83 11 4 35 2310.3 -26.38 87.23  
 80.00 10 58 50 3155.45 -29.81 103.10 251.60 91.81 11 51 26 2155.4 -26.04 76.31  
 90.00 12 11 47 2919.97 -28.27 85.83 251.64 90.69 13 0 27 1920.0 -25.14 59.26  
 100.00 13 41 42 2629.92 -29.81 64.47 251.60 91.81 14 25 32 1629.9 -26.04 37.68  
 110.00 15 6 51 2357.16 -33.85 43.49 251.32 94.83 15 48 8 1357.2 -26.38 16.14

DIFFERENTIAL CORRECTIONS

TDE -.3374 TRA -.5751 TC3 .8982 BAU .3382  
 RDE -.4106 RRA .0668 RC3 -.9318 FAU .28238  
 FDE .9740 FRA -1.8082 FC -11.2387 BSP 1867  
 BDE .5314 BRA .5789 BC3 1.1632 FSP 1525

MID-COURSE EXECUTION ACCURACY

SGT 1083.5 SGR 1008.8 SG3 933.0  
 RRT -.3896 RRF .7832 RTF -.4892  
 SGB 1465.5 R23 -.2942 R13 .7343  
 SG1 1222.9 SG2 807.8 THA 138.87

ORBIT DETERMINATION ACCURACY

ST 23.5 SR 25.3 SS 20.1  
 CRT .8548 CR8 .8595 CST .5264  
 LSA 36.8 MSA 14.9 S8A 3.8  
 EL1 33.2 EL2 9.3 ALF 47.48

LAUNCH DATE AUG 22 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -0.00 LOL 328.76 VL 33.070 GAL 4.31 AZL 88.73 MCA 117.88 SMA 200.89 ECC .25831 INC 1.2874 V1 29.447  
 RP 233.80 LAP 1.12 LOP 86.82 VP 21.786 GAP 11.68 AZP 90.59 TAL 22.21 TAP 140.07 RCA 149.00 APO 252.79 VE 23.517  
 RC 174.413 GL 9.02 GP -13.86 ZAL 50.51 ZAP 135.79 ETS 196.80 ZAE 164.21 ETE 259.34 ZAC 69.39 ETC 283.15 LVI -3.13

DISTANCE 384.188

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.640 VHL 4.652 DLA 15.64 RAL 13.68 RAD 6643.6 VEL 11.901 PTH 6.91 VHP 3.207 DPA 2.81 RAP 46.32 ECC 1.3581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 13 5 3467.57 -45.72 125.16 248.46 104.91 10 10 53 2467.6 -34.96 96.53  
 60.00 9 34 54 3409.48 -39.43 121.75 250.27 99.09 10 31 44 2409.5 -31.61 93.66  
 70.00 10 6 48 3315.58 -33.88 114.97 251.10 94.60 11 2 4 2315.6 -28.50 87.59  
 80.00 10 55 52 3161.83 -29.82 103.57 251.36 91.56 11 48 34 2161.8 -26.15 76.75  
 90.00 12 8 39 2926.91 -28.28 86.34 251.39 90.44 12 57 26 1926.9 -25.24 59.74  
 100.00 13 38 44 2636.30 -29.82 64.94 251.36 91.56 14 22 41 1636.3 -26.15 38.12  
 110.00 15 6 15 2362.40 -33.88 43.89 251.10 94.60 15 45 37 1362.4 -26.50 16.50

DIFFERENTIAL CORRECTIONS

TDE -.3377 TRA -.5797 TC3 .8535 BAU .3413  
 RDE -.4408 RRA .0557 RC3 -.9823 FAU .29397  
 FDE 1.0428 FRA -1.9173 FC -11.7609 BSP 1872  
 BDE .5240 BRA .5823 BC3 1.1798 FSP 1602

MID-COURSE EXECUTION ACCURACY

SGT 1045.1 SGR 1041.1 SG3 975.2  
 RRT -.3706 RRF .7822 RTF -.4451  
 SGB 1475.2 R23 -.2952 R13 .7459  
 SG1 1221.2 SG2 827.3 THA 135.30

ORBIT DETERMINATION ACCURACY

ST 23.6 SR 24.7 SS 21.0  
 CRT .8565 CR8 .8540 CST .5262  
 LSA 36.9 MSA 15.3 S8A 3.8  
 EL1 32.9 EL2 9.1 ALF 46.57

LAUNCH DATE AUG 22 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -0.00 LOL 328.76 VL 33.052 GAL 4.31 AZL 88.69 MCA 118.85 SMA 200.54 ECC .25705 INC 1.3081 V1 29.447  
 RP 234.17 LAP 1.15 LOP 87.61 VP 21.719 GAP 11.40 AZP 90.63 TAL 22.30 TAP 141.18 RCA 148.99 APO 252.09 VE 23.479  
 RC 177.360 GL 9.33 GP -14.27 ZAL 50.43 ZAP 134.33 ETS 198.29 ZAE 163.48 ETE 254.59 ZAC 69.07 ETC 283.24 LVI -2.89

DISTANCE 387.945

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.537 VHL 4.641 DLA 15.88 RAL 13.44 RAD 6643.5 VEL 11.897 PTH 6.91 VHP 3.140 DPA 2.29 RAP 46.03 ECC 1.3544  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 9 3471.27 -45.79 125.50 248.32 104.66 10 9 0 2471.3 -35.10 98.77  
 60.00 9 32 39 3414.00 -39.48 122.12 250.10 98.84 10 29 33 2414.0 -31.75 93.97  
 70.00 10 4 11 3321.21 -33.91 115.41 250.90 94.34 10 59 32 2321.2 -28.63 87.97  
 80.00 10 52 52 3168.88 -29.83 104.08 251.14 91.29 11 45 40 2168.7 -26.27 77.22  
 90.00 12 5 27 2934.34 -28.28 86.88 251.16 90.17 12 54 22 1934.3 -25.36 60.25  
 100.00 13 35 43 2643.13 -29.83 65.45 251.14 91.29 14 19 47 1643.1 -26.27 38.59  
 110.00 15 3 37 2368.03 -33.91 44.33 250.90 94.34 15 43 5 1368.0 -26.63 16.89

DIFFERENTIAL CORRECTIONS

TDE -.3337 TRA -.5809 TC3 .6138 BAU .3467  
 RDE -.3907 RRA .0434 RC3 -1.0359 FAU .30614  
 FDE 1.1095 FRA -2.0399 FC -12.3063 BSP 1842  
 BDE .5138 BRA .5825 BC3 1.2041 FSP 1669

MID-COURSE EXECUTION ACCURACY

SGT 1024.9 SGR 1077.1 SG3 1019.4  
 RRT -.3539 RRF .8007 RTF -.4234  
 SGB 1486.8 R23 -.2926 R13 .7640  
 SG1 1224.6 SG2 843.1 THA 131.00

ORBIT DETERMINATION ACCURACY

ST 23.5 SR 24.2 SS 21.9  
 CRT .8575 CR8 .8499 CST .5204  
 LSA 36.8 MSA 15.7 S8A 3.7  
 EL1 32.5 EL2 9.0 ALF 46.01



LAUNCH DATE AUG 22 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.982 GAL 4.48 AZL 88.48 HCA 123.75 SMA 199.13 ECC .25187 INC 1.5224 V1 29.447
RP 238.94 LAP 1.27 LOP 92.52 VP 21.413 GAP 10.02 AZP 90.85 TAL 22.95 TAP 146.30 RCA 148.98 APO 249.29 V2 23.297
RC 192.165 GL 10.96 GP -16.43 ZAL 50.28 ZAP 126.80 ETS 194.66 ZAE 158.22 ETE 235.73 ZAC 67.46 ETC 283.71 LVI -1.52

DISTANCE 406.797

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.116 VHL 4.595 DLA 17.22 RAL 12.39 RAD 6643.3 VEL 11.879 PTH 6.89 VHP 2.855 DPA -.56 RAP 44.36 ECC 1.3475
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.00 9 1 25 3494.28 -46.16 127.59 248.07 103.09 9 59 39 2494.3 -35.98 98.27
60.00 9 21 8 3441.80 -39.75 124.44 249.64 97.29 10 18 29 2441.8 -32.57 95.86
70.00 9 50 26 3355.53 -34.06 118.08 250.27 92.77 10 46 21 2355.5 -29.38 90.36
80.00 10 36 48 3210.21 -29.86 107.17 250.37 89.67 11 30 18 2210.2 -26.96 80.12
90.00 11 48 16 2979.53 -28.24 90.19 250.34 88.51 12 37 55 1979.5 -26.01 63.40
100.00 13 19 40 2694.68 -29.86 68.54 250.37 89.67 14 4 25 1684.7 -26.96 41.49
110.00 14 49 52 2402.35 -34.06 47.00 250.27 92.77 15 29 54 1402.4 -29.38 19.28

DIFFERENTIAL CORRECTIONS

TDE -.3288 TRA -.6291 TC3 .2969 BAU .3832
RDE -.3291 RRA -.0209 RC3-1.3245 FAU .36564
FDE 1.5498 FRA-2.6162 FC-14.9909 BSP 2018
BDE .4652 BRA .6295 BC3 1.3573 FSP 2071

MID-COURSE EXECUTION ACCURACY

SGT 957.6 SGR 1284.8 SG3 1257.7
RRT -.1150 RRF .8731 RTF -.1273
SGB 1602.4 R23 -.0905 R13 .8688
SG1 1295.0 SG2 943.7 THA 100.54

ORBIT DETERMINATION ACCURACY

ST 23.9 SR 20.6 SS 27.5
CRT .8622 CRS .8390 CST .5101
LSA 37.6 MSA 17.9 SSA 3.5
EL1 30.5 EL2 8.2 ALF 40.07

LAUNCH DATE AUG 22 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.970 GAL 4.47 AZL 88.43 HCA 124.72 SMA 198.91 ECC .25103 INC 1.5677 V1 29.447
RP 236.29 LAP 1.29 LOP 93.49 VP 21.357 GAP 9.76 AZP 90.89 TAL 22.57 TAP 147.29 RCA 148.98 APO 248.85 V2 23.261
RC 195.134 GL 11.30 GP -16.89 ZAL 50.29 ZAP 125.24 ETS 194.30 ZAE 156.91 ETE 232.84 ZAC 67.13 ETC 283.81 LVI -1.24

DISTANCE 410.578

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.050 VHL 4.588 DLA 17.52 RAL 12.21 RAD 6643.3 VEL 11.876 PTH 6.89 VHP 2.807 DPA -1.18 RAP 43.98 ECC 1.3484
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.00 8 59 26 3499.77 -46.25 128.09 248.10 102.71 9 57 46 2499.8 -36.16 98.63
60.00 9 18 44 3448.40 -39.80 124.99 249.62 96.91 10 16 12 2448.4 -32.76 96.32
70.00 9 47 31 3363.65 -34.08 118.71 250.21 92.39 10 43 35 2363.7 -29.55 90.93
80.00 10 33 20 3220.04 -29.85 107.90 250.28 89.28 11 27 1 2220.0 -27.11 80.81
90.00 11 44 32 2990.24 -28.22 90.97 250.24 88.12 12 34 22 1990.2 -26.15 64.15
100.00 13 16 12 2694.51 -29.85 69.27 250.28 89.28 14 1 7 1694.5 -27.11 42.18
110.00 14 46 58 2410.47 -34.08 47.63 250.21 92.39 15 27 8 1410.5 -29.55 19.85

DIFFERENTIAL CORRECTIONS

TDE -.3179 TRA -.6342 TC3 .2338 BAU .3970
RDE -.3171 RRA -.0374 RC3-1.3914 FAU .37867
FDE 1.6231 FRA-2.7614 FC-15.5738 BSP 2037
BDE .4490 BRA .6353 BC3 1.4109 FSP 2120

MID-COURSE EXECUTION ACCURACY

SGT 945.2 SGR 1337.6 SG3 1285.6
RRT -.0602 RRF .8853 RTF -.0617
SGB 1637.9 R23 -.0440 R13 .8842
SG1 1340.0 SG2 941.8 THA 94.82

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 19.9 SS 28.4
CRT .8607 CRS .8273 CST .4900
LSA 37.4 MSA 18.4 SSA 3.5
EL1 29.7 EL2 8.0 ALF 39.60

LAUNCH DATE AUG 22 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.980 GAL 4.46 AZL 88.39 HCA 125.89 SMA 198.71 ECC .25025 INC 1.6140 V1 29.447
RP 236.63 LAP 1.31 LOP 94.46 VP 21.303 GAP 9.49 AZP 90.94 TAL 22.58 TAP 148.27 RCA 148.99 APO 248.44 V2 23.226
RC 198.104 GL 11.66 GP -17.35 ZAL 50.33 ZAP 123.67 ETS 193.53 ZAE 155.54 ETE 230.22 ZAC 66.79 ETC 283.92 LVI -.95

DISTANCE 414.358

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.987 VHL 4.581 DLA 17.84 RAL 12.04 RAD 6643.3 VEL 11.874 PTH 6.89 VHP 2.783 DPA -1.81 RAP 43.59 ECC 1.3454
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.00 8 57 27 3505.60 -46.33 128.63 248.16 102.30 9 55 53 2505.6 -36.40 99.02
60.00 9 16 18 3455.39 -39.86 125.58 249.63 96.92 10 13 54 2455.4 -32.96 96.81
70.00 9 44 33 3372.27 -34.10 119.38 250.17 92.00 10 40 45 2372.3 -29.73 91.53
80.00 10 29 47 3230.50 -29.84 108.68 250.20 88.88 11 23 37 2230.5 -27.27 81.55
90.00 11 40 40 3001.64 -28.19 91.80 250.15 87.71 12 30 42 2001.6 -26.30 64.95
100.00 13 12 38 2704.97 -29.84 70.04 250.20 88.88 13 57 43 1705.0 -27.27 42.91
110.00 14 43 59 2419.08 -34.10 48.30 250.17 92.00 15 24 18 1419.1 -29.73 20.45

DIFFERENTIAL CORRECTIONS

TDE -.3246 TRA -.6591 TC3 .1301 BAU .4084
RDE -.2988 RRA -.0489 RC3-1.4498 FAU .38844
FDE 1.7681 FRA-2.8371 FC-16.0234 BSP 2176
BDE .4412 BRA .6609 BC3 1.4557 FSP 2241

MID-COURSE EXECUTION ACCURACY

SGT 963.8 SGR 1381.4 SG3 1322.6
RRT .0368 RRF .8945 RTF .0593
SGB 1684.4 R23 .0247 R13 .8942
SG1 1382.3 SG2 962.5 THA 87.14

ORBIT DETERMINATION ACCURACY

ST 24.1 SR 18.8 SS 30.0
CRT .8633 CRS .8312 CST .5019
LSA 38.3 MSA 18.8 SSA 3.4
EL1 29.6 EL2 7.7 ALF 36.92

LAUNCH DATE AUG 22 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.951 GAL 4.45 AZL 88.34 HCA 126.66 SMA 198.53 ECC .24952 INC 1.6612 V1 29.447
RP 236.98 LAP 1.33 LOP 95.43 VP 21.251 GAP 9.23 AZP 90.99 TAL 22.57 TAP 149.23 RCA 148.99 APO 248.07 V2 23.191
RC 201.073 GL 12.02 GP -17.82 ZAL 50.38 ZAP 122.09 ETS 193.55 ZAE 154.11 ETE 227.80 ZAC 66.46 ETC 284.03 LVI -.65

DISTANCE 418.142

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.930 VHL 4.575 DLA 18.16 RAL 11.88 RAD 6643.2 VEL 11.871 PTH 6.88 VHP 2.721 DPA -2.45 RAP 43.19 ECC 1.3448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.00 8 55 26 3511.73 -46.42 129.19 248.25 101.87 9 53 58 2511.7 -36.65 99.43
60.00 9 13 50 3462.75 -39.91 126.20 249.66 96.10 10 11 33 2462.7 -33.16 97.32
70.00 9 41 29 3381.32 -34.12 120.09 250.15 91.58 10 37 51 2381.3 -29.92 92.17
80.00 10 26 6 3241.49 -29.82 109.49 250.15 88.45 11 20 8 2241.5 -27.43 82.32
90.00 11 36 41 3013.65 -28.16 92.68 250.08 87.27 12 26 55 2013.7 -26.45 65.80
100.00 13 8 58 2715.96 -29.82 70.86 250.15 88.45 13 54 14 1716.0 -27.43 43.69
110.00 14 40 56 2428.13 -34.12 49.01 250.15 91.58 15 21 24 1428.1 -29.92 21.09

DIFFERENTIAL CORRECTIONS

TDE -.3200 TRA -.6749 TC3 .0416 BAU .4242
RDE -.2830 RRA -.0638 RC3-1.5155 FAU .39975
FDE 1.8780 FRA-2.9496 FC-16.5352 BSP 2264
BDE .4272 BRA .6779 BC3 1.5160 FSP 2317

MID-COURSE EXECUTION ACCURACY

SGT 976.4 SGR 1433.7 SG3 1364.9
RRT .1172 RRF .9040 RTF .1258
SGB 1734.6 R23 .0678 R13 .9016
SG1 1442.0 SG2 964.0 THA 81.71

ORBIT DETERMINATION ACCURACY

ST 24.1 SR 17.9 SS 31.3
CRT .8634 CRS .8239 CST .4926
LSA 38.7 MSA 19.3 SSA 3.3
EL1 29.0 EL2 7.5 ALF 35.38

LAUNCH DATE AUG 22 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

DISTANCE 421.927

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.942 GAL 4.44 AZL 88.29 HCA 127.62 SMA 198.36 ECC .24884 INC 1.7095 V1 29.447  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.200 GAP 8.97 AZP 91.04 TAL 22.56 TAP 150.18 RCA 149.00 APO 247.72 V2 23.157  
 RC 204.040 GL 12.38 GP -18.30 ZAL 50.45 ZAP 120.50 ETS 193.15 ZAE 152.63 ETE 225.59 ZAC 66.12 ETC 284.13 LVI -.36

PLANETOCENTRIC CONIC

C3 20.878 VHL 4.569 DLA 18.50 RAL 11.73 RAD 6643.2 VEL 11.869 PTH 6.88 VHP 2.682 DPA -3.10 RAP 42.78 ECC 1.3436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 24 3518.18 -46.51 129.79 248.36 101.42 9 52 2 2318.2 -36.86 99.86  
 60.00 9 11 19 3470.48 -39.97 126.85 249.71 95.67 10 9 9 2470.5 -33.38 97.86  
 70.00 9 38 21 3390.84 -34.14 120.83 250.14 91.14 10 34 52 2390.6 -30.11 92.85  
 80.00 10 22 18 3253.09 -29.80 110.35 250.10 87.99 11 16 31 2253.1 -27.59 83.15  
 90.00 11 32 33 3026.34 -28.11 93.60 250.02 86.81 12 22 59 2026.3 -26.60 66.70  
 100.00 13 5 10 2727.57 -29.80 71.72 250.10 87.99 13 50 38 1727.6 -27.59 44.51  
 110.00 14 37 48 2437.66 -34.14 49.75 250.14 91.14 15 18 25 1437.7 -30.11 21.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3146 TRA -.8920 TC3 -.0524 BAW .4418 SGT 997.6 SGR 1487.3 SG3 1405.8 ST 24.0 SR 16.9 SS 32.6  
 RDE -.2661 RRA -.0789 RC3-1.5819 FAU .41064 RRT .1998 RRF .9125 RTF .2131 CRT .8638 CR8 .8150 C8T .4820  
 FDE 1.9938 FRA-3.0574 FC-17.0279 BSP 2369 SGB 1790.9 R23 .1017 R13 .9074 L8A 39.1 M8A 19.8 S8A 3.3  
 BDE .4121 BRA .6965 BC3 1.5828 F8P 2394 SG1 1510.1 SG2 962.7 THA 77.02 EL1 28.5 EL2 7.2 ALF 33.71

LAUNCH DATE AUG 22 1973

FLIGHT TIME 188.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

DISTANCE 425.714

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.934 GAL 4.42 AZL 88.24 HCA 128.58 SMA 198.21 ECC .24821 INC 1.7589 V1 29.447  
 RP 237.65 LAP 1.38 LOP 97.36 VP 21.150 GAP 8.71 AZP 91.10 TAL 22.53 TAP 151.12 RCA 149.01 APO 247.41 V2 23.123  
 RC 207.005 GL 12.76 GP -18.78 ZAL 50.53 ZAP 118.91 ETS 192.74 ZAE 151.10 ETE 223.54 ZAC 65.78 ETC 284.24 LVI -.05

PLANETOCENTRIC CONIC

C3 20.830 VHL 4.564 DLA 18.85 RAL 11.58 RAD 6643.2 VEL 11.867 PTH 6.88 VHP 2.648 DPA -3.77 RAP 42.36 ECC 1.3428  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 19 3524.96 -46.60 130.42 248.50 100.94 9 50 4 2525.0 -37.11 100.32  
 60.00 9 8 44 3478.60 -40.02 127.53 249.78 95.20 10 6 42 2478.6 -33.60 98.43  
 70.00 9 35 8 3400.86 -34.15 121.62 250.16 90.68 10 31 49 2400.9 -30.30 93.56  
 80.00 10 18 22 3265.33 -29.78 111.26 250.08 87.52 11 12 48 2265.3 -27.76 84.02  
 90.00 11 28 15 3039.75 -28.06 94.58 249.97 86.32 12 18 55 2039.7 -26.76 67.65  
 100.00 13 1 14 2739.80 -29.76 72.63 250.08 87.52 13 46 54 1739.8 -27.76 45.38  
 110.00 14 34 34 2447.68 -34.15 50.53 250.16 90.68 15 15 22 1447.7 -30.30 22.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3081 TRA -.7103 TC3 -.1511 BAW .4613 SGT 1027.8 SGR 1543.0 SG3 1445.7 ST 24.0 SR 15.9 SS 34.0  
 RDE -.2486 RRA -.0946 RC3-1.6497 FAU .42121 RRT .2816 RRF .9204 RTF .2985 CRT .8645 CR8 .8029 C8T .4684  
 FDE 2.1117 FRA-3.1646 FC-17.5062 BSP 2484 SGB 1854.0 R23 .1270 R13 .9125 L8A 39.5 M8A 20.2 S8A 3.2  
 BDE .3959 BRA .7166 BC3 1.6566 F8P 2464 SG1 1586.6 SG2 959.1 THA 73.00 EL1 27.9 EL2 6.8 ALF 31.97

LAUNCH DATE AUG 22 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

DISTANCE 429.503

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.927 GAL 4.41 AZL 88.19 HCA 129.54 SMA 198.07 ECC .24763 INC 1.8096 V1 29.447  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.103 GAP 8.45 AZP 91.15 TAL 22.50 TAP 152.04 RCA 149.02 APO 247.12 V2 23.090  
 RC 209.965 GL 13.14 GP -19.27 ZAL 50.63 ZAP 117.30 ETS 192.32 ZAE 149.54 ETE 221.63 ZAC 65.44 ETC 284.35 LVI .26

PLANETOCENTRIC CONIC

C3 20.788 VHL 4.559 DLA 19.21 RAL 11.44 RAD 6643.2 VEL 11.866 PTH 6.88 VHP 2.612 DPA -4.44 RAP 41.93 ECC 1.3421  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 13 3532.08 -46.69 131.08 248.66 100.44 9 48 3 2532.1 -37.37 100.61  
 60.00 9 8 5 3487.13 -40.07 128.25 249.87 94.72 10 4 12 2487.1 -33.84 99.04  
 70.00 9 31 49 3411.39 -34.15 122.44 250.19 90.19 10 28 40 2411.4 -30.51 94.32  
 80.00 10 14 17 3278.23 -29.72 112.22 250.07 87.02 11 8 56 2278.2 -27.93 84.94  
 90.00 11 23 47 3053.92 -27.99 95.81 249.94 85.81 12 14 41 2053.9 -26.91 68.86  
 100.00 12 57 9 2752.70 -29.72 73.99 250.07 87.02 13 43 2 1752.7 -27.93 46.30  
 110.00 14 31 15 2458.21 -34.15 51.36 250.19 90.19 15 12 13 1458.2 -30.51 23.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3001 TRA -.7294 TC3 -.2535 BAW .4828 SGT 1066.8 SGR 1600.6 SG3 1484.7 ST 23.0 SR 14.8 SS 35.3  
 RDE -.2304 RRA -.1107 RC3-1.7188 FAU .43145 RRT .3599 RRF .9275 RTF .3.94 CRT .8658 CR8 .7869 C8T .4516  
 FDE 2.2316 FRA-3.2701 FC-17.9687 BSP 2617 SGB 1923.5 R23 .1448 R13 .9174 L8A 40.0 M8A 20.6 S8A 3.1  
 BDE .3783 BRA .7378 BC3 1.7374 F8P 2534 SG1 1670.5 SG2 953.7 THA 69.60 EL1 27.3 EL2 6.5 ALF 30.19

LAUNCH DATE AUG 22 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

DISTANCE 433.292

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.921 GAL 4.39 AZL 88.14 HCA 130.80 SMA 197.94 ECC .24710 INC 1.8815 V1 29.447  
 RP 238.30 LAP 1.42 LOP 99.27 VP 21.056 GAP 8.20 AZP 91.21 TAL 22.46 TAP 152.93 RCA 149.03 APO 246.86 V2 23.058  
 RC 212.919 GL 13.54 GP -19.78 ZAL 50.75 ZAP 115.70 ETS 191.88 ZAE 147.94 ETE 219.90 ZAC 65.10 ETC 284.47 LVI .57

PLANETOCENTRIC CONIC

C3 20.750 VHL 4.555 DLA 19.59 RAL 11.31 RAD 6643.2 VEL 11.864 PTH 6.88 VHP 2.592 DPA -5.13 RAP 41.50 ECC 1.3415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 3 3539.94 -46.78 131.78 248.85 99.91 9 46 3 2539.5 -37.64 101.32  
 60.00 9 3 23 3496.07 -40.12 129.01 249.99 94.21 10 1 39 2496.1 -34.08 99.67  
 70.00 9 28 23 3422.46 -34.15 123.30 250.24 89.68 10 25 25 2422.5 -30.71 95.11  
 80.00 10 10 3 3291.84 -29.67 113.23 250.07 86.49 11 4 55 2291.8 -28.11 85.91  
 90.00 11 19 7 3068.89 -27.91 96.70 249.92 85.27 12 10 15 2068.9 -27.07 69.73  
 100.00 12 52 55 2766.31 -29.67 74.59 250.07 86.49 13 39 1 1766.3 -28.11 47.28  
 110.00 14 27 49 2469.28 -34.15 52.22 250.24 89.68 15 8 58 1469.3 -30.71 24.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2902 TRA -.7491 TC3 -.3591 BAW .5062 SGT 1113.8 SGR 1660.3 SG3 1522.3 ST 23.6 SR 13.8 SS 36.7  
 RDE -.2116 RRA -.1273 RC3-1.7891 FAU .44133 RRT .4329 RRF .9340 RTF .4543 CRT .8678 CR8 .7654 C8T .4302  
 FDE 2.3508 FRA-3.3744 FC-18.4136 BSP 2760 SGB 1999.2 R23 .1564 R13 .9225 L8A 40.5 M8A 21.0 S8A 3.1  
 BDE .3591 BRA .7598 BC3 1.8248 F8P 2595 SG1 1760.9 SG2 946.6 THA 66.72 EL1 26.7 EL2 6.1 ALF 28.42

LAUNCH DATE AUG 22 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC										DISTANCE 437.083										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LOL	328.76	VL	32.915	GAL	4.38	AZL	88.09	HCA	131.45	SMA	197.83	ECC	.24660	INC	1.9148	V1	29.447	RP	238.63	LAP	1.44	LOP	100.22	VP	21.011	GAP	7.94	AZP	91.27	TAL	22.41	TAP	153.86	RCA	149.05	APO	246.62	V2	23.024	RC	215.868	GL	13.94	GP	-20.26	ZAL	50.87	ZAP	114.09	ETS	191.42	ZAE	146.31	ETE	218.26	ZAC	64.76	ETC	284.98	LVI	.89
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.717	VHL	4.552	DLA	19.98	RAL	11.18	RAD	6643.2	VEL	11.863	PTH	6.88	VHP	2.554	DPA	-5.82	RAP	41.06	ECC	1.3409	ST	23.3	SR	12.8	SS	37.9	SGT	1165.8	SGR	1723.9	SG3	1560.4	CRT	.8705	CR8	.7349	C8T	.4001																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	41.0	MSA	21.4	SSA	3.0	SG6	2081.1	R23	.1614	R13	.9281	EL1	26.0	EL2	5.6	ALF	26.86																						
50.00	8	44	51	3547.35	-46.87	132.52	249.07	93.35	9	43	39	2547.4	-37.91	101.86	50.00	8	44	51	3547.35	-46.87	132.52	249.07	93.35	9	43	39	2547.4	-37.91	101.86	50.00	8	44	51	3547.35	-46.87	132.52	249.07	93.35	9	43	39	2547.4	-37.91	101.86																					

LAUNCH DATE AUG 22 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC										DISTANCE 440.873										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LOL	328.76	VL	32.910	GAL	4.38	AZL	88.03	HCA	132.40	SMA	197.73	ECC	.24614	INC	1.9695	V1	29.447	RP	238.95	LAP	1.45	LOP	101.17	VP	20.968	GAP	7.69	AZP	91.33	TAL	22.35	TAP	154.74	RCA	149.06	APO	246.40	V2	22.991	RC	218.810	GL	14.36	GP	-20.76	ZAL	51.02	ZAP	112.49	ETS	190.95	ZAE	144.66	ETE	216.73	ZAC	64.41	ETC	284.69	LVI	1.21
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.687	VHL	4.548	DLA	20.38	RAL	11.07	RAD	6643.1	VEL	11.861	PTH	6.88	VHP	2.529	DPA	-6.52	RAP	40.62	ECC	1.3405	ST	23.5	SR	11.4	SS	39.8	SGT	1248.0	SGR	1778.4	SG3	1587.5	CRT	.8788	CR8	.7037	C8T	.3893																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	42.2	MSA	21.7	SSA	2.9	SG6	2172.6	R23	.1772	R13	.9302	EL1	25.6	EL2	5.0	ALF	24.05																						
50.00	8	42	36	3555.56	-46.96	133.29	249.31	98.76	9	41	52	2555.6	-38.20	102.44	50.00	8	42	36	3555.56	-46.96	133.29	249.31	98.76	9	41	52	2555.6	-38.20	102.44	50.00	8	42	36	3555.56	-46.96	133.29	249.31	98.76	9	41	52	2555.6	-38.20	102.44																					

LAUNCH DATE AUG 22 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC										DISTANCE 444.665										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LOL	328.76	VL	32.905	GAL	4.34	AZL	87.97	HCA	133.35	SMA	197.64	ECC	.24572	INC	2.0257	V1	29.447	RP	239.26	LAP	1.47	LOP	102.12	VP	20.926	GAP	7.44	AZP	91.39	TAL	22.28	TAP	155.62	RCA	149.08	APO	246.21	V2	22.960	RC	221.744	GL	14.78	GP	-21.26	ZAL	51.17	ZAP	110.88	ETS	190.46	ZAE	142.98	ETE	215.30	ZAC	64.07	ETC	284.80	LVI	1.54
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.664	VHL	4.546	DLA	20.80	RAL	10.95	RAD	6643.1	VEL	11.860	PTH	6.88	VHP	2.506	DPA	-7.23	RAP	40.18	ECC	1.3401	ST	23.3	SR	10.2	SS	41.3	SGT	1326.2	SGR	1840.4	SG3	1618.1	CRT	.8882	CR8	.6509	C8T	.3600																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	43.1	MSA	22.1	SSA	2.8	SG6	2268.4	R23	.1819	R13	.9343	EL1	25.1	EL2	4.4	ALF	22.01																						
50.00	8	40	18	3564.13	-47.04	134.10	249.58	98.14	9	39	42	2564.1	-38.50	103.04	50.00	8	40	18	3564.13	-47.04	134.10	249.58	98.14	9	39	42	2564.1	-38.50	103.04	50.00	8	40	18	3564.13	-47.04	134.10	249.58	98.14	9	39	42	2564.1	-38.50	103.04																					

LAUNCH DATE AUG 22 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC										DISTANCE 448.457										EARTH TO MARS																																													
RL	151.31	LAL	-.00	LOL	328.76	VL	32.901	GAL	4.32	AZL	87.92	HCA	134.29	SMA	197.87	ECC	.24534	INC	2.0836	V1	29.447	RP	239.57	LAP	1.49	LOP	103.07	VP	20.885	GAP	7.20	AZP	91.46	TAL	22.20	TAP	156.49	RCA	149.10	APO	246.04	V2	22.928	RC	224.672	GL	15.22	GP	-21.77	ZAL	51.35	ZAP	109.29	ETS	189.96	ZAE	141.29	ETE	213.95	ZAC	63.72	ETC	284.91	LVI	1.88
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	20.645	VHL	4.544	DLA	21.23	RAL	10.84	RAD	6643.1	VEL	11.860	PTH	6.87	VHP	2.486	DPA	-7.94	RAP	39.75	ECC	1.3398	ST	23.2	SR	9.1	SS	42.8	SGT	1412.8	SGR	1903.0	SG3	1645.8	CRT	.9006	CR8	.5756	C8T	.3269																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	44.1	MSA	22.3	SSA	2.7	SG6	2370.1	R23	.1853	R13	.9382	EL1	24.6	EL2	3.7	ALF	19.98																						
50.00	8	37	55	3573.11	-47.12	134.95	249.87	97.49	9	37	28	2573.1	-38.81	103.68	50.00	8	37	55	3573.11	-47.12	134.95	249.87	97.49	9	37	28	2573.1	-38.81	103.68	50.00	8	37	55	3573.11	-47.12	134.95	249.87	97.49	9	37	28	2573.1	-38.81	103.68																					



LAUNCH DATE AUG 22 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

DISTANCE 452.249

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.898 GAL 4.30 AZL 87.86 HCA 138.23 SMA 197.80 ECC .24498 INC 2.1432 V1 29.447
RP 239.88 LAP 1.51 LOP 104.01 VP 20.848 GAP 6.95 AZP 91.52 TAL 22.11 TAP 187.35 RCA 149.12 APO 245.89 V2 22.807
RC 227.591 GL 15.67 GP -22.28 ZAL 51.53 ZAP 107.70 ETS 189.44 ZAE 139.59 ETE 212.66 ZAC 63.37 ETC 285.02 LVI 2.22

PLANETOCENTRIC CONIC

C3 20.632 VHL 4.542 DLA 21.88 RAL 10.73 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.468 DPA -8.65 RAP 39.32 ECC 1.3395
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 35 28 3582.49 -47.20 135.85 250.19 96.80 9 35 11 2582.5 -39.12 104.35
60.00 8 48 31 3947.72 -40.20 133.39 250.86 91.24 9 47 39 2547.7 -35.38 103.43
70.00 9 9 10 3486.91 -34.01 128.33 250.72 86.71 10 7 17 2486.9 -31.81 99.81
80.00 9 45 43 3372.32 -29.19 119.18 250.23 83.41 10 41 55 2372.3 -28.97 91.73
90.00 10 51 57 3158.48 -27.24 103.17 249.95 82.10 11 44 35 2158.5 -27.81 76.17
100.00 12 28 35 2846.79 -29.19 80.53 250.23 83.41 13 16 1 1846.8 -28.97 53.10
110.00 14 8 37 2533.72 -34.01 57.25 250.72 86.71 14 50 50 1533.7 -31.81 28.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2304 TRA -.8748 TC3 -.9694 BAU .6473 SGT 1506.7 SGR 1966.2 SG3 1670.7 ST 23.0 SR 6.1 SS 44.3
RDE -.0986 RRA -.2091 RC3-2.1373 FAU .47888 RRT .7031 RRF .9578 RTF .7217 CRT .9141 CRS .4664 CST .2881
FDE 3.0319 FRA-3.7617 FC-20.0944 BSP 3688 SGB 2477.1 R23 .1872 R13 .9418 LSA 45.2 MSA 22.6 SSA 2.7
BDE .2506 BRA .8994 BC3 2.3469 FSP 2887 SG1 2301.9 SG2 915.1 THA 55.48 EL1 24.2 EL2 3.1 ALF 18.09

LAUNCH DATE AUG 22 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

DISTANCE 456.042

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.895 GAL 4.28 AZL 87.80 HCA 136.17 SMA 197.45 ECC .24466 INC 2.2046 V1 29.447
RP 240.18 LAP 1.53 LOP 104.95 VP 20.807 GAP 6.71 AZP 91.59 TAL 22.02 TAP 158.19 RCA 149.14 APO 245.75 V2 22.866
RC 230.502 GL 16.13 GP -22.80 ZAL 51.73 ZAP 106.12 ETS 188.91 ZAE 137.87 ETE 211.45 ZAC 63.02 ETC 285.13 LVI 2.57

PLANETOCENTRIC CONIC

C3 20.624 VHL 4.541 DLA 22.14 RAL 10.62 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.453 DPA -9.37 RAP 38.89 ECC 1.3394
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 56 3592.32 -47.28 136.78 250.53 96.09 9 32 48 2592.3 -39.45 105.06
60.00 8 45 13 3559.58 -40.30 134.40 251.09 90.55 9 44 33 2559.6 -35.67 104.31
70.00 9 4 49 3501.87 -33.95 129.49 250.86 86.03 10 3 11 2501.9 -32.03 100.92
80.00 9 40 3 3391.39 -29.03 120.55 250.29 82.69 10 36 34 2391.4 -29.13 93.13
90.00 10 45 31 3180.03 -27.03 104.71 249.97 81.36 11 38 31 2180.0 -27.93 77.74
100.00 12 22 55 2865.86 -29.03 81.92 250.29 82.69 13 10 40 1865.9 -29.13 54.50
110.00 14 4 15 2548.69 -33.95 58.41 250.86 86.03 14 46 44 1548.7 -32.03 29.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2134 TRA -.9028 TC3-1.1011 BAU .6801 SGT 1607.7 SGR 2030.3 SG3 1693.1 ST 22.9 SR 7.2 SS 45.8
RDE -.0733 RRA -.2261 RC3-2.2072 FAU .48430 RRT .7378 RRF .9614 RTF .7552 CRT .9230 CRS .3086 CST .2439
FDE 3.1671 FRA-3.8221 FC-20.3296 BSP 3906 SGB 2589.8 R23 .1882 R13 .9452 LSA 46.4 MSA 22.8 SSA 2.6
BDE .2256 BRA .9307 BC3 2.4666 FSP 2928 SG1 2425.2 SG2 908.5 THA 53.85 EL1 23.8 EL2 2.7 ALF 16.39

LAUNCH DATE AUG 22 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC

DISTANCE 459.835

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.893 GAL 4.25 AZL 87.73 HCA 137.11 SMA 197.40 ECC .24437 INC 2.2680 V1 29.447
RP 240.48 LAP 1.54 LOP 105.89 VP 20.770 GAP 6.47 AZP 91.66 TAL 21.92 TAP 159.03 RCA 149.16 APO 245.64 V2 22.836
RC 233.405 GL 16.61 GP -23.31 ZAL 51.95 ZAP 104.56 ETS 188.35 ZAE 136.15 ETE 210.29 ZAC 62.66 ETC 285.24 LVI 2.93

PLANETOCENTRIC CONIC

C3 20.622 VHL 4.541 DLA 22.62 RAL 10.52 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.440 DPA -10.10 RAP 38.47 ECC 1.3394
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 30 19 3602.59 -47.35 137.77 250.90 95.33 9 30 21 2602.6 -39.79 105.82
60.00 8 41 47 3572.01 -40.30 135.46 251.34 89.84 9 41 19 2572.0 -35.95 105.24
70.00 9 0 15 3517.63 -33.87 130.72 251.00 85.31 9 58 53 2517.6 -32.26 102.09
80.00 9 34 2 3411.68 -28.84 122.03 250.34 81.93 10 30 54 2411.7 -29.29 94.81
90.00 10 38 38 3203.11 -26.78 106.35 249.99 80.57 11 32 1 2203.1 -28.05 78.41
100.00 12 18 54 2886.15 -28.84 83.40 250.34 81.93 13 5 0 1886.1 -29.29 55.98
110.00 13 59 41 2584.45 -33.87 59.63 251.00 85.31 14 42 26 1584.4 -32.26 31.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1937 TRA -.9305 TC3-1.2330 BAU .7144 SGT 1712.2 SGR 2097.7 SG3 1714.8 ST 22.7 SR 6.6 SS 47.3
RDE -.0480 RRA -.2448 RC3-2.2792 FAU .48932 RRT .7680 RRF .9647 RTF .7543 CRT .9156 CRS .0953 CST .1901
FDE 3.2926 FRA-3.8917 FC-20.5508 BSP 4121 SGB 2707.8 R23 .1870 R13 .9488 LSA 47.5 MSA 23.0 SSA 2.5
BDE .1995 BRA .9622 BC3 2.5913 FSP 2945 SG1 2553.5 SG2 900.8 THA 52.45 EL1 23.5 EL2 2.6 ALF 15.16

LAUNCH DATE AUG 22 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC

DISTANCE 463.627

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.891 GAL 4.23 AZL 87.87 HCA 138.05 SMA 197.38 ECC .24411 INC 2.3336 V1 29.447
RP 240.78 LAP 1.56 LOP 106.83 VP 20.735 GAP 6.22 AZP 91.74 TAL 21.81 TAP 159.85 RCA 149.18 APO 245.54 V2 22.807
RC 236.297 GL 17.10 GP -23.84 ZAL 52.18 ZAP 103.01 ETS 187.79 ZAE 134.44 ETE 209.18 ZAC 62.30 ETC 285.35 LVI 3.30

PLANETOCENTRIC CONIC

C3 20.625 VHL 4.541 DLA 23.12 RAL 10.42 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.430 DPA -10.82 RAP 38.07 ECC 1.3394
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 27 35 3613.35 -47.41 138.80 251.30 94.54 9 27 49 2613.4 -40.14 106.61
60.00 8 38 12 3585.06 -40.29 136.57 251.61 89.08 9 37 57 2585.1 -36.25 106.22
70.00 8 55 27 3334.28 -33.77 132.00 251.16 84.55 9 54 21 2534.3 -32.49 103.34
80.00 9 27 38 3433.34 -28.63 123.60 250.40 81.13 10 24 91 2433.3 -29.43 96.21
90.00 10 31 14 3227.98 -26.49 108.11 250.00 79.73 11 25 2 2228.0 -28.15 81.23
100.00 12 10 29 2907.81 -28.63 84.97 250.40 81.13 12 58 57 1907.8 -29.43 57.58
110.00 13 54 53 2581.10 -33.77 60.92 251.16 84.55 14 37 54 1581.1 -32.49 32.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1747 TRA -.9623 TC3-1.3735 BAU .7490 SGT 1829.6 SGR 2158.4 SG3 1727.9 ST 22.7 SR 6.3 SS 49.1
RDE -.0184 RRA -.2599 RC3-2.3435 FAU .49223 RRT .7929 RRF .9674 RTF .8074 CRT .8652 CRS -.1814 CST .1411
FDE 3.4493 FRA-3.9161 FC-20.6610 BSP 4366 SGB 2829.5 R23 .1895 R13 .9510 LSA 49.2 MSA 23.2 SSA 2.4
BDE .1757 BRA .9967 BC3 2.7164 FSP 2996 SG1 2683.7 SG2 896.6 THA 50.91 EL1 23.4 EL2 3.1 ALF 13.80

LAUNCH DATE AUG 22 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.888 GAL 4.20 AZL 87.60 HCA 138.98 SMA 197.33 ECC .24388 INC 2.4014 V1 29.447  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.700 GAP 5.99 AZP 91.81 TAL 21.69 TAP 160.67 RCA 149.21 APO 245.45 V2 22.777  
 RC 239.179 GL 17.61 GP -24.36 ZAL 52.42 ZAP 101.48 ETS 107.21 ZAE 132.72 ETE 208.12 ZAC 61.94 ETC 285.46 LVI 3.67

DISTANCE 467.419

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.635 VHL 4.543 DLA 23.63 RAL 10.31 RAD 6643.1 VEL 11.859 PTH 6.87 VHP 2.422 DPA -11.55 RAP 37.67 ECC 1.3398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 45 3624.61 -47.47 139.88 251.72 93.71 9 25 10 2624.6 -40.49 107.46  
 60.00 8 34 28 3598.78 -40.27 137.73 251.89 88.29 9 34 26 2598.8 -36.54 107.26  
 70.00 8 50 23 3551.86 -33.65 133.36 251.32 83.76 9 49 35 2551.9 -32.71 104.66  
 80.00 9 20 46 3456.53 -28.37 125.28 250.45 80.29 10 18 23 2456.5 -29.57 97.92  
 90.00 10 23 13 3254.89 -26.15 110.01 249.99 78.84 11 17 28 2254.9 -28.22 83.19  
 100.00 12 3 38 2931.00 -28.37 86.65 250.45 80.29 12 52 29 1931.0 -29.57 59.29  
 110.00 13 49 49 2598.67 -33.65 62.28 251.32 83.76 14 33 8 1598.7 -32.71 33.58

DIFFERENTIAL CORRECTIONS

TDE -.1528 TRA -.9934 TC3-1.5132 BAU .7852  
 RDE .0106 RRA -.2771 RC3-2.4106 FAU .49494  
 FDE 3.5873 FRA-3.9545 FC-20.7646 B8P 4608  
 BDE .1530 BRA 1.0314 BC3 2.8462 F8P 3021

MID-COURSE EXECUTION ACCURACY

SGT 1948.8 SGR 2223.1 SG3 1740.9  
 RRT .8148 RRF .9701 RTF .8279  
 SGB 2956.4 R23 .1895 R13 .9536  
 SG1 2818.9 SG2 890.9 THA 49.60

ORBIT DETERMINATION ACCURACY

ST 22.8 SR 6.6 S8 50.7  
 CRT .7800 CR8 -.4433 CST .0806  
 LSA 50.8 MSA 23.3 S8A 2.4  
 EL1 23.4 EL2 4.0 ALF 13.21

LAUNCH DATE AUG 22 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.888 GAL 4.18 AZL 87.53 HCA 139.91 SMA 197.31 ECC .24367 INC 2.4716 V1 29.447  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.667 GAP 5.75 AZP 91.89 TAL 21.57 TAP 161.48 RCA 149.23 APO 245.39 V2 22.749  
 RC 242.049 GL 18.14 GP -24.89 ZAL 52.68 ZAP 99.97 ETS 186.61 ZAE 131.00 ETE 207.09 ZAC 61.57 ETC 285.57 LVI 4.06

DISTANCE 471.212

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.653 VHL 4.545 DLA 24.17 RAL 10.21 RAD 6643.1 VEL 11.860 PTH 6.87 VHP 2.416 DPA -12.28 RAP 37.28 ECC 1.3399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 48 3636.40 -47.51 141.02 252.16 92.83 9 22 25 2636.4 -40.86 108.35  
 60.00 8 30 32 3613.14 -40.23 138.95 252.19 87.46 9 30 45 2613.1 -36.85 108.36  
 70.00 8 45 1 3570.45 -33.50 134.79 251.48 82.92 9 44 31 2570.5 -32.93 106.07  
 80.00 9 13 23 3481.44 -28.07 127.07 250.50 79.39 10 11 25 2481.4 -29.68 99.76  
 90.00 10 14 28 3284.21 -25.75 112.06 249.98 77.89 11 9 12 2284.2 -28.27 85.33  
 100.00 11 56 15 2955.91 -28.07 88.44 250.50 79.39 12 45 31 1955.9 -29.68 61.13  
 110.00 13 44 27 2617.27 -33.50 63.71 251.48 82.92 14 28 5 1617.3 -32.93 34.99

DIFFERENTIAL CORRECTIONS

TDE -.1278 TRA -1.0245 TC3-1.6521 BAU .8226  
 RDE .0392 RRA -.2956 RC3-2.4792 FAU .49733  
 FDE 3.7092 FRA-3.9931 FC-20.8475 B8P 4846  
 BDE .1335 BRA 1.0663 BC3 2.9793 F8P 3023

MID-COURSE EXECUTION ACCURACY

SGT 2070.0 SGR 2290.6 SG3 1752.4  
 RRT .8339 RRF .9725 RTF .8459  
 SGB 3087.4 R23 .1879 R13 .9563  
 SG1 2957.9 SG2 884.8 THA 48.47

ORBIT DETERMINATION ACCURACY

ST 22.8 SR 7.4 S8 52.1  
 CRT .6957 CR8 -.6378 CST .0101  
 LSA 52.3 MSA 23.4 S8A 2.3  
 EL1 23.4 EL2 5.2 ALF 13.42

LAUNCH DATE AUG 22 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.887 GAL 4.15 AZL 87.46 HCA 140.84 SMA 197.30 ECC .24348 INC 2.5443 V1 29.447  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.634 GAP 5.51 AZP 91.97 TAL 21.44 TAP 162.28 RCA 149.26 APO 245.33 V2 22.720  
 RC 244.907 GL 18.68 GP -25.43 ZAL 52.95 ZAP 98.48 ETS 185.99 ZAE 129.29 ETE 208.10 ZAC 61.19 ETC 285.67 LVI 4.45

DISTANCE 475.003

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.677 VHL 4.547 DLA 24.72 RAL 10.11 RAD 6643.1 VEL 11.861 PTH 6.88 VHP 2.412 DPA -13.01 RAP 36.92 ECC 1.3403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 43 3648.75 -47.55 142.21 252.63 91.91 9 19 32 2648.7 -41.24 109.29  
 60.00 8 26 24 3628.26 -40.18 140.24 252.50 86.59 9 26 52 2628.3 -37.15 109.53  
 70.00 8 39 19 3590.18 -33.32 136.31 251.65 82.04 9 39 10 2590.2 -33.15 107.57  
 80.00 9 5 24 3508.39 -27.72 129.00 250.53 78.44 10 3 52 2508.4 -29.77 101.76  
 90.00 10 4 49 3316.49 -25.27 114.30 249.93 76.87 11 0 5 2316.5 -28.28 87.69  
 100.00 11 48 15 2982.86 -27.72 90.36 250.53 78.44 12 37 58 1982.9 -29.77 63.13  
 110.00 13 38 46 2637.00 -33.32 65.22 251.65 82.04 14 22 43 1637.0 -33.15 36.48

DIFFERENTIAL CORRECTIONS

TDE -.1020 TRA -1.0581 TC3-1.7961 BAU .8604  
 RDE .0717 RRA -.3121 RC3-2.5420 FAU .49777  
 FDE 3.8532 FRA-4.0089 FC-20.8418 B8P 5104  
 BDE .1247 BRA 1.1032 BC3 3.1125 F8P 3044

MID-COURSE EXECUTION ACCURACY

SGT 2199.7 SGR 2353.7 SG3 1757.5  
 RRT .8498 RRF .9747 RTF .5004  
 SGB 3221.6 R23 .1885 R13 .9582  
 SG1 3098.9 SG2 880.7 THA 47.28

ORBIT DETERMINATION ACCURACY

ST 23.1 SR 8.6 S8 53.8  
 CRT .6145 CR8 -.7787 CST -.0581  
 LSA 54.3 MSA 23.5 S8A 2.2  
 EL1 23.7 EL2 6.6 ALF 14.08

LAUNCH DATE AUG 22 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

RL 151.31 LAL -.00 LOL 328.76 VL 32.887 GAL 4.12 AZL 87.38 HCA 141.76 SMA 197.29 ECC .24332 INC 2.6199 V1 29.447  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.603 GAP 5.28 AZP 92.06 TAL 21.30 TAP 163.07 RCA 149.28 APO 245.29 V2 22.692  
 RC 247.751 GL 19.24 GP -25.97 ZAL 53.24 ZAP 97.01 ETS 185.37 ZAE 127.60 ETE 205.15 ZAC 60.81 ETC 285.78 LVI 4.86

DISTANCE 478.794

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 20.709 VHL 4.551 DLA 25.29 RAL 10.00 RAD 6643.2 VEL 11.862 PTH 6.88 VHP 2.411 DPA -13.73 RAP 36.57 ECC 1.3408  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 29 3661.70 -47.57 143.46 253.13 90.95 9 16 31 2661.7 -41.62 110.30  
 60.00 8 22 3 3644.18 -40.11 141.59 252.83 85.68 9 22 47 2644.2 -37.46 110.77  
 70.00 8 33 16 3611.15 -33.11 137.91 251.82 81.12 9 33 27 2611.2 -33.35 109.17  
 80.00 8 56 40 3537.70 -27.30 131.07 250.54 77.42 9 55 38 2537.7 -29.84 103.93  
 90.00 9 54 1 3352.45 -24.69 116.78 249.85 75.76 10 49 54 2352.4 -28.23 90.32  
 100.00 11 39 32 3012.17 -27.30 92.44 250.54 77.42 12 29 44 2012.2 -29.84 65.30  
 110.00 13 32 42 2657.97 -33.11 66.82 251.82 81.12 14 17 0 1658.0 -33.35 38.09

DIFFERENTIAL CORRECTIONS

TDE -.0736 TRA -1.0917 TC3-1.9390 BAU .8991  
 RDE .1047 RRA -.3296 RC3-2.6049 FAU .49767  
 FDE 3.9877 FRA-4.0239 FC-20.8046 B8P 5364  
 BDE .1280 BRA 1.1404 BC3 3.2473 F8P 3051

MID-COURSE EXECUTION ACCURACY

SGT 2331.1 SGR 2418.4 SG3 1760.4  
 RRT .8637 RRF .9767 RTF .8731  
 SGB 3359.0 R23 .1881 R13 .9602  
 SG1 3242.7 SG2 876.2 THA 46.22

ORBIT DETERMINATION ACCURACY

ST 23.4 SR 10.2 S8 55.5  
 CRT .5703 CR8 -.8618 CST -.1329  
 LSA 56.3 MSA 23.6 S8A 2.1  
 EL1 24.2 EL2 8.1 ALF 15.70

LAUNCH DATE AUG 22 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC

DISTANCE 482.585

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.887 GAL 4.09 AZL 87.30 HCA 142.89 SMA 197.29 ECC .24318 INC 2.6984 V1 29.447  
 RP 242.19 LAP 1.84 LOP 111.48 VP 20.573 GAP 5.04 AZP 92.15 TAL 21.16 TAP 163.85 RCA 149.31 APO 245.27 V2 22.665  
 RC 250.560 GL 19.82 GP -26.52 ZAL 53.54 ZAP 95.58 ETS 184.73 ZAE 125.91 ETE 204.22 ZAC 60.42 ETC 285.89 LVI 5.28

PLANETOCENTRIC CONIC

C3 20.750 VHL 4.555 DLA 25.88 RAL 9.89 RAD 6643.2 VEL 11.864 PTH 6.88 VHP 2.412 DPA -14.46 RAP 36.24 ECC 1.3415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 5 3675.28 -47.58 144.78 253.65 89.94 9 13 20 2675.3 -42.01 111.36  
 60.00 8 17 28 3680.95 -40.01 143.00 253.16 84.73 9 18 29 2661.0 -37.77 112.09  
 70.00 8 26 46 3633.51 -32.87 139.60 251.98 80.14 9 27 20 2633.5 -33.55 110.88  
 80.00 8 47 3 3569.87 -26.81 133.33 250.53 76.33 9 46 32 2569.9 -29.86 106.33  
 90.00 9 41 43 3393.26 -23.98 119.55 249.71 74.54 10 38 16 2393.3 -28.12 93.30  
 100.00 11 29 54 3044.35 -26.81 94.70 250.53 76.33 12 20 39 2044.3 -29.86 67.69  
 110.00 13 26 13 2680.32 -32.87 68.52 251.98 80.14 14 10 53 1680.3 -33.55 39.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0431 TRA-1.1263 TC3-2.0826 BAU .9386 SGT 2466.2 SGR 2483.3 SG3 1760.0 ST 23.9 SR 11.9 SS 57.1  
 RDE .1387 RRA -.3470 RC3-2.6664 FAU .49668 RRT .8757 RRF .9785 RTF .8839 CRT .5550 CRS -.9113 CST -.2095  
 FDE 4.1167 FRA-4.0290 FC-20.7224 B8P 5628 SGB 3499.8 R23 .1878 R13 .9619 LSA 58.4 MSA 23.8 SSA 2.0  
 BDE .1453 BRA 1.1785 BC3 3.3833 F8P 3051 SGI 3389.4 SG2 872.4 THA 45.23 EL1 25.0 EL2 9.5 ALF 18.17

LAUNCH DATE AUG 22 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

DISTANCE 486.375

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.887 GAL 4.06 AZL 87.22 HCA 143.61 SMA 197.30 ECC .24307 INC 2.7802 V1 29.447  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.544 GAP 4.81 AZP 92.24 TAL 21.01 TAP 164.62 RCA 149.34 APO 245.25 V2 22.638  
 RC 253.394 GL 20.42 GP -27.07 ZAL 53.86 ZAP 94.17 ETS 184.07 ZAE 124.24 ETE 203.32 ZAC 60.02 ETC 285.99 LVI 5.71

PLANETOCENTRIC CONIC

C3 20.800 VHL 4.561 DLA 26.50 RAL 9.77 RAD 6643.2 VEL 11.866 PTH 6.88 VHP 2.415 DPA -15.19 RAP 35.93 ECC 1.3423  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 31 3689.54 -47.57 146.16 254.19 88.88 9 10 0 2689.5 -42.42 112.50  
 60.00 8 12 36 3678.65 -39.89 144.49 253.50 83.72 9 13 54 2678.7 -38.08 113.49  
 70.00 8 19 48 3657.42 -32.57 141.41 252.14 79.11 9 20 45 2657.4 -33.72 112.73  
 80.00 8 36 18 3605.62 -26.21 135.82 250.47 75.16 9 36 23 2605.6 -29.83 108.98  
 90.00 9 27 16 3440.93 -23.08 122.75 249.49 73.19 10 24 37 2440.9 -27.89 96.77  
 100.00 11 19 9 3080.09 -26.21 97.19 250.47 75.16 12 10 30 2080.1 -29.83 70.35  
 110.00 13 19 13 2704.23 -32.57 70.33 252.14 79.11 14 4 18 1704.2 -33.72 41.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0102 TRA-1.1615 TC3-2.2254 BAU .9784 SGT 2603.6 SGR 2547.4 SG3 1755.7 ST 24.7 SR 13.9 SS 58.6  
 RDE .1741 RRA -.3644 RC3-2.7253 FAU .49461 RRT .8862 RRF .9801 RTF .8933 CRT .5616 CRS -.9414 CST -.2671  
 FDE 4.2417 FRA-4.0286 FC-20.5862 B8P 5896 SGB 3642.5 R23 .1874 R13 .9635 LSA 60.6 MSA 23.7 SSA 2.0  
 BDE .1744 BRA 1.2173 BC3 3.5185 F8P 3043 SGI 3537.4 SG2 868.8 THA 44.29 EL1 26.1 EL2 10.8 ALF 21.38

LAUNCH DATE AUG 22 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

DISTANCE 490.164

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.888 GAL 4.03 AZL 87.13 HCA 144.53 SMA 197.31 ECC .24297 INC 2.8654 V1 29.447  
 RP 242.73 LAP 1.66 LOP 113.32 VP 20.516 GAP 4.58 AZP 92.33 TAL 20.85 TAP 165.30 RCA 149.37 APO 245.25 V2 22.612  
 RC 256.191 GL 21.04 GP -27.63 ZAL 54.19 ZAP 92.79 ETS 183.40 ZAE 122.58 ETE 202.44 ZAC 59.61 ETC 286.10 LVI 6.15

PLANETOCENTRIC CONIC

C3 20.861 VHL 4.567 DLA 27.13 RAL 9.65 RAD 6643.2 VEL 11.869 PTH 6.88 VHP 2.420 DPA -15.92 RAP 35.64 ECC 1.3433  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 44 3704.52 -47.54 147.61 254.76 87.76 9 6 29 2704.5 -42.82 113.71  
 60.00 8 7 25 3697.36 -39.74 146.06 253.85 82.67 9 9 3 2697.4 -38.38 114.99  
 70.00 8 12 16 3683.10 -32.23 143.33 252.28 78.03 9 13 39 2683.1 -33.88 114.72  
 80.00 8 24 4 3646.00 -25.47 138.60 250.35 73.87 9 24 50 2646.0 -29.72 111.98  
 90.00 9 9 22 3499.61 -21.87 126.63 249.13 71.61 10 7 41 2499.6 -27.47 101.01  
 100.00 11 6 56 3120.47 -25.47 99.96 250.35 73.87 11 58 56 2120.5 -29.72 73.38  
 110.00 13 11 42 2729.91 -32.23 72.25 252.28 78.03 13 57 12 1729.9 -33.88 43.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0253 TRA-1.1972 TC3-2.3876 BAU 1.0190 SGT 2743.4 SGR 2812.2 SG3 1748.8 ST 25.8 SR 16.0 SS 60.2  
 RDE .2112 RRA -.3822 RC3-2.7831 FAU .49181 RRT .8953 RRF .9816 RTF .9114 CRT .5824 CRS -.9604 CST -.3634  
 FDE 4.3648 FRA-4.0181 FC-20.4102 B8P 6171 SGB 3788.1 R23 .1870 R13 .9650 LSA 63.0 MSA 23.7 SSA 1.9  
 BDE .2127 BRA 1.2567 BC3 3.6539 F8P 3032 SGI 3687.9 SG2 865.7 THA 43.43 EL1 27.7 EL2 12.0 ALF 25.03

LAUNCH DATE AUG 22 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

DISTANCE 493.953

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.889 GAL 4.00 AZL 87.05 HCA 145.45 SMA 197.33 ECC .24289 INC 2.9544 V1 29.447  
 RP 242.99 LAP 1.88 LOP 114.24 VP 20.489 GAP 4.35 AZP 92.43 TAL 20.69 TAP 166.14 RCA 149.40 APO 245.26 V2 22.586  
 RC 258.972 GL 21.69 GP -28.20 ZAL 54.54 ZAP 91.44 ETS 182.71 ZAE 120.84 ETE 201.58 ZAC 59.18 ETC 286.21 LVI 6.61

PLANETOCENTRIC CONIC

C3 20.933 VHL 4.575 DLA 27.79 RAL 9.52 RAD 6643.3 VEL 11.872 PTH 6.88 VHP 2.428 DPA -16.66 RAP 35.38 ECC 1.3445  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 44 3720.29 -47.48 149.13 255.34 86.59 9 2 45 2720.3 -43.24 114.99  
 60.00 8 1 55 3717.17 -39.56 147.71 254.21 81.56 9 3 52 2717.2 -38.68 116.59  
 70.00 8 4 4 3710.82 -31.82 145.39 252.39 76.87 9 5 55 2710.8 -34.01 116.87  
 80.00 8 9 47 3692.85 -24.55 141.77 250.13 72.45 9 11 20 2692.8 -29.50 115.44  
 90.00 8 44 13 3581.49 -20.02 131.92 248.45 69.60 9 43 54 2581.5 -26.66 106.86  
 100.00 10 52 39 3167.32 -24.55 103.14 250.13 72.45 11 45 26 2167.3 -29.50 76.81  
 110.00 13 3 30 2757.64 -31.82 74.30 252.39 76.87 13 49 28 1757.6 -34.01 45.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0633 TRA-1.2339 TC3-2.5087 BAU 1.0600 SGT 2885.7 SGR 2676.4 SG3 1738.1 ST 26.7 SR 18.2 SS 61.8  
 RDE .2500 RRA -.4003 RC3-2.8380 FAU .48796 RRT .9033 RRF .9830 RTF .9085 CRT .6120 CRS -.9726 CST -.4363  
 FDE 4.4845 FRA-4.0036 FC-20.1811 B8P 6447 SGB 3935.8 R23 .1868 R13 .9663 LSA 65.6 MSA 23.7 SSA 1.8  
 BDE .2579 BRA 1.2972 SC3 3.7879 F8P 3014 SGI 3840.0 SG2 863.0 THA 42.62 EL1 29.6 EL2 13.0 ALF 28.69

LAUNCH DATE AUG 22 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.890 GAL 3.97 AZL 86.85 HCA 146.36 SMA 197.35 ECC .24203 INC 3.0473 V1 29.447  
 RP 243.24 LAP 1.69 LOP 115.16 VP 20.463 GAP 4.13 AZP 92.54 TAL 20.52 TAP 166.89 RCA 149.43 APO 245.28 V2 22.560  
 RC 261.736 GL 22.36 GP -28.78 ZAL 54.90 ZAP 90.13 ETS 182.01 ZAE 119.33 ETE 200.74 ZAC 56.75 ETC 286.32 LVI 7.09

DISTANCE 497.741 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.017 VHL 4.584 DLA 28.48 RAL 9.38 RAD 6643.3 VEL 11.875 PTH 6.89 VHP 2.437 DPA -17.39 RAP 35.14 ECC 1.3459  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 56 30 3736.89 -47.40 150.72 255.95 85.36 8 58 47 2736.9 -43.65 116.37  
 60.00 7 56 1 3738.20 -39.33 149.48 254.56 80.40 8 58 19 2738.2 -38.97 118.30  
 70.00 7 55 5 3740.95 -31.33 147.60 252.48 75.65 8 57 26 2740.9 -34.11 119.22  
 80.00 7 52 17 3749.73 -23.33 145.55 249.77 70.82 8 54 47 2749.7 -29.10 119.62  
 86.49 7 28 14 3827.46 -16.28 148.32 246.63 66.31 8 32 1 2827.5 -24.65 124.37  
 100.00 10 35 9 3224.20 -23.33 106.92 249.77 70.82 11 28 53 2224.2 -29.10 80.99  
 110.00 12 34 31 2787.77 -31.33 76.92 252.48 75.65 13 40 59 1787.8 -34.11 48.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1038 TRA-1.2713 TC3-2.6478 BAU 1.1015 SGT 3029.6 SGR 2741.0 SG3 1724.3 ST 28.1 SR 20.6 SS 63.4  
 RDE .2902 RRA -.4186 RC3-2.8912 FAU .48332 RRT .9102 RRF .9843 RTF .9146 CRT .6461 CR8 -.9806 CST -.5044  
 FDE 4.5973 FRA-3.9814 FC-19.9093 BSP 6721 SGB 4085.5 R23 .1866 R13 .9675 LSA 68.3 MSA 23.7 S8A 1.7  
 BDE .3082 BRA 1.3365 BC3 3.9204 FSP 2988 SG1 3993.7 SG2 861.0 THA 41.86 EL1 32.0 EL2 13.8 ALF 31.96

LAUNCH DATE AUG 22 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.892 GAL 3.93 AZL 86.86 HCA 147.28 SMA 197.39 ECC .24279 INC 3.1447 V1 29.447  
 RP 243.50 LAP 1.70 LOP 116.08 VP 20.438 GAP 3.90 AZP 92.65 TAL 20.35 TAP 167.63 RCA 149.46 APO 245.31 V2 22.535  
 RC 264.483 GL 23.06 GP -29.37 ZAL 55.29 ZAP 88.85 ETS 181.30 ZAE 117.73 ETE 199.92 ZAC 58.29 ETC 286.43 LVI 7.58

DISTANCE 501.528 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.114 VHL 4.595 DLA 29.19 RAL 9.23 RAD 6643.3 VEL 11.879 PTH 6.89 VHP 2.449 DPA -18.12 RAP 34.94 ECC 1.3475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 0 3754.39 -47.29 152.40 256.57 84.08 8 54 34 2754.4 -44.07 117.85  
 60.00 7 49 41 3760.57 -39.06 151.30 254.91 79.17 8 52 21 2760.6 -39.25 120.13  
 70.00 7 45 9 3773.95 -30.75 149.99 252.52 74.34 8 48 3 2774.0 -34.15 121.79  
 80.00 7 28 33 3826.19 -21.53 150.52 249.11 68.80 8 32 20 2826.2 -28.34 125.18  
 82.44 6 54 41 3934.88 -16.63 156.38 246.93 65.66 8 0 16 2934.9 -25.23 132.44  
 100.00 10 11 25 3300.66 -21.53 111.89 249.11 68.80 11 6 26 2300.7 -28.34 86.54  
 110.00 12 44 35 2820.77 -30.75 78.91 252.52 74.34 13 31 36 1820.8 -34.15 50.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1470 TRA-1.3093 TC3-2.7846 BAU 1.1435 SGT 3174.9 SGR 2805.6 SG3 1707.3 ST 29.8 SR 23.1 SS 64.9  
 RDE .3319 RRA -.4376 RC3-2.9419 FAU .47782 RRT .9165 RRF .9855 RTF .9200 CRT .6818 CR8 -.9859 CST -.5868  
 FDE 4.7035 FRA-3.9559 FC-19.5916 BSP 6999 SGB 4236.9 R23 .1863 R13 .9686 LSA 71.2 MSA 23.6 S8A 1.6  
 BDE .3631 BRA 1.3805 BC3 4.0508 FSP 2956 SG1 4148.9 SG2 859.0 THA 41.15 EL1 34.8 EL2 14.4 ALF 34.67

LAUNCH DATE AUG 22 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.894 GAL 3.90 AZL 86.75 HCA 148.19 SMA 197.42 ECC .24277 INC 3.2468 V1 29.447  
 RP 243.74 LAP 1.71 LOP 116.99 VP 20.414 GAP 3.68 AZP 92.76 TAL 20.17 TAP 168.38 RCA 149.49 APO 245.35 V2 22.511  
 RC 267.212 GL 23.79 GP -29.97 ZAL 55.68 ZAP 87.61 ETS 180.57 ZAE 116.16 ETE 199.11 ZAC 57.82 ETC 286.43 LVI 8.09

DISTANCE 505.314 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.227 VHL 4.607 DLA 29.93 RAL 9.07 RAD 6643.4 VEL 11.884 PTH 6.90 VHP 2.464 DPA -18.86 RAP 34.76 ECC 1.3493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 11 3772.80 -47.15 154.17 257.20 82.72 8 50 4 2772.9 -44.49 119.43  
 60.00 7 42 51 3784.44 -38.74 153.24 255.24 77.89 8 45 55 2784.4 -39.52 122.11  
 70.00 7 34 1 3810.52 -30.05 152.61 252.50 72.94 8 37 31 2810.5 -34.13 124.85  
 79.77 6 33 13 4002.90 -16.99 161.59 247.04 64.98 7 39 56 3002.9 -25.83 137.66  
 79.77 6 33 13 4002.90 -16.99 161.59 247.04 64.98 7 39 56 3002.9 -25.83 137.66  
 79.77 6 33 13 4002.90 -16.99 161.59 247.04 64.98 7 39 56 3002.9 -25.83 137.66  
 110.00 12 33 27 2857.34 -30.05 81.53 252.50 72.94 13 21 4 1857.3 -34.13 53.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1936 TRA-1.3477 TC3-2.9178 BAU 1.1855 SGT 3320.5 SGR 2869.9 SG3 1886.9 ST 31.7 SR 25.7 SS 66.4  
 RDE .3761 RRA -.4584 RC3-2.9896 FAU .47138 RRT .9219 RRF .9866 RTF .9246 CRT .7166 CR8 -.9887 CST -.6234  
 FDE 4.8073 FRA-3.9196 FC-19.2251 BSP 7286 SGB 4388.9 R23 .1863 R13 .9696 LSA 74.2 MSA 23.6 S8A 1.6  
 BDE .4230 BRA 1.4229 BC3 4.1773 FSP 2923 SG1 4304.2 SG2 857.8 THA 40.40 EL1 37.9 EL2 15.0 ALF 36.82

LAUNCH DATE AUG 22 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.896 GAL 3.87 AZL 86.65 HCA 149.10 SMA 197.46 ECC .24276 INC 3.3540 V1 29.447  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.391 GAP 3.45 AZP 92.88 TAL 19.99 TAP 169.09 RCA 149.53 APO 245.40 V2 22.487  
 RC 269.924 GL 24.55 GP -30.59 ZAL 56.10 ZAP 86.42 ETS 179.83 ZAE 114.61 ETE 198.32 ZAC 57.34 ETC 286.66 LVI 8.62

DISTANCE 509.100 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.356 VHL 4.621 DLA 30.70 RAL 8.89 RAD 6643.4 VEL 11.889 PTH 6.90 VHP 2.480 DPA -19.60 RAP 34.61 ECC 1.3515  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 2 3792.44 -46.96 156.02 257.84 81.31 8 43 14 2792.4 -44.91 121.12  
 60.00 7 35 27 3810.00 -38.33 155.31 255.55 76.54 8 38 57 2810.0 -39.76 124.24  
 70.00 7 21 20 3851.68 -29.19 155.51 252.39 71.43 8 25 32 2851.7 -34.02 127.86  
 77.53 6 15 53 4057.22 -17.35 165.82 247.16 64.27 7 23 30 3057.2 -26.45 141.91  
 77.53 6 15 53 4057.22 -17.35 165.82 247.16 64.27 7 23 30 3057.2 -26.45 141.91  
 77.53 6 15 53 4057.22 -17.35 165.82 247.16 64.27 7 23 30 3057.2 -26.45 141.91  
 110.00 12 20 46 2898.50 -29.19 84.43 252.39 71.43 13 9 5 1898.5 -34.02 56.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2426 TRA-1.3874 TC3-3.0481 BAU 1.2281 SGT 3468.3 SGR 2934.9 SG3 1863.7 ST 33.8 SR 28.4 SS 67.8  
 RDE .4216 RRA -.4764 RC3-3.0350 FAU .46422 RRT .9268 RRF .9876 RTF .9288 CRT .7493 CR8 -.9923 CST -.6729  
 FDE 4.9007 FRA-3.8831 FC-18.8183 BSP 7564 SGB 4543.5 R23 .1862 R13 .9705 LSA 77.4 MSA 23.6 S8A 1.5  
 BDE .4864 BRA 1.4669 BC3 4.3015 FSP 2878 SG1 4462.0 SG2 856.8 THA 39.87 EL1 41.4 EL2 15.4 ALF 38.40

LAUNCH DATE AUG 22 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC DISTANCE 512.864 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.898 GAL 3.83 AZL 86.53 HCA 150.01 SMA 197.51 ECC .24278 INC 3.4669 V1 29.447  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.369 GAP 3.23 AZP 93.00 TAL 19.80 TAP 169.81 RCA 149.56 APO 245.45 V2 22.464  
 RC 272.818 GL 25.34 GP -31.22 ZAL 56.53 ZAP 85.26 ETS 179.08 ZAE 113.09 ETE 197.54 ZAC 56.83 ETC 286.78 LVI 9.17

PLANETOCENTRIC CONIC  
 C3 21.504 VHL 4.637 DLA 31.50 RAL 8.70 RAD 6643.5 VEL 11.895 PTH 6.91 VHP 2.499 DPA -20.34 RAP 34.50 ECC 1.3539  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 29 3813.16 -48.73 157.97 258.49 79.82 8 40 3 2813.2 -45.33 122.85  
 60.00 7 27 23 3637.49 -37.89 157.50 255.84 75.11 8 31 20 2837.5 -39.97 126.55  
 70.00 7 6 32 3899.13 -28.12 158.78 252.15 69.76 8 11 31 2899.1 -33.78 131.54  
 75.52 6 0 51 4103.84 -17.72 169.53 247.29 63.52 7 9 15 3103.8 -27.09 145.63  
 75.52 6 0 51 4103.84 -17.72 169.53 247.29 63.52 7 9 15 3103.8 -27.09 145.63  
 75.52 6 0 51 4103.84 -17.72 169.53 247.29 63.52 7 9 15 3103.8 -27.09 145.63  
 110.00 12 5 58 2945.94 -28.12 87.70 252.15 69.76 12 55 4 1945.9 -33.78 60.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2950 TRA-1.4273 TC3-3.1737 BAU 1.2710 SGT 3615.8 SGR 3000.3 SG3 1637.4 ST 36.2 SR 31.3 SS 69.2  
 RDE .4697 RRA -.4966 RC3-3.0776 FAU .45626 RRT .9311 RRF .9885 RTF .9324 CRT .7790 CRS -.9942 CST -.7163  
 FDE 4.9900 FRA-3.8381 FC-18.3685 BSP 7847 SGB 4698.5 R23 .1863 R13 .9713 LSA 80.8 MSA 23.5 SSA 1.4  
 BDE .5546 BRA 1.5112 BC3 4.4208 FSP 2830 SG1 4619.8 SG2 856.4 THA 39.30 EL1 45.2 EL2 15.7 ALF 39.59

LAUNCH DATE AUG 22 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC DISTANCE 516.668 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.901 GAL 3.79 AZL 86.41 HCA 150.91 SMA 197.56 ECC .24278 INC 3.5859 V1 29.447  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.348 GAP 3.01 AZP 93.13 TAL 19.61 TAP 170.52 RCA 149.59 APO 245.52 V2 22.441  
 RC 275.293 GL 26.17 GP -31.87 ZAL 56.98 ZAP 84.14 ETS 178.31 ZAE 111.60 ETE 196.77 ZAC 56.30 ETC 286.91 LVI 9.75

PLANETOCENTRIC CONIC  
 C3 21.673 VHL 4.655 DLA 32.33 RAL 8.48 RAD 6643.6 VEL 11.903 PTH 6.91 VHP 2.521 DPA -21.10 RAP 34.42 ECC 1.3567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 31 3835.17 -46.45 160.02 259.14 78.27 8 34 27 2835.2 -45.73 124.91  
 60.00 7 18 32 3867.20 -37.35 159.83 256.08 73.61 8 22 59 2867.2 -40.14 129.06  
 70.00 6 48 30 3956.09 -26.71 162.62 251.71 67.88 7 54 26 2956.1 -33.34 135.93  
 73.64 5 47 19 4145.40 -18.09 172.88 247.43 62.74 6 56 24 3145.4 -27.74 149.02  
 73.64 5 47 19 4145.40 -18.09 172.88 247.43 62.74 6 56 24 3145.4 -27.74 149.02  
 73.64 5 47 19 4145.40 -18.09 172.88 247.43 62.74 6 56 24 3145.4 -27.74 149.02  
 110.00 11 47 56 3002.91 -26.71 91.53 251.71 67.88 12 37 59 2002.9 -33.34 64.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3508 TRA-1.4680 TC3-3.2938 BAU 1.3137 SGT 3763.5 SGR 3065.1 SG3 1607.7 ST 38.9 SR 34.2 SS 70.5  
 RDE .5202 RRA -.5175 RC3-3.1158 FAU .44734 RRT .9350 RRF .9893 RTF .9356 CRT .8057 CRS -.9955 CST -.7539  
 FDE 5.0727 FRA-3.7878 FC-17.8691 BSP 8131 SGB 4853.7 R23 .1864 R13 .9721 LSA 84.3 MSA 23.5 SSA 1.3  
 BDE .6275 BRA 1.5566 BC3 4.5340 FSP 2778 SG1 4777.5 SG2 856.4 THA 38.77 EL1 49.3 EL2 16.0 ALF 40.45

LAUNCH DATE AUG 22 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC DISTANCE 520.450 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.904 GAL 3.76 AZL 86.29 HCA 151.82 SMA 197.61 ECC .24292 INC 3.7116 V1 29.447  
 RP 244.68 LAP 1.75 LOP 120.63 VP 20.328 GAP 2.79 AZP 93.27 TAL 19.41 TAP 171.23 RCA 149.63 APO 245.59 V2 22.418  
 RC 277.948 GL 27.04 GP -32.55 ZAL 57.45 ZAP 83.07 ETS 177.52 ZAE 110.14 ETE 196.01 ZAC 55.74 ETC 287.04 LVI 10.35

PLANETOCENTRIC CONIC  
 C3 21.866 VHL 4.676 DLA 33.20 RAL 8.25 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 2.545 DPA -21.85 RAP 34.38 ECC 1.3599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 24 4 3858.60 -46.10 162.17 259.77 76.64 8 28 23 2858.6 -46.12 127.04  
 60.00 7 8 45 3899.52 -36.70 162.33 256.26 72.03 8 13 44 2899.5 -40.25 131.80  
 70.00 6 24 32 4030.63 -24.71 167.48 250.87 65.64 7 31 42 3030.6 -32.50 141.58  
 71.85 5 34 47 4183.42 -18.47 176.01 247.57 61.92 6 44 30 3183.4 -28.41 152.18  
 71.85 5 34 47 4183.42 -18.47 176.01 247.57 61.92 6 44 30 3183.4 -28.41 152.18  
 71.85 5 34 47 4183.42 -18.47 176.01 247.57 61.92 6 44 30 3183.4 -28.41 152.18  
 110.00 11 23 58 3077.45 -24.71 96.40 250.87 65.64 12 15 16 2077.4 -32.50 70.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4096 TRA-1.5102 TC3-3.4089 BAU 1.3572 SGT 3912.2 SGR 3131.8 SG3 1575.7 ST 41.9 SR 37.3 SS 71.8  
 RDE .5728 RRA -.5400 RC3-3.1521 FAU .43789 RRT .9385 RRF .9901 RTF .9385 CRT .8293 CRS -.9965 CST -.7861  
 FDE 5.1443 FRA-3.7378 FC-17.3377 BSP 8415 SGB 5011.3 R23 .1865 R13 .9728 LSA 88.0 MSA 23.4 SSA 1.3  
 BDE .7042 BRA 1.6038 BC3 4.6429 FSP 2720 SG1 4937.6 SG2 856.7 THA 38.28 EL1 53.7 EL2 16.3 ALF 41.03

LAUNCH DATE AUG 22 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC DISTANCE 524.231 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.907 GAL 3.72 AZL 86.16 HCA 152.72 SMA 197.67 ECC .24287 INC 3.8447 V1 29.447  
 RP 244.90 LAP 1.76 LOP 121.53 VP 20.309 GAP 2.57 AZP 93.42 TAL 19.21 TAP 171.93 RCA 149.66 APO 245.68 V2 22.397  
 RC 280.584 GL 27.94 GP -33.24 ZAL 57.94 ZAP 82.04 ETS 176.73 ZAE 108.71 ETE 195.26 ZAC 55.16 ETC 287.18 LVI 10.98

PLANETOCENTRIC CONIC  
 C3 22.084 VHL 4.699 DLA 34.10 RAL 7.99 RAD 6643.8 VEL 11.920 PTH 6.93 VHP 2.572 DPA -22.62 RAP 34.38 ECC 1.3635  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 3 3883.60 -45.68 164.44 260.38 74.94 8 21 46 2883.6 -46.48 129.34  
 60.00 6 57 49 3934.97 -35.92 165.02 256.36 70.35 8 3 24 2935.0 -40.30 134.81  
 70.00 5 37 18 4175.13 -20.36 176.43 248.59 61.96 6 46 54 3175.1 -30.10 152.14  
 70.11 5 23 1 4218.68 -18.85 178.96 247.72 61.05 6 33 20 3218.7 -29.10 155.18  
 70.11 5 23 1 4218.68 -18.85 178.96 247.72 61.05 6 33 20 3218.7 -29.10 155.18  
 70.11 5 23 1 4218.68 -18.85 178.96 247.72 61.05 6 33 20 3218.7 -29.10 155.18  
 110.00 10 36 45 3221.95 -20.36 105.35 248.59 61.96 11 30 27 2222.0 -30.10 81.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4725 TRA-1.5526 TC3-3.5169 BAU 1.4007 SGT 4060.0 SGR 3198.4 SG3 1540.5 ST 45.1 SR 40.5 SS 73.0  
 RDE .6286 RRA -.5630 RC3-3.1840 FAU .42759 RRT .9417 RRF .9908 RTF .9410 CRT .8500 CRS -.9973 CST -.8138  
 FDE 5.2098 FRA-3.6793 FC-16.7621 BSP 8701 SGB 5168.5 R23 .1867 R13 .9734 LSA 92.0 MSA 23.4 SSA 1.2  
 BDE .7863 BRA 1.6515 BC3 4.7441 FSP 2657 SG1 5096.9 SG2 857.4 THA 37.83 EL1 58.3 EL2 16.5 ALF 41.45

LAUNCH DATE AUG 22 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.910 GAL 3.68 AZL 88.01 HCA 153.62 SMA 197.73 ECC .24293 INC 3.9880 V1 29.447  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.290 GAP 2.35 AZP 93.57 TAL 19.00 TAP 172.82 RCA 149.70 APO 245.78 V2 22.375  
 RC 283.198 GL 28.89 GP -33.95 ZAL 58.46 ZAP 81.06 ETS 175.92 ZAE 107.31 ETE 194.52 ZAC 54.95 ETC 287.33 LVI 11.64

DISTANCE 528.011 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.333 VHL 4.728 DLA 35.04 RAL 7.69 RAD 6643.9 VEL 11.930 PTH 6.93 VHP 2.602 DPA -23.40 RAP 34.42 ECC 1.3675  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 23 3910.38 -45.18 166.82 280.96 73.16 8 14 33 2910.4 -46.82 131.84  
 60.00 6 45 29 3974.28 -34.98 167.93 256.34 68.56 7 51 43 2974.3 -40.25 138.16  
 66.40 5 11 50 4251.82 -19.23 181.79 247.88 60.13 6 22 41 3251.8 -29.81 158.06  
 66.40 5 11 50 4251.82 -19.23 181.79 247.88 60.13 6 22 41 3251.8 -29.81 158.06  
 66.40 5 11 50 4251.82 -19.23 181.79 247.88 60.13 6 22 41 3251.8 -29.81 158.06  
 66.40 5 11 50 4251.82 -19.23 181.79 247.88 60.13 6 22 41 3251.8 -29.81 158.06  
 66.40 5 11 50 4251.82 -19.23 181.79 247.88 60.13 6 22 41 3251.8 -29.81 158.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5392 TRA-1.5957 TC3-3.6168 BAU 1.4441 SGT 4206.5 SGR 3265.4 SG3 1502.2 ST 48.5 SR 43.9 SS 74.2  
 RDE .6874 RRA -.5867 RC3-3.2115 FAU .41650 RRT .9445 RRF .9915 RTF .9432 CRT .8679 CRS -.9978 CST -.8374  
 FDE 5.2667 FRA-3.6148 FC-16.1455 BSP 8996 SGB 5325.2 R23 .1869 R13 .9739 LSA 96.1 MSA 23.3 SSA 1.1  
 BDE .8737 BRA 1.7002 BC3 4.6367 FSP 2592 SG1 5255.5 SG2 856.8 THA 37.42 EL1 63.2 EL2 16.7 ALF 41.73

LAUNCH DATE AUG 22 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.913 GAL 3.64 AZL 85.86 HCA 154.52 SMA 197.80 ECC .24300 INC 4.1362 V1 29.447  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.273 GAP 2.14 AZP 93.74 TAL 18.79 TAP 173.31 RCA 149.73 APO 245.86 V2 22.354  
 RC 285.791 GL 29.88 GP -34.70 ZAL 58.99 ZAP 80.13 ETS 175.09 ZAE 105.94 ETE 193.78 ZAC 53.90 ETC 287.49 LVI 12.32

DISTANCE 531.790 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.616 VHL 4.756 DLA 36.01 RAL 7.37 RAD 6644.0 VEL 11.942 PTH 6.94 VHP 2.635 DPA -24.19 RAP 34.50 ECC 1.3722  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 0 58 3939.14 -44.58 169.34 261.48 71.30 8 6 37 2939.1 -47.11 134.56  
 60.00 6 31 17 4018.59 -33.83 171.12 256.16 66.65 7 38 15 3018.6 -40.07 141.91  
 66.71 5 1 3 4283.28 -19.61 184.52 248.05 59.17 6 12 26 3283.3 -30.54 160.86  
 66.71 5 1 3 4283.28 -19.61 184.52 248.05 59.17 6 12 26 3283.3 -30.54 160.86  
 66.71 5 1 3 4283.28 -19.61 184.52 248.05 59.17 6 12 26 3283.3 -30.54 160.86  
 66.71 5 1 3 4283.28 -19.61 184.52 248.05 59.17 6 12 26 3283.3 -30.54 160.86  
 66.71 5 1 3 4283.28 -19.61 184.52 248.05 59.17 6 12 26 3283.3 -30.54 160.86

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6088 TRA-1.6407 TC3-3.7094 BAU 1.4882 SGT 4354.1 SGR 3334.1 SG3 1461.5 ST 52.1 SR 47.4 SS 75.2  
 RDE .7489 RRA -.6129 RC3-3.2352 FAU .40480 RRT .9471 RRF .9921 RTF .9453 CRT .8833 CRS -.9982 CST -.8371  
 FDE 5.3105 FRA-3.5519 FC-15.4955 BSP 9277 SGB 5484.0 R23 .1872 R13 .9745 LSA 100.4 MSA 23.3 SSA 1.1  
 BDE .9652 BRA 1.7514 BC3 4.9220 FSP 2519 SG1 5416.1 SG2 860.1 THA 37.04 EL1 68.4 EL2 16.9 ALF 41.91

LAUNCH DATE AUG 22 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.917 GAL 3.80 AZL 85.70 HCA 155.42 SMA 197.86 ECC .24309 INC 4.2983 V1 29.447  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.256 GAP 1.92 AZP 93.91 TAL 18.57 TAP 173.99 RCA 149.77 APO 245.96 V2 22.334  
 RC 288.381 GL 30.92 GP -35.47 ZAL 59.55 ZAP 79.26 ETS 174.25 ZAE 104.61 ETE 193.04 ZAC 53.23 ETC 287.66 LVI 13.04

DISTANCE 535.568 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.938 VHL 4.789 DLA 37.04 RAL 7.00 RAD 6644.1 VEL 11.955 PTH 6.96 VHP 2.671 DPA -24.99 RAP 34.62 ECC 1.3775  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 41 3970.19 -43.87 171.98 261.93 69.36 7 57 51 2970.2 -47.35 137.52  
 60.00 6 14 31 4069.73 -32.39 174.70 255.74 64.58 7 22 21 3069.7 -39.69 146.21  
 65.02 4 50 36 4313.35 -19.98 187.19 248.22 58.15 6 2 29 3313.3 -31.29 163.60  
 65.02 4 50 36 4313.35 -19.98 187.19 248.22 58.15 6 2 29 3313.3 -31.29 163.60  
 65.02 4 50 36 4313.35 -19.98 187.19 248.22 58.15 6 2 29 3313.3 -31.29 163.60  
 65.02 4 50 36 4313.35 -19.98 187.19 248.22 58.15 6 2 29 3313.3 -31.29 163.60  
 65.02 4 50 36 4313.35 -19.98 187.19 248.22 58.15 6 2 29 3313.3 -31.29 163.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6829 TRA-1.6868 TC3-3.7926 BAU 1.5324 SGT 4500.6 SGR 3403.6 SG3 1410.0 ST 56.0 SR 51.0 SS 76.1  
 RDE .8147 RRA -.6399 RC3-3.2539 FAU .39236 RRT .9484 RRF .9927 RTF .5.70 CRT .8964 CRS -.9983 CST -.8379  
 FDE 5.3470 FRA-3.4809 FC-14.8086 BSP 9561 SGB 5642.6 R23 .1877 R13 .9749 LSA 104.9 MSA 23.2 SSA 1.0  
 BDE 1.0631 BRA 1.8041 BC3 4.9972 FSP 2442 SG1 5576.3 SG2 862.5 THA 36.70 EL1 73.8 EL2 17.2 ALF 42.04

LAUNCH DATE AUG 22 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.920 GAL 3.56 AZL 85.53 HCA 156.32 SMA 197.94 ECC .24319 INC 4.4676 V1 29.447  
 RP 245.73 LAP 1.79 LOP 125.14 VP 20.240 GAP 1.71 AZP 94.09 TAL 18.36 TAP 174.67 RCA 149.80 APO 246.07 V2 22.314  
 RC 290.807 GL 32.02 GP -36.27 ZAL 60.13 ZAP 78.43 ETS 173.40 ZAE 103.31 ETE 192.32 ZAC 52.51 ETC 287.84 LVI 13.80

DISTANCE 539.345 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 23.303 VHL 4.828 DLA 38.10 RAL 6.59 RAD 6644.3 VEL 11.970 PTH 6.97 VHP 2.711 DPA -25.80 RAP 34.79 ECC 1.3835  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 41 20 4003.68 -43.03 174.78 262.27 67.34 7 48 4 3003.9 -47.51 140.76  
 60.00 5 53 50 4131.33 -30.52 178.84 254.96 62.29 7 2 41 3131.3 -39.02 151.30  
 63.33 4 40 21 4342.36 -20.35 189.81 248.39 57.07 5 52 43 3342.4 -32.04 166.32  
 63.33 4 40 21 4342.36 -20.35 189.81 248.39 57.07 5 52 43 3342.4 -32.04 166.32  
 63.33 4 40 21 4342.36 -20.35 189.81 248.39 57.07 5 52 43 3342.4 -32.04 166.32  
 63.33 4 40 21 4342.36 -20.35 189.81 248.39 57.07 5 52 43 3342.4 -32.04 166.32  
 63.33 4 40 21 4342.36 -20.35 189.81 248.39 57.07 5 52 43 3342.4 -32.04 166.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .7612 TRA-1.7339 TC3-3.8651 BAU 1.5768 SGT 4645.5 SGR 3474.3 SG3 1371.7 ST 60.1 SR 54.8 SS 76.9  
 RDE .8841 RRA -.6691 RC3-3.2872 FAU .37924 RRT .9516 RRF .9932 RTF .9486 CRT .9079 CRS -.9988 CST -.8883  
 FDE 5.3696 FRA-3.4083 FC-14.0881 BSP 9855 SGB 5801.0 R23 .1880 R13 .9753 LSA 109.5 MSA 23.2 SSA .9  
 BDE 1.1666 BRA 1.8585 BC3 5.0610 FSP 2364 SG1 5736.2 SG2 864.5 THA 36.40 EL1 79.5 EL2 17.4 ALF 42.10

LAUNCH DATE AUG 22 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 543.120

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.924 GAL 3.92 AZL 85.35 HCA 157.21 SMA 198.01 ECC .24330 INC 4.6512 V1 29.447  
 RP 245.83 LAP 1.80 LOP 126.04 VP 20.226 GAP 1.49 AZP 94.29 TAL 18.13 TAP 175.34 RCA 149.84 APO 246.19 V2 22.295  
 RC 293.430 GL 35.17 GP -37.11 ZAL 60.74 ZAP 77.66 ETS 172.53 ZAE 102.06 ETE 191.59 ZAC 51.76 ETC 288.03 LVI 14.60

PLANETOCENTRIC CONIC

C3 23.723 VHL 4.871 DLA 39.21 RAL 6.13 RAD 6644.5 VEL 11.988 PTH 6.98 VHP 2.755 DPA -26.64 RAP 35.01 ECC 1.3904  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 29 44 4040.69 -42.02 177.74 262.48 65.24 7 37 5 3040.7 -47.58 144.32  
 60.00 5 25 45 4212.85 -27.82 184.05 253.47 59.58 6 38 58 3212.8 -37.75 157.66  
 61.62 4 30 12 4370.57 -20.70 192.40 248.55 55.92 5 43 3 3370.6 -32.81 169.04  
 61.62 4 30 12 4370.57 -20.70 192.40 248.55 55.92 5 43 3 3370.6 -32.81 169.04  
 61.62 4 30 12 4370.57 -20.70 192.40 248.55 55.92 5 43 3 3370.6 -32.81 169.04  
 61.62 4 30 12 4370.57 -20.70 192.40 248.55 55.92 5 43 3 3370.6 -32.81 169.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8426 TRA-1.7831 TC3-3.9274 BAU 1.6221 SGT 4790.5 SGR 3547.7 SG3 1323.3 ST 64.3 SR 58.7 SS 77.6  
 RDE .9572 RRA -.7008 RC3-3.2764 FAU .36564 RRT .9536 RRF .9937 RTF .9500 CRT .9176 CRS -.9989 CST -.9002  
 FDE 5.3773 FRA-3.3329 FC-13.3433 BSP 10134 SGB 5961.1 R23 .1885 R13 .9757 LSA 114.3 MSA 23.2 SSA .9  
 BDE 1.2753 BRA 1.9159 BC3 5.1146 FSP 2277 SG1 5897.7 S62 867.3 THA 36.14 EL1 85.3 EL2 17.6 ALF 42.15

LAUNCH DATE AUG 22 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 546.894

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.928 GAL 3.48 AZL 85.15 HCA 158.10 SMA 198.09 ECC .24341 INC 4.8486 V1 29.447  
 RP 246.12 LAP 1.81 LOP 126.93 VP 20.211 GAP 1.28 AZP 94.50 TAL 17.91 TAP 176.01 RCA 149.87 APO 246.31 V2 22.276  
 RC 295.928 GL 34.38 GP -37.98 ZAL 61.37 ZAP 76.95 ETS 171.65 ZAE 100.84 ETE 190.87 ZAC 50.97 ETC 288.25 LVI 15.43

PLANETOCENTRIC CONIC

C3 24.202 VHL 4.920 DLA 40.38 RAL 5.61 RAD 6644.7 VEL 12.007 PTH 7.00 VHP 2.804 DPA -27.49 RAP 35.29 ECC 1.3983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 16 35 4081.25 -40.81 180.88 262.49 63.05 7 24 36 3081.2 -47.51 148.24  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76  
 59.89 4 20 9 4397.99 -21.05 194.97 248.72 54.71 5 33 27 3398.0 -33.60 171.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9295 TRA-1.8334 TC3-3.9754 BAU 1.6670 SGT 4932.3 SGR 3621.6 SG3 1271.8 ST 68.8 SR 62.8 SS 78.1  
 RDE 1.0358 RRA -.7347 RC3-3.2776 FAU .35119 RRT .9555 RRF .9941 RTF .9512 CRT .9261 CRS -.9991 CST -.9105  
 FDE 5.3741 FRA-3.2526 FC-12.5629 BSP 10430 SGB 6119.1 R23 .1889 R13 .9760 LSA 119.3 MSA 23.1 SSA .8  
 BDE 1.3917 BRA 1.9751 BC3 5.1523 FSP 2190 SG1 6056.9 S62 870.2 THA 35.91 EL1 91.4 EL2 17.8 ALF 42.19

LAUNCH DATE AUG 22 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 550.669

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.933 GAL 3.44 AZL 84.94 HCA 158.99 SMA 198.17 ECC .24354 INC 5.0617 V1 29.447  
 RP 246.30 LAP 1.81 LOP 127.83 VP 20.198 GAP 1.07 AZP 94.73 TAL 17.68 TAP 176.87 RCA 149.91 APO 246.43 V2 22.258  
 RC 298.401 GL 35.66 GP -38.89 ZAL 62.03 ZAP 76.37 ETS 170.76 ZAE 99.66 ETE 190.14 ZAC 50.13 ETC 288.48 LVI 16.31

PLANETOCENTRIC CONIC

C3 24.751 VHL 4.975 DLA 41.59 RAL 5.01 RAD 6644.9 VEL 12.030 PTH 7.02 VHP 2.857 DPA -28.37 RAP 35.61 ECC 1.4073  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 1 26 4126.44 -39.36 184.24 262.25 60.76 7 10 13 3126.4 -47.26 152.58  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51  
 58.14 4 10 3 4424.96 -21.37 197.54 248.87 53.43 5 23 48 3425.0 -34.38 174.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0128 TRA-1.8918 TC3-4.0183 BAU 1.7199 SGT 5082.5 SGR 3721.1 SG3 1225.5 ST 73.1 SR 66.3 SS 77.6  
 RDE 1.1039 RRA -.7869 RC3-3.2970 FAU .33908 RRT .9586 RRF .9946 RTF .9542 CRT .9347 CRS -.9991 CST -.9200  
 FDE 5.2921 FRA-3.2323 FC-11.8604 BSP 10544 SGB 6299.0 R23 .1841 R13 .9774 LSA 123.4 MSA 22.8 SSA .8  
 BDE 1.4981 BRA 2.0490 BC3 5.1978 FSP 2032 SG1 6239.6 S62 863.4 THA 35.85 EL1 97.1 EL2 17.8 ALF 42.01

LAUNCH DATE AUG 22 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

DISTANCE 554.440

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.937 GAL 3.39 AZL 84.71 HCA 159.88 SMA 198.25 ECC .24368 INC 5.2923 V1 29.447  
 RP 246.48 LAP 1.82 LOP 128.72 VP 20.186 GAP .86 AZP 94.97 TAL 17.45 TAP 177.33 RCA 149.94 APO 246.57 V2 22.241  
 RC 300.850 GL 37.01 GP -39.85 ZAL 62.72 ZAP 75.72 ETS 169.86 ZAE 98.53 ETE 189.43 ZAC 49.24 ETC 288.74 LVI 17.24

PLANETOCENTRIC CONIC

C3 25.381 VHL 5.038 DLA 42.85 RAL 4.33 RAD 6645.2 VEL 12.056 PTH 7.04 VHP 2.917 DPA -29.27 RAP 36.00 ECC 1.4177  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 43 38 4177.85 -37.59 187.88 261.64 58.36 6 53 16 3177.8 -46.76 157.45  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30  
 56.35 3 59 53 4451.54 -21.66 200.11 249.00 52.07 5 14 5 3451.5 -35.17 177.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1078 TRA-1.9464 TC3-4.0371 BAU 1.7647 SGT 5220.3 SGR 3794.5 SG3 1167.2 ST 77.8 SR 70.9 SS 77.8  
 RDE 1.1963 RRA -.8246 RC3-3.2783 FAU .32265 RRT .9599 RRF .9949 RTF .9547 CRT .9402 CRS -.9992 CST -.9268  
 FDE 5.2714 FRA-3.1304 FC-11.0053 BSP 10874 SGB 6453.7 R23 .1860 R13 .9773 LSA 128.9 MSA 22.9 SSA .7  
 BDE 1.6305 BRA 2.1139 BC3 5.2005 FSP 1954 SG1 6395.0 S62 868.8 THA 35.66 EL1 103.7 EL2 18.1 ALF 42.15

LAUNCH DATE AUG 22 1973      FLIGHT TIME 250.00      ARRIVAL DATE MAY 7 1974

DISTANCE 598.209      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.941 GAL 3.35 AZL 84.46 HCA 160.77 SMA 198.34 ECC .24383 INC 5.5430 V1 29.447  
 RP 246.65 LAP 1.82 LOP 129.61 VP 20.174 GAP .65 AZP 95.24 TAL 17.21 TAP 177.98 RCA 149.98 APO 246.70 V2 22.224  
 RC 303.274 GL 38.44 GP -40.85 ZAL 63.45 ZAP 75.20 ETS 168.95 ZAE 97.44 ETE 189.71 ZAC 48.31 ETC 289.02 LVI 18.22

PLANETOCENTRIC CONIC  
 C3 26.110 VHL 5.110 DLA 44.18 RAL 3.56 RAD 8645.5 VEL 12.086 PTH 7.06 VHP 2.982 DPA -30.20 RAP 36.46 ECC 1.4297  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 22 1 4237.99 -35.37 191.90 260.49 55.82 6 32 39 3238.0 -45.90 163.00  
 54.53 3 49 32 4477.96 -21.92 202.70 249.11 50.63 5 4 10 3478.0 -35.95 180.16  
 54.53 3 49 32 4477.96 -21.92 202.70 249.11 50.63 5 4 10 3478.0 -35.95 180.16  
 54.53 3 49 32 4477.96 -21.92 202.70 249.11 50.63 5 4 10 3478.0 -35.95 180.16  
 54.53 3 49 32 4477.96 -21.92 202.70 249.11 50.63 5 4 10 3478.0 -35.95 180.16  
 54.53 3 49 32 4477.96 -21.92 202.70 249.11 50.63 5 4 10 3478.0 -35.95 180.16

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE 1.2058 TRA-2.0036 TC3-4.0398 BAU 1.8105 SGT 5355.9 SGR 3872.1 SG3 1107.0 ST 82.6 SR 75.5 SS 77.8  
 RDE 1.2935 RRA -.8666 RC3-3.2533 FAU .30590 RRT .9611 RRF .9952 RTF .9551 CRT .9449 CRS -.9993 CST -.9324  
 FDE 5.2254 FRA-3.0268 FC-10.1430 BSP 11188 SGB 6609.0 R23 .1878 R13 .9773 LSA 134.3 MSA 23.1 SSA .7  
 BDE 1.7683 BRA 2.1830 BC3 5.1869 FSP 1866 SG1 6550.9 SG2 874.5 THA 35.52 EL1 110.3 EL2 18.5 ALF 42.28

LAUNCH DATE AUG 22 1973      FLIGHT TIME 260.00      ARRIVAL DATE MAY 9 1974

DISTANCE 561.977      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.948 GAL 3.30 AZL 84.18 HCA 161.66 SMA 198.43 ECC .24399 INC 5.8165 V1 29.447  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.163 GAP .44 AZP 95.32 TAL 16.97 TAP 178.83 RCA 150.01 APO 246.84 V2 22.207  
 RC 305.673 GL 39.94 GP -41.90 ZAL 64.21 ZAP 74.75 ETS 168.04 ZAE 96.40 ETE 188.00 ZAC 47.31 ETC 289.34 LVI 19.25

PLANETOCENTRIC CONIC  
 C3 26.954 VHL 5.192 DLA 45.56 RAL 2.67 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 3.055 DPA -31.15 RAP 36.98 ECC 1.4436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 54 7 4312.60 -32.41 196.57 258.48 53.04 6 6 0 3312.6 -44.45 169.59  
 52.66 3 38 54 4504.37 -22.14 205.33 249.18 49.10 4 53 58 3504.4 -36.71 183.09  
 52.66 3 38 54 4504.37 -22.14 205.33 249.18 49.10 4 53 58 3504.4 -36.71 183.09  
 52.66 3 38 54 4504.37 -22.14 205.33 249.18 49.10 4 53 58 3504.4 -36.71 183.09  
 52.66 3 38 54 4504.37 -22.14 205.33 249.18 49.10 4 53 58 3504.4 -36.71 183.09  
 52.66 3 38 54 4504.37 -22.14 205.33 249.18 49.10 4 53 58 3504.4 -36.71 183.09

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE 1.3050 TRA-2.0657 TC3-4.0269 BAU 1.8584 SGT 5491.7 SGR 3955.7 SG3 1045.5 ST 87.2 SR 80.2 SS 73.3  
 RDE 1.3958 RRA -.9156 RC3-3.2218 FAU .28887 RRT .9624 RRF .9954 RTF .9555 CRT .9488 CRS -.9993 CST -.9369  
 FDE 5.1528 FRA-2.9275 FC3-9.2780 BSP 11479 SGB 6769.0 R23 .1893 R13 .9773 LSA 139.6 MSA 23.2 SSA .6  
 BDE 1.9108 BRA 2.2596 BC3 5.1572 FSP 1760 SG1 6710.6 SG2 879.8 THA 35.43 EL1 117.0 EL2 18.9 ALF 42.45

LAUNCH DATE AUG 22 1973      FLIGHT TIME 262.00      ARRIVAL DATE MAY 11 1974

DISTANCE 565.743      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.950 GAL 3.26 AZL 83.88 HCA 162.54 SMA 198.52 ECC .24416 INC 6.1165 V1 29.447  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.154 GAP .24 AZP 95.84 TAL 16.73 TAP 179.27 RCA 150.05 APO 246.99 V2 22.191  
 RC 308.047 GL 41.54 GP -43.01 ZAL 65.00 ZAP 74.38 ETS 167.12 ZAE 95.42 ETE 187.30 ZAC 46.26 ETC 289.68 LVI 20.34

PLANETOCENTRIC CONIC  
 C3 27.938 VHL 5.288 DLA 47.00 RAL 1.65 RAD 6646.2 VEL 12.161 PTH 7.13 VHP 3.136 DPA -32.13 RAP 37.57 ECC 1.4598  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 10 59 4423.12 -27.70 202.89 254.45 49.64 5 24 42 3423.1 -41.58 178.65  
 50.75 3 27 56 4530.86 -22.30 207.98 249.19 47.49 4 43 26 3530.9 -37.45 186.13  
 50.75 3 27 56 4530.86 -22.30 207.98 249.19 47.49 4 43 26 3530.9 -37.45 186.13  
 50.75 3 27 56 4530.86 -22.30 207.98 249.19 47.49 4 43 26 3530.9 -37.45 186.13  
 50.75 3 27 56 4530.86 -22.30 207.98 249.19 47.49 4 43 26 3530.9 -37.45 186.13  
 50.75 3 27 56 4530.86 -22.30 207.98 249.19 47.49 4 43 26 3530.9 -37.45 186.13

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE 1.4069 TRA-2.1300 TC3-3.9921 BAU 1.9060 SGT 5621.1 SGR 4040.6 SG3 981.3 ST 91.8 SR 84.9 SS 76.5  
 RDE 1.5048 RRA -.9697 RC3-3.1785 FAU .27110 RRT .9636 RRF .9956 RTF .9557 CRT .9521 CRS -.9993 CST -.9408  
 FDE 5.0548 FRA-2.8221 FC3-8.4007 BSP 11792 SGB 6922.6 R23 .1909 R13 .9772 LSA 144.8 MSA 23.4 SSA .6  
 BDE 2.0600 BRA 2.3403 BC3 5.1029 FSP 1660 SG1 6865.9 SG2 884.6 THA 35.38 EL1 123.6 EL2 19.3 ALF 42.85

LAUNCH DATE AUG 22 1973      FLIGHT TIME 284.00      ARRIVAL DATE MAY 13 1974

DISTANCE 569.510      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.955 GAL 3.21 AZL 83.55 HCA 163.42 SMA 198.61 ECC .24433 INC 6.4469 V1 29.447  
 RP 247.14 LAP 1.84 LOP 132.28 VP 20.144 GAP .03 AZP 96.18 TAL 16.48 TAP 179.91 RCA 150.09 APO 247.14 V2 22.176  
 RC 310.395 GL 43.23 GP -44.17 ZAL 65.83 ZAP 74.09 ETS 166.20 ZAE 94.49 ETE 186.60 ZAC 45.15 ETC 290.07 LVI 21.48

PLANETOCENTRIC CONIC  
 C3 29.092 VHL 5.394 DLA 48.50 RAL .47 RAD 6646.6 VEL 12.208 PTH 7.16 VHP 3.227 DPA -33.14 RAP 38.24 ECC 1.4788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27  
 48.80 3 16 29 4557.66 -22.38 210.67 249.12 45.78 4 32 26 3557.7 -38.15 189.27

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE 1.5069 TRA-2.2001 TC3-3.9391 BAU 1.9562 SGT 5749.7 SGR 4132.8 SG3 915.9 ST 96.2 SR 89.7 SS 75.3  
 RDE 1.6197 RRA -1.0322 RC3-3.1274 FAU .25311 RRT .9648 RRF .9957 RTF .9559 CRT .9545 CRS -.9993 CST -.9429  
 FDE 4.9266 FRA-2.7166 FC3-7.5322 BSP 12082 SGB 7080.9 R23 .1925 R13 .9771 LSA 149.7 MSA 23.6 SSA .5  
 BDE 2.2122 BRA 2.4302 BC3 5.0296 FSP 1559 SG1 7024.8 SG2 889.5 THA 35.39 EL1 130.0 EL2 19.8 ALF 42.91



LAUNCH DATE AUG 22 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC DISTANCE 573.271 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.960 GAL 3.17 AZL 83.19 HCA 164.31 SMA 198.71 ECC .24492 INC 6.8130 V1 29.447  
 RP 247.29 LAP 1.84 LOP 133.17 VP 20.136 GAP -.18 AZP 96.56 TAL 16.24 TAP 180.54 RCA 150.12 APO 247.30 V2 22.161  
 RC 312.717 GL 45.03 GP -45.38 ZAL 66.71 ZAP 73.88 ETS 165.30 ZAE 93.62 ETE 165.91 ZAC 43.98 ETC 290.51 LVI 22.60

PLANETOCENTRIC CONIC  
 C3 30.454 VML 5.519 DLA 50.06 RAL 359.10 RAD 6647.2 VEL 12.263 PTH 7.21 VHP 3.330 DPA -36.19 RAP 38.99 ECC 1.5012  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54  
 46.80 3 4 25 4584.94 -22.38 213.40 248.94 43.97 4 20 50 3584.9 -38.78 192.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6042 TRA-2.2750 TC3-3.8627 BAU 2.0073 SGT 5872.5 SGR 4229.6 SG3 848.5 ST 100.1 SR 94.4 SS 73.6  
 RDE 1.7409 RRA-1.1038 RC3-3.0639 FAU .23456 RRT .9661 RRF .9958 RTF .9560 CRT .9563 CRS -.9992 CST -.9444  
 FDE 4.7667 FRA-2.6074 FC3-6.6679 BSP 12389 SGB 7237.1 R23 .1941 R13 .9770 LSA 154.2 HSA 23.9 SSA .5  
 BDE 2.3673 BRA 2.5286 BC3 4.9303 FSP 1448 SG1 7181.7 SG2 893.4 THA 35.46 EL1 136.1 EL2 20.3 ALF 43.24

LAUNCH DATE AUG 22 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC DISTANCE 577.031 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.965 GAL 3.12 AZL 82.78 HCA 165.18 SMA 198.81 ECC .24471 INC 7.2208 V1 29.447  
 RP 247.44 LAP 1.84 LOP 134.06 VP 20.128 GAP -.38 AZP 96.98 TAL 15.99 TAP 181.17 RCA 150.16 APO 247.46 V2 22.147  
 RC 315.013 GL 46.93 GP -46.66 ZAL 67.62 ZAP 73.76 ETS 164.40 ZAE 92.82 ETE 165.24 ZAC 42.74 ETC 290.99 LVI 23.97

PLANETOCENTRIC CONIC  
 C3 32.074 VML 5.663 DLA 51.68 RAL 357.49 RAD 6647.8 VEL 12.329 PTH 7.26 VHP 3.446 DPA -35.27 RAP 39.84 ECC 1.5279  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.85  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.95  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.95  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.95  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.95  
 44.76 2 51 35 4612.90 -22.27 216.17 248.62 42.07 4 8 28 3612.9 -39.33 195.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6920 TRA-2.3575 TC3-3.7659 BAU 2.0617 SGT 5993.3 SGR 4333.1 SG3 779.4 ST 103.4 SR 99.0 SS 71.3  
 RDE 1.8681 RRA-1.1854 RC3-2.9891 FAU .21563 RRT .9671 RRF .9958 RTF .9557 CRT .9568 CRS -.9991 CST -.9442  
 FDE 4.5729 FRA-2.4909 FC3-5.8202 BSP 12663 SGB 7395.6 R23 .1966 R13 .9766 LSA 158.1 HSA 24.4 SSA .5  
 BDE 2.5204 BRA 2.6388 BC3 4.8080 FSP 1331 SG1 7340.7 SG2 899.4 THA 35.58 EL1 141.6 EL2 21.0 ALF 43.69

LAUNCH DATE AUG 22 1973 FLIGHT TIME 270.00 ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC DISTANCE 580.790 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.970 GAL 3.08 AZL 82.32 HCA 166.06 SMA 198.91 ECC .24491 INC 7.6783 V1 29.447  
 RP 247.58 LAP 1.84 LOP 134.94 VP 20.121 GAP -.58 AZP 97.46 TAL 15.74 TAP 181.80 RCA 150.19 APO 247.62 V2 22.133  
 RC 317.282 GL 48.96 GP -48.01 ZAL 68.58 ZAP 73.73 ETS 163.54 ZAE 92.09 ETE 164.59 ZAC 41.43 ETC 291.55 LVI 25.31

PLANETOCENTRIC CONIC  
 C3 34.016 VML 5.832 DLA 53.35 RAL 355.61 RAD 6648.5 VEL 12.407 PTH 7.32 VHP 3.579 DPA -36.37 RAP 40.79 ECC 1.5598  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49  
 42.68 2 37 49 4641.72 -22.03 218.98 248.09 40.09 3 55 10 3641.7 -39.77 199.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7857 TRA-2.4470 TC3-3.6438 BAU 2.1181 SGT 6106.5 SGR 4443.7 SG3 708.9 ST 105.9 SR 103.3 SS 68.4  
 RDE 1.9986 RRA-1.2807 RC3-2.9009 FAU .19626 RRT .9683 RRF .9957 RTF .9552 CRT .9564 CRS -.9990 CST -.9425  
 FDE 4.3388 FRA-2.3693 FC3-4.9949 BSP 12938 SGB 7552.2 R23 .1994 R13 .9761 LSA 161.0 HSA 25.0 SSA .4  
 BDE 2.6688 BRA 2.7619 BC3 4.6575 FSP 1209 SG1 7497.9 SG2 904.4 THA 35.77 EL1 146.3 EL2 21.8 ALF 44.25

LAUNCH DATE AUG 22 1973 FLIGHT TIME 272.00 ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC DISTANCE 584.546 EARTH TO MARS  
 RL 151.31 LAL -.00 LOL 328.76 VL 32.975 GAL 3.03 AZL 81.80 HCA 166.94 SMA 199.01 ECC .24512 INC 8.1956 V1 29.447  
 RP 247.71 LAP 1.85 LOP 135.83 VP 20.115 GAP -.79 AZP 97.99 TAL 15.49 TAP 182.42 RCA 150.23 APO 247.79 V2 22.120  
 RC 319.522 GL 51.11 GP -49.41 ZAL 69.59 ZAP 73.80 ETS 162.71 ZAE 91.43 ETE 163.97 ZAC 40.05 ETC 292.17 LVI 26.73

PLANETOCENTRIC CONIC  
 C3 36.370 VML 6.031 DLA 55.06 RAL 353.37 RAD 6649.4 VEL 12.500 PTH 7.39 VHP 3.732 DPA -37.51 RAP 41.84 ECC 1.5986  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17  
 40.57 2 22 51 4671.66 -21.64 221.81 247.30 38.04 3 40 42 3671.7 -40.06 203.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8198 TRA-2.5415 TC3-3.4930 BAU 2.1759 SGT 6205.8 SGR 4560.7 SG3 636.9 ST 107.3 SR 107.2 SS 64.9  
 RDE 2.1326 RRA-1.3895 RC3-2.7972 FAU .17643 RRT .9693 RRF .9954 RTF .9543 CRT .9566 CRS -.9988 CST -.9389  
 FDE 4.0667 FRA-2.2351 FC3-4.1996 BSP 13273 SGB 7701.4 R23 .2031 R13 .9754 LSA 162.9 HSA 25.7 SSA .4  
 BDE 2.8035 BRA 2.8965 BC3 4.4750 FSP 1088 SG1 7647.5 SG2 910.0 THA 36.05 EL1 149.9 EL2 22.8 ALF 44.96

LAUNCH DATE AUG 22 1973

FLIGHT TIME 274.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

DISTANCE 588.299

EARTH TO MARS

RL 151.31 LAL -.00 LOL 328.76 VL 32.98D GAL 2.98 AZL 81.21 MCA 187.81 SMA 199.11 ECC .24534 INC 8.7848 V1 29.447  
 RP 247.84 LAP 1.85 LOP 136.71 VP 20.110 GAP -.99 AZP 98.59 TAL 15.23 TAP 183.04 RCA 150.26 APO 247.96 V2 22.187  
 RC 321.734 GL 53.40 GP -50.88 ZAL 70.64 ZAP 73.98 ETS 161.94 ZAE 90.88 ETE 183.30 ZAC 38.60 ETC 292.88 LVI 28.21

PLANETOCENTRIC CONIC

C3 39.254 VHL 6.265 DLA 56.80 RAL 350.71 RAD 6680.4 VEL 12.615 PTH 7.47 VHP 3.909 DPA -38.67 RAP 43.02 ECC 1.8460  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97  
 38.45 2 6 23 4703.02 -21.05 224.65 246.14 35.92 3 24 46 3703.0 -40.16 206.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8272 TRA-2.6536 TC3-3.3247 BAW 2.2421 SGT 6307.9 SGR 4693.6 SG3 564.5 ST 107.0 SR 110.2 SS 60.5  
 RDE 2.2581 RRA-1.5219 RC3-2.6833 FAU .15653 RRT .9701 RRF .9950 RTF .9525 CRT .9498 CRS -.9984 CST -.9306  
 FDE 3.7442 FRA-2.0960 FC3-3.4523 B8P 13507 SGB 7862.5 R25 .2089 R13 .9742 LSA 162.8 MSA 27.0 SSA .3  
 BDE 2.9048 BRA 3.0590 BC3 4.2724 FSP 960 SG1 7808.6 SG2 919.5 THA 36.41 EL1 151.6 EL2 24.3 ALF 45.90

LAUNCH DATE AUG 23 1973

FLIGHT TIME 98.00

ARRIVAL DATE NOV 29 1973

HELIOCENTRIC CONIC

DISTANCE 265.530

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 38.127 GAL 4.09 AZL 89.93 HCA 81.77 SMA 254.89 ECC .41170 INC .0682 V1 29.453  
 RP 220.95 LAP .07 LOP 51.49 VP 26.090 GAP 23.15 AZP 89.99 TAL 14.07 TAP 95.84 RCA 149.95 APO 359.83 V2 24.882  
 RC 87.440 GL .39 GP -5.43 ZAL 82.79 ZAP 172.12 ETS 225.21 ZAE 158.66 ETE 345.13 ZAC 77.38 ETC 282.44 LVI -10.75

PLANETOCENTRIC CONIC

C3 39.470 VHL 6.283 DLA 12.71 RAL 30.18 RAD 6650.5 VEL 12.623 PTH 7.48 VHP 8.137 DPA 11.30 RAP 45.11 ECC 1.6496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 26 39 3557.38 -46.97 133.46 276.56 98.83 11 25 57 2557.4 -36.26 102.56  
 60.00 10 52 10 3489.50 -40.08 128.45 277.66 94.58 11 50 19 2489.5 -33.90 99.21  
 70.00 11 28 27 3382.70 -34.12 120.20 278.06 91.52 12 24 50 2382.7 -29.93 92.27  
 80.00 12 21 55 3215.23 -29.85 107.54 278.10 89.47 13 15 30 2215.2 -27.03 80.47  
 90.00 13 36 45 2973.67 -28.25 89.76 278.07 88.73 14 26 19 1973.7 -25.93 62.99  
 100.00 15 4 46 2689.70 -29.85 68.91 278.10 89.47 15 49 36 1689.7 -27.03 41.84  
 110.00 16 27 54 2429.52 -34.12 49.12 278.08 91.52 17 8 23 1429.5 -29.93 21.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3005 TRA -.7922 TC3 .3638 BAU .1982 SGT 912.5 SGR 631.4 S63 142.7 ST 17.7 SR 29.2 SS 4.8  
 RDE -.6365 RRA .2343 RC3 -.0932 FAU .05975 RRT -.0984 RRF .1284 RTF -.5450 CRT .7003 CR8 .8982 C8T .7977  
 FDE .1314 FRA .0516 FC3-1.3108 B8P 1179 SGB 1109.7 R23 -.0272 R13 .5494 LSA 32.4 M8A 11.5 S8A 1.7  
 BDE .7039 BRA .8261 BC3 .3756 F8P 174 S61 916.5 S62 625.7 THA 172.68 EL1 32.2 EL2 11.4 ALF 63.43

LAUNCH DATE AUG 23 1973

FLIGHT TIME 100.00

ARRIVAL DATE DEC 1 1973

HELIOCENTRIC CONIC

DISTANCE 268.216

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.990 GAL 4.12 AZL 89.89 HCA 82.88 SMA 250.25 ECC .40097 INC .1044 V1 29.453  
 RP 221.33 LAP .10 LOP 52.60 VP 25.864 GAP 22.74 AZP 89.99 TAL 14.44 TAP 97.32 RCA 149.91 APO 350.60 V2 24.840  
 RC 89.407 GL .60 GP -5.56 ZAL 62.14 ZAP 171.38 ETS 221.81 ZAE 158.47 ETE 344.70 ZAC 77.21 ETC 282.42 LVI -10.56

PLANETOCENTRIC CONIC

C3 37.987 VHL 6.163 DLA 12.68 RAL 29.48 RAD 6650.0 VEL 12.565 PTH 7.43 VHP 7.881 DPA 11.25 RAP 45.38 ECC 1.6252  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 23 58 3547.11 -46.86 132.49 274.88 99.37 11 23 5 2547.1 -37.90 101.85  
 60.00 10 49 31 3479.14 -40.02 127.58 276.08 95.17 11 47 30 2479.1 -33.62 98.47  
 70.00 11 25 51 3372.21 -34.10 119.38 276.54 92.00 12 22 3 2372.2 -29.73 91.53  
 80.00 12 19 20 3204.61 -29.86 106.75 276.62 89.89 13 12 45 2204.6 -26.87 79.73  
 90.00 13 34 12 2962.99 -28.27 88.98 276.61 89.12 14 23 35 1963.0 -25.78 62.25  
 100.00 15 2 12 2679.09 -29.86 68.12 276.62 89.89 15 46 51 1679.1 -26.87 41.10  
 110.00 16 25 17 2419.03 -34.10 48.30 276.54 92.00 17 5 36 1419.0 -29.73 20.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3010 TRA -.7815 TC3 .3925 BAU .2060 SGT 931.1 SGR 637.7 S63 152.4 ST 17.9 SR 29.4 SS 4.7  
 RDE -.6267 RRA .2325 RC3 -.1025 FAU .06262 RRT -.1053 RRF .1379 RTF -.5549 CRT .7051 CR8 .9050 C8T .7798  
 FDE .1370 FRA .0348 FC3-1.4271 B8P 1220 SGB 1128.5 R23 -.0298 R13 .5599 LSA 32.8 M8A 11.5 S8A 1.8  
 BDE .6971 BRA .8154 BC3 .4057 F8P 189 S61 935.6 S62 631.1 THA 172.40 EL1 32.5 EL2 11.5 ALF 63.10

LAUNCH DATE AUG 23 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 3 1973

HELIOCENTRIC CONIC

DISTANCE 271.006

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.860 GAL 4.15 AZL 89.86 HCA 83.98 SMA 246.05 ECC .39093 INC .1409 V1 29.453  
 RP 221.71 LAP .14 LOP 53.70 VP 25.648 GAP 22.34 AZP 89.99 TAL 14.82 TAP 98.80 RCA 149.86 APO 342.24 V2 24.799  
 RC 91.436 GL .81 GP -5.89 ZAL 61.49 ZAP 170.62 ETS 218.95 ZAE 158.35 ETE 344.24 ZAC 77.04 ETC 282.40 LVI -10.36

PLANETOCENTRIC CONIC

C3 36.833 VHL 6.053 DLA 12.66 RAL 28.78 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 7.636 DPA 11.20 RAP 45.64 ECC 1.6029  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 21 17 3537.40 -46.75 131.58 273.25 100.06 11 20 14 2537.4 -37.96 101.17  
 60.00 10 46 51 3469.34 -39.96 126.75 274.54 95.73 11 44 40 2469.3 -33.35 97.78  
 70.00 11 23 13 3362.30 -34.08 118.61 275.07 92.46 12 19 16 2362.3 -29.52 90.83  
 80.00 12 16 45 3194.59 -29.86 106.01 275.19 90.28 13 10 0 2194.6 -26.71 79.03  
 90.00 13 31 38 2952.92 -28.28 88.24 275.19 89.49 14 20 51 1952.9 -25.64 61.54  
 100.00 14 59 37 2669.06 -29.86 67.38 275.19 90.28 15 44 8 1669.1 -26.71 40.39  
 110.00 16 22 40 2409.12 -34.08 47.53 275.07 92.46 17 2 49 1409.1 -29.52 19.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3012 TRA -.7709 TC3 .4220 BAU .2139 SGT 949.6 SGR 643.7 S63 162.7 ST 18.2 SR 29.6 SS 4.8  
 RDE -.6213 RRA .2305 RC3 -.1124 FAU .06588 RRT -.1131 RRF .1479 RTF -.5648 CRT .7097 CR8 .9105 C8T .7607  
 FDE .1431 FRA .0163 FC3-1.5317 B8P 1257 SGB 1147.2 R23 -.0322 R13 .5702 LSA 33.0 M8A 11.6 S8A 1.8  
 BDE .6904 BRA .8047 BC3 .4367 F8P 204 S61 954.6 S62 636.2 THA 172.08 EL1 32.7 EL2 11.6 ALF 62.81

LAUNCH DATE AUG 23 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 5 1973

HELIOCENTRIC CONIC

DISTANCE 273.886

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.738 GAL 4.18 AZL 89.82 HCA 85.08 SMA 242.23 ECC .38152 INC .1761 V1 29.453  
 RP 222.09 LAP .18 LOP 54.80 VP 25.441 GAP 21.94 AZP 89.98 TAL 15.20 TAP 100.28 RCA 149.82 APO 334.65 V2 24.757  
 RC 93.923 GL 1.03 GP -5.83 ZAL 60.85 ZAP 169.82 ETS 216.53 ZAE 158.28 ETE 343.72 ZAC 76.86 ETC 282.38 LVI -10.18

PLANETOCENTRIC CONIC

C3 35.396 VHL 5.949 DLA 12.64 RAL 28.08 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 7.399 DPA 11.13 RAP 45.89 ECC 1.5828  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 18 35 3528.25 -46.64 130.73 271.68 100.71 11 17 23 2528.2 -37.23 100.55  
 60.00 10 44 11 3460.11 -39.89 125.98 273.06 96.25 11 41 51 2460.1 -33.09 97.13  
 70.00 11 20 35 3352.98 -34.05 117.88 273.65 92.88 12 16 28 2353.0 -29.33 90.18  
 80.00 12 14 9 3185.17 -29.85 105.31 273.80 90.65 13 7 14 2185.2 -26.55 78.37  
 90.00 13 29 3 2943.45 -28.28 87.55 273.81 89.84 14 18 6 1943.4 -25.50 60.88  
 100.00 14 57 1 2659.64 -29.85 66.68 273.80 90.65 15 41 21 1659.6 -26.55 39.74  
 110.00 16 20 2 2399.80 -34.05 46.80 273.65 92.88 17 0 1 1399.8 -29.33 19.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3018 TRA -.7602 TC3 .4517 BAU .2215 SGT 967.6 SGR 649.6 S63 173.7 ST 18.4 SR 29.8 SS 5.0  
 RDE -.6141 RRA .2285 RC3 -.1229 FAU .06889 RRT -.1208 RRF .1586 RTF -.5739 CRT .7150 CR8 .9148 C8T .7405  
 FDE .1495 FRA .0045 FC3-1.6849 B8P 1297 SGB 1165.4 R23 -.0352 R13 .5798 LSA 33.3 M8A 11.6 S8A 1.9  
 BDE .6843 BRA .7938 BC3 .4681 F8P 221 S61 973.2 S62 641.1 THA 171.78 EL1 33.0 EL2 11.6 ALF 62.48

LAUNCH DATE AUG 23 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC

DISTANCE 276.073

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.623 GAL 4.21 AZL 89.79 HCA 86.18 SMA 238.75 ECC .37270 INC .2112 V1 29.453
RP 222.48 LAP .21 LOP 55.90 VP 25.243 GAP 21.55 AZP 89.99 TAL 15.57 TAP 101.75 RCA 149.77 APO 327.73 V2 24.715
RC 95.665 GL 1.25 GP -5.98 ZAL 60.21 ZAP 168.99 ETS 214.45 ZAE 158.26 ETE 343.16 ZAC 76.68 ETC 282.36 LVI -9.86

PLANETOCENTRIC CONIC

C3 34.265 VHL 5.854 DLA 12.62 RAL 27.39 RAD 6648.6 VEL 12.417 PTH 7.32 VHP 7.172 DPA 11.05 RAP 46.13 ECC 1.5639
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 15 34 3519.65 -46.53 129.93 270.17 101.32 11 14 33 2519.7 -36.92 99.96
60.00 10 41 31 3451.46 -39.83 125.25 271.63 96.74 11 39 2 2451.5 -32.85 96.53
70.00 11 17 57 3344.24 -34.01 117.20 272.27 93.29 12 13 41 2344.2 -29.14 89.57
80.00 12 11 32 3176.34 -29.84 104.65 272.45 90.99 13 4 29 2176.3 -26.40 77.76
90.00 13 26 27 2934.58 -28.28 86.90 272.47 90.16 14 15 21 1934.6 -25.36 60.27
100.00 14 54 24 2650.82 -29.84 66.02 272.45 90.99 15 38 35 1650.8 -26.40 39.12
110.00 16 17 23 2391.06 -34.01 46.12 272.27 93.29 16 57 14 1391.1 -29.14 18.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3022 TRA -.7491 TC3 .4815 BAU .2290 SGT 984.8 SGR 655.3 SG3 185.2 ST 18.6 SR 29.9 SS 5.1
RDE -.6072 RRA .2264 RC3 -.1342 FAU .07229 RRT -.1292 RRF .1700 RTF -.5828 CRT .7201 CRS .9176 CST .7199
FDE .1563 FRA -.0269 FC3-1.8265 BSP 1335 SGB 1182.9 R23 -.0381 R13 .5893 LSA 33.6 MSA 11.6 SSA 2.0
BDE .6782 BRA .7825 BC3 .4999 F8P 239 SG1 991.2 SG2 645.7 THA 171.42 EL1 33.3 EL2 11.6 ALF 62.18

LAUNCH DATE AUG 23 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC

DISTANCE 279.929

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.514 GAL 4.24 AZL 89.75 HCA 87.27 SMA 235.57 ECC .36443 INC .2460 V1 29.453
RP 222.86 LAP .25 LOP 56.99 VP 25.053 GAP 21.16 AZP 89.99 TAL 15.95 TAP 103.22 RCA 149.72 APO 321.42 V2 24.673
RC 97.860 GL 1.47 GP -6.13 ZAL 59.58 ZAP 168.15 ETS 212.65 ZAE 158.29 ETE 342.55 ZAC 76.50 ETC 282.34 LVI -9.76

PLANETOCENTRIC CONIC

C3 33.229 VHL 5.764 DLA 12.60 RAL 26.70 RAD 6648.2 VEL 12.375 PTH 7.29 VHP 6.953 DPA 10.96 RAP 46.38 ECC 1.5469
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 13 13 3511.60 -46.42 129.18 268.72 101.88 11 11 44 2511.6 -36.62 99.42
60.00 10 38 51 3443.36 -39.76 124.57 270.25 97.20 11 36 15 2443.4 -32.61 95.97
70.00 11 15 19 3336.08 -33.98 116.57 270.94 93.66 12 10 55 2336.1 -28.96 89.00
80.00 12 8 55 3168.12 -29.83 104.04 271.15 91.31 13 1 43 2168.1 -26.26 77.19
90.00 13 23 50 2926.33 -28.28 86.30 271.18 90.46 14 12 37 1926.3 -25.24 59.70
100.00 14 51 47 2642.59 -29.83 65.41 271.15 91.31 15 35 50 1642.6 -26.26 38.55
110.00 16 14 45 2382.90 -33.98 45.48 270.94 93.66 16 54 28 1382.9 -28.96 17.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3029 TRA -.7385 TC3 .5114 BAU .2363 SGT 1001.9 SGR 660.9 SG3 197.4 ST 18.8 SR 30.0 SS 5.3
RDE -.6005 RRA .2242 RC3 -.1461 FAU .07587 RRT -.1379 RRF .1818 RTF -.5908 CRT .7254 CRS .9194 CST .6987
FDE .1640 FRA -.0519 FC3-1.9786 BSP 1375 SGB 1200.3 R23 -.0413 R13 .5980 LSA 33.8 MSA 11.6 S8A 2.1
BDE .6726 BRA .7717 BC3 .5318 F8P 258 SG1 1009.1 SG2 650.0 THA 171.07 EL1 33.5 EL2 11.6 ALF 61.86

LAUNCH DATE AUG 23 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC

DISTANCE 283.055

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.412 GAL 4.27 AZL 89.72 HCA 88.36 SMA 232.66 ECC .35668 INC .2807 V1 29.453
RP 223.25 LAP .28 LOP 58.08 VP 24.870 GAP 20.77 AZP 89.99 TAL 16.33 TAP 104.69 RCA 149.67 APO 315.64 V2 24.631
RC 100.104 GL 1.70 GP -6.29 ZAL 58.96 ZAP 167.28 ETS 211.09 ZAE 158.38 ETE 341.87 ZAC 76.31 ETC 282.33 LVI -9.55

PLANETOCENTRIC CONIC

C3 32.280 VHL 5.682 DLA 12.59 RAL 26.03 RAD 6647.9 VEL 12.337 PTH 7.26 VHP 6.742 DPA 10.87 RAP 46.58 ECC 1.5312
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 10 33 3504.10 -46.31 128.49 267.33 102.41 11 8 57 2504.1 -36.34 98.92
60.00 10 36 12 3435.82 -39.69 123.94 268.92 97.62 11 33 28 2435.8 -32.39 95.45
70.00 11 12 40 3328.49 -33.95 115.98 269.65 94.01 12 8 9 2328.5 -28.79 88.48
80.00 12 6 18 3160.49 -29.82 103.47 269.89 91.61 12 58 58 2160.5 -26.13 78.66
90.00 13 21 13 2918.68 -28.27 85.74 269.93 90.74 14 9 52 1918.7 -25.12 59.17
100.00 14 49 10 2634.96 -29.82 64.84 269.89 91.61 15 33 5 1635.0 -26.13 38.03
110.00 16 12 7 2375.31 -33.95 44.89 269.65 94.01 16 51 42 1375.3 -28.79 17.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3036 TRA -.7278 TC3 .5412 BAU .2434 SGT 1018.5 SGR 666.5 SG3 210.4 ST 19.0 SR 30.2 SS 5.5
RDE -.5941 RRA .2219 RC3 -.1389 FAU .07967 RRT -.1473 RRF .1947 RTF -.5386 CRT .7308 CRS .9193 CST .8775
FDE .1717 FRA -.0788 FC3-2.1367 BSP 1412 SGB 1217.2 R23 -.0449 R13 .6068 LSA 34.1 MSA 11.7 S8A 2.1
BDE .6672 BRA .7609 BC3 .5640 F8P 279 SG1 1026.5 SG2 654.0 THA 170.69 EL1 33.7 EL2 11.6 ALF 61.55

LAUNCH DATE AUG 23 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC

DISTANCE 288.243

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 34.315 GAL 4.30 AZL 89.68 HCA 89.45 SMA 229.98 ECC .34941 INC .3151 V1 29.453
RP 223.64 LAP .32 LOP 59.17 VP 24.694 GAP 20.39 AZP 90.00 TAL 16.70 TAP 106.15 RCA 149.62 APO 310.34 V2 24.590
RC 102.397 GL 1.93 GP -6.45 ZAL 58.36 ZAP 166.39 ETS 209.72 ZAE 158.52 ETE 341.13 ZAC 76.12 ETC 282.31 LVI -9.35

PLANETOCENTRIC CONIC

C3 31.410 VHL 5.604 DLA 12.58 RAL 25.35 RAD 6647.5 VEL 12.302 PTH 7.24 VHP 6.539 DPA 10.76 RAP 46.78 ECC 1.5169
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 7 54 3497.10 -46.21 127.85 265.99 102.89 11 6 11 2497.1 -36.08 98.45
60.00 10 33 33 3428.80 -39.63 123.35 267.65 98.01 11 30 42 2428.8 -32.19 94.97
70.00 11 10 2 3321.45 -33.91 115.43 268.42 94.33 12 5 24 2321.5 -28.63 87.99
80.00 12 3 40 3153.42 -29.80 102.95 268.68 91.89 12 56 14 2153.4 -26.00 76.17
90.00 13 18 38 2911.60 -28.26 85.22 268.72 91.00 14 7 7 1911.6 -25.00 58.68
100.00 14 46 32 2627.90 -29.80 64.32 268.68 91.89 15 30 20 1627.9 -26.00 37.54
110.00 16 9 29 2368.27 -33.91 44.35 268.42 94.33 16 48 57 1368.3 -28.63 16.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2954 TRA -.7083 TC3 .5819 BAU .2548 SGT 1033.0 SGR 671.8 SG3 223.9 ST 18.8 SR 30.2 SS 5.8
RDE -.5878 RRA .2197 RC3 -.1721 FAU .08358 RRT -.1659 RRF .2073 RTF -.6197 CRT .7304 CRS .9202 CST .6568
FDE .1824 FRA -.1050 FC3-2.3035 BSP 1337 SGB 1232.2 R23 -.0352 R13 .6278 LSA 34.1 MSA 11.6 S8A 2.2
BDE .6578 BRA .7416 BC3 .6068 F8P 303 SG1 1043.0 SG2 656.1 THA 169.75 EL1 33.7 EL2 11.5 ALF 62.05

LAUNCH DATE		AUG 23 1973		FLIGHT TIME		114.00		ARRIVAL DATE		DEC 19 1973												
HELIOCENTRIC CONIC						DISTANCE 289.488			EARTH TO MARS													
RL	151.28	LAL	-.00	LOL	329.72	VL	34.224	GAL	4.33	AZL	89.65	HCA	90.53	SMA	227.52	ECC	.34259	INC	.3498	V1	29.483	
RP	224.03	LAP	.35	LOP	60.25	VP	24.926	GAP	20.02	AZP	90.00	TAL	17.07	TAP	107.60	RCA	149.58	APO	305.47	V2	24.548	
RC	104.733	GL	2.16	GP	-6.62	ZAL	57.76	ZAP	165.49	ETS	208.52	ZAE	158.70	ETE	340.32	ZAC	75.93	ETC	282.30	LVI	-9.14	
PLANETOCENTRIC CONIC																						
C3	30.613	VHL	5.533	DLA	12.59	RAL	24.70	RAD	6647.2	VEL	12.270	PTH	7.21	VHP	6.344	DPA	10.64	RAP	46.97	ECC	1.5038	
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LONG
50.00	10	5	17	3490.65	-46.11	127.26	264.72	103.34	11	3	27	2490.7	-35.84	98.03								
60.00	10	30	56	3422.36	-39.57	122.82	266.42	98.37	11	27	58	2422.4	-32.00	94.53								
70.00	11	7	25	3315.01	-33.88	114.93	267.23	94.62	12	2	40	2315.0	-28.48	87.55								
80.00	12	1	3	3146.99	-29.79	102.47	267.52	92.14	12	53	30	2147.0	-25.89	75.73								
90.00	13	15	58	2905.16	-28.26	84.75	267.57	91.24	14	4	23	1905.2	-24.90	58.24								
100.00	14	43	55	2621.46	-29.79	63.84	267.52	92.14	15	27	36	1621.5	-25.89	37.10								
110.00	16	6	31	2361.83	-33.88	43.85	267.23	94.62	16	46	13	1361.8	-28.48	16.46								
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY										
TDE	-.2991	TRA	-.7007	TC3	.6071	BAU	.2599	SGT	1048.8	SGR	677.3	SG3	238.5	ST	19.1	SR	30.3	SS	6.0			
RDE	-.5819	RRA	.2170	RC3	-.1865	FAU	.08785	RRT	-.1733	RRF	.2220	RTF	-.6214	CRT	.7381	CRS	.9165	CST	.6342			
FDE	.1900	FRA	-.1381	FC3	-2.4844	BSP	1410	SGB	1248.5	R23	-.0440	R13	.6306	LSA	34.4	MSA	11.6	SSA	2.3			
BDE	.6543	BRA	.7335	BC3	.6351	FSP	324	SG1	1059.7	SG2	660.2	THA	169.50	EL1	33.9	EL2	11.5	ALF	61.48			

LAUNCH DATE		AUG 23 1973		FLIGHT TIME		116.00		ARRIVAL DATE		DEC 17 1973												
HELIOCENTRIC CONIC						DISTANCE 292.784			EARTH TO MARS													
RL	151.28	LAL	-.00	LOL	329.72	VL	34.139	GAL	4.36	AZL	89.62	HCA	91.61	SMA	225.26	ECC	.33620	INC	.3840	V1	29.453	
RP	224.42	LAP	.38	LOP	61.33	VP	24.364	GAP	19.64	AZP	90.01	TAL	17.44	TAP	109.04	RCA	149.53	APO	300.99	V2	24.506	
RC	107.119	GL	2.39	GP	-6.80	ZAL	57.19	ZAP	164.56	ETS	207.45	ZAE	158.92	ETE	339.43	ZAC	75.73	ETC	282.30	LVI	-8.93	
PLANETOCENTRIC CONIC																						
C3	29.880	VHL	5.466	DLA	12.59	RAL	24.05	RAD	6647.0	VEL	12.240	PTH	7.19	VHP	6.156	DPA	10.51	RAP	47.15	ECC	1.4910	
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LONG
50.00	10	2	41	3484.71	-46.01	126.71	263.50	103.74	11	0	45	2484.7	-35.62	97.64								
60.00	10	28	20	3416.44	-39.51	122.33	265.28	98.70	11	25	16	2416.4	-31.82	94.13								
70.00	11	4	48	3309.12	-33.84	114.47	266.10	94.89	11	59	57	2309.1	-28.35	87.14								
80.00	11	58	25	3141.12	-29.77	102.04	266.40	92.36	12	50	46	2141.1	-25.78	75.33								
90.00	13	13	21	2899.31	-28.25	84.32	266.46	91.45	14	1	40	1899.3	-24.80	57.84								
100.00	14	41	17	2615.60	-29.77	63.40	266.40	92.36	15	24	53	1615.6	-25.78	36.69								
110.00	16	4	14	2355.94	-33.84	43.59	266.10	94.89	16	43	30	1355.9	-28.35	16.06								
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY										
TDE	-.3021	TRA	-.6924	TC3	.6327	BAU	.2653	SGT	1063.8	SGR	682.8	SG3	253.9	ST	19.4	SR	30.4	SS	6.2			
RDE	-.5761	RRA	.2142	RC3	-.2016	FAU	.09234	RRT	-.1822	RRF	.2373	RTF	-.6242	CRT	.7451	CRS	.9123	CST	.6134			
FDE	.1991	FRA	-.1729	FC3	-2.6754	BSP	1470	SGB	1284.1	R23	-.0515	R13	.6347	LSA	34.6	MSA	11.6	SSA	2.4			
BDE	.6505	BRA	.7248	BC3	.6641	FSP	348	SG1	1075.7	SG2	664.0	THA	169.16	EL1	34.2	EL2	11.5	ALF	60.97			

LAUNCH DATE		AUG 23 1973		FLIGHT TIME		118.00		ARRIVAL DATE		DEC 19 1973												
HELIOCENTRIC CONIC						DISTANCE 296.125			EARTH TO MARS													
RL	151.28	LAL	-.00	LOL	329.72	VL	34.058	GAL	4.39	AZL	89.58	HCA	92.68	SMA	223.17	ECC	.33020	INC	.4182	V1	29.453	
RP	224.81	LAP	.42	LOP	62.40	VP	24.208	GAP	19.28	AZP	90.02	TAL	17.80	TAP	110.46	RCA	149.48	APO	296.86	V2	24.464	
RC	109.544	GL	2.63	GP	-6.98	ZAL	56.62	ZAP	163.62	ETS	206.50	ZAE	159.19	ETE	338.45	ZAC	75.53	ETC	282.29	LVI	-8.73	
PLANETOCENTRIC CONIC																						
C3	29.208	VHL	5.404	DLA	12.60	RAL	23.42	RAD	6646.7	VEL	12.213	PTH	7.17	VHP	5.975	DPA	10.37	RAP	47.32	ECC	1.4807	
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LONG
50.00	10	0	7	3479.27	-45.92	126.22	262.34	104.12	10	58	6	2479.3	-35.41	97.28								
60.00	10	25	45	3411.04	-39.45	121.88	264.14	99.00	11	22	36	2411.0	-31.66	93.77								
70.00	11	2	12	3303.77	-33.81	114.06	265.01	95.13	11	57	16	2303.8	-29.22	86.78								
80.00	11	55	48	3135.83	-29.76	101.64	265.33	92.57	12	48	4	2135.8	-25.68	74.96								
90.00	13	10	43	2894.05	-28.24	83.94	265.39	91.64	13	58	57	1894.0	-24.71	57.48								
100.00	14	38	40	2610.31	-29.76	63.01	265.33	92.57	15	22	10	1610.3	-25.68	36.33								
110.00	16	1	38	2350.59	-33.81	42.98	265.01	95.13	16	40	49	1350.6	-28.22	15.69								
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY										
TDE	-.3042	TRA	-.6834	TC3	.6387	BAU	.2709	SGT	1078.0	SGR	688.3	SG3	270.1	ST	19.6	SR	30.4	SS	6.5			
RDE	-.5705	RRA	.2112	RC3	-.2178	FAU	.09708	RRT	-.1924	RRF	.2332	RTF	-.6280	CRT	.7515	CRS	.9073	CST	.5935			
FDE	.2092	FRA	-.2101	FC3	-2.6789	BSP	1519	SGB	1279.0	R23	-.0580	R13	.6397	LSA	34.8	MSA	11.6	SSA	2.5			
BDE	.6465	BRA	.7153	BC3	.6937	FSP	375	SG1	1091.1	SG2	667.3	THA	168.74	EL1	34.4	EL2	11.5	ALF	60.54			

LAUNCH DATE		AUG 23 1973		FLIGHT TIME		120.00		ARRIVAL DATE		DEC 21 1973												
HELIOCENTRIC CONIC						DISTANCE 299.508			EARTH TO MARS													
RL	151.28	LAL	-.00	LOL	329.72	VL	33.981	GAL	4.42	AZL	89.55	HCA	93.75	SMA	221.24	ECC	.32457	INC	.4523	V1	29.453	
RP	225.20	LAP	.45	LOP	63.47	VP	24.058	GAP	18.91	AZP	90.03	TAL	18.15	TAP	111.90	RCA	149.43	APO	293.05	V2	24.422	
RC	112.011	GL	2.87	GP	-7.17	ZAL	56.08	ZAP	162.66	ETS	205.64	ZAE	159.50	ETE	337.38	ZAC	75.33	ETC	282.29	LVI	-8.52	
PLANETOCENTRIC CONIC																						
C3	28.589	VHL	5.347	DLA	12.62	RAL	22.81	RAD	6646.5	VEL	12.187	PTH	7.15	VHP	5.800	DPA	10.22	RAP	47.47	ECC	1.4705	
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LONG
50.00	9	57	34	3474.32	-45.84	125.77	261.23	104.45	10	55	29	2474.3	-35.22	98.98								
60.00	10	23	11	3406.15	-39.40	121.47	263.07	99.27	11	19	57	2406.1	-31.51	93.44								
70.00	10	59	37	3298.96	-33.78	113.69	263.97	95.35	11	54	36	2299.0	-28.11	86.45								
80.00	11	53	11	3131.11	-29.74	101.29	264.30	92.75	12	45	22	2131.1	-25.59	74.64								
90.00	13	8	5	2889.36	-28.23	83.60	264.37	91.81	13	56	15	1889.4	-24.64	57.16								
100.00	14	36	3	2605.58	-29.74	62.66	264.30	92.75	15	19	29	1605.6	-25.59	36.01								
110.00	15	59	3	2345.78	-33.78	42.60	263.97	95.35	16	38	9	1345.8	-28.11	15.36								
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY										
TDE	-.3061	TRA	-.6741	TC3	.6836	BAU	.2762	SGT	1090.9	SGR	694.0	SG3	287.1	ST	19.8	SR	30.5	SS	6.7			
RDE	-.5650	RRA	.2081	RC3	-.2344	FAU	.10201	RRT	-.2032	RRF	.2700	RTF	-.6314	CRT	.7579							

LAUNCH DATE AUG 23 1973 FLIGHT TIME 122.00 ARRIVAL DATE DEC 23 1973

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 33.909 GAL 4.45 AZL 89.51 HCA 94.82 SMA 219.45 ECC .31928 INC .4884 V1 29.453  
 RP 229.59 LAP .48 LOP 64.54 VP 23.914 GAP 18.55 AZP 90.04 TAL 18.50 TAP 113.31 RCA 149.39 APO 289.52 V2 24.380  
 RC 114.516 GL 3.11 GP -7.37 ZAL 55.55 ZAP 161.69 ETS 204.87 ZAE 159.84 ETE 336.20 ZAC 75.12 ETC 282.29 LVI -8.30

Distance 302.928 Earth to Mars

Planetocentric Conic: C3 28.020 VHL 5.293 DLA 12.65 RAL 22.20 RAD 6646.2 VEL 12.164 PTH 7.13 VHP 5.631 DPA 10.05 RAP 47.61 ECC 1.4611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 55 4 3469.84 -45.76 125.37 260.18 104.76 10 52 54 2469.8 -35.05 98.67  
 60.00 10 20 39 3401.75 -39.35 121.11 262.05 99.51 11 17 21 2401.8 -31.37 93.14  
 70.00 10 57 2 3294.68 -33.75 113.36 262.97 95.55 11 51 57 2294.7 -28.01 86.16  
 80.00 11 50 35 3126.94 -29.73 100.98 263.32 92.92 12 42 42 2126.9 -25.52 74.35  
 90.00 13 5 28 2885.25 -28.22 83.30 263.40 91.96 13 53 33 1885.2 -24.57 56.88  
 100.00 14 33 26 2601.41 -29.73 62.35 263.32 92.92 15 16 48 1601.4 -25.52 35.72  
 110.00 15 56 29 2341.50 -33.75 42.27 262.97 95.55 16 35 30 1341.5 -28.01 15.07

Differential Corrections: TDE -.3077 TRA -.6649 TC3 .7080 BAU .2815 SGT 1103.0 SGR 699.8 S63 305.1 ST 20.0 SR 30.5 S8 7.0  
 RDE -.5595 RRA .2047 RC3 -.2522 FAU .10723 RRT -.2150 RRF .2875 RTF -.6349 CRT .7638 CRS .8960 C8T .5569  
 FDE .2323 FRA -.2926 FC3-3.3130 BSP 1596 SGB 1306.3 R23 -.0709 R13 .6496 LSA 35.2 MSA 11.7 S8A 2.7  
 BDE .6385 BRA .6957 BC3 .7516 FSP 431 S61 1119.3 S62 673.5 THA 167.75 EL1 34.6 EL2 11.4 ALF 59.76

LAUNCH DATE AUG 23 1973 FLIGHT TIME 124.00 ARRIVAL DATE DEC 25 1973

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 33.842 GAL 4.47 AZL 89.48 HCA 95.88 SMA 217.80 ECC .31432 INC .5204 V1 29.453  
 RP 229.98 LAP .52 LOP 65.60 VP 23.775 GAP 18.20 AZP 90.05 TAL 18.84 TAP 114.71 RCA 149.34 APO 286.25 V2 24.338  
 RC 117.057 GL 3.35 GP -7.57 ZAL 55.04 ZAP 160.69 ETS 204.17 ZAE 160.22 ETE 334.91 ZAC 74.91 ETC 282.29 LVI -8.09

Distance 306.382 Earth to Mars

Planetocentric Conic: C3 27.496 VHL 5.244 DLA 12.68 RAL 21.62 RAD 6646.0 VEL 12.143 PTH 7.11 VHP 5.469 DPA 9.88 RAP 47.73 ECC 1.4525  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 52 36 3465.82 -45.69 125.00 259.18 105.03 10 50 22 2465.8 -34.89 98.42  
 60.00 10 18 8 3397.84 -39.30 120.79 261.08 99.73 11 14 46 2397.8 -31.25 92.88  
 70.00 10 54 29 3290.91 -33.73 113.06 262.02 95.72 11 49 20 2290.9 -27.92 85.90  
 80.00 11 47 58 3123.31 -29.72 100.72 262.39 93.06 12 40 2 2123.3 -25.45 74.11  
 90.00 13 2 50 2881.69 -28.21 83.04 262.46 92.09 13 50 52 1881.7 -24.51 56.63  
 100.00 14 30 50 2597.79 -29.72 62.08 262.39 93.06 15 14 8 1597.8 -25.45 35.47  
 110.00 15 53 55 2337.73 -33.73 41.98 262.02 95.72 16 32 53 1337.7 -27.92 14.82

Differential Corrections: TDE -.3092 TRA -.6556 TC3 .7314 BAU .2867 SGT 1114.3 SGR 705.8 S63 324.1 ST 20.2 SR 30.5 S8 7.4  
 RDE -.5542 RRA .2011 RC3 -.2710 FAU .11273 RRT -.2274 RRF .3059 RTF -.6382 CRT .7698 CRS .8898 C8T .5407  
 FDE .2456 FRA -.3384 FC3-3.5493 BSP 1629 SGB 1319.0 R23 -.0775 R13 .6546 LSA 35.3 MSA 11.7 S8A 2.8  
 BDE .6346 BRA .6858 BC3 .7800 FSP 462 S61 1132.5 S62 676.3 THA 167.16 EL1 34.8 EL2 11.3 ALF 59.30

LAUNCH DATE AUG 23 1973 FLIGHT TIME 126.00 ARRIVAL DATE DEC 27 1973

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 33.778 GAL 4.50 AZL 89.45 HCA 96.94 SMA 216.28 ECC .30986 INC .5544 V1 29.453  
 RP 226.37 LAP .55 LOP 66.86 VP 23.641 GAP 17.85 AZP 90.07 TAL 19.17 TAP 116.10 RCA 149.29 APO 283.23 V2 24.297  
 RC 119.633 GL 3.60 GP -7.79 ZAL 54.55 ZAP 159.67 ETS 203.53 ZAE 160.63 ETE 333.47 ZAC 74.69 ETC 282.30 LVI -7.88

Distance 309.867 Earth to Mars

Planetocentric Conic: C3 27.013 VHL 5.197 DLA 12.73 RAL 21.05 RAD 6645.8 VEL 12.123 PTH 7.10 VHP 5.313 DPA 9.69 RAP 47.83 ECC 1.4448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 50 10 3462.25 -45.63 124.68 258.24 105.27 10 47 52 2462.3 -34.75 96.19  
 60.00 10 15 39 3394.41 -39.26 120.50 260.16 99.92 11 12 14 2394.4 -31.15 92.65  
 70.00 10 51 56 3287.65 -33.71 112.81 261.12 95.86 11 46 44 2287.6 -27.84 85.68  
 80.00 11 45 22 3120.23 -29.70 100.49 261.49 93.18 12 37 23 2120.2 -25.39 73.90  
 90.00 13 0 13 2878.70 -28.20 82.82 261.57 92.20 13 48 11 1878.7 -24.45 56.43  
 100.00 14 28 14 2594.70 -29.70 61.88 261.49 93.18 15 11 29 1594.7 -25.39 35.26  
 110.00 15 51 23 2334.47 -33.71 41.73 261.12 95.86 16 30 17 1334.5 -27.84 14.59

Differential Corrections: TDE -.3105 TRA -.8464 TC3 .7532 BAU .2916 SGT 1124.2 SGR 712.1 S63 344.1 ST 20.4 SR 30.4 S8 7.7  
 RDE -.5489 RRA .1973 RC3 -.2907 FAU .11830 RRT -.2403 RRF .3252 RTF -.609 CRT .7756 CRS .8830 C8T .5253  
 FDE .2594 FRA -.3872 FC3-3.7978 BSP 1659 SGB 1330.8 R23 -.0844 R13 .6593 LSA 35.4 MSA 11.7 S8A 2.9  
 BDE .8308 BRA .8758 BC3 .8074 FSP 493 S61 1144.5 S62 679.0 THA 168.52 EL1 34.9 EL2 11.2 ALF 59.03

LAUNCH DATE AUG 23 1973 FLIGHT TIME 128.00 ARRIVAL DATE DEC 29 1973

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 33.717 GAL 4.52 AZL 89.41 HCA 97.99 SMA 214.84 ECC .30529 INC .5887 V1 29.453  
 RP 226.76 LAP .58 LOP 67.72 VP 23.512 GAP 17.50 AZP 90.08 TAL 19.48 TAP 117.48 RCA 149.25 APO 280.42 V2 24.255  
 RC 122.240 GL 3.84 GP -8.01 ZAL 54.08 ZAP 158.84 ETS 202.95 ZAE 161.07 ETE 331.89 ZAC 74.47 ETC 282.30 LVI -7.66

Distance 313.380 Earth to Mars

Planetocentric Conic: C3 26.568 VHL 5.154 DLA 12.77 RAL 20.50 RAD 6645.6 VEL 12.105 PTH 7.08 VHP 5.162 DPA 9.49 RAP 47.92 ECC 1.4372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 47 46 3459.13 -45.57 124.40 257.34 105.48 10 45 25 2459.1 -34.63 95.99  
 60.00 10 13 12 3391.44 -39.23 120.26 259.29 100.08 11 9 44 2391.4 -31.06 92.45  
 70.00 10 49 25 3284.88 -33.69 112.60 260.26 95.99 11 44 10 2284.9 -27.78 85.49  
 80.00 11 42 47 3117.88 -29.69 100.30 260.64 93.28 12 34 44 2117.7 -25.34 73.72  
 90.00 12 57 35 2876.24 -28.19 82.84 260.73 92.29 13 45 31 1876.2 -24.41 56.26  
 100.00 14 25 39 2592.15 -29.69 61.67 260.64 93.28 15 8 51 1592.1 -25.34 35.09  
 110.00 15 48 51 2331.70 -33.69 41.52 260.26 95.99 16 27 43 1331.7 -27.78 14.41

Differential Corrections: TDE -.3121 TRA -.6376 TC3 .7732 BAU .2961 SGT 1133.1 SGR 718.8 S63 365.0 ST 20.5 SR 30.4 S8 8.1  
 RDE -.5435 RRA .1933 RC3 -.3114 FAU .12455 RRT -.2535 RRF .3451 RTF -.6430 CRT .7814 CRS .8771 C8T .5132  
 FDE .2755 FRA -.4387 FC3-4.0584 BSP 1685 SGB 1341.8 R23 -.0917 R13 .6637 LSA 35.6 MSA 11.7 S8A 3.0  
 BDE .6267 BRA .6663 BC3 .8336 FSP 530 S61 1155.8 S62 681.6 THA 165.86 EL1 34.9 EL2 11.1 ALF 58.64

LAUNCH DATE AUG 23 1973

FLIGHT TIME 130.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC DISTANCE 316.919 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.660 GAL 4.54 AZL 89.38 HCA 99.05 SMA 213.81 ECC .30118 INC .6229 V1 29.453  
 RP 227.15 LAP .62 LOP 68.77 VP 23.367 GAP 17.15 AZP 90.10 TAL 19.80 TAP 118.84 RCA 149.21 APO 272.82 V2 24.214  
 RC 124.878 GL 4.09 GP -8.23 ZAL 53.63 ZAP 157.59 ETS 202.41 ZAE 161.53 ETE 330.14 ZAC 74.25 ETC 282.32 LVI -7.44

PLANETOCENTRIC CONIC  
 C3 26.158 VHL 5.114 DLA 12.83 RAL 19.96 RAD 6645.5 VEL 12.088 PTH 7.07 VMP 5.017 DPA 9.27 RAP 47.99 ECC 1.4305  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 45 25 3486.42 -45.52 124.16 256.50 103.66 10 43 1 2456.4 -34.53 95.82  
 60.00 10 10 46 3368.92 -39.20 120.05 256.46 100.22 11 7 15 2368.9 -30.98 92.28  
 70.00 10 46 54 3282.60 -33.67 112.42 259.45 96.09 11 41 37 2282.6 -27.72 85.33  
 80.00 11 40 11 3115.64 -29.69 100.15 259.83 93.35 12 32 7 2115.6 -25.30 73.58  
 90.00 12 54 58 2874.33 -28.19 82.50 259.92 92.36 13 42 52 1874.3 -24.38 56.13  
 100.00 14 23 3 2590.12 -29.69 61.52 259.83 93.35 15 8 13 1590.1 -25.30 34.95  
 110.00 15 46 20 2329.42 -33.67 41.34 259.45 96.09 16 25 10 1329.4 -27.72 14.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3132 TRA -.6290 TC3 .7916 BAU .3003 SGT 1140.6 SGR 725.9 SCS 387.0 ST 20.7 SR 30.3 SS 8.5  
 RDE -.5383 RRA .1890 RC3 -.3333 FAU .13090 RRT -.2673 RRF .3661 RTF -.6444 CRT .7869 CRS .8701 CST .5001  
 FDE .2916 FRA -.4939 FC3-4.3323 BSP 1709 SGB 1352.1 R23 -.0995 R13 .6677 LSA 35.7 MSA 11.7 S8A 3.1  
 BDE .6228 BRA .6588 BC3 .8588 FSP 567 SG1 1166.1 S62 684.2 THA 165.12 EL1 35.0 EL2 11.1 ALF 58.29

LAUNCH DATE AUG 23 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC DISTANCE 320.481 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.607 GAL 4.57 AZL 89.34 HCA 100.09 SMA 212.28 ECC .29732 INC .6571 V1 29.453  
 RP 227.54 LAP .65 LOP 69.82 VP 23.267 GAP 16.81 AZP 90.12 TAL 20.10 TAP 120.19 RCA 149.17 APO 275.40 V2 24.172  
 RC 127.544 GL 4.34 GP -8.47 ZAL 53.20 ZAP 156.52 ETS 201.91 ZAE 162.01 ETE 328.20 ZAC 74.02 ETC 282.33 LVI -7.22

PLANETOCENTRIC CONIC  
 C3 25.779 VHL 5.077 DLA 12.90 RAL 19.44 RAD 6645.3 VEL 12.072 PTH 7.05 VMP 4.877 DPA 9.04 RAP 48.05 ECC 1.4243  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 43 5 3454.13 -45.48 123.96 255.70 105.81 10 40 40 2454.1 -34.44 95.67  
 60.00 10 8 22 3386.84 -39.17 119.88 257.68 100.33 11 4 49 2386.8 -30.91 92.15  
 70.00 10 44 24 3280.79 -33.66 112.28 258.68 96.17 11 39 5 2280.8 -27.68 85.21  
 80.00 11 37 36 3114.12 -29.68 100.04 259.07 93.41 12 29 30 2114.1 -25.27 73.48  
 90.00 12 52 20 2872.94 -28.19 82.40 259.15 92.41 13 40 13 1872.9 -24.35 56.04  
 100.00 14 20 28 2588.59 -29.68 61.40 259.07 93.41 15 3 37 1588.6 -25.27 34.85  
 110.00 15 43 51 2327.61 -33.66 41.20 258.68 96.17 16 22 38 1327.6 -27.68 14.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3144 TRA -.6207 TC3 .8081 BAU .3044 SGT 1147.0 SGR 733.6 SCS 410.3 ST 20.8 SR 30.2 SS 8.9  
 RDE -.5330 RRA .1843 RC3 -.3563 FAU .13759 RRT -.2814 RRF .3878 RTF -.6452 CRT .7923 CRS .8634 CST .4887  
 FDE .3093 FRA -.5931 FC3-4.6207 BSP 1728 SGB 1361.5 R23 -.1077 R13 .6714 LSA 35.7 MSA 11.8 S8A 3.2  
 BDE .6188 BRA .6475 BC3 .8831 FSP 606 SG1 1175.6 S62 686.9 THA 164.32 EL1 35.0 EL2 11.0 ALF 57.92

LAUNCH DATE AUG 23 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC DISTANCE 324.064 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.556 GAL 4.59 AZL 89.31 HCA 101.14 SMA 211.14 ECC .29370 INC .6914 V1 29.453  
 RP 227.93 LAP .68 LOP 70.86 VP 23.151 GAP 16.48 AZP 90.13 TAL 20.39 TAP 121.53 RCA 149.13 APO 273.15 V2 24.131  
 RC 130.237 GL 4.59 GP -8.71 ZAL 52.80 ZAP 155.42 ETS 201.45 ZAE 162.50 ETE 326.05 ZAC 73.78 ETC 282.35 LVI -7.01

PLANETOCENTRIC CONIC  
 C3 25.428 VHL 5.043 DLA 12.97 RAL 18.94 RAD 6645.2 VEL 12.058 PTH 7.04 VMP 4.742 DPA 8.79 RAP 48.08 ECC 1.4189  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 40 48 3452.24 -45.45 123.79 254.95 105.94 10 38 21 2452.2 -34.36 95.55  
 60.00 10 6 0 3385.19 -39.15 119.74 256.94 100.42 11 2 25 2385.2 -30.86 92.04  
 70.00 10 41 56 3279.45 -33.65 112.18 257.95 96.23 11 36 35 2279.5 -27.64 85.12  
 80.00 11 35 1 3113.10 -29.68 99.96 258.34 93.45 12 26 55 2113.1 -25.25 73.41  
 90.00 12 49 42 2872.08 -28.18 82.33 258.43 92.45 13 37 34 1872.1 -24.34 55.98  
 100.00 14 17 53 2587.57 -29.68 61.33 258.34 93.45 15 1 1 1587.6 -25.25 34.78  
 110.00 15 41 22 2326.27 -33.65 41.10 257.95 96.23 16 20 8 1326.3 -27.64 14.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3160 TRA -.6129 TC3 .8222 BAU .3080 SGT 1152.1 SGR 741.9 SCS 434.6 ST 20.9 SR 30.1 SS 9.4  
 RDE -.5276 RRA .1794 RC3 -.3805 FAU .14458 RRT -.2953 RRF .4101 RTF -.6451 CRT .7978 CRS .8577 CST .4605  
 FDE .3295 FRA -.6156 FC3-4.9225 BSP 1747 SGB 1370.3 R23 -.1168 R13 .6748 LSA 35.8 MSA 11.9 S8A 3.2  
 BDE .6150 BRA .6386 BC3 .9060 FSP 647 SG1 1184.1 S62 689.6 THA 163.49 EL1 35.1 EL2 10.9 ALF 57.50

LAUNCH DATE AUG 23 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC DISTANCE 327.667 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.509 GAL 4.61 AZL 89.27 HCA 102.18 SMA 210.07 ECC .29030 INC .7259 V1 29.453  
 RP 228.32 LAP .71 LOP 71.91 VP 23.039 GAP 16.14 AZP 90.15 TAL 20.66 TAP 122.85 RCA 149.09 APO 271.06 V2 24.090  
 RC 132.934 GL 4.85 GP -8.97 ZAL 52.41 ZAP 154.31 ETS 201.02 ZAE 163.00 ETE 323.67 ZAC 73.55 ETC 282.38 LVI -6.78

PLANETOCENTRIC CONIC  
 C3 25.104 VHL 5.010 DLA 13.05 RAL 18.48 RAD 6645.0 VEL 12.045 PTH 7.03 VMP 4.613 DPA 8.54 RAP 48.10 ECC 1.4132  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 33 3450.75 -45.42 123.66 254.25 106.04 10 36 4 2450.7 -34.30 95.46  
 60.00 10 3 39 3383.96 -39.14 119.64 256.25 100.49 11 0 3 2384.0 -30.82 91.96  
 70.00 10 39 28 3278.57 -33.64 112.11 257.26 96.27 11 34 6 2278.6 -27.62 85.06  
 80.00 11 32 27 3112.58 -29.67 99.92 257.65 93.47 12 24 19 2112.6 -25.24 73.38  
 90.00 12 47 4 2871.72 -28.18 82.31 257.74 92.46 13 34 56 1871.7 -24.33 55.95  
 100.00 14 15 18 2587.05 -29.67 61.29 257.65 93.47 14 58 26 1587.0 -25.24 34.74  
 110.00 15 38 54 2325.39 -33.64 41.03 257.26 96.27 16 17 40 1325.4 -27.62 13.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3174 TRA -.6057 TC3 .8337 BAU .3112 SGT 1155.6 SGR 750.9 SCS 460.0 ST 21.1 SR 30.0 SS 9.8  
 RDE -.5222 RRA .1741 RC3 -.4059 FAU .15189 RRT -.3093 RRF .4531 RTF -.6440 CRT .8031 CRS .8521 CST .4730  
 FDE .3509 FRA -.6813 FC3-5.2380 BSP 1784 SGB 1378.1 R23 -.1265 R13 .6776 LSA 35.9 MSA 11.9 S8A 3.3  
 BDE .6111 BRA .6303 BC3 .9273 FSP 691 SG1 1191.4 S62 692.6 THA 162.59 EL1 35.1 EL2 10.8 ALF 57.09

LAUNCH DATE AUG 23 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC										DISTANCE 331.288										EARTH TO MARS																																													
RL	151.28	LAL	-.00	LOL	329.72	VL	33.464	GAL	4.82	AZL	89.24	HCA	103.22	SMA	209.00	ECC	.28711	INC	.7605	V1	29.453	RP	228.70	LAP	.74	LOP	72.94	VP	22.931	GAP	15.82	AZP	90.17	TAL	20.93	TAP	124.15	RCA	149.05	APO	269.11	V2	24.049	RC	135.694	GL	5.10	GP	-9.23	ZAL	152.02	ZAP	153.18	ETS	200.17	ZAE	163.50	ETE	321.03	ZAC	73.31	ETC	282.40	LVI	-6.56
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.804	VHL	4.980	DLA	13.14	RAL	17.99	RAD	6644.9	VEL	12.032	PTH	7.02	VHP	4.488	DPA	8.26	RAP	48.10	ECC	1.4082	SGT	1157.6	SGR	760.7	SG3	486.7	ST	21.2	SR	29.9	SS	10.3	CRT	.8082	CR8	.8465	CST	.4660	L8A	36.0	M8A	12.0	S8A	3.4																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3232	RRF	.4568	RTF	-.6420	EL1	35.1	EL2	10.6	ALF	56.67																												
50.00	9	36	21	3440.63	-45.40	123.56	253.59	106.11	10	33	50	2449.6	-34.26	95.39	50.00	9	36	21	3440.63	-45.40	123.56	253.59	106.11	10	33	50	2449.6	-34.26	95.39	50.00	9	36	21	3440.63	-45.40	123.56	253.59	106.11	10	33	50	2449.6	-34.26	95.39																					
60.00	10	1	20	3383.13	-39.13	119.58	255.60	100.53	10	57	43	2383.1	-30.80	91.90	60.00	10	1	20	3383.13	-39.13	119.58	255.60	100.53	10	57	43	2383.1	-30.80	91.90	60.00	10	1	20	3383.13	-39.13	119.58	255.60	100.53	10	57	43	2383.1	-30.80	91.90																					
70.00	10	37	1	3278.13	-33.64	112.08	256.60	96.29	11	31	39	2278.1	-27.61	85.03	70.00	10	37	1	3278.13	-33.64	112.08	256.60	96.29	11	31	39	2278.1	-27.61	85.03	70.00	10	37	1	3278.13	-33.64	112.08	256.60	96.29	11	31	39	2278.1	-27.61	85.03																					
80.00	11	29	52	3112.54	-29.67	99.92	257.00	93.47	12	21	44	2112.5	-25.24	73.37	80.00	11	29	52	3112.54	-29.67	99.92	257.00	93.47	12	21	44	2112.5	-25.24	73.37	80.00	11	29	52	3112.54	-29.67	99.92	257.00	93.47	12	21	44	2112.5	-25.24	73.37																					
90.00	12	44	26	2871.87	-28.18	82.32	257.09	92.45	13	32	18	1871.9	-24.34	55.97	90.00	12	44	26	2871.87	-28.18	82.32	257.09	92.45	13	32	18	1871.9	-24.34	55.97	90.00	12	44	26	2871.87	-28.18	82.32	257.09	92.45	13	32	18	1871.9	-24.34	55.97																					
100.00	14	12	44	2587.01	-29.67	61.29	257.00	93.47	14	55	51	1587.0	-25.24	34.74	100.00	14	12	44	2587.01	-29.67	61.29	257.00	93.47	14	55	51	1587.0	-25.24	34.74	100.00	14	12	44	2587.01	-29.67	61.29	257.00	93.47	14	55	51	1587.0	-25.24	34.74																					
110.00	15	36	27	2324.95	-33.64	41.00	256.60	96.29	16	15	12	1324.9	-27.61	13.95	110.00	15	36	27	2324.95	-33.64	41.00	256.60	96.29	16	15	12	1324.9	-27.61	13.95	110.00	15	36	27	2324.95	-33.64	41.00	256.60	96.29	16	15	12	1324.9	-27.61	13.95																					

LAUNCH DATE AUG 23 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC										DISTANCE 334.925										EARTH TO MARS																																													
RL	151.28	LAL	-.00	LOL	329.72	VL	33.422	GAL	4.64	AZL	89.20	HCA	104.25	SMA	208.15	ECC	.28411	INC	.7954	V1	29.453	RP	229.09	LAP	.77	LOP	73.98	VP	22.826	GAP	15.49	AZP	90.20	TAL	21.19	TAP	125.44	RCA	149.01	APO	267.29	V2	24.008	RC	138.457	GL	5.36	GP	-9.50	ZAL	151.70	ZAP	152.02	ETS	200.23	ZAE	163.98	ETE	318.10	ZAC	73.06	ETC	282.43	LVI	-6.34
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.526	VHL	4.952	DLA	13.24	RAL	17.55	RAD	6644.8	VEL	12.021	PTH	7.01	VHP	4.368	DPA	7.97	RAP	48.08	ECC	1.4036	SGT	1158.1	SGR	771.4	SG3	514.6	ST	21.4	SR	29.7	SS	10.8	CRT	.8132	CR8	.8418	CST	.4614	L8A	36.0	M8A	12.2	S8A	3.5																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3366	RRF	.4809	RTF	-.6390	EL1	35.0	EL2	10.5	ALF	56.22																												
50.00	9	34	10	3448.88	-45.38	123.49	252.98	106.16	10	31	39	2448.9	-34.23	95.34	50.00	9	34	10	3448.88	-45.38	123.49	252.98	106.16	10	31	39	2448.9	-34.23	95.34	50.00	9	34	10	3448.88	-45.38	123.49	252.98	106.16	10	31	39	2448.9	-34.23	95.34																					
60.00	9	59	2	3382.71	-39.12	119.54	254.98	100.56	10	55	25	2382.7	-30.78	91.87	60.00	9	59	2	3382.71	-39.12	119.54	254.98	100.56	10	55	25	2382.7	-30.78	91.87	60.00	9	59	2	3382.71	-39.12	119.54	254.98	100.56	10	55	25	2382.7	-30.78	91.87																					
70.00	10	34	34	3278.12	-33.64	112.08	255.99	96.29	11	29	12	2278.1	-27.61	85.03	70.00	10	34	34	3278.12	-33.64	112.08	255.99	96.29	11	29	12	2278.1	-27.61	85.03	70.00	10	34	34	3278.12	-33.64	112.08	255.99	96.29	11	29	12	2278.1	-27.61	85.03																					
80.00	11	27	17	3112.97	-29.68	99.95	256.39	93.46	12	19	10	2113.0	-25.25	73.40	80.00	11	27	17	3112.97	-29.68	99.95	256.39	93.46	12	19	10	2113.0	-25.25	73.40	80.00	11	27	17	3112.97	-29.68	99.95	256.39	93.46	12	19	10	2113.0	-25.25	73.40																					
90.00	12	41	47	2872.52	-28.18	82.37	256.48	92.43	13	29	40	1872.5	-24.35	56.01	90.00	12	41	47	2872.52	-28.18	82.37	256.48	92.43	13	29	40	1872.5	-24.35	56.01	90.00	12	41	47	2872.52	-28.18	82.37	256.48	92.43	13	29	40	1872.5	-24.35	56.01																					
100.00	14	10	9	2587.44	-29.68	61.32	256.39	93.46	14	53	16	1587.4	-25.25	34.77	100.00	14	10	9	2587.44	-29.68	61.32	256.39	93.46	14	53	16	1587.4	-25.25	34.77	100.00	14	10	9	2587.44	-29.68	61.32	256.39	93.46	14	53	16	1587.4	-25.25	34.77																					
110.00	15	34	1	2324.94	-33.64	40.99	255.99	96.29	16	12	46	1324.9	-27.61	13.95	110.00	15	34	1	2324.94	-33.64	40.99	255.99	96.29	16	12	46	1324.9	-27.61	13.95	110.00	15	34	1	2324.94	-33.64	40.99	255.99	96.29	16	12	46	1324.9	-27.61	13.95																					

LAUNCH DATE AUG 23 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC										DISTANCE 338.578										EARTH TO MARS																																													
RL	151.28	LAL	-.00	LOL	329.72	VL	33.382	GAL	4.66	AZL	89.17	HCA	105.28	SMA	207.29	ECC	.28130	INC	.8305	V1	29.453	RP	229.48	LAP	.80	LOP	75.01	VP	22.723	GAP	15.17	AZP	90.22	TAL	21.43	TAP	126.71	RCA	148.98	APO	265.60	V2	23.967	RC	141.241	GL	5.62	GP	-9.78	ZAL	151.37	ZAP	150.85	ETS	199.97	ZAE	164.45	ETE	314.86	ZAC	72.81	ETC	282.47	LVI	-6.11
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.268	VHL	4.926	DLA	13.35	RAL	17.12	RAD	6644.7	VEL	12.010	PTH	7.00	VHP	4.252	DPA	7.67	RAP	48.04	ECC	1.3994	SGT	1156.7	SGR	783.2	SG3	543.7	ST	21.5	SR	29.5	SS	11.4	CRT	.8181	CR8	.8375	CST	.4577	L8A	36.1	M8A	12.3	S8A	3.5																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.3493	RRF	.5054	RTF	-.5446	EL1	35.0	EL2	10.4	ALF	55.73																												
50.00	9	32	2	3448.49	-45.38	123.45	252.40	106.19	10	29	30	2448.5	-34.21	95.31	50.00	9	32	2	3448.49	-45.38	123.45	252.40	106.19	10	29	30	2448.5	-34.21	95.31	50.00	9	32	2	3448.49	-45.38	123.45	252.40	106.19	10	29	30	2448.5	-34.21	95.31																					
60.00	9	56	46	3382.67	-39.12	119.54	254.41	100.56	10	53	8	2382.7	-30.78	91.87	60.00	9	56	46	3382.67	-39.12	119.54	254.41	100.56	10	53	8	2382.7	-30.78	91.87	60.00	9	56	46	3382.67	-39.12	119.54	254.41	100.56	10	53	8	2382.7	-30.78	91.87																					
70.00	10	32	8	3278.55	-33.64	112.11	255.42	96.27	11	26	47	2278.5	-27.62	85.06	70.00	10	32	8	3278.55	-33.64	112.11	255.42	96.27	11	26	47	2278.5	-27.62	85.06	70.00	10	32	8	3278.55	-33.64	112.11	255.42	96.27	11	26	47	2278.5	-27.62	85.06																					
80.00	11	24	42	3113.88	-29.68	100.02	255.81	93.42	12	16	36	2113.9	-25.27	73.46	80.00	11	24	42	3113.88	-29.68	100.02	255.81	93.42	12	16	36	2113.9	-25.27	73.46	80.00	11	24	42	3113.88	-29.68	100.02	255.81	93.42	12	16	36	2113.9	-25.27	73.46																					
90.00	12	39	8	2873.66	-28.19	82.45	255.90	92.39	13	27	1	1873.7	-24.37	56.09	90.00	12	39	8	2873.66</																																														



LAUNCH DATE AUG 23 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC DISTANCE 348.922 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.310 GAL 4.68 AZL 89.10 HCA 107.33 SMA 209.74 ECC .27617 INC .9013 V1 29.453  
 RP 230.25 LAP .86 LOP 77.06 VP 22.933 GAP 14.53 AZP 90.27 TAL 21.88 TAP 129.21 RCA 148.92 APO 262.56 V2 23.887  
 RC 146.870 GL 6.14 GP -10.36 ZAL 50.78 ZAP 148.43 ETS 199.19 ZAE 165.28 ETE 307.35 ZAC 72.29 ETC 282.55 LVI -8.66

PLANETOCENTRIC CONIC  
 CS 23.807 VHL 4.879 DLA 13.59 RAL 16.31 RAD 6644.9 VEL 11.991 PTH 6.99 VHP 4.034 DPA 7.01 RAP 47.90 ECC 1.3918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2-LAT INJ 2 LONG  
 50.00 9 27 51 3448.74 -45.38 123.48 251.38 106.17 10 25 19 2448.7 -34.22 95.33  
 60.00 9 52 16 3383.71 -39.14 119.62 253.38 100.50 10 48 40 2383.7 -30.82 91.94  
 70.00 10 27 18 3280.63 -33.66 112.27 254.37 96.18 11 21 59 2280.6 -27.67 85.20  
 80.00 11 19 30 3117.06 -29.69 100.25 254.76 93.30 12 11 27 2117.1 -25.33 73.68  
 90.00 12 33 46 2877.36 -28.20 82.72 254.84 92.25 13 21 44 1877.4 -24.43 56.34  
 100.00 14 2 22 2591.53 -29.69 61.62 254.76 93.30 14 45 34 1591.5 -25.33 35.05  
 110.00 15 26 44 2327.45 -33.66 41.19 254.37 96.18 16 5 32 1327.5 -27.67 14.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3181 TRA -.5712 TC3 .8611 BAU .3258 SGT 1149.8 SGR 810.7 S63 606.3 ST 21.4 SR 29.1 S8 12.5  
 RDE -.4936 RRA .1421 RC3 -.5936 FAU .19368 RRT -.3819 RRF .5558 RTF -.6313 CRT .8249 CRS .8266 CST .4447  
 FDE .4830 FRA -1.0725 FC3 -7.0431 BSP 1730 SGB 1406.8 R23 -.1749 R13 .6956 LSA 35.9 MSA 12.6 S8A 3.7  
 BDE .5872 BRA .5887 BC3 1.0237 FSP 937 S61 1215.2 S62 709.0 THA 156.52 EL1 34.7 EL2 10.2 ALF 55.39

LAUNCH DATE AUG 23 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC DISTANCE 349.612 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.277 GAL 4.69 AZL 89.06 HCA 108.36 SMA 205.04 ECC .27385 INC .9370 V1 29.453  
 RP 230.63 LAP .89 LOP 78.08 VP 22.442 GAP 14.22 AZP 90.30 TAL 22.08 TAP 130.44 RCA 148.89 APO 261.19 V2 23.847  
 RC 149.713 GL 6.41 GP -10.67 ZAL 50.52 ZAP 147.19 ETS 198.87 ZAE 165.62 ETE 303.07 ZAC 72.03 ETC 282.59 LVI -5.43

PLANETOCENTRIC CONIC  
 CS 23.601 VHL 4.858 DLA 13.73 RAL 15.93 RAD 6644.4 VEL 11.983 PTH 6.98 VHP 3.932 DPA 6.66 RAP 47.80 ECC 1.3884  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2-LAT INJ 2 LONG  
 50.00 9 25 48 3449.37 -45.39 123.53 250.92 106.13 10 23 17 2449.4 -34.25 95.37  
 60.00 9 50 4 3384.80 -39.15 119.71 252.92 100.44 10 46 28 2384.8 -30.85 92.01  
 70.00 10 24 53 3282.30 -33.67 112.40 253.90 96.10 11 19 35 2282.3 -27.71 85.31  
 80.00 11 16 54 3119.34 -29.70 100.42 254.28 93.21 12 8 53 2119.3 -25.37 73.84  
 90.00 12 31 4 2879.94 -28.20 82.91 254.36 92.16 13 19 4 1879.9 -24.48 56.51  
 100.00 13 59 46 2593.82 -29.70 61.79 254.28 93.21 14 42 59 1593.8 -25.37 35.20  
 110.00 15 24 20 2329.12 -33.67 41.32 253.90 96.10 16 3 9 1329.1 -27.71 14.23

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3229 TRA -.5708 TC3 .8497 BAU .3259 SGT 1143.2 SGR 826.1 S63 636.9 ST 21.7 SR 28.8 S8 13.2  
 RDE -.4871 RRA .1347 RC3 -.5873 FAU .20295 RRT -.3872 RRF .5803 RTF -.6187 CRT .8303 CRS .8257 CST .4486  
 FDE .5202 FRA -1.1593 FC3 -7.4449 BSP 1768 SGB 1410.4 R23 -.1942 R13 .6940 LSA 36.1 MSA 12.8 S8A 3.7  
 BDE .5844 BRA .5865 BC3 1.0330 FSP 996 S61 1214.7 S62 716.8 THA 155.25 EL1 34.7 EL2 10.1 ALF 54.53

LAUNCH DATE AUG 23 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 353.312 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.246 GAL 4.70 AZL 89.03 HCA 109.37 SMA 204.39 ECC .27166 INC .9731 V1 29.453  
 RP 231.01 LAP .92 LOP 79.10 VP 22.354 GAP 13.91 AZP 90.32 TAL 22.27 TAP 131.64 RCA 148.87 APO 259.92 V2 23.807  
 RC 152.572 GL 6.68 GP -10.98 ZAL 50.28 ZAP 145.92 ETS 198.56 ZAE 165.89 ETE 298.44 ZAC 71.76 ETC 282.64 LVI -5.19

PLANETOCENTRIC CONIC  
 CS 23.408 VHL 4.838 DLA 13.87 RAL 15.57 RAD 6644.3 VEL 11.975 PTH 6.97 VHP 3.833 DPA 6.29 RAP 47.68 ECC 1.3852  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2-LAT INJ 2 LONG  
 50.00 9 23 47 3450.33 -45.41 123.62 250.51 106.06 10 21 17 2450.3 -34.29 95.43  
 60.00 9 47 52 3386.23 -39.17 119.83 252.49 100.36 10 44 18 2386.2 -30.89 92.11  
 70.00 10 22 28 3284.37 -33.68 112.56 253.47 96.01 11 17 13 2284.4 -27.76 85.45  
 80.00 11 14 16 3122.07 -29.71 100.62 253.84 93.10 12 6 18 2122.1 -25.42 74.02  
 90.00 12 28 21 2882.99 -28.21 83.13 253.92 92.05 13 16 24 1883.0 -24.53 56.72  
 100.00 13 57 8 2596.54 -29.71 61.99 253.84 93.10 14 40 25 1596.5 -25.42 35.39  
 110.00 15 21 55 2331.19 -33.68 41.48 253.47 96.01 16 0 46 1331.2 -27.76 14.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3262 TRA -.5702 TC3 .8385 BAU .3263 SGT 1135.0 SGR 842.9 S63 672.8 ST 22.0 SR 28.6 S8 13.8  
 RDE -.4804 RRA .1269 RC3 -.6225 FAU .21253 RRT -.3925 RRF .6048 RTF -.6157 CRT .8348 CRS .8244 CST .4509  
 FDE .5391 FRA -1.2500 FC3 -7.8801 BSP 1769 SGB 1413.8 R23 -.2120 R13 .6936 LSA 36.1 MSA 13.1 S8A 3.7  
 BDE .5807 BRA .5842 BC3 1.0427 FSP 1057 S61 1213.7 S62 725.0 THA 153.79 EL1 34.6 EL2 10.0 ALF 53.79

LAUNCH DATE AUG 23 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 357.022 EARTH TO MARS  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.217 GAL 4.71 AZL 88.99 HCA 110.39 SMA 203.78 ECC .26961 INC 1.0095 V1 29.453  
 RP 231.39 LAP .95 LOP 80.11 VP 22.268 GAP 13.61 AZP 90.35 TAL 22.45 TAP 132.84 RCA 148.84 APO 258.73 V2 23.787  
 RC 155.447 GL 6.95 GP -11.31 ZAL 50.06 ZAP 144.64 ETS 198.25 ZAE 166.07 ETE 293.49 ZAC 71.49 ETC 282.70 LVI -4.96

PLANETOCENTRIC CONIC  
 CS 23.229 VHL 4.820 DLA 14.03 RAL 15.22 RAD 6644.2 VEL 11.967 PTH 6.97 VHP 3.738 DPA 5.90 RAP 47.54 ECC 1.3823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2-LAT INJ 2 LONG  
 50.00 9 21 47 3491.61 -45.43 123.73 250.13 105.98 10 19 19 2451.6 -34.34 95.51  
 60.00 9 45 41 3388.02 -39.19 119.98 252.10 100.27 10 42 9 2388.0 -30.95 92.22  
 70.00 10 20 4 3286.83 -33.70 112.75 253.06 95.90 11 14 51 2286.8 -27.82 85.62  
 80.00 11 11 38 3125.24 -29.72 100.86 253.43 92.98 12 3 43 2125.2 -25.48 74.24  
 90.00 12 25 36 2886.50 -28.22 83.39 253.50 91.92 13 13 43 1886.5 -24.59 56.96  
 100.00 13 54 30 2599.71 -29.72 62.23 253.43 92.98 14 37 50 1599.7 -25.48 35.61  
 110.00 15 19 30 2333.65 -33.70 41.67 253.06 95.90 15 58 24 1333.6 -27.82 14.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3288 TRA -.5694 TC3 .8210 BAU .3270 SGT 1125.1 SGR 861.4 S63 707.8 ST 22.2 SR 28.2 S8 14.5  
 RDE -.4735 RRA .1185 RC3 -.6595 FAU .22248 RRT -.3966 RRF .6291 RTF -.5917 CRT .8390 CRS .8226 CST .4524  
 FDE .6002 FRA -1.3464 FC3 -8.2917 BSP 1799 SGB 1417.0 R23 -.2288 R13 .6945 LSA 36.2 MSA 13.3 S8A 3.7  
 BDE .5764 BRA .5816 BC3 1.0531 FSP 1120 S61 1212.1 S62 734.0 THA 152.14 EL1 34.5 EL2 9.9 ALF 53.08

LAUNCH DATE AUG 23 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.189 GAL 4.72 AZL 88.95 HCA 111.40 SMA 203.22 ECC .26769 INC 1.0463 V1 29.453  
 RP 231.77 LAP .97 LOP 81.12 VP 22.185 GAP 13.31 AZP 90.38 TAL 22.62 TAP 134.01 RCA 148.82 APO 257.62 V2 23.728  
 RC 158.336 GL 7.23 GP -11.64 ZAL 49.86 ZAP 143.33 ETS 197.93 ZAE 166.15 ETE 288.27 ZAC 71.21 ETC 282.76 LVI -4.72

DISTANCE 360.741  
 EARTH TO MARS  
 C3 23.062 VHL 4.802 DLA 14.19 RAL 14.89 RAD 6644.2 VEL 11.960 PTH 6.96 VHP 3.648 DPA 5.50 RAP 47.38 ECC 1.3795  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 19 49 3453.19 -45.46 123.87 249.78 105.87 10 17 23 2453.2 -34.40 95.61  
 60.00 9 43 30 3390.15 -39.21 120.15 251.73 100.15 10 40 0 2390.2 -31.02 92.37  
 70.00 10 17 39 3289.68 -33.72 112.97 252.69 95.77 11 12 28 2289.7 -27.89 85.81  
 80.00 11 8 58 3126.85 -29.73 101.13 253.04 92.84 12 1 7 2128.9 -25.55 74.48  
 90.00 12 22 50 2890.48 -28.23 83.68 253.11 91.77 13 11 0 1890.5 -24.66 57.23  
 100.00 13 31 50 2603.32 -29.73 62.49 253.04 92.84 14 35 14 1603.3 -23.53 35.85  
 110.00 15 17 5 2336.50 -33.72 41.89 252.69 95.77 15 56 2 1336.5 -27.89 14.73

DIFFERENTIAL CORRECTIONS  
 TDE -.3309 TRA -.5697 TC3 .8021 BAU .3278 SGT 1113.9 SGR 881.5 SCS 744.0 ST 22.4 SR 27.9 SS 15.3  
 RDE -.4862 RRA .1099 RC3 -.6980 FAU .23271 RRT -.3988 RRF .6529 RTF -.5757 CRT .8425 CRS .8221 CST .4552  
 FDE .6453 FRA -1.4432 FC3 -0.7357 BSP 1806 SGB 1420.5 R23 -.2451 R13 .6960 LSA 36.2 MSA 13.6 SSA 3.8  
 BDE .5717 BRA .5802 BC3 1.0632 FSP 1186 SG1 1210.0 S2 744.2 THA 150.31 EL1 34.4 EL2 9.8 ALF 52.37

LAUNCH DATE AUG 23 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.164 GAL 4.72 AZL 88.92 HCA 112.40 SMA 202.69 ECC .26588 INC 1.0835 V1 29.453  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.105 GAP 13.01 AZP 90.41 TAL 22.77 TAP 135.17 RCA 148.80 APO 256.59 V2 23.689  
 RC 161.238 GL 7.50 GP -11.99 ZAL 49.57 ZAP 142.00 ETS 197.66 ZAE 166.12 ETE 282.86 ZAC 70.93 ETC 282.82 LVI -4.48

DISTANCE 364.467  
 EARTH TO MARS  
 C3 22.906 VHL 4.786 DLA 14.36 RAL 14.58 RAD 6644.1 VEL 11.954 PTH 6.95 VHP 3.561 DPA 5.08 RAP 47.20 ECC 1.3770  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 53 3455.08 -45.50 124.04 249.47 105.75 10 15 28 2455.1 -34.47 95.73  
 60.00 9 41 21 3392.62 -39.24 120.36 251.41 100.01 10 37 53 2392.6 -31.09 92.93  
 70.00 10 15 13 3292.91 -33.74 113.22 252.35 95.63 11 10 6 2292.9 -27.97 86.03  
 80.00 11 6 17 3132.90 -29.75 101.43 252.69 92.68 11 58 30 2132.9 -25.63 74.76  
 90.00 12 20 1 2894.92 -28.24 84.00 252.75 91.61 13 8 16 1894.9 -24.73 57.54  
 100.00 13 49 9 2607.37 -29.75 62.79 252.69 92.68 14 32 37 1607.4 -25.63 36.13  
 110.00 15 14 40 2339.73 -33.74 42.14 252.35 95.63 15 53 39 1339.7 -27.97 14.95

DIFFERENTIAL CORRECTIONS  
 TDE -.3327 TRA -.5701 TC3 .7798 BAU .3289 SGT 1101.0 SGR 903.5 SCS 781.5 ST 22.6 SR 27.5 SS 16.0  
 RDE -.4586 RRA .1006 RC3 -.7583 FAU .24329 RRT -.3985 RRF .6762 RTF -.5577 CRT .8460 CRS .8211 CST .4575  
 FDE .6938 FRA -1.5470 FC3 -0.9194 BSP 1806 SGB 1424.2 R23 -.2602 R13 .6988 LSA 36.3 MSA 13.9 SSA 3.8  
 BDE .5666 BRA .5789 BC3 1.0739 FSP 1252 SG1 1207.2 S2 755.8 THA 148.26 EL1 34.3 EL2 9.7 ALF 51.66

LAUNCH DATE AUG 23 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.140 GAL 4.73 AZL 88.88 HCA 113.41 SMA 202.20 ECC .26419 INC 1.1211 V1 29.453  
 RP 232.51 LAP 1.03 LOP 83.13 VP 22.028 GAP 12.71 AZP 90.45 TAL 22.91 TAP 136.32 RCA 148.78 APO 255.62 V2 23.650  
 RC 164.150 GL 7.78 GP -12.34 ZAL 49.51 ZAP 140.64 ETS 197.37 ZAE 165.97 ETE 277.35 ZAC 70.64 ETC 282.88 LVI -4.24

DISTANCE 368.201  
 EARTH TO MARS  
 C3 22.781 VHL 4.771 DLA 14.55 RAL 14.28 RAD 6644.0 VEL 11.948 PTH 6.95 VHP 3.478 DPA 4.64 RAP 47.00 ECC 1.3746  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 15 57 3457.27 -45.54 124.24 249.19 105.60 10 13 34 2457.3 -34.56 95.87  
 60.00 9 39 11 3395.43 -39.28 120.59 251.11 99.86 10 35 47 2395.4 -31.18 92.72  
 70.00 10 12 47 3296.53 -33.77 113.50 252.03 95.46 11 7 44 2296.5 -28.05 86.28  
 80.00 11 3 35 3137.38 -29.76 101.76 252.36 92.51 11 55 52 2137.4 -25.71 75.07  
 90.00 12 17 11 2899.82 -28.25 84.36 252.42 91.43 13 5 31 1899.8 -24.81 57.87  
 100.00 13 46 27 2611.85 -29.76 63.13 252.36 92.51 14 29 58 1611.9 -25.71 36.44  
 110.00 15 12 14 2343.35 -33.77 42.42 252.03 95.46 15 51 17 1343.3 -26.05 15.20

DIFFERENTIAL CORRECTIONS  
 TDE -.3340 TRA -.5715 TC3 .7532 BAU .3300 SGT 1088.3 SGR 927.5 SCS 819.9 ST 22.7 SR 27.1 SS 16.8  
 RDE -.4509 RRA .0909 RC3 -.7803 FAU .23411 RRT -.3949 RRF .6909 RTF -.5666 CRT .8489 CRS .8197 CST .4589  
 FDE .7435 FRA -1.6532 FC3 -0.6653 BSP 1804 SGB 1428.4 R23 -.2740 R13 .7027 LSA 36.3 MSA 14.3 SSA 3.8  
 BDE .5611 BRA .5786 BC3 1.0845 FSP 1321 SG1 1203.7 S2 769.0 THA 145.95 EL1 34.1 EL2 9.6 ALF 50.95

LAUNCH DATE AUG 23 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 33.118 GAL 4.73 AZL 88.84 HCA 114.41 SMA 201.75 ECC .26260 INC 1.1591 V1 29.453  
 RP 232.89 LAP 1.06 LOP 84.14 VP 21.953 GAP 12.42 AZP 90.48 TAL 23.04 TAP 137.45 RCA 148.77 APO 254.73 V2 23.612  
 RC 167.073 GL 8.07 GP -12.71 ZAL 48.37 ZAP 139.26 ETS 197.07 ZAE 165.88 ETE 271.84 ZAC 70.35 ETC 282.96 LVI -4.00

DISTANCE 371.942  
 EARTH TO MARS  
 C3 22.625 VHL 4.757 DLA 14.74 RAL 13.99 RAD 6644.0 VEL 11.942 PTH 6.95 VHP 3.398 DPA 4.18 RAP 46.78 ECC 1.3723  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 14 3 3459.76 -45.58 124.46 248.95 105.44 10 11 42 2459.8 -34.66 96.03  
 60.00 9 37 2 3398.56 -39.31 120.85 250.84 99.69 10 33 41 2398.6 -31.28 92.93  
 70.00 10 10 21 3300.53 -33.79 113.81 251.74 95.28 11 5 21 2300.5 -28.15 86.55  
 80.00 11 0 50 3142.30 -29.78 102.12 252.06 92.32 11 53 13 2142.3 -25.80 75.41  
 90.00 12 14 18 2905.19 -28.26 84.75 252.11 91.24 13 2 43 1905.2 -24.90 58.24  
 100.00 13 43 42 2616.77 -29.78 63.49 252.06 92.32 14 27 19 1616.8 -25.80 36.77  
 110.00 15 9 47 2347.35 -33.79 42.73 251.74 95.28 15 48 54 1347.3 -26.15 15.47

DIFFERENTIAL CORRECTIONS  
 TDE -.3355 TRA -.5740 TC3 .7230 BAU .3316 SGT 1071.2 SGR 953.3 SCS 859.6 ST 22.9 SR 26.7 SS 17.7  
 RDE -.4425 RRA .0808 RC3 -.8241 FAU .26526 RRT -.3876 RRF .7207 RTF -.5125 CRT .8517 CRS .8197 CST .4617  
 FDE .8002 FRA -1.7618 FC3 -1.0149 BSP 1805 SGB 1434.0 R23 -.2859 R13 .7083 LSA 36.4 MSA 14.6 SSA 3.8  
 BDE .5552 BRA .5797 BC3 1.0963 FSP 1393 SG1 1200.7 S2 784.1 THA 143.39 EL1 33.9 EL2 9.5 ALF 50.15

LAUNCH DATE AUG 23 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC										DISTANCE 375.689										EARTH TO MARS																																													
RL	151.28	LAL	-0.00	LOL	329.72	VL	33.097	GAL	4.73	AZL	88.80	HCA	115.41	SMA	201.32	ECC	.26112	INC	1.1977	V1	29.453	RP	233.25	LAP	1.08	LOP	85.13	VP	21.880	GAP	12.13	AZP	90.51	TAL	23.15	TAP	139.56	RCA	148.75	APO	253.89	V2	23.973	RC	170.003	GL	8.38	GP	-13.08	ZAL	49.24	ZAP	137.87	ETS	196.78	ZAE	165.27	EYE	266.44	ZAC	70.06	ETC	293.03	LVI	-3.76
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.498	VHL	4.743	DLA	14.94	RAL	13.72	RAD	6643.9	VEL	11.937	PTH	6.94	VHP	3.323	DPA	3.71	RAP	46.94	ECC	1.3703	SGT	1054.6	SGR	981.2	SG3	900.0	ST	23.0	SR	26.3	SB	18.5																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-3757	RRF	.7416	RTF	-.4842	CRT	.8540	CRS	.8191	CST	.4633																												
50.00	9	12	9	3462.54	-45.63	124.71	248.73	105.25	10	9	52	2462.5	-34.76	96.21	SGB	1440.5	R23	-.2944	R13	.7159	LSA	36.4	MSA	15.0	SSA	3.7																																							
60.00	9	34	53	3402.03	-39.35	121.13	250.60	99.50	10	31	35	2402.0	-31.38	93.16	SG1	1197.2	SG2	801.0	THA	140.44	EL1	33.7	EL2	9.4	ALF	49.36																																							
70.00	10	7	53	3304.91	-33.82	114.15	251.48	95.08	11	2	58	2304.9	-28.25	86.85																																																			
80.00	10	58	4	3147.66	-29.79	102.52	251.78	92.11	11	50	31	2147.7	-25.90	75.77																																																			
90.00	12	11	23	2911.02	-28.26	85.18	251.83	91.02	12	59	54	1911.0	-24.99	58.64																																																			
100.00	13	40	56	2622.13	-29.79	63.89	251.78	92.11	14	24	38	1622.1	-25.90	37.14																																																			
110.00	15	7	19	2351.72	-33.82	43.06	251.48	95.08	15	46	31	1351.7	-28.25	15.77																																																			

LAUNCH DATE AUG 23 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC										DISTANCE 379.441										EARTH TO MARS																																													
RL	151.28	LAL	-0.00	LOL	329.72	VL	33.077	GAL	4.73	AZL	88.76	HCA	116.40	SMA	200.93	ECC	.25972	INC	1.2366	V1	29.453	RP	233.62	LAP	1.11	LOP	86.13	VP	21.809	GAP	11.84	AZP	90.55	TAL	23.26	TAP	139.66	RCA	148.74	APO	253.11	V2	23.536	RC	172.941	GL	8.65	GP	-13.46	ZAL	49.14	ZAP	136.44	ETS	196.48	ZAE	164.71	ETE	261.24	ZAC	69.76	ETC	293.11	LVI	-3.91
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.379	VHL	4.731	DLA	15.15	RAL	13.46	RAD	6643.9	VEL	11.932	PTH	6.94	VHP	3.251	DPA	3.22	RAP	46.28	ECC	1.3683	SGT	1037.6	SGR	1011.3	SG3	941.3	ST	23.2	SR	25.8	SB	19.4																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-3588	RRF	.7816	RTF	-.4516	CRT	.8561	CRS	.8182	CST	.4643																												
50.00	9	10	16	3465.61	-45.69	124.99	248.55	105.04	10	8	2	2465.6	-34.88	96.40	SGB	1446.9	R23	-.2982	R13	.7264	LSA	36.4	MSA	15.4	SSA	3.7																																							
60.00	9	32	44	3405.82	-39.39	121.45	250.59	99.29	10	29	29	2405.8	-31.50	93.41	SG1	1194.6	SG2	819.9	THA	137.05	EL1	33.4	EL2	9.2	ALF	48.54																																							
70.00	10	5	24	3309.66	-33.85	114.52	251.25	94.87	11	0	33	2309.7	-28.36	87.18																																																			
80.00	10	55	15	3153.45	-29.80	102.95	251.53	91.88	11	47	48	2153.5	-26.00	76.17																																																			
90.00	12	8	24	2917.33	-28.27	85.64	251.97	90.79	12	57	2	1917.3	-25.09	59.08																																																			
100.00	13	38	7	2627.93	-29.80	64.32	251.53	91.88	14	21	55	1627.9	-26.00	37.54																																																			
110.00	15	4	50	2356.48	-33.85	43.43	251.25	94.87	15	44	7	1356.5	-28.36	16.10																																																			

LAUNCH DATE AUG 23 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC										DISTANCE 383.200										EARTH TO MARS																																													
RL	151.28	LAL	-0.00	LOL	329.72	VL	33.059	GAL	4.73	AZL	88.72	HCA	117.39	SMA	200.96	ECC	.25842	INC	1.2763	V1	29.453	RP	233.99	LAP	1.13	LOP	87.12	VP	21.741	GAP	11.55	AZP	90.59	TAL	23.35	TAP	140.74	RCA	148.73	APO	252.39	V2	23.498	RC	175.886	GL	8.95	GP	-13.85	ZAL	49.04	ZAP	135.00	ETS	196.18	ZAE	164.03	ETE	256.29	ZAC	69.46	ETC	293.19	LVI	-3.26
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.268	VHL	4.719	DLA	15.37	RAL	13.22	RAD	6643.8	VEL	11.927	PTH	6.93	VHP	3.181	DPA	2.72	RAP	45.99	ECC	1.3665	SGT	1015.9	SGR	1046.9	SG3	987.1	ST	22.6	SR	25.4	SB	20.0																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-3583	RRF	.7821	RTF	-.4437	CRT	.8553	CRS	.8074	CST	.4460																												
50.00	9	8	23	3468.94	-45.75	125.29	248.39	104.82	10	6	12	2468.9	-35.01	96.62	SGB	1458.8	R23	-.2785	R13	.7491	LSA	36.0	MSA	15.8	SSA	3.7																																							
60.00	9	30	34	3409.92	-39.44	121.79	250.21	99.06	10	27	24	2409.9	-31.62	93.69	SG1	1202.7	SG2	825.6	THA	132.60	EL1	32.7	EL2	9.1	ALF	48.81																																							
70.00	10	2	53	3314.78	-33.88	114.91	251.04	94.63	10	58	8	2314.8	-28.48	87.53																																																			
80.00	10	52	23	3159.66	-29.82	103.41	251.30	91.64	11	45	3	2159.7	-26.11	76.60																																																			
90.00	12	5	23	2924.08	-28.28	86.13	251.33	90.54	12	54	7	1924.1	-25.20	59.54																																																			
100.00	13	35	15	2634.13	-29.82	64.78	251.30	91.64	14	19	9	1634.1	-26.11	37.97																																																			
110.00	15	2	20	2361.59	-33.88	43.83	251.04	94.63	15	41	41	1361.6	-28.48	16.45																																																			

LAUNCH DATE AUG 23 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC										DISTANCE 386.961										EARTH TO MARS																																													
RL	151.28	LAL	-0.00	LOL	329.72	VL	33.042	GAL	4.73	AZL	88.68	HCA	118.38	SMA	200.22	ECC	.25720	INC	1.3165	V1	29.453	RP	234.35	LAP	1.16	LOP	88.11	VP	21.675	GAP	11.27	AZP	90.63	TAL	23.43	TAP	141.81	RCA	148.73	APO	251.72	V2	23.461	RC	178.836	GL	9.25	GP	-14.25	ZAL	48.97	ZAP	133.54	ETS	195.87	ZAE	163.23	ETE	251.68	ZAC	69.18	ETC	293.20	LVI	-3.00
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	22.163	VHL	4.708	DLA	15.61	RAL	12.99	RAD	6643.8	VEL	11.923	PTH	6.93	VHP	3.116	DPA	2.20	RAP	45.70	ECC	1.3648	SGT	1002.2	SGR	1078.8	SG3	1027.1	ST	23.3	SR	24.7	SB	21.2																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-3132	RRF	.7987	RTF	-.3761	CRT	.8587	CRS	.8143	CST	.4610																												
50.00	9	6	32	3472.60	-45.81	125.62	248.27	104.57	10	4	24	2472.6	-35.15	96.85	SGB	1472.5	R23	-.2791	R13	.7600	LSA	36.4	MSA	16.2	SSA	3.7																																							
60.00	9	28	24	3414.38	-39.49	122.15	250.05	98.82	10	25	18	2414.4	-31.76	93.99	SG1	1196.7	SG2	858.0	THA	128.38	EL1	32.7	EL2	9.0	ALF	47.03																																							
70.00	10	0	21	3320.32	-33.91	115.34	250.86	94.38	10	55	42	2320.3	-28.61	87.91																																																			
80.00	10	49	29	3166.37	-29.83	103.91	251.10	91.38	11	42	15	2166.4	-26.23	77.07																																																			
90.00	12	2	17	2931.37	-28.28	86.67	251.12	90.28	12	51	9	1931.4	-25.31	60.05																																																			
100.00	13	32	21	2640.85	-29.83	65.28	251.10	91.38	14	16	22	1640.8	-26.23	38.43																																																			
110.00	14	59	48	2367.13	-33.91	44.26	250.86	94.38	15	39	15	1367.1	-28.61	16.83																																																			

LAUNCH DATE AUG 23 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 9 1974

Table for Flight Time 170.00, containing heliocentric and planetocentric conic data, differential corrections, mid-course execution accuracy, and orbit determination accuracy.

LAUNCH DATE AUG 23 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 11 1974

Table for Flight Time 172.00, containing heliocentric and planetocentric conic data, differential corrections, mid-course execution accuracy, and orbit determination accuracy.

LAUNCH DATE AUG 23 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 13 1974

Table for Flight Time 174.00, containing heliocentric and planetocentric conic data, differential corrections, mid-course execution accuracy, and orbit determination accuracy.

LAUNCH DATE AUG 23 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 15 1974

Table for Flight Time 176.00, containing heliocentric and planetocentric conic data, differential corrections, mid-course execution accuracy, and orbit determination accuracy.

LAUNCH DATE AUG 23 1973 FLIGHT TIME 170.00 ARRIVAL DATE FEB 17 1974

**HELIOCENTRIC CONIC** DISTANCE 409.020 EARTH TO MARS  
 RL 131.26 LAL -.00 LOL 329.72 VL 32.974 GAL 4.70 AZL 88.47 HCA 123.27 SMA 198.87 ECC .25218 INC 1.5277 V1 29.453  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.373 GAP 9.90 AZP 90.84 TAL 23.65 TAP 146.92 RCA 148.72 APO 249.02 V2 23.279  
 RC 193.649 GL 10.83 GP -16.37 ZAL 48.86 ZAP 125.96 ETS 194.21 ZAE 157.72 ETE 233.53 ZAC 67.60 ETC 283.75 LVI -1.69

**PLANETOCENTRIC CONIC**  
 C3 21.734 VHL 4.682 DLA 16.93 RAL 12.00 RAD 6643.6 VEL 11.905 PTH 6.91 VHP 2.837 DPA -.64 RAP 43.96 ECC 1.3577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 57 11 3495.09 -46.18 127.66 248.07 103.03 9 55 26 2495.1 -36.01 98.32  
 60.00 9 17 18 3441.54 -39.75 124.42 249.65 97.30 10 14 40 2441.5 -32.96 95.85  
 70.00 9 47 6 3353.80 -34.05 117.94 250.28 92.85 10 43 0 2353.8 -29.34 90.24  
 80.00 10 34 0 3206.82 -29.86 106.92 250.38 89.80 11 27 27 2206.8 -26.90 79.88  
 90.00 11 45 44 2975.30 -26.25 89.88 250.37 88.67 12 35 19 1975.3 -25.95 63.10  
 100.00 13 16 52 2681.29 -29.86 68.28 250.39 89.80 14 1 33 1681.3 -26.90 41.25  
 110.00 14 46 33 2400.62 -34.05 46.86 250.28 92.85 15 26 33 1400.6 -29.34 19.15

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3296 TRA -.6466 TC3 .2420 BAU .3835 SGT 931.3 SGR 1283.0 SG3 1244.4 ST 23.8 SR 21.4 SS 26.4  
 RDE -.3461 RRA -.0320 RC3-1.2974 FAU .37202 RRT -.0545 RRF .8709 RTF -.0603 CRT .8621 CRS .8060 CST .4529  
 FDE 1.4742 FRA-2.8350 FC-14.8189 BSP 1979 SGB 1597.2 R23 -.0443 R13 .8699 LSA 36.9 MSA 18.6 SBA 3.5  
 BDE .4779 BRA .6474 BC3 1.3198 FSP 2082 SGI 1285.3 SG2 948.2 THA 95.09 EL1 30.9 EL2 8.3 ALF 41.44

LAUNCH DATE AUG 23 1973 FLIGHT TIME 180.00 ARRIVAL DATE FEB 19 1974

**HELIOCENTRIC CONIC** DISTANCE 409.607 EARTH TO MARS  
 RL 131.26 LAL -.00 LOL 329.72 VL 32.963 GAL 4.69 AZL 88.43 HCA 124.25 SMA 198.66 ECC .25137 INC 1.5723 V1 29.453  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.318 GAP 9.63 AZP 90.88 TAL 23.66 TAP 147.90 RCA 148.72 APO 248.60 V2 23.244  
 RC 196.619 GL 11.17 GP -16.82 ZAL 48.90 ZAP 124.39 ETS 193.85 ZAE 156.37 ETE 230.78 ZAC 67.28 ETC 283.85 LVI -1.42

**PLANETOCENTRIC CONIC**  
 C3 21.664 VHL 4.654 DLA 17.22 RAL 11.84 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 2.790 DPA -1.25 RAP 43.56 ECC 1.3965  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 55 18 3500.46 -46.26 128.15 248.11 102.66 9 53 38 2500.5 -36.21 98.67  
 60.00 9 15 0 3447.98 -39.80 124.96 249.64 96.94 10 12 28 2448.0 -32.75 96.29  
 70.00 9 44 18 3361.72 -34.07 118.56 250.23 92.48 10 40 20 2361.7 -29.51 90.79  
 80.00 10 30 40 3216.40 -29.85 107.63 250.31 89.43 11 24 17 2216.4 -27.05 80.55  
 90.00 11 42 8 2985.72 -28.23 90.64 250.27 88.29 12 31 54 1985.7 -26.09 63.84  
 100.00 13 13 32 2690.87 -29.85 69.00 250.31 89.43 13 58 23 1690.9 -27.05 41.92  
 110.00 14 43 45 2408.54 -34.07 47.48 250.23 92.48 15 23 53 1408.5 -29.51 19.71

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3301 TRA -.6648 TC3 .1572 BAU .3955 SGT 959.5 SGR 1328.2 SG3 1285.7 ST 24.0 SR 20.5 SS 27.7  
 RDE -.3314 RRA -.0455 RC3-1.3564 FAU .38325 RRT .0245 RRF .8818 RTF .0259 CRT .8628 CRS .8058 CST .4543  
 FDE 1.5836 FRA-2.9413 FC-15.3158 BSP 2069 SGB 1638.5 R23 .0193 R13 .8816 LSA 37.3 MSA 19.1 SBA 3.4  
 BDE .4677 BRA .6663 BC3 1.3655 FSP 2175 SGI 1328.7 SG2 958.9 THA 87.88 EL1 30.5 EL2 8.2 ALF 39.75

LAUNCH DATE AUG 23 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 21 1974

**HELIOCENTRIC CONIC** DISTANCE 413.380 EARTH TO MARS  
 RL 131.26 LAL -.00 LOL 329.72 VL 32.953 GAL 4.88 AZL 88.38 HCA 125.21 SMA 198.47 ECC .25062 INC 1.6178 V1 29.453  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.285 GAP 9.37 AZP 90.93 TAL 23.66 TAP 148.87 RCA 148.73 APO 248.21 V2 23.209  
 RC 199.589 GL 11.51 GP -17.27 ZAL 48.95 ZAP 122.82 ETS 193.48 ZAE 154.97 ETE 228.27 ZAC 66.96 ETC 283.95 LVI -1.14

**PLANETOCENTRIC CONIC**  
 C3 21.599 VHL 4.647 DLA 17.53 RAL 11.68 RAD 6643.5 VEL 11.899 PTH 6.91 VHP 2.747 DPA -1.87 RAP 43.16 ECC 1.3555  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 23 3506.12 -46.34 128.68 248.18 102.27 9 51 49 2506.1 -36.42 99.05  
 60.00 9 12 40 3434.77 -39.85 125.53 249.65 96.58 10 10 15 2434.8 -32.94 96.76  
 70.00 9 41 26 3370.07 -34.10 119.21 250.19 92.10 10 37 37 2370.1 -29.69 91.38  
 80.00 10 27 15 3226.50 -29.84 108.38 250.24 89.03 11 21 1 2226.5 -27.21 81.26  
 90.00 11 38 26 2996.72 -28.21 91.44 250.19 87.89 12 28 23 1996.7 -26.24 64.61  
 100.00 13 10 7 2700.97 -29.84 69.75 250.24 89.03 13 55 8 1701.0 -27.21 42.63  
 110.00 14 40 53 2416.89 -34.10 48.13 250.19 92.10 15 21 10 1416.9 -29.69 20.30

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3267 TRA -.8810 TC3 .0730 BAU .4100 SGT 970.5 SGR 1376.8 SG3 1327.8 ST 24.1 SR 19.7 SS 28.9  
 RDE -.3167 RRA -.0605 RC3-1.4179 FAU .39467 RRT .1023 RRF .8921 RTF .105 CRT .8628 CRS .8010 CST .4478  
 FDE 1.6873 FRA-3.0596 FC-15.8195 BSP 2150 SGB 1684.5 R23 .0675 R13 .8898 LSA 37.5 MSA 19.6 SBA 3.4  
 BDE .4530 BRA .8836 BC3 1.4198 FSP 2232 SGI 1383.7 SG2 960.8 THA 82.00 EL1 30.0 EL2 8.0 ALF 38.33

LAUNCH DATE AUG 23 1973 FLIGHT TIME 184.00 ARRIVAL DATE FEB 23 1974

**HELIOCENTRIC CONIC** DISTANCE 417.175 EARTH TO MARS  
 RL 131.26 LAL -.00 LOL 329.72 VL 32.944 GAL 4.66 AZL 88.34 HCA 126.18 SMA 198.29 ECC .24992 INC 1.6643 V1 29.453  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.213 GAP 9.10 AZP 90.98 TAL 23.65 TAP 149.83 RCA 148.74 APO 247.85 V2 23.174  
 RC 202.557 GL 11.88 GP -17.73 ZAL 49.01 ZAP 121.23 ETS 193.09 ZAE 153.51 ETE 225.96 ZAC 66.64 ETC 284.06 LVI -.86

**PLANETOCENTRIC CONIC**  
 C3 21.538 VHL 4.641 DLA 17.85 RAL 11.53 RAD 6643.5 VEL 11.897 PTH 6.91 VHP 2.706 DPA -2.51 RAP 42.75 ECC 1.3545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 27 3512.08 -46.43 129.23 248.27 101.85 9 49 59 2512.1 -36.64 99.43  
 60.00 9 10 17 3461.92 -39.91 126.13 249.68 96.15 10 7 59 2461.9 -33.14 97.26  
 70.00 9 38 30 3378.85 -34.12 119.90 250.18 91.69 10 34 49 2378.9 -29.87 92.00  
 80.00 10 23 43 3237.15 -29.83 109.17 250.19 88.62 11 17 40 2237.2 -27.37 82.02  
 90.00 11 34 36 3008.33 -28.18 92.29 250.13 87.46 12 24 45 2008.3 -26.39 65.43  
 100.00 13 6 35 2711.62 -29.83 70.54 250.19 88.62 13 51 47 1711.6 -27.37 43.38  
 110.00 14 37 57 2425.67 -34.12 48.82 250.18 91.69 15 18 22 1425.7 -29.87 20.92

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3224 TRA -.6986 TC3 -.0161 BAU .4264 SGT 989.7 SGR 1427.4 SG3 1369.2 ST 24.1 SR 18.8 SS 30.1  
 RDE -.3014 RRA -.0757 RC3-1.4809 FAU .40589 RRT .1823 RRF .9016 RTF .1960 CRT .8626 CRS .7948 CST .4394  
 FDE 1.7932 FRA-3.1732 FC-16.3146 BSP 2247 SGB 1737.0 R23 .1044 R13 .8961 LSA 37.8 MSA 20.1 SBA 3.3  
 BDE .4414 BRA .7027 BC3 1.4810 FSP 2328 SGI 1448.1 SG2 959.3 THA 77.02 EL1 29.6 EL2 7.7 ALF 36.85

LAUNCH DATE AUG 23 1973      FLIGHT TIME 186.00      ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC      DISTANCE 420.962      EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.936 GAL 4.65 AZL 88.29 MCA 127.14 SMA 198.13 ECC .24926 INC 1.7118 V1 29.453  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.163 GAP 8.84 AZP 91.03 TAL 23.63 TAP 150.77 RCA 148.75 APO 247.52 V2 23.140  
 RC 205.523 GL 12.22 GP -18.19 ZAL 49.08 ZAP 119.64 ETS 192.69 ZAE 152.01 ETE 223.84 ZAC 66.32 ETC 284.16 LVI -.57

PLANETOCENTRIC CONIC

C3 21.483 VML 4.635 DLA 18.18 RAL 11.39 RAD 6643.5 VEL 11.895 PTH 6.90 VHP 2.668 DPA -3.15 RAP 42.32 ECC 1.3836  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 30 3518.35 -46.51 129.81 248.39 101.41 9 48 8 2518.4 -36.87 99.87  
 60.00 9 7 52 3469.43 -39.96 126.76 249.74 95.73 10 5 41 2469.4 -33.35 97.79  
 70.00 9 35 30 3388.09 -34.13 120.82 250.18 91.27 10 31 58 2388.1 -30.05 92.65  
 80.00 10 20 4 3248.37 -29.81 110.00 250.16 88.18 11 14 13 2248.4 -27.53 82.81  
 90.00 11 30 38 3020.59 -28.14 93.19 250.08 87.02 12 20 59 2020.6 -26.54 66.29  
 100.00 13 2 56 2722.85 -29.81 71.37 250.16 86.18 13 48 19 1722.8 -27.53 44.18  
 110.00 14 34 56 2434.91 -34.13 49.54 250.18 91.27 15 15 31 1434.9 -30.05 21.57

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3173 TRA -.7175 TC3 -.1100 BAU .4448      SGT 1017.7 SGR 1479.5 SG3 1409.5      ST 24.1 SR 17.8 SS 31.4  
 RDE -.2852 RRA -.0913 RC3-1.5448 FAU .41671      RRT .2625 RRF .9102 RTF .2804      CRT .8626 CRS .7868 CST .4291  
 FDE 1.9039 FRA-3.2651 FC-16.7930 B8P 2358      SGB 1795.7 R23 .1318 R13 .9016      LSA 38.1 MSA 20.6 SSA 3.2  
 BDE .4267 BRA .7232 BC3 1.5487 FSP 2404      SG1 1520.4 SG2 958.6 THA 72.79      EL1 29.0 EL2 7.5 ALF 35.27

LAUNCH DATE AUG 23 1973      FLIGHT TIME 188.00      ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC      DISTANCE 424.751      EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.929 GAL 4.63 AZL 88.24 MCA 128.10 SMA 197.99 ECC .24866 INC 1.7604 V1 29.453  
 RP 237.81 LAP 1.39 LOP 97.83 VP 21.114 GAP 8.58 AZP 91.09 TAL 23.60 TAP 151.70 RCA 148.76 APO 247.22 V2 23.106  
 RC 208.485 GL 12.58 GP -18.66 ZAL 49.17 ZAP 118.04 ETS 192.28 ZAE 150.46 ETE 221.89 ZAC 65.99 ETC 284.27 LVI -.28

PLANETOCENTRIC CONIC

C3 21.431 VML 4.629 DLA 18.52 RAL 11.26 RAD 6643.5 VEL 11.892 PTH 6.90 VHP 2.633 DPA -3.81 RAP 41.89 ECC 1.3827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 30 3524.94 -46.60 130.42 248.53 100.94 9 48 15 2524.9 -37.11 100.32  
 60.00 9 5 23 3477.32 -40.01 127.42 249.82 95.28 10 3 21 2477.3 -33.57 98.34  
 70.00 9 32 24 3397.80 -34.15 121.38 250.21 90.82 10 29 2 2397.8 -30.25 93.35  
 80.00 10 16 18 3260.20 -29.78 110.88 250.14 87.72 11 10 38 2260.2 -27.69 83.65  
 90.00 11 26 31 3033.52 -28.09 94.13 250.04 86.55 12 17 5 2033.5 -26.69 67.21  
 100.00 12 59 10 2734.67 -29.78 72.25 250.14 87.72 13 44 45 1734.7 -27.69 45.02  
 110.00 14 31 50 2444.62 -34.15 50.29 250.21 90.82 15 12 35 1444.6 -30.25 22.26

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3110 TRA -.7376 TC3 -.2082 BAU .4651      SGT 1054.6 SGR 1533.4 SG3 1448.7      ST 24.1 SR 16.9 SS 32.6  
 RDE -.2684 RRA -.1072 RC3-1.6098 FAU .42719      RRT .3400 RRF .9181 RTF .3810      CRT .8627 CRS .7762 CST .4161  
 FDE 2.0170 FRA-3.3934 FC-17.2564 B8P 2482      SGB 1861.1 R23 .1513 R13 .9070      LSA 38.4 MSA 21.0 SSA 3.2  
 BDE .4108 BRA .7453 BC3 1.6232 FSP 2474      SG1 1800.1 SG2 950.5 THA 69.21      EL1 28.5 EL2 7.2 ALF 33.64

LAUNCH DATE AUG 23 1973      FLIGHT TIME 190.00      ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC      DISTANCE 428.540      EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.922 GAL 4.62 AZL 88.19 MCA 129.06 SMA 197.86 ECC .24810 INC 1.8101 V1 29.453  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.067 GAP 8.33 AZP 91.14 TAL 23.56 TAP 152.61 RCA 148.77 APO 246.95 V2 23.073  
 RC 211.443 GL 12.95 GP -19.13 ZAL 49.28 ZAP 116.43 ETS 191.85 ZAE 148.87 ETE 220.08 ZAC 65.67 ETC 284.38 LVI .01

PLANETOCENTRIC CONIC

C3 21.385 VML 4.624 DLA 18.89 RAL 11.13 RAD 6643.4 VEL 11.890 PTH 6.90 VHP 2.601 DPA -4.48 RAP 41.45 ECC 1.3519  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 29 3531.85 -46.69 131.06 248.69 100.45 9 44 21 2531.8 -37.36 100.79  
 60.00 9 2 51 3485.59 -40.06 128.12 249.91 94.81 10 0 57 2485.6 -33.79 98.93  
 70.00 9 29 13 3408.00 -34.15 122.17 250.25 90.35 10 26 1 2408.0 -30.44 94.07  
 80.00 10 12 23 3272.85 -29.74 111.80 250.14 87.23 11 6 56 2272.6 -27.86 84.54  
 90.00 11 22 15 3047.16 -28.03 95.12 250.02 86.05 12 13 2 2047.2 -26.84 68.18  
 100.00 12 55 15 2747.12 -29.74 73.17 250.14 87.23 13 41 2 1747.1 -27.86 45.91  
 110.00 14 28 39 2454.82 -34.15 51.09 250.25 90.35 15 9 34 1454.8 -30.44 22.99

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3038 TRA -.7588 TC3 -.3108 BAU .4873      SGT 1100.7 SGR 1589.2 SG3 1486.8      ST 24.0 SR 15.9 SS 33.9  
 RDE -.2508 RRA -.1235 RC3-1.6761 FAU .43734      RRT .4134 RRF .9252 RTF .4.63      CRT .8634 CRS .7623 CST .4005  
 FDE 2.1333 FRA-3.4998 FC-17.7050 B8P 2618      SGB 1933.2 R23 .1650 R13 .9123      LSA 38.8 MSA 21.5 SSA 3.1  
 BDE .3939 BRA .7668 BC3 1.7047 FSP 2540      SG1 1886.9 SG2 944.2 THA 66.13      EL1 28.0 EL2 6.9 ALF 31.91

LAUNCH DATE AUG 23 1973      FLIGHT TIME 192.00      ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC      DISTANCE 432.331      EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.916 GAL 4.60 AZL 88.14 MCA 130.01 SMA 197.74 ECC .24758 INC 1.8611 V1 29.453  
 RP 238.47 LAP 1.43 LOP 99.73 VP 21.022 GAP 8.07 AZP 91.20 TAL 23.51 TAP 153.52 RCA 148.78 APO 246.70 V2 23.040  
 RC 214.394 GL 13.34 GP -19.61 ZAL 49.40 ZAP 114.83 ETS 191.41 ZAE 147.28 ETE 218.59 ZAC 65.34 ETC 284.49 LVI .31

PLANETOCENTRIC CONIC

C3 21.343 VML 4.620 DLA 19.25 RAL 11.01 RAD 6643.4 VEL 11.889 PTH 6.90 VHP 2.571 DPA -5.15 RAP 41.01 ECC 1.3512  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 26 3539.08 -46.77 131.74 248.88 99.94 9 42 25 2539.1 -37.62 101.29  
 60.00 9 0 15 3494.26 -40.11 128.85 250.03 94.31 9 58 30 2494.3 -34.03 99.94  
 70.00 9 25 55 3418.71 -34.15 123.01 250.30 89.85 10 22 54 2418.7 -30.64 94.84  
 80.00 10 8 20 3283.78 -29.69 112.78 250.15 86.72 11 3 5 2283.8 -28.03 85.47  
 90.00 11 17 47 3061.56 -27.95 96.17 250.01 85.53 12 8 48 2061.6 -26.99 69.20  
 100.00 12 51 12 2760.23 -29.69 74.14 250.15 86.72 13 37 12 1760.2 -28.03 48.84  
 110.00 14 25 21 2465.53 -34.15 51.93 250.30 89.85 15 6 27 1465.5 -30.64 23.76

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.2942 TRA -.7802 TC3 -.4159 BAU .5114      SGT 1153.7 SGR 1647.0 SG3 1523.7      ST 23.9 SR 14.9 SS 35.2  
 RDE -.2329 RRA -.1406 RC3-1.7435 FAU .44709      RRT .4808 RRF .9318 RTF .5052      CRT .8645 CRS .7430 CST .3793  
 FDE 2.2451 FRA-3.6071 FC-18.1358 B8P 2767      SGB 2010.9 R23 .1729 R13 .9179      LSA 39.2 MSA 21.9 SSA 3.0  
 BDE .3753 BRA .7927 BC3 1.7924 FSP 2596      SG1 1779.6 SG2 936.2 THA 63.55      EL1 27.4 EL2 6.5 ALF 30.27

LAUNCH DATE AUG 23 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

DISTANCE 436.123

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.910 GAL 4.58 AZL 88.09 MCA 130.96 SMA 197.84 ECC .24710 INC 1.9134 V1 29.453
RP 238.79 LAP 1.44 LOP 100.70 VP 20.978 GAP 7.82 AZP 91.25 TAL 23.45 TAP 154.41 RCA 148.80 APO 246.47 V2 23.008
RC 217.340 GL 13.73 GP -20.09 ZAL 49.53 ZAP 113.22 ETS 190.95 ZAE 145.61 ETE 216.82 ZAC 65.02 ETC 284.60 LVI .61

PLANETOCENTRIC CONIC

C3 21.305 VHL 4.616 DLA 19.63 RAL 10.90 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 2.544 DPA -5.83 RAP 40.57 ECC 1.3506
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 41 19 3546.66 -48.86 132.45 249.10 99.40 9 40 26 2546.7 -37.89 101.81
60.00 8 57 35 3503.34 -40.15 129.62 250.17 93.79 9 55 58 2503.3 -34.27 100.20
70.00 9 22 31 3429.94 -34.15 123.89 250.37 89.33 10 19 41 2429.9 -30.85 95.65
80.00 10 4 6 3299.57 -29.64 113.80 250.17 86.19 10 59 6 2299.6 -28.20 86.47
90.00 11 13 7 3076.76 -27.87 97.27 250.01 84.99 12 4 24 2076.6 -27.15 70.29
100.00 12 46 58 2774.04 -29.64 75.17 250.17 86.19 13 33 12 1774.0 -29.20 47.83
110.00 14 21 57 2476.76 -34.15 52.80 250.37 89.33 15 3 14 1476.8 -30.85 24.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2814 TRA -.8005 TC3 -.9208 BAW .5377 SGT 1210.8 SGR 1709.2 SG3 1561.5 ST 23.6 SR 14.0 SS 36.3
RDE -.2157 RRA -.1592 RC3-1.8144 FAU .45714 RRT .5412 RRF .9380 RTF .5669 CRT .8659 CRS .7155 CST .3485
FDE 2.3433 FRA-3.7246 FC-18.5760 BSP 2923 SGB 2094.6 R23 .1744 R13 .9243 LSA 39.5 MSA 22.3 SSA 3.0
BDE .3545 BRA .8162 BC3 1.8877 FSP 2631 SG1 1878.7 SG2 926.3 THA 61.50 EL1 26.7 EL2 6.2 ALF 28.87

LAUNCH DATE AUG 23 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

DISTANCE 439.914

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.906 GAL 4.56 AZL 88.03 MCA 131.91 SMA 197.54 ECC .24866 INC 1.9670 V1 29.453
RP 239.10 LAP 1.46 LOP 101.65 VP 20.935 GAP 7.57 AZP 91.31 TAL 23.38 TAP 155.29 RCA 148.82 APO 246.27 V2 22.975
RC 220.278 GL 14.13 GP -20.58 ZAL 49.68 ZAP 111.62 ETS 190.47 ZAE 143.95 ETE 215.36 ZAC 64.69 ETC 284.70 LVI .92

PLANETOCENTRIC CONIC

C3 21.271 VHL 4.612 DLA 20.02 RAL 10.79 RAD 6643.4 VEL 11.886 PTH 6.90 VHP 2.520 DPA -6.52 RAP 40.12 ECC 1.3501
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 39 10 3554.61 -46.95 133.20 249.34 98.83 9 38 25 2554.6 -38.17 102.37
60.00 8 54 50 3512.88 -40.19 130.43 250.33 93.24 9 53 23 2512.9 -34.52 100.80
70.00 9 18 59 3441.77 -34.13 124.81 250.46 88.79 10 16 21 2441.8 -31.06 96.51
80.00 9 59 41 3314.17 -29.57 114.88 250.20 85.63 10 54 55 2314.2 -28.37 87.52
90.00 11 8 14 3092.89 -27.77 98.44 250.02 84.41 11 59 47 2092.9 -27.30 71.44
100.00 12 42 33 2788.64 -29.57 76.25 250.20 85.63 13 29 2 1788.6 -28.37 48.88
110.00 14 18 25 2488.58 -34.13 53.73 250.46 88.79 14 59 54 1488.6 -31.06 25.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2773 TRA -.8324 TC3 -.8496 BAW .5643 SGT 1299.7 SGR 1760.6 SG3 1587.1 ST 23.9 SR 12.6 SS 38.1
RDE -.1915 RRA -.1722 RC3-1.8750 FAU .46353 RRT .5983 RRF .9428 RTF .6216 CRT .8732 CRS .6928 CST .3422
FDE 2.5119 FRA-3.7701 FC-18.8657 BSP 3118 SGB 2188.4 R23 .1886 R13 .9265 LSA 40.7 MSA 22.7 SSA 2.9
BDE .3370 BRA .8500 BC3 1.9844 FSP 2735 SG1 1983.5 SG2 924.3 THA 58.63 EL1 26.4 EL2 5.6 ALF 28.06

LAUNCH DATE AUG 23 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

DISTANCE 443.707

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.901 GAL 4.54 AZL 87.98 MCA 132.86 SMA 197.46 ECC .24825 INC 2.0221 V1 29.453
RP 239.42 LAP 1.48 LOP 102.60 VP 20.894 GAP 7.32 AZP 91.38 TAL 23.31 TAP 156.16 RCA 148.84 APO 246.09 V2 22.944
RC 223.209 GL 14.54 GP -21.06 ZAL 49.85 ZAP 110.02 ETS 189.99 ZAE 142.27 ETE 213.97 ZAC 64.36 ETC 284.81 LVI 1.24

PLANETOCENTRIC CONIC

C3 21.242 VHL 4.609 DLA 20.43 RAL 10.69 RAD 6643.4 VEL 11.885 PTH 6.90 VHP 2.498 DPA -7.21 RAP 39.68 ECC 1.3498
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 36 57 3562.91 -47.03 133.98 249.61 98.23 9 36 20 2562.9 -38.46 102.95
60.00 8 52 0 3522.84 -40.23 131.28 250.50 92.67 9 50 43 2522.8 -34.77 101.61
70.00 9 15 19 3454.16 -34.11 125.78 250.56 88.22 10 12 54 2454.2 -31.28 97.41
80.00 9 55 4 3329.55 -29.48 116.01 250.24 85.04 10 50 34 2329.6 -28.54 88.63
90.00 11 3 6 3109.93 -27.65 99.67 250.04 83.80 11 54 56 2109.9 -27.45 72.67
100.00 12 37 56 2804.03 -29.48 77.38 250.24 85.04 13 24 40 1804.0 -28.54 49.99
110.00 14 14 46 2500.98 -34.11 54.69 250.56 88.22 14 56 27 1501.0 -31.28 26.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2858 TRA -.8591 TC3 -.7702 BAW .5933 SGT 1382.7 SGR 1820.1 SG3 1816.5 ST 23.8 SR 11.5 SS 39.9
RDE -.1700 RRA -.1890 RC3-1.9422 FAU .47107 RRT .6463 RRF .9476 RTF .6587 CRT .8807 CRS .6514 CST .3185
FDE 2.6419 FRA-3.8501 FC-19.1983 BSP 3306 SGB 2265.7 R23 .1918 R13 .9309 LSA 41.5 MSA 23.1 SSA 2.8
BDE .3158 BRA .8796 BC3 2.0893 FSP 2788 SG1 2093.6 SG2 917.3 THA 56.89 EL1 26.0 EL2 5.0 ALF 24.07

LAUNCH DATE AUG 23 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

DISTANCE 447.900

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.898 GAL 4.52 AZL 87.92 MCA 133.80 SMA 197.39 ECC .24588 INC 2.0788 V1 29.453
RP 239.73 LAP 1.50 LOP 103.54 VP 20.854 GAP 7.07 AZP 91.44 TAL 23.23 TAP 157.02 RCA 148.86 APO 245.93 V2 22.912
RC 226.132 GL 14.97 GP -21.55 ZAL 50.02 ZAP 108.43 ETS 189.48 ZAE 140.97 ETE 212.67 ZAC 64.03 ETC 284.92 LVI 1.56

PLANETOCENTRIC CONIC

C3 21.218 VHL 4.606 DLA 20.85 RAL 10.59 RAD 6643.4 VEL 11.884 PTH 6.90 VHP 2.478 DPA -7.90 RAP 39.24 ECC 1.3492
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 34 41 3571.59 -47.11 134.81 249.90 97.80 9 34 13 2571.6 -38.75 103.57
60.00 8 49 4 3533.28 -40.26 132.16 250.70 92.07 9 47 57 2533.3 -35.03 102.37
70.00 9 11 31 3467.18 -34.08 126.79 250.68 87.62 10 9 18 2467.2 -31.49 98.36
80.00 9 50 14 3345.80 -29.38 117.21 250.29 84.41 10 45 59 2345.8 -28.72 89.80
90.00 10 57 41 3128.01 -27.51 100.98 250.06 83.17 11 49 49 2128.0 -27.59 73.97
100.00 12 33 5 2820.27 -29.38 78.58 250.29 84.41 13 20 6 1820.3 -28.72 51.17
110.00 14 10 57 2514.00 -34.08 55.71 250.68 87.62 14 52 51 1514.0 -31.49 27.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2527 TRA -.8870 TC3 -.8942 BAW .6238 SGT 1473.5 SGR 1879.9 SG3 1643.1 ST 23.7 SR 10.4 SS 41.0
RDE -.1476 RRA -.2057 RC3-2.0089 FAU .47778 RRT .6879 RRF .9520 RTF .7092 CRT .8911 CRS .5947 CST .2845
FDE 2.7277 FRA-3.9218 FC-19.4939 BSP 3507 SGB 2388.5 R23 .1937 R13 .9351 LSA 42.4 MSA 23.4 SSA 2.8
BDE .2927 BRA .9105 BC3 2.1989 FSP 2839 SG1 2208.2 SG2 910.4 THA 54.84 EL1 25.5 EL2 4.4 ALF 22.11

LAUNCH DATE AUG 23 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.893 GAL 4.90 AZL 87.86 HCA 134.74 SMA 197.33 ECC .24554 INC 2.1372 V1 29.453  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.813 GAP 6.83 AZP 91.50 TAL 23.13 TAP 197.87 RCA 148.88 APO 245.79 V2 22.882  
 RC 229.048 GL 15.40 GP -22.05 ZAL 50.21 ZAP 106.84 ETS 188.96 ZAE 138.87 ETE 211.43 ZAC 63.70 ETC 285.02 LVI 1.89

DISTANCE 451.295 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.199 VHL 4.604 DLA 21.29 RAL 10.49 RAD 6643.4 VEL 11.883 PTH 6.89 VHP 2.461 DPA -8.60 RAP 38.80 ECC 1.3489  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 32 21 3580.67 -47.19 135.67 250.21 96.94 9 32 1 2580.7 -39.06 104.22  
 60.00 8 46 2 3544.21 -40.28 133.09 250.91 91.44 9 45 6 2544.2 -35.30 103.17  
 70.00 9 7 32 3480.86 -34.04 127.66 250.80 86.99 10 5 33 2480.9 -31.71 99.37  
 80.00 9 45 8 3362.98 -29.26 118.47 250.35 83.76 10 41 11 2363.0 -28.88 91.05  
 90.00 10 51 58 3147.21 -27.35 102.36 250.09 82.49 11 44 25 2147.2 -27.73 75.36  
 100.00 12 28 0 2837.45 -29.26 79.84 250.35 83.76 13 15 17 1837.5 -28.88 52.42  
 110.00 14 6 59 2527.67 -34.04 56.78 250.80 86.99 14 49 6 1527.7 -31.71 28.29

DIFFERENTIAL CORRECTIONS  
 TDE -.2382 TRA -.9159 TC3-1.0217 BAU .6537 SGT 1571.4 SGR 1940.5 SG3 1687.3 ST 23.6 SR 9.4 SS 42.4  
 RDE -.1241 RRA -.2227 RC3-2.0756 FAU .48376 RRT .7241 RRF .9559 RTF .7439 CRT .9052 CRS .5143 CST .2494  
 FDE 2.9068 FRA-3.9886 FC-19.7556 BSP 3716 SGB 2496.9 R23 .1948 R13 .9389 LSA 43.4 MSA 23.6 SSA 2.7  
 BDE .2686 BRA .9426 BC3 2.3134 FSP 2883 SG1 2327.7 SG2 903.5 THA 53.18 EL1 25.1 EL2 3.7 ALF 20.21

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 23 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.892 GAL 4.48 AZL 87.80 HCA 135.68 SMA 197.28 ECC .24524 INC 2.1973 V1 29.453  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.777 GAP 6.58 AZP 91.57 TAL 23.03 TAP 198.71 RCA 148.90 APO 245.86 V2 22.851  
 RC 231.955 GL 15.85 GP -22.54 ZAL 50.42 ZAP 105.27 ETS 188.43 ZAE 137.15 ETE 210.25 ZAC 63.36 ETC 285.13 LVI 2.22

DISTANCE 455.086 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.185 VHL 4.603 DLA 21.174 RAL 10.40 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.447 DPA -9.31 RAP 38.37 ECC 1.3487  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 55 3590.16 -47.26 136.58 250.55 96.24 9 29 46 2590.2 -39.38 104.91  
 60.00 8 42 53 3555.65 -40.29 134.07 251.14 90.78 9 42 8 2555.6 -35.57 104.02  
 70.00 9 3 23 3495.24 -33.98 128.98 250.94 86.33 10 1 39 2495.2 -31.94 100.43  
 80.00 9 39 46 3381.18 -29.12 119.81 250.41 83.07 10 36 7 2381.2 -29.05 92.38  
 90.00 10 45 54 3167.66 -27.15 103.82 250.12 81.78 11 38 41 2167.7 -27.86 76.84  
 100.00 12 22 38 2855.65 -29.12 81.17 250.41 83.07 13 10 13 1855.7 -29.05 53.75  
 110.00 14 2 50 2542.06 -33.98 57.89 250.94 86.33 14 45 12 1542.1 -31.94 29.35

DIFFERENTIAL CORRECTIONS  
 TDE -.2219 TRA -.9454 TC3-1.1515 BAU .6888 SGT 1674.9 SGR 2001.9 SG3 1689.0 ST 23.5 SR 8.4 SS 43.9  
 RDE -.1000 RRA -.2398 RC3-2.1422 FAU .48902 RRT .7551 RRF .9595 RTF .7736 CRT .9205 CRS .4020 CST .2086  
 FDE 3.0368 FRA-4.0483 FC-19.9637 BSP 3936 SGB 2610.2 R23 .1946 R13 .9426 LSA 44.5 MSA 23.9 SSA 2.6  
 BDE .2433 BRA .9754 BC3 2.4321 FSP 2921 SG1 2451.3 SG2 896.7 THA 51.68 EL1 24.8 EL2 3.1 ALF 18.50

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 23 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.890 GAL 4.45 AZL 87.74 HCA 136.62 SMA 197.24 ECC .24496 INC 2.2594 V1 29.453  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.741 GAP 6.34 AZP 91.64 TAL 22.93 TAP 159.54 RCA 148.93 APO 245.56 V2 22.821  
 RC 234.852 GL 16.31 GP -23.04 ZAL 50.64 ZAP 103.71 ETS 187.98 ZAE 135.43 ETE 209.13 ZAC 63.03 ETC 285.23 LVI 2.57

DISTANCE 458.880 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.177 VHL 4.602 DLA 22.21 RAL 10.30 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.435 DPA -10.01 RAP 37.95 ECC 1.3485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 25 3600.08 -47.33 137.53 250.91 95.52 9 27 25 2600.1 -39.71 105.63  
 60.00 8 39 36 3567.63 -40.30 135.08 251.39 90.09 9 39 4 2567.6 -35.65 104.91  
 70.00 8 59 2 3510.37 -33.91 130.15 251.09 85.64 9 57 33 2510.4 -32.16 101.55  
 80.00 9 34 5 3400.49 -28.95 121.22 250.48 82.35 10 30 45 2400.5 -29.20 93.79  
 90.00 10 39 26 3189.49 -26.93 105.38 250.15 81.03 11 32 39 2189.5 -27.98 76.42  
 100.00 12 18 56 2874.96 -28.95 82.58 250.48 82.35 13 4 51 1875.0 -29.20 55.18  
 110.00 13 58 29 2557.19 -33.91 59.07 251.09 85.64 14 41 6 1557.2 -32.16 30.47

DIFFERENTIAL CORRECTIONS  
 TDE -.2026 TRA -.9747 TC3-1.2813 BAU .7236 SGT 1781.2 SGR 2087.0 SG3 1710.2 ST 23.4 SR 7.7 SS 45.2  
 RDE -.0765 RRA -.2588 RC3-2.2113 FAU .49420 RRT .7823 RRF .9628 RTF .7598 CRT .9322 CRS .2513 CST .1571  
 FDE 3.1498 FRA-4.1178 FC-20.2030 BSP 4153 SGB 2728.5 R23 .1922 R13 .9465 LSA 45.4 MSA 24.0 SSA 2.5  
 BDE .2166 BRA 1.0085 BC3 2.5557 FSP 2932 SG1 2579.7 SG2 886.9 THA 50.40 EL1 24.5 EL2 2.7 ALF 17.24

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 23 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.888 GAL 4.43 AZL 87.68 HCA 137.55 SMA 197.21 ECC .24471 INC 2.3234 V1 29.453  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.706 GAP 6.10 AZP 91.71 TAL 22.81 TAP 180.38 RCA 148.95 APO 245.47 V2 22.792  
 RC 237.739 GL 16.79 GP -23.55 ZAL 50.87 ZAP 102.18 ETS 187.31 ZAE 133.72 ETE 208.06 ZAC 62.69 ETC 285.34 LVI 2.92

DISTANCE 462.672 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.174 VHL 4.602 DLA 22.69 RAL 10.21 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.425 DPA -10.72 RAP 37.94 ECC 1.3485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 49 3610.46 -47.40 138.52 251.30 94.75 9 25 0 2610.5 -40.04 106.40  
 60.00 8 36 11 3580.20 -40.30 136.15 251.65 89.36 9 35 51 2580.2 -36.14 105.86  
 70.00 8 54 28 3526.33 -33.82 131.39 251.25 84.91 9 53 15 2526.3 -32.38 102.74  
 80.00 9 28 2 3421.07 -28.75 122.71 250.55 81.59 10 25 3 2421.1 -29.35 95.31  
 90.00 10 32 30 3212.93 -26.67 107.05 250.17 80.24 11 26 3 2212.9 -28.09 80.13  
 100.00 12 10 54 2895.54 -28.75 84.08 250.55 81.59 12 59 9 1895.5 -29.35 56.67  
 110.00 13 53 55 2573.15 -33.82 60.31 251.25 84.91 14 36 48 1573.1 -32.38 31.66

DIFFERENTIAL CORRECTIONS  
 TDE -.1853 TRA -1.0088 TC3-1.4210 BAU .7586 SGT 1901.8 SGR 2124.2 SG3 1722.3 ST 23.5 SR 7.0 SS 46.9  
 RDE -.0476 RRA -.2734 RC3-2.2722 FAU .49664 RRT .8046 RRF .9658 RTF .8200 CRT .9284 CRS .0372 CST .1158  
 FDE 3.3078 FRA-4.1355 FC-20.3061 BSP 4401 SGB 2851.2 R23 .1948 R13 .9487 LSA 47.0 MSA 24.2 SSA 2.5  
 BDE -.1913 BRA 1.0451 BC3 2.6799 FSP 2988 SG1 2710.3 SG2 885.1 THA 48.92 EL1 24.4 EL2 2.5 ALF 15.64

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 23 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC DISTANCE 466.465 EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.887 GAL 4.40 AZL 97.61 HCA 138.48 SMA 197.19 ECC .24448 INC 2.3896 V1 29.453  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.672 GAP 5.88 AZP 91.79 TAL 22.69 TAP 161.17 RCA 148.98 APO 245.39 V2 22.763  
 RC 240.615 GL 17.28 GP -24.05 ZAL 51.12 ZAP 100.65 ETS 166.74 ZAE 132.00 ETE 207.02 ZAC 62.34 ETC 285.44 LVI 3.28

PLANETOCENTRIC CONIC

C3 21.177 VHL 4.602 DLA 23.19 RAL 10.12 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.417 DPA -11.42 RAP 37.14 ECC 1.3488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 7 3621.32 -47.45 139.97 251.71 93.95 9 22 29 2621.3 -40.39 107.21  
 60.00 8 32 37 3593.38 -40.28 137.28 251.93 88.60 9 32 30 2593.4 -36.43 106.85  
 70.00 8 49 40 3543.15 -33.71 132.69 251.41 84.15 9 48 43 2543.2 -32.60 104.01  
 80.00 9 21 35 3443.01 -26.52 124.30 250.61 80.78 10 18 58 2443.0 -29.49 96.92  
 90.00 10 25 2 3238.16 -26.37 108.83 250.19 79.39 11 19 0 2238.2 -29.18 81.97  
 100.00 12 4 27 2917.48 -26.52 85.67 250.61 80.78 12 53 5 1917.5 -29.49 58.29  
 110.00 13 49 6 2589.97 -33.71 61.61 251.41 84.15 14 32 16 1590.0 -32.60 32.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.1642 TRA-1.0416 TC3-1.5584 BAU .7951 SGT 2022.4 SGR 2186.0 SG3 1734.6 ST 23.6 SR 6.8 SS 48.4  
 RDE -.0201 RRA -.2908 RC3-2.3361 FAU .49920 RRT .8244 RRF .9685 RTF .8384 CRT .8959 CRS -.2039 CST .0609  
 FDE 3.4388 FRA-4.1726 FC-20.4074 BSP 4638 SGB 2978.0 R23 .1942 R13 .9514 LSA 48.5 MSA 24.4 SSA 2.4  
 BDE .1654 BRA 1.0815 BC3 2.8082 FSP 3007 SG1 2845.2 SG2 879.4 THA 47.70 EL1 24.4 EL2 2.9 ALF 14.79

LAUNCH DATE AUG 23 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC DISTANCE 470.258 EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.886 GAL 4.37 AZL 87.54 HCA 139.41 SMA 197.17 ECC .24428 INC 2.4561 V1 29.453  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.639 GAP 5.82 AZP 91.87 TAL 22.56 TAP 161.97 RCA 149.00 APO 245.33 V2 22.734  
 RC 243.479 GL 17.79 GP -24.58 ZAL 51.38 ZAP 99.15 ETS 186.14 ZAE 130.29 ETE 206.03 ZAC 61.99 ETC 285.54 LVI 3.64

PLANETOCENTRIC CONIC

C3 21.187 VHL 4.603 DLA 23.71 RAL 10.03 RAD 6643.4 VEL 11.882 PTH 6.89 VHP 2.412 DPA -12.13 RAP 36.76 ECC 1.3487  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 19 3632.67 -47.50 140.66 252.15 93.11 9 19 51 2632.7 -40.75 108.06  
 60.00 8 28 52 3607.20 -40.25 138.45 252.23 87.81 9 28 59 2607.2 -36.72 107.91  
 70.00 8 44 35 3560.91 -33.58 134.06 251.58 83.35 9 43 56 2560.9 -32.82 105.35  
 80.00 9 14 41 3466.49 -26.26 126.00 250.67 79.93 10 12 27 2466.5 -29.61 98.65  
 90.00 10 16 56 3265.47 -26.01 110.75 250.19 78.50 11 11 21 2265.5 -28.24 83.96  
 100.00 11 57 33 2940.96 -26.26 87.37 250.67 79.93 12 46 34 1941.0 -29.61 60.02  
 110.00 13 44 1 2607.73 -33.58 62.98 251.58 83.35 14 27 29 1607.7 -32.82 34.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.1394 TRA-1.0734 TC3-1.6937 BAU .8330 SGT 2142.7 SGR 2293.0 SG3 1747.5 ST 23.7 SR 7.2 SS 49.7  
 RDE .0060 RRA -.3105 RC3-2.4040 FAU .50205 RRT .8422 RRF .9711 RTF .8552 CRT .8448 CRS -.4229 CST -.0067  
 FDE 3.5458 FRA-4.2237 FC-20.5140 BSP 4874 SGB 3109.2 R23 .1910 R13 .9546 LSA 49.8 MSA 24.4 SSA 2.3  
 BDE .1395 BRA 1.1174 BC3 2.9407 FSP 2997 SG1 2984.3 SG2 872.3 THA 46.71 EL1 24.4 EL2 3.7 ALF 14.68

LAUNCH DATE AUG 23 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC DISTANCE 474.050 EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.886 GAL 4.34 AZL 87.47 HCA 140.34 SMA 197.16 ECC .24411 INC 2.5291 V1 29.453  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.608 GAP 5.39 AZP 91.95 TAL 22.42 TAP 162.76 RCA 149.03 APO 245.29 V2 22.706  
 RC 246.330 GL 18.31 GP -25.08 ZAL 51.65 ZAP 97.67 ETS 185.54 ZAE 128.59 ETE 205.07 ZAC 61.63 ETC 285.64 LVI 4.02

PLANETOCENTRIC CONIC

C3 21.204 VHL 4.605 DLA 24.25 RAL 9.94 RAD 6643.4 VEL 11.883 PTH 6.89 VHP 2.408 DPA -12.84 RAP 36.39 ECC 1.3490  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 22 3644.57 -47.54 141.81 252.61 92.22 9 17 7 2644.6 -41.11 108.97  
 60.00 8 24 57 3621.73 -40.21 139.68 252.54 86.97 9 25 18 2621.7 -37.02 109.03  
 70.00 8 39 12 3579.74 -33.42 135.51 251.76 82.51 9 38 52 2579.7 -33.04 106.77  
 80.00 9 7 14 3491.79 -27.94 127.81 250.72 79.02 10 5 26 2491.8 -29.72 100.53  
 90.00 10 8 4 3295.32 -25.59 112.83 250.18 77.53 11 2 59 2295.3 -28.28 86.15  
 100.00 11 50 6 2966.26 -27.94 89.18 250.72 79.02 12 39 32 1966.3 -29.72 61.90  
 110.00 13 38 38 2626.55 -33.42 64.42 251.76 82.51 14 22 25 1626.6 -33.04 35.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.1159 TRA-1.1095 TC3-1.8372 BAU .8708 SGT 2275.1 SGR 2310.1 SG3 1750.0 ST 24.0 SR 7.8 SS 51.8  
 RDE .0384 RRA -.3252 RC3-2.4811 FAU .50173 RRT .8562 RRF .9752 RTF .6075 CRT .7583 CRS -.6289 CST -.0632  
 FDE 3.6987 FRA-4.2189 FC-20.4854 BSP 5139 SGB 3242.3 R23 .1927 R13 .9562 LSA 51.8 MSA 24.5 SSA 2.2  
 BDE .1221 BRA 1.1562 BC3 3.0712 FSP 3032 SG1 3123.6 SG2 869.2 THA 45.51 EL1 24.7 EL2 5.0 ALF 14.54

LAUNCH DATE AUG 23 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC DISTANCE 477.841 EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.886 GAL 4.32 AZL 87.40 HCA 141.28 SMA 197.16 ECC .24395 INC 2.6028 V1 29.453  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.577 GAP 5.15 AZP 92.03 TAL 22.28 TAP 163.55 RCA 149.06 APO 245.26 V2 22.679  
 RC 249.167 GL 18.86 GP -25.60 ZAL 51.94 ZAP 96.22 ETS 184.91 ZAE 126.90 ETE 204.14 ZAC 61.27 ETC 285.74 LVI 4.41

PLANETOCENTRIC CONIC

C3 21.228 VHL 4.607 DLA 24.81 RAL 9.84 RAD 6643.4 VEL 11.884 PTH 6.90 VHP 2.407 DPA -13.54 RAP 36.04 ECC 1.3494  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 18 3657.03 -47.56 143.01 253.10 91.30 9 14 15 2657.0 -41.48 109.93  
 60.00 8 20 49 3637.00 -40.14 140.98 252.86 86.09 9 21 26 2637.0 -37.32 110.21  
 70.00 8 33 28 3599.69 -33.23 137.03 251.94 81.62 9 33 28 2599.7 -33.24 108.29  
 80.00 8 59 9 3519.13 -27.57 129.78 250.76 78.06 9 57 48 2519.1 -29.80 102.56  
 90.00 9 58 16 3328.19 -25.09 115.11 250.13 76.50 10 53 44 2328.2 -28.27 88.55  
 100.00 11 42 1 2993.60 -27.57 91.13 250.76 78.06 12 31 54 1993.6 -29.80 63.92  
 110.00 13 32 55 2646.51 -33.23 65.95 251.94 81.62 14 17 1 1646.5 -33.24 37.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.0887 TRA-1.1448 TC3-1.9780 BAU .9092 SGT 2407.1 SGR 2370.9 SG3 1752.0 ST 24.3 SR 9.0 SS 53.0  
 RDE .0697 RRA -.3422 RC3-2.5204 FAU .50136 RRT .8689 RRF .9752 RTF .8789 CRT .6930 CRS -.7616 CST -.1303  
 FDE 3.8275 FRA-4.2270 FC-20.4468 BSP 5401 SGB 3378.6 R23 .1923 R13 .9582 LSA 53.6 MSA 24.6 SSA 2.2  
 BDE .1128 BRA 1.1948 BC3 3.2038 FSP 3039 SG1 3266.0 SG2 864.9 THA 44.50 EL1 25.2 EL2 6.2 ALF 15.30

LAUNCH DATE AUG 23 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC  
 RL 151.20 LAL -.00 LOL 329.72 VL 32.886 GAL 4.29 AZL 87.32 HCA 142.19 SMA 197.16 ECC .24382 INC 2.6793 V1 29.453  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.548 GAP 4.92 AZP 92.12 TAL 22.13 TAP 164.32 RCA 149.09 APO 245.24 V2 22.652  
 RC 251.989 GL 19.42 GP -26.12 ZAL 52.25 ZAP 94.80 ETS 184.28 ZAE 125.22 ETE 203.23 ZAC 60.90 ETC 285.84 LVI 4.81

DISTANCE 481.633 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.260 VHL 4.611 DLA 25.38 RAL 9.74 RAD 6643.4 VEL 11.885 PTH 6.90 VHP 2.409 DPA -14.25 RAP 35.71 ECC 1.3499  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 4 3670.08 -47.58 144.20 253.61 90.33 9 11 14 2670.1 -41.87 110.95  
 60.00 8 16 27 3653.07 -40.06 142.34 253.20 85.17 9 17 20 2653.1 -37.63 111.47  
 70.00 8 27 22 3620.90 -33.01 138.65 252.11 80.69 9 27 43 2620.9 -33.44 109.92  
 80.00 8 50 10 3548.93 -27.13 131.86 250.77 77.04 9 49 27 2548.9 -29.85 104.77  
 90.00 9 47 17 3364.91 -24.48 117.63 250.05 75.38 10 43 21 2364.9 -28.20 91.23  
 100.00 11 33 10 3023.40 -27.13 93.25 250.77 77.04 12 23 33 2023.4 -29.85 86.14  
 110.00 13 26 49 2667.72 -33.01 67.57 252.11 80.69 14 11 16 1667.7 -33.44 38.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0596 TRA-1.1809 TC3-2.1193 BAU .9487 SGT 2542.3 SGR 2432.2 SG3 1751.2 ST 24.6 SR 10.4 SS 54.6  
 RDE .1025 RRA -.3594 RC3-2.5787 FAU .50021 RRT .8800 RRF .9771 RTF .8887 CRT .6488 CRS -.8472 CST -.1993  
 FDE 3.9564 FRA-4.2291 FC-20.3688 B8P 5665 SGB 3518.3 R23 .1919 R13 .9800 LSA 55.6 MSA 24.6 SSA 2.1  
 BDE .1186 BRA 1.2344 BC3 3.3378 F8P 3039 SG1 3411.3 SG2 861.1 THA 43.56 EL1 25.8 EL2 7.6 ALF 16.71

LAUNCH DATE AUG 23 1973

FLIGHT TIME 220.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC  
 RL 151.20 LAL -.00 LOL 329.72 VL 32.887 GAL 4.25 AZL 87.24 HCA 143.11 SMA 197.18 ECC .24371 INC 2.7588 V1 29.453  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.519 GAP 4.69 AZP 92.21 TAL 21.98 TAP 165.08 RCA 149.12 APO 245.24 V2 22.625  
 RC 254.795 GL 20.00 GP -26.65 ZAL 52.57 ZAP 93.40 ETS 183.63 ZAE 123.56 ETE 202.36 ZAC 60.51 ETC 285.94 LVI 5.23

DISTANCE 485.423 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.301 VHL 4.615 DLA 25.98 RAL 9.64 RAD 6643.4 VEL 11.887 PTH 6.90 VHP 2.412 DPA -14.96 RAP 35.40 ECC 1.3506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 41 3683.78 -47.57 145.60 254.14 89.30 9 8 5 2683.8 -42.25 112.04  
 60.00 8 11 51 3670.01 -39.95 143.76 253.54 84.21 9 13 1 2670.0 -37.93 112.81  
 70.00 8 20 50 3643.53 -32.75 140.36 252.28 79.71 9 21 33 2643.5 -33.62 111.66  
 80.00 8 40 32 3581.89 -26.61 134.16 250.75 75.94 9 40 13 2581.7 -29.85 107.20  
 90.00 9 34 41 3406.75 -23.73 120.46 249.90 74.15 10 31 28 2406.8 -28.06 94.28  
 100.00 11 23 24 3056.16 -26.61 95.53 250.75 75.94 12 14 20 2056.2 -29.85 68.57  
 110.00 13 20 16 2690.35 -32.75 69.28 252.28 79.71 14 5 6 1690.3 -33.62 40.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0283 TRA-1.2177 TC3-2.2608 BAU .9889 SGT 2680.2 SGR 2494.1 SG3 1747.7 ST 25.5 SR 12.1 SS 56.1  
 RDE .1362 RRA -.3770 RC3-2.6361 FAU .49832 RRT .8897 RRF .9788 RTF .8973 CRT .6293 CRS -.8998 CST -.2698  
 FDE 4.0787 FRA-4.2262 FC-20.2528 B8P 5927 SGB 3661.1 R23 .1914 R13 .9817 LSA 57.7 MSA 24.6 SSA 2.0  
 BDE .1391 BRA 1.2747 BC3 3.4726 F8P 3030 SG1 3359.3 SG2 857.6 THA 42.69 EL1 26.7 EL2 8.9 ALF 18.78

LAUNCH DATE AUG 23 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC  
 RL 151.20 LAL -.00 LOL 329.72 VL 32.888 GAL 4.22 AZL 87.16 HCA 144.03 SMA 197.19 ECC .24362 INC 2.8417 V1 29.453  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.492 GAP 4.46 AZP 92.30 TAL 21.82 TAP 165.84 RCA 149.15 APO 245.24 V2 22.599  
 RC 257.584 GL 20.60 GP -27.19 ZAL 52.90 ZAP 92.03 ETS 182.97 ZAE 121.92 ETE 201.50 ZAC 60.12 ETC 286.04 LVI 5.65

DISTANCE 489.213 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.352 VHL 4.621 DLA 26.80 RAL 9.53 RAD 6643.4 VEL 11.889 PTH 6.90 VHP 2.417 DPA -15.66 RAP 35.12 ECC 1.3514  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 6 3698.17 -47.55 148.99 254.69 88.23 9 4 44 2698.2 -42.65 113.19  
 60.00 8 6 56 3687.88 -39.82 145.27 253.89 83.20 9 8 25 2687.9 -38.23 114.23  
 70.00 8 13 47 3667.75 -32.44 142.18 252.43 78.67 9 14 55 2667.7 -33.79 113.53  
 80.00 8 29 35 3618.17 -25.98 136.69 250.69 74.75 9 29 53 2618.2 -29.80 109.91  
 90.00 9 19 47 3455.96 -22.78 123.75 249.66 72.77 10 17 23 2456.0 -27.79 97.86  
 100.00 11 12 26 3092.64 -25.98 98.05 250.69 74.75 12 3 59 2092.6 -29.80 71.28  
 110.00 13 13 14 2714.57 -32.44 71.10 252.43 78.67 13 58 28 1714.6 -33.79 42.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0056 TRA-1.2549 TC3-2.4005 BAU 1.0293 SGT 2819.5 SGR 2534.9 SG3 1740.2 ST 26.3 SR 13.9 SS 57.8  
 RDE .1714 RRA -.3943 RC3-2.6906 FAU .49531 RRT .8961 RRF .9804 RTF .5.46 CRT .6278 CRS -.9330 CST -.3400  
 FDE 4.1985 FRA-4.2117 FC-20.0825 B8P 6202 SGB 3804.9 R23 .1911 R13 .9632 LSA 60.0 MSA 24.6 SSA 1.9  
 BDE .1715 BRA 1.3154 BC3 3.6058 F8P 3020 SG1 3707.7 SG2 854.5 THA 41.86 EL1 28.0 EL2 10.2 ALF 21.36

LAUNCH DATE AUG 23 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC  
 RL 151.20 LAL -.00 LOL 329.72 VL 32.889 GAL 4.19 AZL 87.07 HCA 144.94 SMA 197.22 ECC .24355 INC 2.9281 V1 29.453  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.466 GAP 4.23 AZP 92.40 TAL 21.63 TAP 166.59 RCA 149.19 APO 245.25 V2 22.573  
 RC 260.356 GL 21.23 GP -27.74 ZAL 53.25 ZAP 90.70 ETS 182.29 ZAE 120.29 ETE 200.86 ZAC 59.72 ETC 286.14 LVI 6.09

DISTANCE 493.002 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.414 VHL 4.627 DLA 27.24 RAL 9.42 RAD 6643.5 VEL 11.892 PTH 6.90 VHP 2.425 DPA -16.37 RAP 34.86 ECC 1.3524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 59 19 3713.28 -47.51 148.45 255.27 87.11 9 1 12 2713.3 -43.05 114.42  
 60.00 8 1 45 3706.78 -39.86 146.85 254.25 82.14 9 3 32 2706.8 -38.53 115.75  
 70.00 8 6 10 3693.78 -32.07 144.12 252.57 77.58 9 7 44 2693.8 -33.94 115.54  
 80.00 8 17 4 3659.54 -25.21 139.52 250.56 73.45 9 18 3 2659.5 -29.67 112.98  
 90.00 9 1 3 3517.35 -21.48 127.79 249.26 71.15 9 59 41 2517.4 -27.32 102.29  
 100.00 10 59 56 3134.01 -25.21 100.89 250.56 73.45 11 52 10 2134.0 -29.67 74.35  
 110.00 13 5 36 2740.60 -32.07 73.04 252.57 77.58 13 51 17 1740.6 -33.94 44.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0418 TRA-1.2930 TC3-2.5395 BAU 1.0704 SGT 2961.2 SGR 2616.5 SG3 1730.1 ST 27.4 SR 15.9 SS 59.1  
 RDE .2079 RRA -.4123 RC3-2.7441 FAU .49160 RRT .9055 RRF .9819 RTF .9111 CRT .6402 CRS -.9540 CST -.4084  
 FDE 4.3125 FRA-4.1944 FC-19.8751 B8P 6474 SGB 3951.6 R23 .1907 R13 .9646 LSA 62.4 MSA 24.6 SSA 1.8  
 BDE .2120 BRA 1.3571 BC3 3.7389 F8P 3000 SG1 3858.6 SG2 851.9 THA 41.10 EL1 29.6 EL2 11.3 ALF 24.25

LAUNCH DATE AUG 23 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

DISTANCE 496.700

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.890 GAL 4.16 AZL 86.98 HCA 145.86 SMA 197.25 ECC .24349 INC 3.0183 V1 29.453
RP 243.37 LAP 1.69 LOP 115.62 VP 20.440 GAP 4.01 AZP 92.50 TAL 21.48 TAP 167.34 RCA 149.22 APO 245.28 V2 22.548
RC 263.112 GL 21.88 GP -28.29 ZAL 53.81 ZAP 89.40 ETS 181.60 ZAE 118.69 ETE 199.85 ZAC 59.30 ETC 288.24 LVI 6.55

PLANETOCENTRIC CONIC

C3 21.486 VHL 4.635 DLA 27.91 RAL 9.30 RAD 6643.5 VEL 11.895 PTH 6.90 VHP 2.434 DPA -17.08 RAP 34.62 ECC 1.3556
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 19 3729.19 -47.44 149.98 255.86 85.93 8 57 28 2729.2 -43.46 115.73
60.00 7 56 12 3726.80 -39.46 148.51 254.60 81.03 8 58 19 2726.8 -38.82 117.37
70.00 7 57 52 3721.91 -31.84 146.20 252.69 76.42 8 59 54 2721.9 -34.05 117.73
80.00 8 2 20 3707.83 -24.24 142.77 250.32 72.01 9 4 8 2707.8 -29.41 116.55
90.00 8 33 34 3606.82 -19.41 133.53 248.48 69.02 9 33 41 2606.8 -26.35 108.65
100.00 10 45 12 3182.31 -24.24 104.14 250.32 72.01 11 38 15 2182.3 -29.41 77.91
110.00 12 57 18 2768.73 -31.64 75.12 252.69 76.42 13 43 27 1768.7 -34.05 46.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0805 TRA-1.3314 TC3-2.8769 BAU 1.1117 SGT 3104.4 SGR 2677.2 SG3 1716.4 ST 28.6 SR 18.1 SS 80.6
RDE .2461 RRA -.4298 RC3-2.7948 FAU .48689 RRT .9121 RRF .9832 RTF .9167 CRT .6601 CRS -.9679 CST -.4729
FDE 4.4244 FRA-4.1657 FC-19.6178 BSP 6748 SGB 4099.3 R23 .1906 R13 .9658 LSA 64.9 MSA 24.6 SSA 1.8
BDE .2590 BRA 1.3991 BC3 3.8700 FSP 2975 SG1 4010.3 SG2 849.8 THA 40.37 EL1 31.5 EL2 12.3 ALF 27.16

LAUNCH DATE AUG 23 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

DISTANCE 500.578

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.892 GAL 4.12 AZL 86.89 HCA 146.77 SMA 197.28 ECC .24345 INC 3.1127 V1 29.453
RP 243.62 LAP 1.71 LOP 116.53 VP 20.416 GAP 3.78 AZP 92.60 TAL 21.30 TAP 168.07 RCA 149.25 APO 245.31 V2 22.523
RC 265.850 GL 22.55 GP -28.86 ZAL 53.99 ZAP 88.13 ETS 180.90 ZAE 117.10 ETE 199.04 ZAC 58.87 ETC 286.35 LVI 7.02

PLANETOCENTRIC CONIC

C3 21.572 VHL 4.645 DLA 28.60 RAL 9.16 RAD 6643.5 VEL 11.898 PTH 6.91 VHP 2.446 DPA -17.78 RAP 34.42 ECC 1.3550
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 51 3 3745.94 -47.35 151.59 256.47 84.70 8 53 29 2745.9 -43.87 117.13
60.00 7 50 15 3748.06 -39.22 150.27 254.96 79.86 8 52 43 2748.1 -39.10 119.11
70.00 7 48 45 3752.52 -31.13 148.44 252.77 75.19 8 51 17 2752.5 -34.13 120.12
80.00 7 44 5 3767.17 -22.93 146.70 249.92 70.34 8 46 52 2767.2 -28.95 120.90
85.54 7 15 37 3859.03 -16.17 150.58 247.05 66.09 8 19 56 2859.0 -24.64 126.60
100.00 10 26 57 3241.64 -22.93 108.06 249.92 70.34 11 20 59 2241.6 -28.95 82.26
110.00 12 48 11 2799.34 -31.13 77.36 252.77 75.19 13 34 50 1799.3 -34.13 49.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1220 TRA-1.3705 TC3-2.8119 BAU 1.1534 SGT 3248.6 SGR 2738.8 SG3 1700.0 ST 30.1 SR 20.4 SS 82.1
RDE .2858 RRA -.4481 RC3-2.8442 FAU .48149 RRT .9179 RRF .9844 RTF .9216 CRT .6859 CRS -.9771 CST -.5340
FDE 4.5299 FRA-4.1332 FC-19.3232 BSP 7028 SGB 4249.0 R23 .1904 R13 .9669 LSA 67.6 MSA 24.5 SSA 1.7
BDE .3108 BRA 1.4419 BC3 3.9995 FSP 2946 SG1 4163.5 SG2 846.2 THA 39.71 EL1 33.9 EL2 13.2 ALF 29.89

LAUNCH DATE AUG 23 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

DISTANCE 504.364

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.894 GAL 4.09 AZL 86.79 HCA 147.68 SMA 197.32 ECC .24343 INC 3.2116 V1 29.453
RP 243.86 LAP 1.72 LOP 117.45 VP 20.393 GAP 3.56 AZP 92.72 TAL 21.11 TAP 168.80 RCA 149.29 APO 245.36 V2 22.499
RC 268.570 GL 23.26 GP -29.44 ZAL 54.39 ZAP 86.81 ETS 180.18 ZAE 115.55 ETE 198.26 ZAC 58.42 ETC 286.45 LVI 7.51

PLANETOCENTRIC CONIC

C3 21.672 VHL 4.655 DLA 29.32 RAL 9.02 RAD 6643.6 VEL 11.902 PTH 6.91 VHP 2.460 DPA -18.50 RAP 34.24 ECC 1.3567
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 46 31 3763.61 -47.23 153.28 257.10 83.40 8 49 14 2763.6 -44.29 118.63
60.00 7 43 52 3770.69 -38.93 152.12 255.30 78.63 8 46 42 2770.7 -39.37 120.97
70.00 7 38 38 3786.12 -30.52 150.87 252.80 73.87 8 41 44 2786.1 -34.15 122.74
80.00 7 18 28 3849.63 -20.94 152.01 249.16 68.22 8 22 38 2849.6 -28.06 126.86
81.93 6 45 48 3954.39 -16.32 157.77 247.16 65.43 7 51 42 2954.4 -25.23 133.88
100.00 10 1 20 3324.11 -20.94 113.38 249.16 68.22 10 56 44 2324.1 -28.06 88.23
110.00 12 38 4 2832.94 -30.52 79.79 252.80 73.87 13 25 17 1832.9 -34.15 51.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1662 TRA-1.4104 TC3-2.9440 BAU 1.1953 SGT 3393.9 SGR 2799.8 SG3 1680.1 ST 31.8 SR 22.8 SS 83.6
RDE .3276 RRA -.4667 RC3-2.8902 FAU .47508 RRT .9230 RRF .9856 RTF .5259 CRT .7132 CRS -.9834 CST -.5895
FDE 4.6322 FRA-4.0949 FC-18.9784 BSP 7307 SGB 4399.6 R23 .1905 R13 .9679 LSA 70.5 MSA 24.5 SBA 1.6
BDE .3673 BRA 1.4856 BC3 4.1256 FSP 2912 SG1 4317.3 SG2 846.9 THA 38.07 EL1 36.6 EL2 13.9 ALF 32.27

LAUNCH DATE AUG 23 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

DISTANCE 508.150

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.896 GAL 4.05 AZL 86.88 HCA 148.59 SMA 197.37 ECC .24343 INC 3.3155 V1 29.453
RP 244.10 LAP 1.73 LOP 118.36 VP 20.370 GAP 3.33 AZP 92.83 TAL 20.93 TAP 169.52 RCA 149.32 APO 245.41 V2 22.475
RC 271.273 GL 23.99 GP -30.03 ZAL 54.81 ZAP 85.72 ETS 179.46 ZAE 114.01 ETE 197.48 ZAC 57.95 ETC 286.56 LVI 8.02

PLANETOCENTRIC CONIC

C3 21.787 VHL 4.668 DLA 30.08 RAL 8.88 RAD 6643.6 VEL 11.907 PTH 6.92 VHP 2.478 DPA -19.21 RAP 34.09 ECC 1.3588
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 40 3782.28 -47.06 155.06 257.73 82.04 8 44 42 2782.3 -44.70 120.24
60.00 7 36 57 3794.85 -38.59 154.09 255.63 77.34 8 40 12 2794.9 -39.62 122.98
70.00 7 27 16 3823.45 -29.79 153.53 252.77 72.46 8 30 59 2823.4 -34.11 125.66
79.35 6 25 16 4019.34 -16.88 162.76 247.27 64.74 7 32 15 3019.3 -25.83 138.88
79.35 6 25 16 4019.34 -16.88 162.76 247.27 64.74 7 32 15 3019.3 -25.83 138.88
79.35 6 25 16 4019.34 -16.88 162.76 247.27 64.74 7 32 15 3019.3 -25.83 138.88
110.00 12 26 42 2870.27 -29.79 82.44 252.77 72.46 13 14 33 1870.3 -34.11 54.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2134 TRA-1.4504 TC3-3.0723 BAU 1.2375 SGT 3539.3 SGR 2861.2 SG3 1657.6 ST 33.8 SR 25.3 SS 85.0
RDE .3711 RRA -.4857 RC3-2.9344 FAU .46800 RRT .9276 RRF .9866 RTF .9297 CRT .7411 CRS -.9878 CST -.6400
FDE 4.7280 FRA-4.0506 FC-18.5965 BSP 7589 SGB 4531.1 R23 .1905 R13 .9688 LSA 73.5 MSA 24.4 SBA 1.5
BDE .4280 BRA 1.5296 BC3 4.2485 FSP 2871 SG1 4471.8 SG2 846.0 THA 38.50 EL1 39.7 EL2 14.5 ALF 34.25

LAUNCH DATE AUG 23 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 14 1974

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 32.899 GAL 4.02 AZL 86.58 HCA 149.50 SMA 197.42 ECC .24343 INC 3.4246 V1 29.453  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.349 GAP 3.11 AZP 92.95 TAL 20.75 TAP 170.23 RCA 149.36 APO 245.47 V2 22.452  
 RC 273.957 GL 24.75 GP -30.64 ZAL 55.24 ZAP 84.57 ETS 178.71 ZAE 112.51 ETE 196.72 ZAC 57.46 ETC 286.68 LVI 8.55

Planetocentric Conic: C3 21.920 VHL 4.682 DLA 30.84 RAL 8.69 RAD 6643.7 VEL 11.913 PTH 6.92 VHP 2.494 DPA -19.93 RAP 33.98 ECC 1.3607  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 28 3802.04 -46.86 156.92 258.38 80.62 8 39 50 2802.0 -45.11 121.96  
 60.00 7 29 27 3820.75 -38.18 156.17 255.94 75.98 8 33 8 2820.8 -39.84 125.14  
 70.00 7 14 16 3865.61 -28.88 156.48 252.63 70.93 8 18 41 2865.6 -33.97 128.94  
 77.16 6 8 27 4071.99 -17.24 166.88 247.40 64.03 7 16 19 3072.0 -26.45 143.02  
 77.16 6 8 27 4071.99 -17.24 166.88 247.40 64.03 7 16 19 3072.0 -26.45 143.02  
 77.16 6 8 27 4071.99 -17.24 166.88 247.40 64.03 7 16 19 3072.0 -26.45 143.02  
 110.00 12 13 42 2912.43 -28.88 85.39 252.63 70.93 13 2 15 1912.4 -33.97 57.86

Differential Corrections: TDE .2633 TRA-1.4916 TC3-3.1974 BAU 1.2801 SGT 3686.1 SGR 2923.5 SCS 1632.4 ST 36.0 SR 28.0 SB 66.4  
 RDE .4163 RRA -.5056 RC3-2.9765 FAU .46021 RRT .9317 RRF .9876 RTF .9331 CRT .7679 CR8 -.9908 CST -.6846  
 FDE 4.8158 FRA-4.0030 FC-18.1762 BSP 7865 SGB 4704.7 R23 .1906 R13 .9697 LSA 76.7 MSA 24.4 SSA 1.5  
 BDE .4925 BRA 1.5750 BC3 4.3683 FSP 2823 SGI 4628.1 SGI 845.6 THA 37.95 EL1 43.1 EL2 15.0 ALP 35.82

LAUNCH DATE AUG 23 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 16 1974

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 32.902 GAL 3.98 AZL 86.46 HCA 150.40 SMA 197.47 ECC .24346 INC 3.5395 V1 29.453  
 RP 244.36 LAP 1.75 LOP 120.18 VP 20.328 GAP 2.89 AZP 93.08 TAL 20.54 TAP 170.94 RCA 149.39 APO 245.55 V2 22.430  
 RC 276.623 GL 25.55 GP -31.27 ZAL 55.69 ZAP 83.46 ETS 177.96 ZAE 111.03 ETE 195.97 ZAC 56.95 ETC 286.79 LVI 9.11

Planetocentric Conic: C3 22.072 VHL 4.698 DLA 31.65 RAL 8.50 RAD 6643.7 VEL 11.919 PTH 6.93 VHP 2.515 DPA -20.65 RAP 33.90 ECC 1.3633  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 52 3823.00 -46.61 158.89 259.03 79.12 8 34 35 2823.0 -45.51 123.82  
 60.00 7 21 15 3848.64 -37.70 158.38 256.22 74.55 8 25 24 2848.6 -40.04 127.49  
 70.00 6 58 59 3914.52 -27.75 159.83 252.36 69.24 8 4 13 2914.5 -33.68 132.73  
 75.17 5 53 45 4117.59 -17.61 170.51 247.53 63.27 7 2 22 3117.6 -27.08 146.67  
 75.17 5 53 45 4117.59 -17.61 170.51 247.53 63.27 7 2 22 3117.6 -27.08 146.67  
 75.17 5 53 45 4117.59 -17.61 170.51 247.53 63.27 7 2 22 3117.6 -27.08 146.67  
 110.00 11 58 25 2961.33 -27.75 88.75 252.36 69.24 12 47 46 1961.3 -33.68 61.65

Differential Corrections: TDE .3165 TRA-1.5332 TC3-3.3175 BAU 1.3229 SGT 3832.8 SGR 2985.9 SCS 1804.2 ST 38.5 SR 30.8 SB 67.7  
 RDE .4639 RRA -.5260 RC3-3.0154 FAU .45161 RRT .9354 RRF .9885 RTF .9361 CRT .7929 CR8 -.9930 CST -.7241  
 FDE 4.8984 FRA-3.9493 FC-17.7136 BSP 8148 SGB 4858.6 R23 .1907 R13 .9705 LSA 80.1 MSA 24.3 SSA 1.4  
 BDE .5616 BRA 1.6210 BC3 4.4831 FSP 2772 SGI 4784.4 SGI 845.5 THA 37.45 EL1 46.8 EL2 15.4 ALP 37.06

LAUNCH DATE AUG 23 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 18 1974

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 32.905 GAL 3.94 AZL 86.34 HCA 151.31 SMA 197.53 ECC .24349 INC 3.6607 V1 29.453  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.309 GAP 2.67 AZP 93.21 TAL 20.33 TAP 171.84 RCA 149.43 APO 245.62 V2 22.407  
 RC 279.268 GL 26.38 GP -31.91 ZAL 56.16 ZAP 82.40 ETS 177.19 ZAE 109.58 ETE 195.23 ZAC 56.41 ETC 286.92 LVI 9.69

Planetocentric Conic: C3 22.246 VHL 4.717 DLA 32.48 RAL 8.28 RAD 6643.8 VEL 11.926 PTH 6.93 VHP 2.538 DPA -21.38 RAP 33.86 ECC 1.3681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 24 49 3845.26 -46.30 160.95 259.67 77.56 8 28 55 2845.3 -45.90 125.83  
 60.00 7 12 15 3878.81 -37.12 160.74 256.44 73.04 8 16 54 2878.8 -40.19 130.04  
 70.00 6 40 9 3973.88 -26.25 163.79 251.85 67.33 7 46 23 2973.9 -33.16 137.28  
 73.31 5 40 23 4158.56 -17.97 173.82 247.67 62.48 6 49 41 3158.6 -27.74 150.03  
 73.31 5 40 23 4158.56 -17.97 173.82 247.67 62.48 6 49 41 3158.6 -27.74 150.03  
 73.31 5 40 23 4158.56 -17.97 173.82 247.67 62.48 6 49 41 3158.6 -27.74 150.03  
 110.00 11 39 35 3020.70 -26.25 92.71 251.85 67.33 12 29 56 2020.7 -33.16 66.20

Differential Corrections: TDE .3726 TRA-1.5759 TC3-3.4327 BAU 1.3660 SGT 3980.0 SGR 3049.2 SCS 1573.3 ST 41.2 SR 33.6 SB 69.0  
 RDE .5136 RRA -.5474 RC3-3.0517 FAU .44235 RRT .9388 RRF .9893 RTF .9388 CRT .8156 CR8 -.9946 CST -.7582  
 FDE 4.9721 FRA-3.8921 FC-17.2144 BSP 8428 SGB 5013.8 R23 .1910 R13 .9712 LSA 83.6 MSA 24.3 SSA 1.3  
 BDE .6345 BRA 1.6683 BC3 4.5931 FSP 2718 SGI 4941.9 SGI 846.1 THA 36.99 EL1 50.8 EL2 15.8 ALP 38.00

LAUNCH DATE AUG 23 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 20 1974

Heliocentric Conic: RL 151.28 LAL -.00 LOL 329.72 VL 32.808 GAL 3.90 AZL 86.21 HCA 152.21 SMA 197.59 ECC .24354 INC 3.7890 V1 29.453  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.290 GAP 2.45 AZP 93.35 TAL 20.13 TAP 172.34 RCA 149.47 APO 245.71 V2 22.388  
 RC 281.893 GL 27.26 GP -32.58 ZAL 56.64 ZAP 81.38 ETS 176.41 ZAE 108.18 ETE 194.49 ZAC 55.85 ETC 287.05 LVI 10.29

Planetocentric Conic: C3 22.445 VHL 4.738 DLA 33.36 RAL 8.05 RAD 6643.9 VEL 11.935 PTH 6.94 VHP 2.564 DPA -22.12 RAP 33.86 ECC 1.3694  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 17 3868.98 -45.93 163.12 260.29 75.93 8 22 46 2869.0 -46.28 127.99  
 60.00 7 2 17 3911.69 -36.44 163.26 256.61 71.44 8 7 29 2911.7 -40.28 132.83  
 70.00 6 14 23 4053.79 -24.05 168.96 250.89 64.99 7 21 57 3053.8 -32.18 143.31  
 71.52 5 28 1 4196.03 -18.35 176.91 247.82 61.64 6 37 57 3196.0 -28.41 153.15  
 71.52 5 28 1 4196.03 -18.35 176.91 247.82 61.64 6 37 57 3196.0 -28.41 153.15  
 71.52 5 28 1 4196.03 -18.35 176.91 247.82 61.64 6 37 57 3196.0 -28.41 153.15  
 110.00 11 13 30 3100.61 -24.05 97.87 250.89 64.99 12 5 30 2100.6 -32.18 72.22

Differential Corrections: TDE .4326 TRA-1.6191 TC3-3.5408 BAU 1.4090 SGT 4126.3 SGR 3112.6 SCS 1539.4 ST 44.1 SR 36.7 SB 70.2  
 RDE .5861 RRA -.5697 RC3-3.0840 FAU .43224 RRT .9418 RRF .9901 RTF .9411 CRT .8363 CR8 -.9958 CST -.7883  
 FDE 5.0400 FRA-3.8306 FC-16.6719 BSP 8706 SGB 5168.6 R23 .1913 R13 .9718 LSA 87.4 MSA 24.2 SSA 1.3  
 BDE .7124 BRA 1.7164 BC3 4.6956 FSP 2653 SGI 5098.8 SGI 846.7 THA 36.56 EL1 55.1 EL2 16.1 ALP 38.73

LAUNCH DATE AUG 23 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

DISTANCE 527.063

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.911 GAL 3.86 AZL 86.08 HCA 183.11 SMA 197.65 ECC .24361 INC 3.9249 V1 29.453
RP 245.22 LAP 1.77 LOP 122.89 VP 20.272 GAP 2.23 AZP 93.50 TAL 19.91 TAP 173.03 RCA 149.50 APO 245.80 V2 22.365
RC 284.497 GL 28.17 GP -33.27 ZAL 57.15 ZAP 80.41 ETS 175.61 ZAE 106.78 ETE 193.76 ZAC 55.26 ETC 297.18 LVI 10.92

PLANETOCENTRIC CONIC

C3 22.671 VHL 4.761 DLA 34.27 RAL 7.79 RAD 6644.0 VEL 11.944 PTH 6.95 VHP 2.593 DPA -22.87 RAP 33.89 ECC 1.3731
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 11 9 3894.32 -45.49 165.40 260.89 74.22 8 16 3 2894.3 -46.63 130.34
60.00 6 51 7 3947.83 -35.62 163.98 256.66 69.75 7 56 55 2947.8 -40.30 135.91
69.79 5 16 23 4230.83 -18.72 179.84 247.97 60.76 6 26 54 3230.8 -29.11 156.13
69.79 5 16 23 4230.83 -18.72 179.84 247.97 60.76 6 26 54 3230.8 -29.11 156.13
69.79 5 16 23 4230.83 -18.72 179.84 247.97 60.76 6 26 54 3230.8 -29.11 156.13
69.79 5 16 23 4230.83 -18.72 179.84 247.97 60.76 6 26 54 3230.8 -29.11 156.13
69.79 5 16 23 4230.83 -18.72 179.84 247.97 60.76 6 26 54 3230.8 -29.11 156.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4959 TRA-1.6630 TC3-3.6426 BAU 1.4524 SGT 4272.2 SGR 3177.1 S63 1503.0 ST 47.3 SR 39.8 S8 71.4
RDE .6215 RRA -.5926 RC3-3.1133 FAU .42150 RRT .9445 RRF .9908 RTF .9432 CRT .8544 CRS -.9967 CST -.8130
FDE 5.1004 FRA-3.7621 FC-16.0954 BSP 8996 SGB 5324.1 R23 .1917 R13 .9723 LSA 91.3 MSA 24.1 S8A 1.2
BDE .7951 BRA 1.7654 BC3 4.7917 FSP 2592 SG1 9256.1 S62 848.3 THA 36.17 EL1 59.6 EL2 16.4 ALF 39.28

LAUNCH DATE AUG 23 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 530.842

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.915 GAL 3.82 AZL 85.93 HCA 154.01 SMA 197.72 ECC .24368 INC 4.0692 V1 29.453
RP 245.43 LAP 1.78 LOP 123.79 VP 20.255 GAP 2.02 AZP 93.66 TAL 19.70 TAP 173.71 RCA 149.54 APO 245.90 V2 22.344
RC 287.079 GL 29.12 GP -33.98 ZAL 57.68 ZAP 79.49 ETS 174.80 ZAE 105.42 ETE 193.04 ZAC 54.64 ETC 297.33 LVI 11.59

PLANETOCENTRIC CONIC

C3 22.930 VHL 4.788 DLA 35.22 RAL 7.49 RAD 6644.1 VEL 11.955 PTH 6.96 VHP 2.624 DPA -23.63 RAP 33.97 ECC 1.3774
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 3 21 3921.47 -44.96 167.80 261.45 72.43 8 8 43 2921.5 -46.94 132.89
60.00 6 30 28 3988.03 -34.63 168.93 256.62 67.96 7 44 56 2988.0 -40.21 139.32
68.08 5 5 16 4263.70 -19.10 182.65 248.13 59.83 6 16 20 3263.7 -29.82 159.00
68.08 5 5 16 4263.70 -19.10 182.65 248.13 59.83 6 16 20 3263.7 -29.82 159.00
68.08 5 5 16 4263.70 -19.10 182.65 248.13 59.83 6 16 20 3263.7 -29.82 159.00
68.08 5 5 16 4263.70 -19.10 182.65 248.13 59.83 6 16 20 3263.7 -29.82 159.00
68.08 5 5 16 4263.70 -19.10 182.65 248.13 59.83 6 16 20 3263.7 -29.82 159.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5631 TRA-1.7078 TC3-3.7363 BAU 1.4957 SGT 4417.4 SGR 3241.9 S63 1483.6 ST 50.7 SR 43.1 S8 72.4
RDE .6799 RRA -.6169 RC3-3.1381 FAU .40999 RRT .9470 RRF .9915 RTF .9450 CRT .8705 CRS -.9973 CST -.8361
FDE 5.1510 FRA-3.6900 FC-15.4799 BSP 9283 SGB 5479.4 R23 .1922 R13 .9728 LSA 95.4 MSA 24.0 S8A 1.1
BDE .8828 BRA 1.8158 BC3 4.8793 FSP 2525 SG1 5413.0 S62 850.1 THA 35.82 EL1 64.4 EL2 16.7 ALF 39.70

LAUNCH DATE AUG 23 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 534.620

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.919 GAL 3.78 AZL 85.78 HCA 154.91 SMA 197.80 ECC .24377 INC 4.2229 V1 29.453
RP 245.63 LAP 1.79 LOP 124.89 VP 20.239 GAP 1.80 AZP 93.83 TAL 19.48 TAP 174.39 RCA 149.58 APO 246.01 V2 22.324
RC 289.637 GL 30.13 GP -34.73 ZAL 58.24 ZAP 78.61 ETS 173.97 ZAE 104.10 ETE 192.32 ZAC 53.99 ETC 287.49 LVI 12.28

PLANETOCENTRIC CONIC

C3 23.224 VHL 4.819 DLA 36.21 RAL 7.16 RAD 6644.2 VEL 11.967 PTH 6.97 VHP 2.659 DPA -24.40 RAP 34.09 ECC 1.3822
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 54 47 3950.68 -44.33 170.33 261.95 70.57 8 0 37 2950.7 -47.21 135.66
60.00 6 23 49 4033.52 -33.42 172.18 256.39 66.03 7 31 3 3033.5 -39.98 143.17
66.39 4 54 33 4294.92 -19.47 185.37 248.30 58.85 6 6 8 3294.9 -30.54 161.79
66.39 4 54 33 4294.92 -19.47 185.37 248.30 58.85 6 6 8 3294.9 -30.54 161.79
66.39 4 54 33 4294.92 -19.47 185.37 248.30 58.85 6 6 8 3294.9 -30.54 161.79
66.39 4 54 33 4294.92 -19.47 185.37 248.30 58.85 6 6 8 3294.9 -30.54 161.79
66.39 4 54 33 4294.92 -19.47 185.37 248.30 58.85 6 6 8 3294.9 -30.54 161.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6338 TRA-1.7538 TC3-3.8217 BAU 1.5395 SGT 4562.1 SGR 3308.6 S63 1422.0 ST 54.3 SR 46.5 S8 73.4
RDE .7415 RRA -.6427 RC3-3.1594 FAU .39792 RRT .9492 RRF .9921 RTF .5466 CRT .8845 CRS -.9978 CST -.8550
FDE 5.1917 FRA-3.6152 FC-14.8338 BSP 9567 SGB 5635.6 R23 .1928 R13 .9733 LSA 99.7 MSA 24.0 S8A 1.1
BDE .9755 BRA 1.8678 BC3 4.9366 FSP 2452 SG1 5570.8 S62 852.3 THA 35.50 EL1 69.5 EL2 17.0 ALF 40.01

LAUNCH DATE AUG 23 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 538.397

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.922 GAL 3.74 AZL 85.61 HCA 155.80 SMA 197.87 ECC .24386 INC 4.3860 V1 29.453
RP 245.83 LAP 1.80 LOP 125.59 VP 20.224 GAP 1.59 AZP 94.00 TAL 19.26 TAP 175.06 RCA 149.62 APO 246.12 V2 22.305
RC 292.172 GL 31.18 GP -35.50 ZAL 58.81 ZAP 77.79 ETS 173.14 ZAE 102.82 ETE 191.61 ZAC 53.30 ETC 287.66 LVI 13.01

PLANETOCENTRIC CONIC

C3 23.559 VHL 4.854 DLA 37.24 RAL 6.79 RAD 6644.4 VEL 11.981 PTH 6.98 VHP 2.697 DPA -25.19 RAP 34.25 ECC 1.3877
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 45 17 3982.25 -43.58 172.99 262.37 68.63 7 51 40 2982.2 -47.42 138.68
60.00 6 6 25 4086.39 -31.90 175.83 255.91 63.94 7 14 32 3086.4 -39.54 147.60
64.69 4 44 7 4324.83 -19.84 188.03 248.46 57.82 5 56 12 3324.8 -31.29 164.54
64.69 4 44 7 4324.83 -19.84 188.03 248.46 57.82 5 56 12 3324.8 -31.29 164.54
64.69 4 44 7 4324.83 -19.84 188.03 248.46 57.82 5 56 12 3324.8 -31.29 164.54
64.69 4 44 7 4324.83 -19.84 188.03 248.46 57.82 5 56 12 3324.8 -31.29 164.54
64.69 4 44 7 4324.83 -19.84 188.03 248.46 57.82 5 56 12 3324.8 -31.29 164.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7082 TRA-1.8014 TC3-3.8979 BAU 1.5837 SGT 4706.4 SGR 3377.2 S63 1378.1 ST 58.2 SR 50.1 S8 74.3
RDE .8065 RRA -.6710 RC3-3.1767 FAU .38525 RRT .9514 RRF .9926 RTF .9481 CRT .8968 CRS -.9982 CST -.8711
FDE 5.2201 FRA-3.5402 FC-14.1573 BSP 9843 SGB 5792.7 R23 .1932 R13 .9737 LSA 104.1 MSA 23.9 S8A 1.0
BDE 1.0733 BRA 1.9223 BC3 5.0284 FSP 2371 SG1 5729.3 S62 854.8 THA 35.22 EL1 74.8 EL2 17.2 ALF 40.25

LAUNCH DATE AUG 23 1973

FLIGHT TIME 250.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

DISTANCE 542.172

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.026 GAL 3.70 AZL 85.44 HCA 186.70 SMA 197.95 ECC .24397 INC 4.5623 V1 20.453
RP 246.02 LAP 1.80 LOP 126.48 VP 20.210 GAP 1.30 AZP 94.19 TAL 19.03 TAP 175.72 RCA 149.66 APO 246.24 V2 22.286
RC 294.602 GL 32.29 GP -36.31 ZAL 59.42 ZAP 77.03 ETS 172.28 ZAE 101.57 ETE 190.89 ZAC 52.57 ETC 287.84 LVI 13.78

PLANETOCENTRIC CONIC

C3 23.941 VHL 4.893 DLA 38.31 RAL 6.37 RAD 6644.5 VEL 11.997 PTH 6.99 VHP 2.739 DPA -25.99 RAP 34.47 ECC 1.3940
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 34 43 4016.56 -42.69 175.81 262.68 66.60 7 41 39 3016.6 -47.55 141.99
60.00 5 44 40 4190.89 -29.89 180.11 255.00 61.60 6 53 50 3150.9 -38.75 152.90
63.00 4 33 52 4353.74 -20.20 190.64 248.63 56.73 5 46 26 3353.7 -32.04 167.26
63.00 4 33 52 4353.74 -20.20 190.64 248.63 56.73 5 46 26 3353.7 -32.04 167.26
63.00 4 33 52 4353.74 -20.20 190.64 248.63 56.73 5 46 26 3353.7 -32.04 167.26
63.00 4 33 52 4353.74 -20.20 190.64 248.63 56.73 5 46 26 3353.7 -32.04 167.26
63.00 4 33 52 4353.74 -20.20 190.64 248.63 56.73 5 46 26 3353.7 -32.04 167.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7863 TRA-1.8504 TC3-3.9641 BAU 1.6284 SGT 4850.0 SGR 3447.5 SG3 1331.6 ST 62.2 SR 53.8 SS 75.0
RDE .8753 RRA -.7009 RC3-3.1892 FAU .37199 RRT .9533 RRF .9931 RTF .9494 CRT .9074 CRS -.9985 CST -.8848
FDE 5.2366 FRA-3.4598 FC-13.4515 BSP 10129 SGB 5950.4 R23 .1938 R13 .9741 LSA 108.7 MSA 23.9 SSA .9
BDE 1.1766 BRA 1.9787 BC3 5.0878 FSP 2292 SG1 5888.3 SG2 857.7 THA 34.97 EL1 80.4 EL2 17.5 ALF 40.44

LAUNCH DATE AUG 23 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

DISTANCE 545.947

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.931 GAL 3.66 AZL 85.25 HCA 157.59 SMA 198.03 ECC .24409 INC 4.7508 V1 29.453
RP 246.21 LAP 1.81 LOP 127.38 VP 20.196 GAP 1.17 AZP 94.39 TAL 18.80 TAP 176.39 RCA 149.69 APO 246.37 V2 22.267
RC 297.167 GL 33.45 GP -37.15 ZAL 60.04 ZAP 76.32 ETS 171.42 ZAE 100.36 ETE 190.18 ZAC 51.80 ETC 288.04 LVI 14.59

PLANETOCENTRIC CONIC

C3 24.379 VHL 4.937 DLA 39.44 RAL 5.89 RAD 6644.7 VEL 12.015 PTH 7.01 VHP 2.785 DPA -26.81 RAP 34.73 ECC 1.4012
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 22 48 4054.11 -41.63 178.79 262.84 64.50 7 30 22 3054.1 -47.37 145.62
60.00 5 14 2 4239.30 -26.90 185.68 253.26 58.78 6 24 41 3239.3 -37.25 159.93
61.28 4 23 45 4381.74 -20.55 193.23 248.79 55.57 5 36 47 3381.7 -32.81 169.98
61.28 4 23 45 4381.74 -20.55 193.23 248.79 55.57 5 36 47 3381.7 -32.81 169.98
61.28 4 23 45 4381.74 -20.55 193.23 248.79 55.57 5 36 47 3381.7 -32.81 169.98
61.28 4 23 45 4381.74 -20.55 193.23 248.79 55.57 5 36 47 3381.7 -32.81 169.98
61.28 4 23 45 4381.74 -20.55 193.23 248.79 55.57 5 36 47 3381.7 -32.81 169.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8692 TRA-1.9007 TC3-4.0169 BAU 1.6729 SGT 4990.8 SGR 3519.0 SG3 1282.5 ST 66.4 SR 57.7 SS 75.6
RDE .9487 RRA -.7336 RC3-3.1953 FAU .35798 RRT .9551 RRF .9936 RTF .9506 CRT .9168 CRS -.9987 CST -.8967
FDE 5.2416 FRA-3.3781 FC-12.7126 BSP 10409 SGB 6106.7 R23 .1942 R13 .9744 LSA 113.5 MSA 23.8 SSA .9
BDE 1.2867 BRA 2.0374 BC3 5.1328 FSP 2204 SG1 6045.8 SG2 860.4 THA 34.76 EL1 86.2 EL2 17.8 ALF 40.80

LAUNCH DATE AUG 23 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

DISTANCE 549.722

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.935 GAL 3.61 AZL 85.03 HCA 158.48 SMA 198.11 ECC .24422 INC 4.9536 V1 29.453
RP 246.39 LAP 1.82 LOP 128.27 VP 20.184 GAP .95 AZP 94.61 TAL 18.57 TAP 177.04 RCA 149.73 APO 246.50 V2 22.249
RC 299.628 GL 34.68 GP -38.03 ZAL 60.70 ZAP 75.66 ETS 170.54 ZAE 99.19 ETE 189.47 ZAC 50.99 ETC 288.25 LVI 15.44

PLANETOCENTRIC CONIC

C3 24.880 VHL 4.988 DLA 40.61 RAL 5.35 RAD 6644.9 VEL 12.035 PTH 7.02 VHP 2.839 DPA -27.66 RAP 35.04 ECC 1.4095
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 16 4095.56 -40.37 181.96 262.78 62.30 7 17 31 3095.6 -47.45 149.62
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70
59.54 4 13 40 4409.13 -20.88 195.80 248.95 54.34 5 27 9 3409.1 -33.59 172.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9485 TRA-1.9580 TC3-4.0667 BAU 1.7252 SGT 5141.0 SGR 3615.3 SG3 1238.7 ST 70.6 SR 61.0 SS 75.3
RDE 1.0128 RRA -.7827 RC3-3.2193 FAU .34631 RRT .9581 RRF .9941 RTF .9335 CRT .9261 CRS -.9988 CST -.9075
FDE 5.1730 FRA-3.3318 FC-12.0503 BSP 10528 SGB 6285.0 R23 .1898 R13 .9758 LSA 117.5 MSA 23.5 SSA .8
BDE 1.3976 BRA 2.1094 BC3 5.1667 FSP 2053 SG1 6226.5 SG2 855.4 THA 34.72 EL1 91.6 EL2 17.7 ALF 40.52

LAUNCH DATE AUG 23 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

DISTANCE 553.494

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.939 GAL 3.57 AZL 84.83 HCA 159.37 SMA 198.20 ECC .24435 INC 5.1720 V1 29.453
RP 246.57 LAP 1.82 LOP 129.17 VP 20.172 GAP .74 AZP 94.84 TAL 18.33 TAP 177.70 RCA 149.77 APO 246.63 V2 22.232
RC 302.065 GL 35.98 GP -38.95 ZAL 61.39 ZAP 75.07 ETS 169.65 ZAE 98.07 ETE 188.77 ZAC 50.13 ETC 288.49 LVI 16.34

PLANETOCENTRIC CONIC

C3 25.456 VHL 5.045 DLA 41.84 RAL 4.74 RAD 6645.2 VEL 12.059 PTH 7.04 VHP 2.891 DPA -28.53 RAP 35.42 ECC 1.4189
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 53 35 4142.03 -38.84 185.36 262.45 60.01 7 2 38 3142.0 -47.13 154.07
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47
57.78 4 3 32 4436.04 -21.20 198.37 249.09 53.04 5 17 28 3436.0 -34.37 175.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0398 TRA-2.0116 TC3-4.0913 BAU 1.7693 SGT 5276.4 SGR 3686.2 SG3 1182.7 ST 75.1 SR 65.3 SS 75.6
RDE 1.0986 RRA -.8178 RC3-3.2078 FAU .33040 RRT .9593 RRF .9945 RTF .9539 CRT .9325 CRS -.9989 CST -.9156
FDE 5.1617 FRA-3.2453 FC-11.2368 BSP 10851 SGB 6436.5 R23 .1917 R13 .9758 LSA 122.7 MSA 23.6 SSA .8
BDE 1.5127 BRA 2.1715 BC3 5.1989 FSP 1977 SG1 6378.7 SG2 860.7 THA 34.55 EL1 97.9 EL2 18.1 ALF 40.73

LAUNCH DATE AUG 23 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

DISTANCE 557.263

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.944 GAL 3.52 AZL 84.39 HCA 160.25 SMA 198.29 ECC .24450 INC 5.4105 V1 29.453
RP 246.74 LAP 1.83 LOP 130.06 VP 20.161 GAP .54 AZP 95.09 TAL 18.09 TAP 178.34 RCA 149.81 APO 246.77 V2 22.215
RC 304.476 GL 37.35 GP -39.92 ZAL 82.10 ZAP 74.95 ETS 168.75 ZAE 96.99 ETE 188.06 ZAC 49.23 ETC 288.75 LVI 17.29

PLANETOCENTRIC CONIC

C3 26.119 VHL 5.111 DLA 43.12 RAL 4.04 RAD 6645.5 VEL 12.086 PTH 7.07 VHP 2.952 DPA -29.42 RAP 35.85 ECC 1.4299
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 35 4 4195.09 -36.97 189.06 261.73 57.80 6 44 59 3195.1 -46.55 159.06
55.98 3 53 17 4462.70 -21.48 200.95 249.22 51.66 5 7 40 3462.7 -35.16 178.28
55.98 3 53 17 4462.70 -21.48 200.95 249.22 51.66 5 7 40 3462.7 -35.16 178.28
55.98 3 53 17 4462.70 -21.48 200.95 249.22 51.66 5 7 40 3462.7 -35.16 178.28
55.98 3 53 17 4462.70 -21.48 200.95 249.22 51.66 5 7 40 3462.7 -35.16 178.28
55.98 3 53 17 4462.70 -21.48 200.95 249.22 51.66 5 7 40 3462.7 -35.16 178.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1349 TRA-2.0676 TC3-4.1011 BAU 1.8142 SGT 5410.7 SGR 3760.8 SG3 1125.0 ST 79.7 SR 69.8 SS 75.8
RDE 1.1904 RRA -.8573 RC3-3.1895 FAU .31401 RRT .9606 RRF .9948 RTF .9543 CRT .9380 CRS -.9990 CST -.9223
FDE 5.1327 FRA-3.1393 FC3-10.4081 BSP 11172 SGB 6589.3 R23 .1935 R13 .9758 LSA 128.1 MSA 23.7 SSA .7
BDE 1.6447 BRA 2.2383 BC3 5.1954 FSP 1895 SG1 6332.1 S62 866.3 THA 34.42 EL1 104.3 EL2 18.5 ALF 40.94

LAUNCH DATE AUG 23 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

DISTANCE 561.032

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.949 GAL 3.48 AZL 84.33 HCA 161.14 SMA 198.38 ECC .24466 INC 5.6692 V1 29.453
RP 246.90 LAP 1.83 LOP 130.95 VP 20.151 GAP .33 AZP 95.37 TAL 17.85 TAP 178.99 RCA 149.85 APO 246.92 V2 22.199
RC 306.863 GL 38.80 GP -40.94 ZAL 62.86 ZAP 74.10 ETS 167.85 ZAE 95.96 ETE 187.36 ZAC 48.26 ETC 289.04 LVI 18.28

PLANETOCENTRIC CONIC

C3 26.887 VHL 5.185 DLA 44.46 RAL 3.24 RAD 6645.8 VEL 12.118 PTH 7.09 VHP 3.021 DPA -30.35 RAP 36.35 ECC 1.4425
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 12 21 4257.77 -34.60 193.18 260.41 55.04 6 23 18 3257.8 -45.56 164.78
54.14 3 42 50 4489.17 -21.72 203.55 249.31 50.20 4 57 39 3489.2 -35.93 181.16
54.14 3 42 50 4489.17 -21.72 203.55 249.31 50.20 4 57 39 3489.2 -35.93 181.16
54.14 3 42 50 4489.17 -21.72 203.55 249.31 50.20 4 57 39 3489.2 -35.93 181.16
54.14 3 42 50 4489.17 -21.72 203.55 249.31 50.20 4 57 39 3489.2 -35.93 181.16
54.14 3 42 50 4489.17 -21.72 203.55 249.31 50.20 4 57 39 3489.2 -35.93 181.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2307 TRA-2.1280 TC3-4.0968 BAU 1.8610 SGT 5545.6 SGR 3840.5 SG3 1065.7 ST 84.3 SR 74.3 SS 75.6
RDE 1.2863 RRA -.9025 RC3-3.1655 FAU .29735 RRT .9618 RRF .9950 RTF .9546 CRT .9424 CRS -.9991 CST -.9278
FDE 5.0768 FRA-3.0348 FC3-9.5743 BSP 11463 SGB 6745.6 R23 .1952 R13 .9757 LSA 133.3 MSA 23.8 SSA .7
BDE 1.7802 BRA 2.3115 BC3 5.1773 FSP 1802 SG1 6689.0 S62 872.1 THA 34.33 EL1 110.7 EL2 18.9 ALF 41.16

LAUNCH DATE AUG 23 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 564.799

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.953 GAL 3.43 AZL 84.05 HCA 162.02 SMA 198.47 ECC .24482 INC 5.9321 V1 29.453
RP 247.06 LAP 1.83 LOP 131.84 VP 20.141 GAP .12 AZP 95.66 TAL 17.60 TAP 179.62 RCA 149.88 APO 247.07 V2 22.183
RC 309.224 GL 40.33 GP -42.01 ZAL 63.64 ZAP 73.71 ETS 166.94 ZAE 94.98 ETE 186.66 ZAC 47.24 ETC 289.36 LVI 19.34

PLANETOCENTRIC CONIC

C3 27.780 VHL 5.271 DLA 45.86 RAL 2.32 RAD 6646.1 VEL 12.194 PTH 7.12 VHP 3.096 DPA -31.30 RAP 36.92 ECC 1.4572
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 42 22 4337.21 -31.39 198.03 258.08 52.21 5 54 39 3337.2 -43.88 171.68
52.26 3 32 5 4515.67 -21.92 206.18 249.35 48.65 4 47 21 3515.7 -36.68 184.13
52.26 3 32 5 4515.67 -21.92 206.18 249.35 48.65 4 47 21 3515.7 -36.68 184.13
52.26 3 32 5 4515.67 -21.92 206.18 249.35 48.65 4 47 21 3515.7 -36.68 184.13
52.26 3 32 5 4515.67 -21.92 206.18 249.35 48.65 4 47 21 3515.7 -36.68 184.13
52.26 3 32 5 4515.67 -21.92 206.18 249.35 48.65 4 47 21 3515.7 -36.68 184.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3296 TRA-2.1903 TC3-4.0723 BAU 1.9081 SGT 5675.0 SGR 3923.3 SG3 1004.2 ST 88.8 SR 78.9 SS 75.1
RDE 1.3888 RRA -.9325 RC3-3.1323 FAU .28013 RRT .9629 RRF .9952 RTF .9548 CRT .9463 CRS -.9991 CST -.9323
FDE 4.9988 FRA-2.9262 FC3-8.7299 BSP 11770 SGB 6899.2 R23 .1969 R13 .9757 LSA 138.5 MSA 24.0 SSA .6
BDE 1.9227 BRA 2.3884 BC3 5.1376 FSP 1706 SG1 6843.1 S62 877.6 THA 34.29 EL1 117.2 EL2 19.3 ALF 41.40

LAUNCH DATE AUG 23 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

DISTANCE 568.564

EARTH TO MARS

RL 151.28 LAL -.00 LOL 329.72 VL 32.958 GAL 3.39 AZL 83.74 HCA 162.81 SMA 198.57 ECC .24499 INC 6.2827 V1 29.453
RP 247.22 LAP 1.84 LOP 132.73 VP 20.132 GAP -.08 AZP 95.99 TAL 17.35 TAP 180.26 RCA 149.92 APO 247.22 V2 22.188
RC 311.559 GL 41.95 GP -43.14 ZAL 64.47 ZAP 73.41 ETS 166.02 ZAE 94.05 ETE 185.96 ZAC 46.17 ETC 289.72 LVI 20.45

PLANETOCENTRIC CONIC

C3 28.824 VHL 5.389 DLA 47.32 RAL 1.26 RAD 6646.5 VEL 12.197 PTH 7.15 VHP 3.181 DPA -32.28 RAP 37.56 ECC 1.4744
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 3 50 25 4468.91 -25.66 205.34 252.91 48.45 5 4 53 3468.9 -40.17 182.14
50.34 3 20 57 4542.33 -22.06 208.84 249.33 47.01 4 36 39 3542.3 -37.40 187.19
50.34 3 20 57 4542.33 -22.06 208.84 249.33 47.01 4 36 39 3542.3 -37.40 187.19
50.34 3 20 57 4542.33 -22.06 208.84 249.33 47.01 4 36 39 3542.3 -37.40 187.19
50.34 3 20 57 4542.33 -22.06 208.84 249.33 47.01 4 36 39 3542.3 -37.40 187.19
50.34 3 20 57 4542.33 -22.06 208.84 249.33 47.01 4 36 39 3542.3 -37.40 187.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4265 TRA-2.2591 TC3-4.0309 BAU 1.9575 SGT 5805.0 SGR 4012.8 SG3 941.2 ST 93.2 SR 83.5 SS 74.1
RDE 1.4957 RRA -1.0114 RC3-3.0916 FAU .26260 RRT .9642 RRF .9954 RTF .9550 CRT .9492 CRS -.9991 CST -.9354
FDE 4.8895 FRA-2.8213 FC3-7.8874 BSP 12036 SGB 7057.0 R23 .1984 R13 .9756 LSA 143.4 MSA 24.2 SSA .6
BDE 2.0669 BRA 2.4752 BC3 5.0800 FSP 1598 SG1 7001.6 S62 882.5 THA 34.30 EL1 123.5 EL2 19.8 ALF 41.68

LAUNCH DATE AUG 23 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.963 GAL 3.34 AZL 83.39 HCA 163.79 SMA 198.67 ECC .24517 INC 6.6036 V1 29.453  
 RP 247.37 LAP 1.84 LOP 133.61 VP 20.123 GAP -.29 AZP 96.35 TAL 17.10 TAP 180.89 RCA 149.96 APO 247.38 V2 22.154  
 RC 313.869 GL 43.66 GP -44.32 ZAL 65.34 ZAP 73.18 ETS 165.12 ZAE 93.18 ETE 185.20 ZAC 49.02 ETC 290.12 LVI 21.63

DISTANCE 572.327  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.050 VHL 5.482 DLA 48.84 RAL .03 RAD 6647.0 VEL 12.247 PTH 7.19 VHP 3.276 DPA -33.30 RAP 38.29 ECC 1.4946  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37  
 48.37 3 9 19 4569.31 -22.12 211.54 249.23 45.27 4 25 28 3569.3 -38.08 190.37

DIFFERENTIAL CORRECTIONS  
 TDE 1.5247 TRA-2.3301 TC3-3.9659 BAU 2.0071 SGT 5927.6 SGR 4105.1 SG3 875.9 ST 97.3 SR 88.2 S8 72.8  
 RDE 1.6118 RRA-1.0756 RC3-3.0383 FAU .24439 RRT .9653 RRF .9955 RTF .9549 CRT .9515 CRS -.9991 CST -.9377  
 FDE 4.7589 FRA-2.7056 FC3-7.0407 BSP 12358 SGB 7210.2 R23 .2004 R13 .9754 LSA 148.2 MSA 24.4 S8A .5  
 BDE 2.2187 BRA 2.5664 BC3 4.9959 F8P 1496 SG1 7155.3 SG2 888.3 THA 34.37 EL1 129.7 EL2 20.3 ALF 42.04

LAUNCH DATE AUG 23 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.968 GAL 3.30 AZL 83.01 HCA 164.67 SMA 198.77 ECC .24536 INC 6.9866 V1 29.453  
 RP 247.51 LAP 1.84 LOP 134.50 VP 20.117 GAP -.49 AZP 96.74 TAL 16.85 TAP 181.51 RCA 150.00 APO 247.54 V2 22.140  
 RC 316.151 GL 45.50 GP -45.56 ZAL 66.25 ZAP 73.04 ETS 164.22 ZAE 92.37 ETE 184.60 ZAC 43.82 ETC 290.57 LVI 22.87

DISTANCE 576.089  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 31.503 VHL 5.613 DLA 50.41 RAL 358.59 RAD 6647.6 VEL 12.306 PTH 7.24 VHP 3.383 DPA -34.35 RAP 39.09 ECC 1.5185  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67  
 46.35 2 57 1 4596.82 -22.09 214.28 249.00 43.45 4 13 38 3596.8 -38.69 193.67

DIFFERENTIAL CORRECTIONS  
 TDE 1.6146 TRA-2.4084 TC3-3.8808 BAU 2.0597 SGT 6048.2 SGR 4205.2 SG3 809.3 ST 100.9 SR 92.7 S8 70.9  
 RDE 1.7313 RRA-1.1509 RC3-2.9760 FAU .22592 RRT .9664 RRF .9955 RTF .9548 CRT .9528 CRS -.9990 CST -.9384  
 FDE 4.5899 FRA-2.5896 FC3-6.2086 BSP 12624 SGB 7366.4 R23 .2025 R13 .9751 LSA 152.3 MSA 24.8 S8A .5  
 BDE 2.3674 BRA 2.6693 BC3 4.8905 F8P 1380 SG1 7312.0 SG2 893.6 THA 34.49 EL1 135.4 EL2 21.0 ALF 42.46

LAUNCH DATE AUG 23 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.974 GAL 3.25 AZL 82.59 HCA 165.55 SMA 198.87 ECC .24556 INC 7.4121 V1 29.453  
 RP 247.65 LAP 1.85 LOP 135.38 VP 20.111 GAP -.70 AZP 97.18 TAL 16.59 TAP 182.14 RCA 150.04 APO 247.70 V2 22.126  
 RC 318.406 GL 47.43 GP -46.87 ZAL 67.20 ZAP 72.99 ETS 163.34 ZAE 91.63 ETE 183.94 ZAC 42.54 ETC 291.08 LVI 24.18

DISTANCE 579.849  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 33.237 VHL 5.785 DLA 52.05 RAL 356.90 RAD 6648.2 VEL 12.375 PTH 7.29 VHP 3.505 DPA -35.43 RAP 40.00 ECC 1.5470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12  
 44.29 2 43 53 4625.09 -21.94 217.06 248.61 41.53 4 0 58 3625.1 -39.20 197.12

DIFFERENTIAL CORRECTIONS  
 TDE 1.6947 TRA-2.4935 TC3-3.7729 BAU 2.1149 SGT 6164.0 SGR 4313.0 SG3 741.2 ST 103.9 SR 97.1 S8 68.5  
 RDE 1.8566 RRA-1.2380 RC3-2.9018 FAU .20704 RRT .9678 RRF .9955 RTF .9544 CRT .9530 CRS -.9989 CST -.9377  
 FDE 4.3875 FRA-2.4684 FC3-5.3928 BSP 12903 SGB 7523.1 R23 .2050 R13 .9748 LSA 155.8 MSA 25.3 S8A .4  
 BDE 2.5138 BRA 2.7839 BC3 4.7594 F8P 1263 SG1 7469.2 SG2 899.1 THA 34.67 EL1 140.5 EL2 21.7 ALF 42.99

LAUNCH DATE AUG 23 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC  
 RL 151.28 LAL -.00 LOL 329.72 VL 32.979 GAL 3.20 AZL 82.11 HCA 166.42 SMA 198.97 ECC .24577 INC 7.8909 V1 29.453  
 RP 247.78 LAP 1.85 LOP 136.27 VP 20.106 GAP -.90 AZP 97.87 TAL 16.33 TAP 182.76 RCA 150.07 APO 247.87 V2 22.113  
 RC 320.632 GL 49.52 GP -48.24 ZAL 68.20 ZAP 73.04 ETS 162.49 ZAE 90.87 ETE 183.30 ZAC 41.19 ETC 291.65 LVI 25.96

DISTANCE 583.807  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 35.325 VHL 5.944 DLA 53.73 RAL 354.91 RAD 6649.0 VEL 12.459 PTH 7.36 VHP 3.645 DPA -36.54 RAP 41.00 ECC 1.5814  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70  
 42.20 2 29 43 4654.33 -21.65 219.87 248.00 39.53 3 47 18 3654.3 -39.60 200.70

DIFFERENTIAL CORRECTIONS  
 TDE 1.7579 TRA-2.5851 TC3-3.6381 BAU 2.1710 SGT 6270.7 SGR 4426.8 SG3 671.3 ST 105.9 SR 101.3 S8 65.5  
 RDE 1.9860 RRA-1.3375 RC3-2.8129 FAU .18762 RRT .9688 RRF .9953 RTF .9535 CRT .9519 CRS -.9987 CST -.9349  
 FDE 4.1484 FRA-2.3365 FC3-4.5980 BSP 13194 SGB 7675.9 R23 .2086 R13 .9741 LSA 158.4 MSA 26.0 S8A .4  
 BDE 2.6523 BRA 2.9106 BC3 4.5987 F8P 1143 SG1 7622.2 SG2 905.7 THA 34.93 EL1 144.8 EL2 22.7 ALF 43.66



LAUNCH DATE AUG 23 1973

FLIGHT TIME 274.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

RL 151.20 LAL -.00 LOL 329.72 VL 32.904 GAL 3.15 AZL 81.87 MCA 167.30 SMA 199.00 ECC .24598 INC 8.4536 VI 29.453  
 RP 247.91 LAP 1.85 LOP 137.13 VP 20.101 GAP -1.10 AZP 98.23 TAL 16.08 TAP 183.37 RCA 150.11 APO 246.03 VE 22.101  
 RC 322.829 GL 51.72 GP -49.68 ZAL 69.25 ZAP 73.18 ET8 161.69 ZAE 90.38 ETE 182.70 ZAC 39.77 ETC 292.30 LVI 27.01

DISTANCE 587,362

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 37.867 VHL 6.154 DLA 55.46 RAL 352.56 RAD 6649.9 VEL 12.560 PTH 7.43 VHP 3.806 DPA -37.69 RAP 42.13 ECC 1.6232  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41  
 40.08 2 14 17 4684.74 -21.20 222.71 247.09 37.46 3 32 22 3684.7 -39.83 204.41

DIFFERENTIAL CORRECTIONS

TDE 1.7896 TRA-2.6874 TC3-3.4798 BAU 2.2334  
 RDE 2.1124 RRA-1.4563 RC3-2.7117 FAU .16795  
 FDE 3.8629 FRA-2.1992 FC3-3.8398 BSP 13460  
 BDE 2.7685 BRA 3.0566 BC3 4.4116 FSP 1018

MID-COURSE EXECUTION ACCURACY

SGT 6371.3 SGR 4552.5 SG3 600.5  
 RRT .9696 RRF .9949 RTF .9522  
 SGB 7830.6 R23 .2130 R13 .9732  
 SG1 7777.3 SG2 912.5 TMA 35.27

ORBIT DETERMINATION ACCURACY

ST 106.6 SR 104.8 SS 61.8  
 CRT .9488 CRS -.9983 CST -.9290  
 LSA 159.5 NSA 27.0 SSA .4  
 EL1 147.6 EL2 23.9 ALF 44.48

LAUNCH DATE AUG 24 1973 FLIGHT TIME 98.00 ARRIVAL DATE NOV 30 1973

Table with columns for Heliocentric Conic, Planetocentric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, etc.

LAUNCH DATE AUG 24 1973 FLIGHT TIME 100.00 ARRIVAL DATE DEC 2 1973

Table with columns for Heliocentric Conic, Planetocentric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, etc.

LAUNCH DATE AUG 24 1973 FLIGHT TIME 102.00 ARRIVAL DATE DEC 4 1973

Table with columns for Heliocentric Conic, Planetocentric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, etc.

LAUNCH DATE AUG 24 1973 FLIGHT TIME 104.00 ARRIVAL DATE DEC 6 1973

Table with columns for Heliocentric Conic, Planetocentric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, etc.

LAUNCH DATE AUG 24 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 8 1973

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 34.576 GAL 4.50 AZL 89.77 HCA 85.76 SMA 237.29 ECC .36892 INC .2289 V1 29.459
RP 222.87 LAP .23 LOP 56.45 VP 25.155 GAP 21.44 AZP 89.98 TAL 16.75 TAP 102.51 RCA 149.51 APO 325.07 V2 24.694
RC 96.756 GL 1.34 GP -6.01 ZAL 58.41 ZAP 166.60 ETS 213.33 ZAE 158.28 ETE 342.97 ZAC 76.63 ETC 282.35 LVI -9.90

PLANETOCENTRIC CONIC

C3 34.691 VHL 5.890 DLA 12.40 RAL 26.55 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 7.098 DPA 11.05 RAP 46.23 ECC 1.5709
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 9 26 3518.49 -46.51 129.82 269.42 101.40 11 8 4 2518.5 -36.88 99.88
60.00 10 35 18 3449.61 -39.81 125.09 270.90 96.85 11 32 48 2449.6 -32.79 96.40
70.00 11 12 3 3341.52 -34.00 116.99 271.55 93.41 12 7 44 2341.5 -29.08 89.38
80.00 12 5 55 3172.71 -29.84 104.38 271.74 91.13 12 58 48 2172.7 -26.34 77.90
90.00 13 20 58 2930.52 -28.28 86.60 271.77 90.31 14 9 48 1930.5 -25.30 59.99
100.00 14 48 47 2647.19 -29.84 65.75 271.74 91.13 15 32 54 1647.2 -26.34 38.87
110.00 16 11 29 2388.33 -34.00 45.91 271.55 93.41 16 51 17 1388.3 -29.08 18.30

DIFFERENTIAL CORRECTIONS

TDE -.3016 TRA -.7382 TC3 .4840 BAV .2331
RDE -.6124 RRA .2271 RC3 -.1354 FAU .07374
FDE .1455 FRA -.0741 FC3-1.8402 B8P 1313
BDE .6826 BRA .7724 BC3 .5025 F5P 243

MID-COURSE EXECUTION ACCURACY

SGT 975.6 SGR 658.9 SG3 187.8
RRT -.1287 RRF .1714 RTF -.5768
SGB 1176.1 R23 -.0390 R13 .5838
SG1 982.1 SG2 647.1 THA 171.21

ORBIT DETERMINATION ACCURACY

ST 18.4 SR 30.0 SS 4.8
CRT .7250 CR8 .9065 CST .6531
LSA 33.5 MSA 11.4 SSA 2.0
EL1 33.3 EL2 11.4 ALF 62.55

LAUNCH DATE AUG 24 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 10 1973

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 34.472 GAL 4.53 AZL 89.74 HCA 86.85 SMA 234.21 ECC .36184 INC .2637 V1 29.459
RP 223.06 LAP .26 LOP 57.34 VP 24.966 GAP 21.05 AZP 89.99 TAL 17.14 TAP 103.99 RCA 149.46 APO 318.95 V2 24.652
RC 98.976 GL 1.56 GP -6.16 ZAL 57.78 ZAP 167.74 ETS 211.64 ZAE 158.35 ETE 342.33 ZAC 76.45 ETC 282.33 LVI -9.70

PLANETOCENTRIC CONIC

C3 33.679 VHL 5.803 DLA 12.39 RAL 25.87 RAD 6648.4 VEL 12.393 PTH 7.31 VHP 6.882 DPA 10.96 RAP 46.45 ECC 1.5543
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 6 47 3510.66 -46.41 129.09 268.00 101.95 11 5 17 2510.7 -36.59 99.35
60.00 10 32 41 3441.73 -39.75 124.43 269.54 97.29 11 30 2 2441.7 -32.57 95.86
70.00 11 9 26 3333.56 -33.97 116.37 270.24 93.77 12 5 0 2333.6 -28.90 88.83
80.00 12 3 20 3164.68 -29.83 103.79 270.47 91.45 12 56 5 2164.7 -26.20 76.95
90.00 13 18 24 2922.46 -28.27 86.01 270.50 90.60 14 7 6 1922.5 -25.18 59.43
100.00 14 46 12 2639.16 -29.83 65.15 270.47 91.45 15 30 11 1639.2 -26.20 38.32
110.00 16 8 53 2380.38 -33.97 45.29 270.24 93.77 16 48 33 1380.4 -28.90 17.74

DIFFERENTIAL CORRECTIONS

TDE -.3022 TRA -.7275 TC3 .5127 BAV .2402
RDE -.6062 RRA .2248 RC3 -.1472 FAU .07741
FDE .1521 FRA -.1018 FC3-1.9900 B8P 1352
BDE .6773 BRA .7615 BC3 .5335 F5P 262

MID-COURSE EXECUTION ACCURACY

SGT 992.0 SGR 662.5 SG3 200.2
RRT -.1373 RRF .1833 RTF -.5847
SGB 1192.9 R23 -.0424 R13 .5923
SG1 999.3 SG2 651.5 THA 170.84

ORBIT DETERMINATION ACCURACY

ST 18.6 SR 30.1 SS 5.0
CRT .7304 CR8 .9041 CST .6277
LSA 33.8 MSA 11.5 SSA 2.1
EL1 33.5 EL2 11.4 ALF 62.26

LAUNCH DATE AUG 24 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 34.371 GAL 4.56 AZL 89.70 HCA 87.94 SMA 231.38 ECC .35427 INC .2980 V1 29.459
RP 223.44 LAP .30 LOP 58.63 VP 24.786 GAP 20.66 AZP 89.99 TAL 17.52 TAP 105.46 RCA 149.41 APO 313.35 V2 24.611
RC 101.244 GL 1.79 GP -6.32 ZAL 57.17 ZAP 166.88 ETS 210.18 ZAE 158.47 ETE 341.62 ZAC 76.27 ETC 282.32 LVI -9.90

PLANETOCENTRIC CONIC

C3 32.753 VHL 5.723 DLA 12.37 RAL 25.20 RAD 6648.1 VEL 12.356 PTH 7.28 VHP 6.673 DPA 10.86 RAP 46.66 ECC 1.5390
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 4 9 3503.37 -46.30 128.42 266.64 102.46 11 2 32 2503.4 -36.32 98.87
60.00 10 30 4 3434.40 -39.66 123.82 268.25 97.70 11 27 18 2434.4 -32.35 95.36
70.00 11 6 50 3326.18 -33.94 115.80 268.99 94.11 12 2 17 2326.2 -28.74 88.32
80.00 12 0 46 3157.23 -29.81 103.23 269.24 91.74 12 53 23 2157.2 -26.07 76.43
90.00 13 15 49 2915.00 -28.27 85.47 269.28 90.88 14 4 24 1915.0 -25.06 58.92
100.00 14 43 37 2631.72 -29.81 64.60 269.24 91.74 15 27 29 1631.7 -26.07 37.80
110.00 16 6 17 2373.00 -33.94 44.71 268.99 94.11 16 45 50 1373.0 -28.74 17.23

DIFFERENTIAL CORRECTIONS

TDE -.3025 TRA -.7169 TC3 .5416 BAV .2472
RDE -.6002 RRA .2224 RC3 -.1598 FAU .08131
FDE .1591 FRA -.1315 FC3-2.1493 B8P 1385
BDE .6721 BRA .7506 BC3 .5646 F5P 283

MID-COURSE EXECUTION ACCURACY

SGT 1007.9 SGR 668.2 SG3 213.3
RRT -.1468 RRF .1961 RTF -.5224
SGB 1209.3 R23 -.0436 R13 .6008
SG1 1016.2 SG2 655.6 THA 170.42

ORBIT DETERMINATION ACCURACY

ST 18.8 SR 30.2 SS 5.2
CRT .7354 CR8 .9002 CST .6024
LSA 34.0 MSA 11.5 SSA 2.2
EL1 33.7 EL2 11.4 ALF 62.00

LAUNCH DATE AUG 24 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 34.276 GAL 4.59 AZL 89.67 HCA 89.02 SMA 228.78 ECC .34716 INC .3325 V1 29.459
RP 223.83 LAP .33 LOP 59.71 VP 24.612 GAP 20.28 AZP 89.99 TAL 17.90 TAP 106.93 RCA 149.36 APO 308.21 V2 24.569
RC 103.560 GL 2.01 GP -6.48 ZAL 56.57 ZAP 165.96 ETS 208.89 ZAE 158.63 ETE 340.89 ZAC 76.08 ETC 282.31 LVI -9.30

PLANETOCENTRIC CONIC

C3 31.904 VHL 5.648 DLA 12.37 RAL 24.53 RAD 6647.7 VEL 12.322 PTH 7.25 VHP 6.472 DPA 10.75 RAP 46.85 ECC 1.5251
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 1 32 3496.59 -46.20 127.80 265.33 102.93 10 59 49 2496.6 -36.06 98.42
60.00 10 27 28 3427.60 -39.62 123.25 267.00 98.08 11 24 35 2427.6 -32.15 94.89
70.00 11 4 15 3319.34 -33.90 115.27 267.78 94.42 11 59 34 2319.3 -28.58 87.84
80.00 11 58 11 3150.38 -29.80 102.72 268.05 92.00 12 50 41 2150.4 -25.95 75.96
90.00 13 13 15 2908.11 -28.26 84.97 268.10 91.13 14 1 43 1908.1 -24.95 58.44
100.00 14 41 3 2624.85 -29.80 64.09 268.05 92.00 15 24 47 1624.9 -25.95 37.33
110.00 16 3 41 2366.16 -33.90 44.18 267.78 94.42 16 43 7 1366.2 -28.58 16.76

DIFFERENTIAL CORRECTIONS

TDE -.2954 TRA -.6985 TC3 .5796 BAV .2580
RDE -.5942 RRA .2200 RC3 -.1730 FAU .08534
FDE .1685 FRA -.1619 FC3-2.3159 B8P 1323
BDE .6636 BRA .7323 BC3 .6048 F5P 307

MID-COURSE EXECUTION ACCURACY

SGT 1022.1 SGR 673.6 SG3 227.0
RRT -.1641 RRF .2089 RTF -.6116
SGB 1224.1 R23 -.0378 R13 .6202
SG1 1032.2 SG2 657.9 THA 169.54

ORBIT DETERMINATION ACCURACY

ST 18.5 SR 30.3 SS 5.4
CRT .7360 CR8 .8975 CST .5786
LSA 34.0 MSA 11.4 SSA 2.3
EL1 33.7 EL2 11.3 ALF 62.42

LAUNCH DATE AUG 24 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.89 VL 34.187 GAL 4.61 AZL 89.63 HCA 90.10 SMA 226.40 ECC .34050 INC .3668 V1 29.459  
 RP 224.22 LAP .37 LOP 60.79 VP 24.446 GAP 19.90 AZP 90.00 TAL 18.28 TAP 108.38 RCA 149.31 APO 303.48 V2 24.527  
 RC 108.921 GL 2.24 GP -6.65 ZAL 55.98 ZAP 165.04 ETS 207.73 ZAE 158.84 ETE 340.00 ZAC 75.89 ETC 282.30 LVI -9.10

DISTANCE 288.245 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 31.125 VHL 5.579 DLA 12.37 RAL 23.88 RAD 6647.4 VEL 12.290 PTH 7.23 VHP 6.278 DPA 10.63 RAP 47.03 ECC 1.5122  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 58 57 3490.36 -46.10 127.23 264.09 103.36 10 57 8 2490.4 -35.83 98.01  
 60.00 10 24 53 3421.36 -39.56 122.73 265.81 98.43 11 21 54 2421.4 -31.97 94.46  
 70.00 11 1 40 3313.10 -33.87 114.78 266.62 94.71 11 56 53 2313.1 -28.44 87.41  
 80.00 11 55 36 3144.13 -29.78 102.26 266.91 92.25 12 48 0 2144.1 -25.83 75.53  
 90.00 13 10 41 2901.85 -28.25 84.51 266.97 91.36 13 59 2 1901.9 -24.84 58.01  
 100.00 14 38 28 2618.60 -29.78 63.63 266.91 92.25 15 22 7 1618.6 -25.83 36.90  
 110.00 16 1 7 2359.91 -33.87 43.70 266.62 94.71 16 40 27 1359.9 -28.44 16.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2989 TRA -.6909 TC3 .6038 BAU .2630 SGT 1037.2 SGR 679.2 SG3 241.8 ST 18.8 SR 30.4 SS 5.7  
 RDE -.5887 RRA .2172 RC3 -.1872 FAU .08974 RRT -.1717 RRF .2235 RTF -.6135 CRT .7434 CRS .8902 CST .5540  
 FDE .1760 FRA -.1977 FC3-2.4960 BSP 1391 SGB 1239.8 R23 -.0461 R13 .6234 LSA 34.3 MSA 11.4 SSA 2.4  
 BDE .6602 BRA .7242 BC3 .6321 FSP 330 SG1 1048.2 SG2 662.1 THA 169.25 EL1 34.0 EL2 11.3 ALF 61.89

LAUNCH DATE AUG 24 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.89 VL 34.103 GAL 4.64 AZL 89.60 HCA 91.18 SMA 224.20 ECC .33426 INC .4010 V1 29.459  
 RP 224.61 LAP .40 LOP 61.87 VP 24.285 GAP 19.53 AZP 90.01 TAL 18.65 TAP 109.83 RCA 149.26 APO 299.14 V2 24.485  
 RC 108.326 GL 2.47 GP -6.83 ZAL 55.41 ZAP 164.10 ETS 206.73 ZAE 159.09 ETE 339.07 ZAC 75.69 ETC 282.29 LVI -8.89

DISTANCE 291.563 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.410 VHL 5.515 DLA 12.37 RAL 23.25 RAD 6647.2 VEL 12.261 PTH 7.21 VHP 6.092 DPA 10.49 RAP 47.20 ECC 1.5005  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 24 3484.62 -46.01 126.71 262.90 103.75 10 54 29 2484.6 -35.61 97.63  
 60.00 10 22 20 3415.63 -39.50 122.26 264.67 98.75 11 19 15 2415.6 -31.80 94.08  
 70.00 10 59 6 3307.39 -33.83 114.34 265.51 94.97 11 54 14 2307.4 -28.31 87.02  
 80.00 11 53 2 3138.45 -29.76 101.84 265.83 92.47 12 45 21 2138.4 -25.73 75.14  
 90.00 13 8 6 2896.18 -28.24 84.09 265.89 91.57 13 56 22 1896.2 -24.75 57.62  
 100.00 14 35 54 2612.92 -29.76 63.21 265.83 92.47 15 19 27 1612.9 -25.73 36.51  
 110.00 15 58 33 2354.21 -33.83 43.26 265.51 94.97 16 37 47 1354.2 -28.31 15.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3014 TRA -.6825 TC3 .6288 BAU .2684 SGT 1051.5 SGR 684.8 SG3 257.4 ST 19.1 SR 30.5 SS 5.9  
 RDE -.5833 RRA .2143 RC3 -.2021 FAU .09435 RRT -.1809 RRF .2389 RTF -.6165 CRT .7500 CRS .8819 CST .5298  
 FDE .1840 FRA -.2360 FC3-2.6860 BSP 1443 SGB 1254.9 R23 -.0532 R13 .6277 LSA 34.5 MSA 11.5 SSA 2.5  
 BDE .6566 BRA .7154 BC3 .6603 FSP 354 SG1 1063.7 SG2 665.8 THA 168.88 EL1 34.2 EL2 11.3 ALF 61.45

LAUNCH DATE AUG 24 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.89 VL 34.023 GAL 4.67 AZL 89.56 HCA 92.25 SMA 222.17 ECC .32840 INC .4349 V1 29.459  
 RP 225.00 LAP .43 LOP 62.94 VP 24.131 GAP 19.16 AZP 90.02 TAL 19.01 TAP 111.26 RCA 149.21 APO 295.13 V2 24.443  
 RC 110.773 GL 2.71 GP -7.01 ZAL 54.86 ZAP 163.15 ETS 205.93 ZAE 159.39 ETE 338.05 ZAC 75.50 ETC 282.29 LVI -8.89

DISTANCE 294.924 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.753 VHL 5.455 DLA 12.38 RAL 22.63 RAD 6646.9 VEL 12.235 PTH 7.18 VHP 5.913 DPA 10.35 RAP 47.35 ECC 1.4897  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 53 53 3479.37 -45.93 126.23 261.77 104.11 10 51 53 2479.4 -35.41 97.29  
 60.00 10 19 48 3410.42 -39.44 121.83 263.58 99.03 11 16 38 2410.4 -31.64 93.72  
 70.00 10 56 34 3302.23 -33.80 113.94 264.45 95.20 11 51 36 2302.2 -28.19 86.67  
 80.00 11 50 28 3133.33 -29.75 101.46 264.78 92.67 12 42 42 2133.3 -25.64 74.79  
 90.00 13 5 32 2891.09 -28.23 83.72 264.85 91.75 13 53 43 1891.1 -24.67 57.28  
 100.00 14 33 20 2607.80 -29.75 62.83 264.78 92.67 15 16 48 1607.8 -25.64 36.16  
 110.00 15 56 0 2349.05 -33.80 42.86 264.45 95.20 16 35 9 1349.1 -28.19 15.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3035 TRA -.6737 TC3 .6527 BAU .2737 SGT 1064.7 SGR 690.4 SG3 273.8 ST 19.3 SR 30.6 SS 6.2  
 RDE -.5780 RRA .2111 RC3 -.2179 FAU .09919 RRT -.1907 RRF .2548 RTF -.6197 CRT .7564 CRS .8734 CST .5078  
 FDE .1931 FRA -.2768 FC3-2.8861 BSP 1491 SGB 1268.9 R23 -.0601 R13 .6323 LSA 34.7 MSA 11.5 SSA 2.5  
 BDE .6529 BRA .7080 BC3 .6881 FSP 380 SG1 1078.0 SG2 669.4 THA 168.44 EL1 34.4 EL2 11.2 ALF 61.05

LAUNCH DATE AUG 24 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.89 VL 33.949 GAL 4.69 AZL 89.53 HCA 93.32 SMA 220.29 ECC .32291 INC .4689 V1 29.459  
 RP 225.39 LAP .47 LOP 64.01 VP 23.983 GAP 18.79 AZP 90.03 TAL 19.37 TAP 112.69 RCA 149.18 APO 291.42 V2 24.401  
 RC 113.259 GL 2.94 GP -7.20 ZAL 54.33 ZAP 162.17 ETS 205.01 ZAE 159.72 ETE 336.93 ZAC 75.29 ETC 282.29 LVI -8.48

DISTANCE 298.326 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.149 VHL 5.399 DLA 12.40 RAL 22.02 RAD 6646.7 VEL 12.210 PTH 7.16 VHP 5.740 DPA 10.19 RAP 47.49 ECC 1.4787  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 51 24 3474.61 -45.85 125.80 260.70 104.43 10 49 19 2474.6 -35.23 96.98  
 60.00 10 17 17 3405.72 -39.39 121.44 262.54 99.30 11 14 3 2405.7 -31.50 93.41  
 70.00 10 54 2 3297.60 -33.77 113.58 263.44 95.41 11 48 59 2297.6 -28.08 86.35  
 80.00 11 47 55 3128.78 -29.73 101.12 263.78 92.84 12 40 4 2128.8 -25.55 74.48  
 90.00 13 2 58 2886.57 -28.22 83.39 263.86 91.92 13 51 4 1886.6 -24.59 56.97  
 100.00 14 30 47 2603.25 -29.73 62.49 263.78 92.84 15 14 10 1603.2 -25.55 35.85  
 110.00 15 53 28 2344.42 -33.77 42.50 263.44 95.41 16 32 32 1344.4 -28.08 15.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3053 TRA -.6648 TC3 .6762 BAU .2789 SGT 1077.0 SGR 696.2 SG3 291.1 ST 19.5 SR 30.6 SS 6.4  
 RDE -.5729 RRA .2078 RC3 -.2345 FAU .10427 RRT -.2014 RRF .2715 RTF -.6230 CRT .7626 CRS .8649 CST .4878  
 FDE .2032 FRA -.3200 FC3-3.0960 BSP 1530 SGB 1282.4 R23 -.0666 R13 .6371 LSA 34.9 MSA 11.5 SSA 2.6  
 BDE .6491 BRA .6965 BC3 .7157 FSP 408 SG1 1091.9 SG2 672.6 THA 167.95 EL1 34.5 EL2 11.2 ALF 60.67

LAUNCH DATE AUG 24 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.878 GAL 4.72 AZL 89.50 HCA 94.38 SMA 218.55 ECC .31775 INC .5028 V1 29.459  
 RP 225.78 LAP .50 LOP 65.07 VP 23.840 GAP 18.43 AZP 90.04 TAL 19.72 TAP 114.10 RCA 149.11 APO 288.00 V2 24.359  
 RC 115.782 GL 3.18 GP -7.40 ZAL 53.81 ZAP 161.18 ETS 204.27 ZAE 160.09 ETE 335.69 ZAC 75.09 ETC 282.29 LVI -8.27

PLANETOCENTRIC CONIC  
 C3 28.593 VHL 5.347 DLA 12.43 RAL 21.44 RAD 6646.5 VEL 12.188 PTH 7.15 VHP 5.573 DPA 10.02 RAP 47.61 ECC 1.4706  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 48 57 3470.30 -45.77 125.41 259.68 104.73 10 46 48 2470.3 -35.06 96.70  
 60.00 10 14 48 3401.49 -39.35 121.09 261.55 99.53 11 11 30 2401.5 -31.37 93.12  
 70.00 10 51 31 3293.48 -33.75 113.26 262.48 95.60 11 46 24 2293.5 -27.98 86.07  
 80.00 11 45 22 3124.77 -29.72 100.82 262.83 93.00 12 37 27 2124.8 -25.47 74.21  
 90.00 13 0 24 2882.62 -28.21 83.10 262.91 92.06 13 48 26 1882.6 -24.52 56.70  
 100.00 14 28 14 2599.24 -29.72 62.19 262.83 93.00 15 11 33 1599.2 -25.47 35.57  
 110.00 15 50 57 2340.30 -33.75 42.18 262.48 95.60 18 29 57 1340.3 -27.98 14.99

DIFFERENTIAL CORRECTIONS  
 TDE -.3068 TRA -.6557 TC3 .6991 BAV .2841  
 RDE -.5678 RRA .2043 RC3 -.2520 FAU .10963  
 FDE .2142 FRA -.3666 FC3-3.3195 BSP 1565  
 BDE .6453 BRA .6868 BC3 .7431 FSP 438

MID-COURSE EXECUTION ACCURACY  
 SGT 1088.4 SGR 702.1 SG3 309.3  
 RRT -.2130 RRF .2891 RTF -.6263  
 SGB 1295.2 R23 -.0731 R13 .6421  
 SGI 1105.0 SGI 675.7 THA 167.40

ORBIT DETERMINATION ACCURACY  
 ST 19.7 SR 30.6 SS 6.7  
 CRT .7685 CR8 .8580 CST .4691  
 LSA 35.1 MSA 11.5 S8A 2.7  
 EL1 34.7 EL2 11.1 ALP 60.32

LAUNCH DATE AUG 24 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.812 GAL 4.74 AZL 89.46 HCA 95.45 SMA 216.95 ECC .31292 INC .5365 V1 29.459  
 RP 226.17 LAP .53 LOP 66.13 VP 23.703 GAP 18.08 AZP 90.05 TAL 20.06 TAP 115.50 RCA 149.06 APO 284.83 V2 24.318  
 RC 118.341 GL 3.41 GP -7.61 ZAL 53.32 ZAP 160.17 ETS 203.60 ZAE 160.49 ETE 334.33 ZAC 74.88 ETC 282.29 LVI -8.07

PLANETOCENTRIC CONIC  
 C3 28.081 VHL 5.299 DLA 12.46 RAL 20.86 RAD 6646.2 VEL 12.167 PTH 7.13 VHP 5.413 DPA 9.84 RAP 47.72 ECC 1.4621  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 46 33 3466.46 -45.70 125.06 258.71 104.99 10 44 19 2466.5 -34.92 96.46  
 60.00 10 12 21 3397.75 -39.30 120.78 260.61 99.73 11 8 59 2397.8 -31.25 92.87  
 70.00 10 49 1 3289.87 -33.72 112.98 261.56 95.76 11 43 51 2289.9 -27.90 85.83  
 80.00 11 42 49 3121.30 -29.71 100.57 261.92 93.13 12 34 51 2121.3 -25.41 73.97  
 90.00 12 57 50 2879.21 -28.20 82.85 262.00 92.18 13 45 49 1879.2 -24.46 56.47  
 100.00 14 25 41 2595.77 -29.71 61.94 261.92 93.13 15 8 57 1595.8 -25.41 35.34  
 110.00 15 48 27 2336.69 -33.72 41.90 261.56 95.76 16 27 24 1336.7 -27.90 14.75

DIFFERENTIAL CORRECTIONS  
 TDE -.3080 TRA -.6467 TC3 .7208 BAV .2890  
 RDE -.5628 RRA .2005 RC3 -.2704 FAU .11527  
 FDE .2259 FRA -.4163 FC3-3.5538 BSP 1594  
 BDE .6415 BRA .6771 BC3 .7699 FSP 489

MID-COURSE EXECUTION ACCURACY  
 SGT 1098.8 SGR 708.3 SG3 328.5  
 RRT -.2253 RRF .3076 RTF -.6292  
 SGB 1307.3 R23 -.0797 R13 .6469  
 SGI 1117.3 SGI 678.6 THA 166.79

ORBIT DETERMINATION ACCURACY  
 ST 19.8 SR 30.6 SS 7.1  
 CRT .7742 CR8 .8469 CST .4515  
 LSA 35.2 MSA 11.6 S8A 2.8  
 EL1 34.8 EL2 11.1 ALP 60.00

LAUNCH DATE AUG 24 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.749 GAL 4.76 AZL 89.43 HCA 96.50 SMA 215.45 ECC .30838 INC .5705 V1 29.459  
 RP 226.56 LAP .57 LOP 67.19 VP 23.571 GAP 17.72 AZP 90.06 TAL 20.39 TAP 116.89 RCA 149.01 APO 281.90 V2 24.276  
 RC 120.933 GL 3.63 GP -7.82 ZAL 52.84 ZAP 159.15 ETS 202.99 ZAE 160.93 ETE 332.83 ZAC 74.67 ETC 282.30 LVI -7.86

PLANETOCENTRIC CONIC  
 C3 27.609 VHL 5.254 DLA 12.50 RAL 20.31 RAD 6646.1 VEL 12.147 PTH 7.11 VHP 5.258 DPA 9.85 RAP 47.81 ECC 1.4544  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 44 10 3483.05 -45.64 124.76 257.79 105.21 10 41 53 2483.1 -34.78 96.24  
 60.00 10 9 56 3394.47 -39.27 120.51 259.72 99.91 11 6 31 2394.5 -31.15 92.65  
 70.00 10 48 32 3286.76 -33.70 112.74 260.68 95.90 11 41 19 2286.8 -27.82 85.62  
 80.00 11 40 17 3118.36 -29.70 100.35 261.06 93.25 12 32 16 2118.4 -25.35 73.77  
 90.00 12 55 16 2876.36 -28.19 82.65 261.14 92.29 13 43 13 1876.4 -24.41 56.27  
 100.00 14 23 9 2592.83 -29.70 61.72 261.06 93.25 15 6 22 1592.8 -25.35 35.14  
 110.00 15 45 59 2333.58 -33.70 41.66 260.68 95.90 16 24 52 1333.6 -27.82 14.53

DIFFERENTIAL CORRECTIONS  
 TDE -.3092 TRA -.6377 TC3 .7410 BAV .2937  
 RDE -.5578 RRA .1965 RC3 -.2898 FAU .12119  
 FDE .2392 FRA -.4694 FC3-3.8002 BSP 1620  
 BDE .6377 BRA .6673 BC3 .7957 FSP 503

MID-COURSE EXECUTION ACCURACY  
 SGT 1107.9 SGR 714.7 SG3 348.7  
 RRT -.2390 RRF .3267 RTF -.6316  
 SGB 1318.4 R23 -.0885 R13 .6515  
 SGI 1128.7 SGI 681.4 THA 166.13

ORBIT DETERMINATION ACCURACY  
 ST 20.0 SR 30.6 SS 7.4  
 CRT .7798 CR8 .8385 CST .4365  
 LSA 35.3 MSA 11.6 S8A 2.9  
 EL1 34.9 EL2 11.0 ALP 59.67

LAUNCH DATE AUG 24 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.690 GAL 4.79 AZL 89.40 HCA 97.56 SMA 214.07 ECC .30412 INC .6044 V1 29.459  
 RP 226.95 LAP .60 LOP 68.24 VP 23.443 GAP 17.38 AZP 90.08 TAL 20.71 TAP 118.26 RCA 148.97 APO 279.17 V2 24.234  
 RC 123.556 GL 3.90 GP -8.04 ZAL 52.38 ZAP 158.10 ETS 202.43 ZAE 161.38 ETE 331.16 ZAC 74.45 ETC 282.31 LVI -7.65

PLANETOCENTRIC CONIC  
 C3 27.174 VHL 5.213 DLA 12.55 RAL 19.77 RAD 6645.9 VEL 12.130 PTH 7.10 VHP 5.109 DPA 9.44 RAP 47.88 ECC 1.4472  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 41 50 3460.07 -45.59 124.49 256.93 105.41 10 39 30 2460.1 -34.67 96.05  
 60.00 10 7 33 3391.65 -39.23 120.28 258.88 100.07 11 4 4 2391.6 -31.06 92.47  
 70.00 10 44 5 3284.14 -33.68 112.54 259.85 96.02 11 38 49 2284.1 -27.76 85.44  
 80.00 11 37 46 3115.94 -29.69 100.17 260.24 93.34 12 29 42 2115.9 -25.31 73.60  
 90.00 12 52 43 2874.04 -28.19 82.48 260.32 92.37 13 40 37 1874.0 -24.37 56.11  
 100.00 14 20 38 2590.41 -29.69 61.54 260.24 93.34 15 3 48 1590.4 -25.31 34.97  
 110.00 15 43 31 2330.96 -33.68 41.46 259.85 96.02 16 22 22 1331.0 -27.76 14.36

DIFFERENTIAL CORRECTIONS  
 TDE -.3108 TRA -.6295 TC3 .7592 BAV .2979  
 RDE -.5528 RRA .1923 RC3 -.3102 FAU .12741  
 FDE .2535 FRA -.5249 FC3-4.0590 BSP 1646  
 BDE .6341 BRA .6582 BC3 .8201 FSP 538

MID-COURSE EXECUTION ACCURACY  
 SGT 1116.0 SGR 721.6 SG3 370.0  
 RRT -.2509 RRF .3468 RTF -.6331  
 SGB 1329.0 R23 -.0942 R13 .6555  
 SGI 1139.3 SGI 684.2 THA 165.43

ORBIT DETERMINATION ACCURACY  
 ST 20.1 SR 30.6 SS 7.8  
 CRT .7854 CR8 .8305 CST .4239  
 LSA 35.4 MSA 11.7 S8A 3.0  
 EL1 34.9 EL2 10.9 ALP 59.31

LAUNCH DATE AUG 24 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC										DISTANCE 315.810										EARTH TO MARS																																																																																																																										
RL	151.25	LAL	.00	LOL	330.69	VL	33.634	GAL	4.81	AZL	89.36	HCA	98.61	SMA	212.78	ECC	.30012	INC	.6383	Y1	29.459	RP	227.34	LAP	.63	LOP	69.29	VP	23.320	GAP	17.03	AZP	90.10	TAL	21.02	TAP	119.62	RCA	148.92	APO	276.64	V2	24.193	RC	126.208	GL	4.14	GP	-8.26	ZAL	51.95	ZAP	157.03	ETS	201.91	ZAE	161.86	ETE	329.32	ZAC	74.23	ETC	282.33	LVI	-7.43																																																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																										
C3	26.772	VHL	5.174	DLA	12.60	RAL	19.25	RAD	6645.7	VEL	12.113	PTH	7.09	VHP	4.966	DPA	9.22	RAP	47.94	ECC	1.4406	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																															
50.00	9	39	32	3457.51	-45.54	124.26	256.11	105.59	10	37	10	2457.5	-34.57	95.69	ST	20.3	SR	30.5	SS	8.2	60.00	10	5	11	3389.27	-39.20	120.08	258.08	100.20	11	1	40	2389.3	-30.99	92.31	CRT	.7910	CR8	.8224	CST	.4122	70.00	10	41	38	3281.99	-33.67	112.38	259.06	96.12	11	36	20	2282.0	-27.71	85.29	L8A	35.5	M8A	11.7	88A	3.1	80.00	11	35	15	3114.03	-29.68	100.03	259.45	93.42	12	27	9	2114.0	-25.27	73.47	BDE	.6304	BRA	.6490	BC3	.8437	F8P	576	90.00	12	50	10	2872.24	-28.18	82.35	259.54	92.44	13	38	2	1872.2	-24.34	55.99	SG1	1148.9	SG2	687.0	THA	164.68	100.00	14	18	6	2588.51	-29.68	61.40	259.45	93.42	15	1	15	1588.5	-25.27	34.84	SG2	1148.9	SG2	687.0	THA	164.68	110.00	15	41	4	2328.81	-33.67	41.29	259.06	96.12	16	19	53	1328.8	-27.71	14.21

LAUNCH DATE AUG 24 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC										DISTANCE 319.384										EARTH TO MARS																																																																																																																										
RL	151.25	LAL	.00	LOL	330.69	VL	33.582	GAL	4.83	AZL	89.33	HCA	99.65	SMA	211.59	ECC	.29636	INC	.6722	V1	29.459	RP	227.73	LAP	.66	LOP	70.34	VP	23.201	GAP	16.69	AZP	90.11	TAL	21.32	TAP	120.97	RCA	148.88	APO	274.29	V2	24.152	RC	126.887	GL	4.38	GP	-8.50	ZAL	51.53	ZAP	155.95	ETS	201.43	ZAE	162.36	ETE	327.27	ZAC	74.00	ETC	282.34	LVI	-7.22																																																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																										
C3	26.401	VHL	5.138	DLA	12.67	RAL	18.75	RAD	6645.6	VEL	12.098	PTH	7.07	VHP	4.828	DPA	8.99	RAP	47.98	ECC	1.4345	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																															
50.00	9	37	17	3455.35	-45.50	124.07	255.35	105.73	10	34	52	2455.4	-34.48	95.75	ST	20.4	SR	30.4	SS	8.6	60.00	10	2	51	3387.31	-39.18	119.92	257.32	100.31	10	59	18	2387.3	-30.93	92.18	CRT	.7963	CR8	.8146	CST	.4016	70.00	10	39	13	3280.30	-33.65	112.25	258.32	96.19	11	33	53	2280.3	-27.66	85.18	L8A	35.6	M8A	11.8	88A	3.2	80.00	11	32	44	3112.63	-29.67	99.92	258.71	93.47	12	24	36	2112.6	-25.24	73.38	BDE	.6267	BRA	.6403	BC3	.8660	F8P	616	90.00	12	47	36	2870.97	-28.18	82.25	258.80	92.49	13	35	27	1871.0	-24.32	55.90	SG1	1157.5	SG2	689.8	THA	163.86	100.00	14	15	36	2587.10	-29.67	61.29	258.71	93.47	14	58	43	1587.1	-25.24	34.75	SG2	1157.5	SG2	689.8	THA	163.86	110.00	15	38	39	2327.12	-33.65	41.16	258.32	96.19	16	17	26	1327.1	-27.66	14.10

LAUNCH DATE AUG 24 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC										DISTANCE 322.978										EARTH TO MARS																																																																																																																										
RL	151.25	LAL	.00	LOL	330.69	VL	33.532	GAL	4.84	AZL	89.29	HCA	100.70	SMA	210.47	ECC	.29284	INC	.7063	V1	29.459	RP	228.12	LAP	.69	LOP	71.38	VP	23.087	GAP	16.35	AZP	90.13	TAL	21.60	TAP	122.30	RCA	148.84	APO	272.11	V2	24.110	RC	131.592	GL	4.63	GP	-8.74	ZAL	51.14	ZAP	154.84	ETS	200.98	ZAE	162.86	ETE	325.00	ZAC	73.77	ETC	282.37	LVI	-7.01																																																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																										
C3	26.058	VHL	5.105	DLA	12.74	RAL	18.26	RAD	6645.4	VEL	12.084	PTH	7.06	VHP	4.694	DPA	8.74	RAP	48.00	ECC	1.4288	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																															
50.00	9	35	4	3453.58	-45.47	123.91	254.63	105.85	10	32	38	2453.6	-34.41	95.64	ST	20.6	SR	30.3	SS	9.1	60.00	10	0	32	3385.78	-39.16	119.79	256.61	100.39	10	56	58	2385.8	-30.88	92.08	CRT	.8018	CR8	.8084	CST	.3946	70.00	10	36	48	3279.07	-33.65	112.15	257.61	96.25	11	31	27	2279.1	-27.64	85.10	L8A	35.7	M8A	11.9	88A	3.3	80.00	11	30	13	3111.71	-29.67	99.86	258.01	93.51	12	22	5	2111.7	-25.22	73.32	BDE	.6232	BRA	.6319	BC3	.8868	F8P	657	90.00	12	45	3	2870.20	-28.18	82.20	258.10	92.51	13	32	53	1870.2	-24.31	55.85	SG1	1165.2	SG2	692.8	THA	163.01	100.00	14	13	5	2588.16	-29.67	61.22	258.01	93.51	14	56	11	1586.2	-25.22	34.68	SG2	1165.2	SG2	692.8	THA	163.01	110.00	15	38	14	2325.89	-33.65	41.07	257.61	96.25	16	15	0	1325.9	-27.64	14.01

LAUNCH DATE AUG 24 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC										DISTANCE 326.591										EARTH TO MARS																																																																																																																										
RL	151.25	LAL	.00	LOL	330.69	VL	33.488	GAL	4.86	AZL	89.26	HCA	101.74	SMA	209.44	ECC	.28953	INC	.7406	V1	29.459	RP	228.51	LAP	.73	LOP	72.42	VP	22.978	GAP	16.02	AZP	90.15	TAL	21.88	TAP	123.82	RCA	148.80	APO	270.08	V2	24.069	RC	134.321	GL	4.88	GP	-8.89	ZAL	50.76	ZAP	153.71	ETS	200.56	ZAE	163.37	ETE	322.48	ZAC	73.54	ETC	282.39	LVI	-6.79																																																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																										
C3	25.740	VHL	5.073	DLA	12.82	RAL	17.79	RAD	6643.5	VEL	12.071	PTH	7.05	VHP	4.586	DPA	8.48	RAP	48.00	ECC	1.4238	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																															
50.00	9	32	53	3452.19	-45.45	123.78	253.95	105.94	10	30	25	2452.2	-34.36	95.55	ST	20.7	SR	30.2	SS	9.5	60.00	9	58	16	3384.65	-39.15	119.70	255.94	100.45	10	54	40	2384.7	-30.85	92.00	CRT	.8069	CR8	.8021	CST	.3879	70.00	10	34	24	3278.28	-33.64	112.09	256.95	96.29	11	29	3	2278.3	-27.62	85.04	L8A	35.8	M8A	12.0	88A	3.3	80.00	11	27	43	3111.27	-29.67	99.82	257.35	93.52	12	19	34	2111.3	-25.22	73.29	BDE	.6195	BRA	.6239	BC3	.9061	F8P	701	90.00	12	42	29	2869.93	-28.18	82.18	257.44	92.52	13	30	19	1869.9	-24.30	55.83	SG1	1171.5	SG2	696.0	THA	162.07	100.00	14	10	35	2585.75	-29.67	61.19	257.35	93.52	14	53	40	1585.7	-25.22	34.65	SG2	1171.5	SG2	696.0	THA	162.07	110.00	15	33	51	2325.10	-33.64	41.01	256.95	96.29	16	12	36	1325.1	-27.62	13.96

LAUNCH DATE AUG 24 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 9 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.442 GAL 4.88 AZL 89.22 HCA 102.77 SMA 208.47 ECC .28643 INC .7790 V1 29.459  
 RP 228.90 LAP .76 LOP 73.46 VP 22.869 GAP 15.69 AZP 90.17 TAL 22.14 TAP 124.92 RCA 148.76 APO 266.19 V2 24.020  
 RC 137.073 GL 5.13 GP -9.25 ZAL 50.41 ZAP 152.57 ETS 200.17 ZAE 163.87 ETE 319.68 ZAC 73.30 ETC 282.42 LVI -6.57

Planetocentric Conic: C3 25.446 VHL 5.044 DLA 12.81 RAL 17.34 RAD 6645.2 VEL 12.059 PTH 7.04 VHP 4.443 DPA 8.20 RAP 47.99 ECC 1.4188  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 30 45 3451.17 -45.43 123.69 253.32 106.01 10 28 16 2451.2 -34.32 95.48  
 60.00 9 56 1 3383.92 -39.14 119.64 255.32 100.49 10 52 25 2383.9 -30.82 91.95  
 70.00 10 32 2 3277.93 -33.64 112.06 256.33 96.30 11 26 40 2277.9 -27.61 85.02  
 80.00 11 25 13 3111.31 -29.67 99.83 256.73 93.52 12 17 4 2111.3 -25.22 73.29  
 90.00 12 39 56 2870.16 -28.18 82.19 256.82 92.52 13 27 46 1870.2 -24.31 55.85  
 100.00 14 8 4 2585.78 -29.67 61.20 256.73 93.52 14 51 10 1585.8 -25.22 34.66  
 110.00 15 31 28 2324.75 -33.64 40.98 256.33 96.30 16 10 13 1324.7 -27.61 13.94

Differential Corrections: TDE -.3176 TRA -.5937 TC3 .8187 BAU .3144 SGT 1136.2 SGR 764.0 SG3 493.0 ST 20.8 SR 30.1 SS 10.0  
 RDE -.5275 RRA .1661 RC3 -.4291 FAU .16323 RRT -.3171 RRF .4578 RTF -.6285 CRT .8117 CRS .7980 CST .3819  
 FDE .3455 FRA -.8619 FC3-5.5536 B8P 1729 SGB 1369.2 R23 -.1415 R13 .6703 LSA 35.8 MSA 12.1 S8A 3.4  
 BDE .6157 BRA .6165 BC3 .9243 F8P 747 SG1 1177.1 SG2 699.5 THA 161.05 EL1 35.1 EL2 10.4 ALF 57.42

LAUNCH DATE AUG 24 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 11 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.401 GAL 4.89 AZL 89.19 HCA 103.80 SMA 207.98 ECC .28351 INC .8095 V1 29.459  
 RP 229.28 LAP .79 LOP 74.49 VP 22.766 GAP 15.37 AZP 90.19 TAL 22.40 TAP 126.20 RCA 148.73 APO 266.43 V2 23.988  
 RC 139.847 GL 5.38 GP -9.52 ZAL 50.08 ZAP 151.40 ETS 199.79 ZAE 164.35 ETE 316.58 ZAC 73.06 ETC 282.45 LVI -6.36

Planetocentric Conic: C3 25.173 VHL 5.017 DLA 13.01 RAL 18.91 RAD 6645.1 VEL 12.048 PTH 7.03 VHP 4.324 DPA 7.90 RAP 47.95 ECC 1.4143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 28 38 3450.51 -45.41 123.63 252.73 106.05 10 28 9 2450.5 -34.29 95.44  
 60.00 9 53 47 3383.58 -39.13 119.61 254.73 100.51 10 50 11 2383.6 -30.81 91.93  
 70.00 10 29 40 3278.00 -33.64 112.07 255.74 96.30 11 24 18 2278.0 -27.61 85.02  
 80.00 11 22 42 3111.81 -29.67 99.86 256.14 93.50 12 14 34 2111.8 -25.23 73.32  
 90.00 12 37 22 2870.86 -28.18 82.25 256.23 92.49 13 25 12 1870.9 -24.32 55.90  
 100.00 14 5 34 2586.29 -29.67 61.23 256.14 93.50 14 48 40 1586.3 -25.23 34.69  
 110.00 15 29 6 2324.82 -33.64 40.99 255.74 96.30 16 7 51 1324.8 -27.61 13.94

Differential Corrections: TDE -.3195 TRA -.5885 TC3 .8228 BAU .3167 SGT 1136.0 SGR 774.8 SG3 521.1 ST 21.0 SR 30.0 SS 10.8  
 RDE -.5221 RRA .1598 RC3 -.4565 FAU .17138 RRT -.3293 RRF .4817 RTF -.6243 CRT .8167 CRS .7917 CST .3794  
 FDE .3698 FRA -.9403 FC3-5.8940 B8P 1739 SGB 1375.1 R23 -.1535 R13 .6721 LSA 35.9 MSA 12.3 S8A 3.5  
 BDE .6121 BRA .6098 BC3 .9409 F8P 795 SG1 1181.5 SG2 703.4 THA 159.99 EL1 35.1 EL2 10.3 ALF 56.96

LAUNCH DATE AUG 24 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 13 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.362 GAL 4.91 AZL 89.18 HCA 104.83 SMA 206.74 ECC .28078 INC .8442 V1 29.459  
 RP 229.67 LAP .82 LOP 75.52 VP 22.666 GAP 15.04 AZP 90.22 TAL 22.63 TAP 127.47 RCA 148.69 APO 264.79 V2 23.947  
 RC 142.641 GL 5.63 GP -9.80 ZAL 49.77 ZAP 150.21 ETS 199.44 ZAE 164.82 ETE 313.15 ZAC 72.81 ETC 282.49 LVI -6.14

Planetocentric Conic: C3 24.920 VHL 4.992 DLA 13.11 RAL 18.50 RAD 6645.0 VEL 12.037 PTH 7.02 VHP 4.210 DPA 7.60 RAP 47.90 ECC 1.4101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 26 34 3450.20 -45.41 123.61 252.18 106.07 10 24 4 2450.2 -34.28 95.42  
 60.00 9 51 35 3383.61 -39.13 119.61 254.18 100.51 10 47 59 2383.6 -30.81 91.93  
 70.00 10 27 18 3278.49 -33.64 112.11 255.19 96.28 11 21 57 2278.5 -27.62 85.08  
 80.00 11 20 12 3112.77 -29.67 99.94 255.58 93.47 12 12 5 2112.8 -25.25 73.39  
 90.00 12 34 47 2872.05 -28.18 82.33 255.67 92.45 13 22 39 1872.0 -24.34 55.98  
 100.00 14 3 4 2587.24 -29.67 61.30 255.38 93.47 14 46 11 1587.2 -25.25 34.76  
 110.00 15 26 45 2325.31 -33.64 41.02 255.19 96.28 16 5 30 1325.3 -27.62 13.97

Differential Corrections: TDE -.3211 TRA -.5837 TC3 .8242 BAU .3186 SGT 1134.1 SGR 786.7 SG3 550.4 ST 21.2 SR 29.8 SS 11.1  
 RDE -.5166 RRA .1532 RC3 -.4833 FAU .17989 RRT -.3411 RRF .5060 RTF -.6191 CRT .8214 CRS .7877 CST .3774  
 FDE .3958 FRA -1.0225 FC3-6.2495 B8P 1746 SGB 1380.2 R23 -.1659 R13 .6739 LSA 35.9 MSA 12.4 S8A 3.5  
 BDE .6082 BRA .6034 BC3 .9564 F8P 846 SG1 1184.9 SG2 707.8 THA 159.81 EL1 35.1 EL2 10.2 ALF 56.50

LAUNCH DATE AUG 24 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 15 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.325 GAL 4.92 AZL 89.12 HCA 105.86 SMA 205.98 ECC .27821 INC .8791 V1 29.459  
 RP 230.05 LAP .85 LOP 76.55 VP 22.570 GAP 14.72 AZP 90.24 TAL 22.86 TAP 128.72 RCA 148.68 APO 263.26 V2 23.907  
 RC 145.456 GL 5.89 GP -10.09 ZAL 49.48 ZAP 148.99 ETS 199.10 ZAE 165.24 ETE 309.35 ZAC 72.56 ETC 282.53 LVI -5.92

Planetocentric Conic: C3 24.685 VHL 4.968 DLA 13.23 RAL 16.10 RAD 6644.9 VEL 12.027 PTH 7.02 VHP 4.101 DPA 7.27 RAP 47.82 ECC 1.4062  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 24 31 3450.21 -45.41 123.61 251.67 106.07 10 22 2 2450.2 -34.28 95.42  
 60.00 9 49 24 3384.00 -39.14 119.65 253.67 100.49 10 45 48 2384.0 -30.82 91.96  
 70.00 10 24 57 3279.36 -33.65 112.17 254.67 96.24 11 19 37 2279.4 -27.64 85.12  
 80.00 11 17 41 3114.15 -29.68 100.04 255.06 93.41 12 9 35 2114.2 -25.27 73.48  
 90.00 12 32 12 2873.67 -28.19 82.45 255.15 92.39 13 20 5 1873.7 -24.37 56.09  
 100.00 14 0 33 2588.63 -29.68 61.41 255.06 93.41 14 43 42 1588.6 -25.27 34.85  
 110.00 15 24 24 2326.18 -33.65 41.09 254.67 96.24 16 3 10 1326.2 -27.64 14.03

Differential Corrections: TDE -.3124 TRA -.5694 TC3 .8389 BAU .3250 SGT 1131.2 SGR 800.4 SG3 582.0 ST 20.7 SR 29.6 SS 11.6  
 RDE -.5114 RRA .1456 RC3 -.5161 FAU .18904 RRT -.3660 RRF .5318 RTF -.6263 CRT .8224 CRS .7768 CST .3608  
 FDE .4163 FRA -1.1165 FC3-6.6300 B8P 1633 SGB 1385.7 R23 -.1622 R13 .6867 LSA 35.6 MSA 12.5 S8A 3.6  
 BDE .5993 BRA .5877 BC3 .9849 F8P 892 SG1 1191.8 SG2 707.0 THA 156.98 EL1 34.7 EL2 10.0 ALF 56.99

LAUNCH DATE AUG 24 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 17 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.291 GAL 4.93 AZL 89.09 HCA 106.88 SMA 205.23 ECC .27580 INC .9143 V1 29.459  
 RP 230.44 LAP .87 LOP 77.57 VP 22.477 GAP 14.41 AZP 90.27 TAL 23.08 TAP 129.96 RCA 148.63 APO 261.84 V2 23.867  
 RC 148.289 GL 6.14 GP -10.38 ZAL 49.21 ZAP 147.76 ETS 198.77 ZAE 165.62 ETE 305.21 ZAC 72.31 ETC 282.57 LVI -5.69

Distance 344.885 Earth to Mars: DPA 6.93 RAP 47.72 ECC 1.4028

Planetary Conic: C3 24.485 VHL 4.946 DLA 13.35 RAL 15.72 RAD 6644.8 VEL 12.018 PTH 7.01 VHP 3.995  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 22 31 3450.57 -45.41 123.64 251.20 106.05 10 20 2 2450.6 -34.30 95.45  
 60.00 9 47 15 3384.76 -39.15 119.71 253.19 100.44 10 43 39 2384.8 -30.85 92.01  
 70.00 10 22 37 3280.66 -33.66 112.27 254.19 96.18 11 17 18 2280.7 -27.67 85.20  
 80.00 11 15 10 3116.02 -29.69 100.18 254.58 93.34 12 7 6 2116.0 -25.31 73.61  
 90.00 12 29 36 2875.80 -28.19 82.61 254.66 92.31 13 17 31 1875.8 -24.40 56.23  
 100.00 13 58 2 2590.49 -29.69 61.54 254.58 93.34 14 41 12 1590.5 -25.31 34.98  
 110.00 15 22 3 2327.48 -33.66 41.19 254.19 96.18 16 0 51 1327.5 -27.67 14.12

Differential Corrections: TDE -.3179 TRA -.5702 TC3 .8275 BAU .3245 SGT 1125.4 SGR 814.4 SG3 613.5 ST 21.1 SR 29.4 SS 12.2  
 RDE -.5055 RRA .1303 RC3 -.5475 FAU .19812 RRT -.3704 RRF .5561 RTF -.6125 CRT .8280 CRS .7759 CST .3654  
 FDE .4482 FRA-1.2047 FC3-7.0106 BSP 1683 SGB 1389.2 R23 -.1828 R13 .6836 LSA 35.8 MSA 12.8 SSA 3.6  
 BDE .5972 BRA .5867 BC3 .9922 FSP 950 SG1 1191.3 SG2 714.7 THA 155.81 EL1 34.8 EL2 10.0 ALF 56.12

LAUNCH DATE AUG 24 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 19 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.259 GAL 4.94 AZL 89.05 HCA 107.90 SMA 204.56 ECC .27354 INC .9497 V1 29.459  
 RP 230.82 LAP .90 LOP 78.59 VP 22.387 GAP 14.10 AZP 90.29 TAL 23.27 TAP 131.18 RCA 148.60 APO 260.51 V2 23.827  
 RC 151.140 GL 6.40 GP -10.69 ZAL 48.97 ZAP 146.50 ETS 198.45 ZAE 165.93 ETE 300.69 ZAC 72.05 ETC 282.62 LVI -5.47

Distance 348.581 Earth to Mars: DPA 6.57 RAP 47.61 ECC 1.3993

Planetary Conic: C3 24.261 VHL 4.926 DLA 13.49 RAL 15.36 RAD 6644.7 VEL 12.010 PTH 7.00 VHP 3.694  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 20 33 3451.25 -45.43 123.70 250.77 106.00 10 18 4 2451.2 -34.32 95.49  
 60.00 9 45 6 3385.88 -39.16 119.80 252.75 100.36 10 41 32 2385.9 -30.86 92.08  
 70.00 10 20 17 3282.35 -33.67 112.40 253.74 96.10 11 14 59 2282.4 -27.71 85.32  
 80.00 11 12 38 3118.31 -29.70 100.35 254.12 93.25 12 4 37 2118.3 -25.35 73.77  
 90.00 12 26 59 2878.39 -28.20 82.79 254.20 92.22 13 14 57 1878.4 -24.45 56.41  
 100.00 13 55 30 2592.78 -29.70 61.71 254.12 93.25 14 38 43 1592.8 -25.35 35.13  
 110.00 15 19 43 2329.17 -33.67 41.32 253.74 96.10 15 58 32 1329.2 -27.71 14.24

Differential Corrections: TDE -.3224 TRA -.5703 TC3 .8147 BAU .3244 SGT 1118.1 SGR 829.7 SG3 646.3 ST 21.4 SR 29.1 SS 12.8  
 RDE -.4992 RRA .1304 RC3 -.5803 FAU .20754 RRT -.3746 RRF .5803 RTF -.5986 CRT .8331 CRS .7757 CST .3705  
 FDE .4836 FRA-1.2984 FC3-7.4058 BSP 1713 SGB 1392.3 R23 -.2021 R13 .6819 LSA 35.9 MSA 13.1 SSA 3.6  
 BDE .5943 BRA .5850 BC3 1.0003 FSP 1009 SG1 1190.0 SG2 722.8 THA 154.47 EL1 34.8 EL2 9.9 ALF 55.32

LAUNCH DATE AUG 24 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 21 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.229 GAL 4.94 AZL 89.01 HCA 108.92 SMA 203.93 ECC .27142 INC .9855 V1 29.459  
 RP 231.20 LAP .93 LOP 79.61 VP 22.299 GAP 13.79 AZP 90.32 TAL 23.46 TAP 132.38 RCA 148.58 APO 259.28 V2 23.787  
 RC 154.008 GL 6.66 GP -11.00 ZAL 48.74 ZAP 145.23 ETS 198.14 ZAE 166.17 ETE 295.83 ZAC 71.79 ETC 282.67 LVI -5.25

Distance 352.287 Earth to Mars: DPA 6.20 RAP 47.47 ECC 1.3961

Planetary Conic: C3 24.071 VHL 4.906 DLA 13.63 RAL 15.01 RAD 6644.6 VEL 12.002 PTH 7.00 VHP 3.797  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 18 36 3452.24 -45.45 123.79 250.37 105.94 10 16 8 2452.2 -34.36 95.55  
 60.00 9 42 59 3387.34 -39.18 119.92 252.35 100.30 10 39 26 2387.3 -30.93 92.10  
 70.00 10 17 57 3284.43 -33.66 112.56 253.32 96.01 11 12 41 2284.4 -27.76 85.46  
 80.00 11 10 6 3121.04 -29.71 100.55 253.70 93.14 12 2 7 2121.0 -25.40 73.93  
 90.00 12 24 20 2881.42 -28.21 83.02 253.78 92.10 13 12 22 1881.4 -24.50 56.62  
 100.00 13 52 58 2595.51 -29.71 61.92 253.70 93.14 14 36 13 1595.5 -25.40 35.32  
 110.00 15 17 23 2331.25 -33.66 41.48 253.32 96.01 15 56 15 1331.3 -27.76 14.38

Differential Corrections: TDE -.3257 TRA -.5706 TC3 .7998 BAU .3246 SGT 1109.4 SGR 846.6 SG3 680.3 ST 21.7 SR 28.9 SS 13.5  
 RDE -.4928 RRA .1223 RC3 -.6148 FAU .21732 RRT -.3783 RRF .6046 RTF -.5541 CRT .8374 CRS .7757 CST .3751  
 FDE .5212 FRA-1.3940 FC3-7.8160 BSP 1733 SGB 1395.6 R23 -.2202 R13 .6815 LSA 36.0 MSA 13.4 SSA 3.7  
 BDE .5907 BRA .5838 BC3 1.0088 FSP 1071 SG1 1188.4 SG2 731.6 THA 152.94 EL1 34.7 EL2 9.8 ALF 54.80

LAUNCH DATE AUG 24 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 23 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.201 GAL 4.95 AZL 88.98 HCA 109.93 SMA 203.34 ECC .26943 INC 1.0215 V1 29.459  
 RP 231.58 LAP .96 LOP 80.62 VP 22.215 GAP 13.48 AZP 90.35 TAL 23.64 TAP 133.56 RCA 148.55 APO 258.12 V2 23.748  
 RC 156.890 GL 6.93 GP -11.32 ZAL 48.53 ZAP 143.92 ETS 197.84 ZAE 166.30 ETE 290.87 ZAC 71.52 ETC 282.73 LVI -8.02

Distance 358.002 Earth to Mars: DPA 5.81 RAP 47.32 ECC 1.3932

Planetary Conic: C3 23.894 VHL 4.888 DLA 13.78 RAL 14.68 RAD 6644.5 VEL 11.995 PTH 6.99 VHP 3.704  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 16 41 3453.33 -45.47 123.90 250.01 105.85 10 14 14 2453.5 -34.41 95.63  
 60.00 9 40 52 3389.14 -39.20 120.07 251.97 100.21 10 37 21 2389.1 -30.99 92.30  
 70.00 10 15 37 3286.89 -33.70 112.75 252.94 95.90 11 10 24 2286.9 -27.82 85.63  
 80.00 11 7 33 3124.19 -29.72 100.78 253.31 93.02 11 59 37 2124.2 -25.46 74.17  
 90.00 12 21 41 2884.91 -28.22 83.27 253.38 91.98 13 9 46 1884.9 -24.56 56.85  
 100.00 13 50 25 2598.66 -29.72 62.15 253.31 93.02 14 33 43 1598.7 -25.46 35.53  
 110.00 15 15 3 2333.71 -33.70 41.67 252.94 95.90 15 53 57 1333.7 -27.82 14.54

Differential Corrections: TDE -.3283 TRA -.5709 TC3 .7826 BAU .3251 SGT 1099.2 SGR 865.1 SG3 715.5 ST 21.9 SR 28.6 SS 14.2  
 RDE -.4862 RRA .1136 RC3 -.6508 FAU .22742 RRT -.3806 RRF .6286 RTF -.5683 CRT .8412 CRS .7750 CST .3784  
 FDE .5604 FRA-1.4948 FC3-8.2402 BSP 1740 SGB 1398.8 R23 -.2372 R13 .6823 LSA 36.0 MSA 13.7 SSA 3.7  
 BDE .5866 BRA .5821 BC3 1.0178 FSP 1134 SG1 1186.2 SG2 741.3 THA 151.22 EL1 34.6 EL2 9.8 ALF 53.93



LAUNCH DATE AUG 24 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC DISTANCE 359.726 EARTH TO MARS

RL 151.25 LAL .00 LOL 330.69 VL 33.174 GAL 4.96 AZL 88.94 MCA 110.94 SMA 202.79 ECC .26757 INC 1.0570 V1 29.459  
 RP 231.95 LAP .99 LOP 81.63 VP 22.133 GAP 13.18 AZP 90.38 TAL 23.80 TAP 134.73 RCA 148.55 APO 257.05 V2 23.708  
 RC 159.785 GL 7.20 GP -11.66 ZAL 48.34 ZAP 142.60 ETS 197.54 ZAE 166.33 ETE 285.26 ZAC 71.25 ETC 282.79 LVI -4.79

PLANETOCENTRIC CONIC

C3 23.728 VHL 4.871 DLA 13.95 RAL 14.37 RAD 6644.5 VEL 11.988 PTH 6.98 VHP 3.615 DPA 5.41 RAP 47.14 ECC 1.3905  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 14 47 3455.13 -45.80 124.05 249.69 105.74 10 12 22 2455.1 -34.47 95.73  
 60.00 9 38 46 3391.27 -39.23 120.24 251.63 100.09 10 35 18 2391.3 -31.05 92.44  
 70.00 10 13 17 3289.72 -33.72 112.97 252.59 95.77 11 8 7 2289.7 -27.89 85.82  
 80.00 11 4 58 3127.76 -29.73 101.05 252.94 92.88 11 57 6 2127.8 -25.53 74.41  
 90.00 12 19 0 2988.84 -28.23 83.56 253.01 91.83 13 7 9 1888.8 -24.63 57.12  
 100.00 13 47 50 2602.24 -29.73 62.41 252.94 92.88 14 31 12 1602.2 -25.53 35.78  
 110.00 15 12 43 2336.54 -33.72 41.89 252.59 95.77 15 51 40 1336.5 -27.89 14.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3307 TRA -.5721 TC3 .7618 BAU .3257 SGT 1087.6 SGR 885.1 SG3 751.9 ST 22.1 SR 28.3 SS 14.9  
 RDE -.4792 RRA .1045 RC3 -.6883 FAU .23783 RRT -.3805 RRF .6522 RTF -.5502 CRT .8447 CR8 .7754 CST .3830  
 FDE .6040 FRA-1.5987 FC3-8.6776 B8P 1745 SGB 1402.2 R23 -.2537 R13 .6838 LSA 36.0 MSA 14.0 S8A 3.7  
 BDE .5822 BRA .5816 BC3 1.0267 F8P 1200 SG1 1183.3 SG2 752.3 THA 149.30 EL1 34.5 EL2 9.7 ALF 53.22

LAUNCH DATE AUG 24 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC DISTANCE 363.457 EARTH TO MARS

RL 151.25 LAL .00 LOL 330.69 VL 33.149 GAL 4.96 AZL 88.91 MCA 111.94 SMA 202.28 ECC .26582 INC 1.0947 V1 29.459  
 RP 232.33 LAP 1.02 LOP 82.63 VP 22.054 GAP 12.88 AZP 90.41 TAL 23.94 TAP 135.89 RCA 148.51 APO 256.05 V2 23.670  
 RC 162.693 GL 7.47 GP -12.00 ZAL 48.18 ZAP 141.25 ETS 197.24 ZAE 166.24 ETE 279.71 ZAC 70.98 ETC 282.85 LVI -4.56

PLANETOCENTRIC CONIC

C3 23.573 VHL 4.855 DLA 14.12 RAL 14.07 RAD 6644.4 VEL 11.981 PTH 6.98 VHP 3.530 DPA 4.98 RAP 46.94 ECC 1.3979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 12 55 3457.02 -45.53 124.21 249.39 105.62 10 10 32 2457.0 -34.55 95.85  
 60.00 9 36 41 3393.73 -39.26 120.45 251.32 99.95 10 33 15 2393.7 -31.13 92.60  
 70.00 10 10 56 3292.93 -33.74 113.22 252.26 95.62 11 5 49 2292.9 -27.97 86.04  
 80.00 11 2 23 3131.76 -29.74 101.34 252.60 92.73 11 54 34 2131.8 -25.61 74.68  
 90.00 12 16 17 2993.22 -28.23 83.86 252.67 91.67 13 4 30 1893.2 -24.70 57.42  
 100.00 13 45 14 2606.23 -29.74 62.71 252.60 92.73 14 28 41 1606.2 -25.61 36.05  
 110.00 15 10 23 2339.75 -33.74 42.14 252.26 95.62 15 49 22 1339.7 -27.97 14.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3322 TRA -.5737 TC3 .7382 BAU .3267 SGT 1074.7 SGR 907.1 SG3 789.5 ST 22.2 SR 27.9 SS 15.6  
 RDE -.4720 RRA .0948 RC3 -.7277 FAU .24860 RRT -.3782 RRF .6754 RTF -.5299 CRT .8477 CR8 .7746 CST .3851  
 FDE .6487 FRA-1.7080 FC3-9.1303 B8P 1742 SGB 1406.3 R23 -.2686 R13 .6870 LSA 36.0 MSA 14.3 S8A 3.7  
 BDE .5772 BRA .5815 BC3 1.0368 F8P 1268 SG1 1180.3 SG2 764.6 THA 147.12 EL1 34.4 EL2 9.6 ALF 52.56

LAUNCH DATE AUG 24 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC DISTANCE 367.195 EARTH TO MARS

RL 151.25 LAL .00 LOL 330.69 VL 33.126 GAL 4.96 AZL 88.87 MCA 112.94 SMA 201.81 ECC .26417 INC 1.1318 V1 29.459  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.978 GAP 12.58 AZP 90.44 TAL 24.08 TAP 137.02 RCA 148.50 APO 255.12 V2 23.631  
 RC 165.610 GL 7.74 GP -12.35 ZAL 48.03 ZAP 139.89 ETS 196.95 ZAE 166.02 ETE 274.11 ZAC 70.70 ETC 282.92 LVI -3.33

PLANETOCENTRIC CONIC

C3 23.428 VHL 4.840 DLA 14.30 RAL 13.79 RAD 6644.3 VEL 11.975 PTH 6.97 VHP 3.448 DPA 4.55 RAP 46.72 ECC 1.3858  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 4 3499.20 -45.97 124.41 249.13 105.47 10 8 43 2499.2 -34.63 95.99  
 60.00 9 34 36 3396.91 -39.29 120.68 251.04 99.80 10 31 13 2396.5 -31.21 92.70  
 70.00 10 8 35 3298.30 -33.77 113.50 251.96 95.48 11 3 32 2298.5 -28.05 86.28  
 80.00 10 59 45 3136.18 -29.76 101.67 252.29 92.36 11 52 2 2136.2 -25.69 74.99  
 90.00 12 13 32 2998.08 -28.24 84.23 252.35 91.50 13 1 30 1898.0 -24.78 57.75  
 100.00 13 42 37 2610.65 -29.76 63.04 252.29 92.36 14 26 8 1610.6 -25.69 36.35  
 110.00 15 8 2 2343.32 -33.77 42.41 251.96 95.48 15 47 9 1343.3 -28.05 15.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3338 TRA -.5765 TC3 .7098 BAU .3276 SGT 1060.2 SGR 930.8 SG3 828.0 ST 22.4 SR 27.8 SS 16.3  
 RDE -.4644 RRA .0847 RC3 -.7683 FAU .25958 RRT -.3715 RRF .6977 RTF -.5289 CRT .8504 CR8 .7747 CST .3885  
 FDE .6976 FRA-1.8193 FC3-9.5916 B8P 1743 SGB 1410.8 R23 -.2823 R13 .6912 LSA 36.1 MSA 14.7 S8A 3.7  
 BDE .5719 BRA .5827 BC3 1.0480 F8P 1338 SG1 1176.3 SG2 778.8 THA 144.68 EL1 34.2 EL2 9.8 ALF 51.85

LAUNCH DATE AUG 24 1973

FLIGHT TIME 160.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC DISTANCE 370.940 EARTH TO MARS

RL 151.25 LAL .00 LOL 330.69 VL 33.104 GAL 4.96 AZL 88.83 MCA 113.94 SMA 201.37 ECC .26264 INC 1.1694 V1 29.459  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.904 GAP 12.29 AZP 90.47 TAL 24.20 TAP 138.14 RCA 148.48 APO 254.25 V2 23.593  
 RC 168.537 GL 8.02 GP -12.71 ZAL 47.89 ZAP 138.50 ETS 196.65 ZAE 165.67 ETE 268.57 ZAC 70.42 ETC 282.99 LVI -4.09

PLANETOCENTRIC CONIC

C3 23.291 VHL 4.826 DLA 14.49 RAL 13.92 RAD 6644.3 VEL 11.970 PTH 6.97 VHP 3.370 DPA 4.09 RAP 46.48 ECC 1.3833  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 13 3481.66 -45.62 124.63 248.90 105.31 10 6 55 2481.7 -34.73 96.15  
 60.00 9 32 32 3399.61 -39.33 120.93 250.79 99.63 10 29 11 2399.6 -31.31 93.00  
 70.00 10 6 14 3300.45 -33.79 113.80 251.69 95.28 11 1 14 2300.4 -28.15 86.55  
 80.00 10 57 6 3141.02 -29.77 102.03 252.01 92.37 11 49 27 2141.0 -25.78 75.32  
 90.00 12 10 45 2903.32 -28.25 84.62 252.06 91.30 12 59 8 1903.3 -24.87 58.11  
 100.00 13 39 58 2615.49 -29.77 63.40 252.01 92.37 14 23 34 1615.5 -25.78 36.69  
 110.00 15 5 40 2347.27 -33.79 42.72 251.69 95.28 15 44 47 1347.3 -28.15 15.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3352 TRA -.5801 TC3 .6778 BAU .3292 SGT 1045.1 SGR 956.5 SG3 867.7 ST 22.6 SR 27.2 SS 17.1  
 RDE -.4564 RRA .0741 RC3 -.8112 FAU .27086 RRT -.3613 RRF .7194 RTF -.4786 CRT .8529 CR8 .7748 CST .3915  
 FDE .7502 FRA-1.9348 FC-10.0677 B8P 1742 SGB 1416.8 R23 -.2930 R13 .6977 LSA 36.1 MSA 15.1 S8A 3.7  
 BDE .5663 BRA .5848 BC3 1.0571 F8P 1410 SG1 1172.8 SG2 794.8 THA 141.90 EL1 34.0 EL2 9.4 ALF 51.11

LAUNCH DATE AUG 24 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 2 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.084 GAL 4.96 AZL 88.79 MCA 114.94 SMA 200.98 ECC .28120 INC 1.2075 V1 29.459 RP 233.44 LAP 1.09 LOP 85.63 VP 21.832 GAP 12.00 AZP 90.51 TAL 24.31 TAP 139.25 RCA 148.47 APO 253.45 V2 23.554 RC 171.472 GL 8.30 GP -13.07 ZAL 47.78 ZAP 137.08 ETS 196.36 ZAE 165.18 ETE 263.20 ZAC 70.13 ETC 283.07 LVI -3.86

Distance 374.691 Earth to Mars

Planetocentric Conic: C3 23.164 VHL 4.813 DLA 14.69 RAL 13.26 RAD 6644.2 VEL 11.964 PTH 6.96 VHP 3.295 DPA 3.62 RAP 46.23 ECC 1.3812 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3363 TRA -.5851 TC3 .6413 BAU .3311 RDE -.4481 RRA .0630 RC3 -.8555 FAU .28235 FDE .8060 FRA -2.0524 FC -10.5526 BSP 1740 BDE .5602 BRA .5885 BC3 1.0692 FSP 1482

Mid-Course Execution Accuracy: SGT 1029.5 SGR 984.2 SG3 908.1 RRT -.3460 RRF .7402 RTF -.4469 SGB 1424.2 R23 -.2998 R13 .7066 SG1 1169.5 SG2 812.8 THA 138.71

Orbit Determination Accuracy: ST 22.8 SR 26.7 SS 17.9 CRT .8551 CRS .7750 CST .3942 LSA 36.1 MSA 15.5 SSA 3.7 EL1 33.8 EL2 9.3 ALF 50.33

LAUNCH DATE AUG 24 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 4 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.065 GAL 4.96 AZL 88.75 MCA 115.93 SMA 200.58 ECC .25985 INC 1.2460 V1 29.459 RP 233.80 LAP 1.12 LOP 86.62 VP 21.762 GAP 11.71 AZP 90.54 TAL 24.41 TAP 140.34 RCA 148.46 APO 252.70 V2 23.517 RC 174.413 GL 8.58 GP -13.45 ZAL 47.69 ZAP 135.85 ETS 196.06 ZAE 164.56 ETE 258.07 ZAC 69.84 ETC 283.15 LVI -3.62

Distance 378.446 Earth to Mars

Planetocentric Conic: C3 23.044 VHL 4.800 DLA 14.69 RAL 13.02 RAD 6644.2 VEL 11.960 PTH 6.96 VHP 3.224 DPA 3.13 RAP 45.95 ECC 1.3792 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3374 TRA -.5912 TC3 .6001 BAU .3336 RDE -.4392 RRA .0515 RC3 -.9013 FAU .29400 FDE .8671 FRA -2.1714 FC -11.0453 BSP 1743 BDE .5538 BRA .5935 BC3 1.0820 FSP 1557

Mid-Course Execution Accuracy: SGT 1013.6 SGR 1013.7 SG3 949.3 RRT -.3251 RRF .7599 RTF -.4102 SGB 1433.5 R23 -.3008 R13 .7188 SG1 1166.8 SG2 832.8 THA 134.99

Orbit Determination Accuracy: ST 22.9 SR 26.3 SS 18.8 CRT .8569 CRS .7758 CST .3976 LSA 36.1 MSA 15.9 SSA 3.7 EL1 33.6 EL2 9.2 ALF 49.50

LAUNCH DATE AUG 24 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 6 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.047 GAL 4.96 AZL 88.71 MCA 116.92 SMA 200.22 ECC .25858 INC 1.2851 V1 29.459 RP 234.17 LAP 1.15 LOP 87.61 VP 21.695 GAP 11.43 AZP 90.58 TAL 24.49 TAP 141.42 RCA 148.45 APO 252.00 V2 23.479 RC 177.360 GL 8.87 GP -13.84 ZAL 47.61 ZAP 134.19 ETS 195.75 ZAE 163.81 ETE 253.24 ZAC 69.55 ETC 283.23 LVI -3.38

Distance 382.208 Earth to Mars

Planetocentric Conic: C3 22.932 VHL 4.789 DLA 15.11 RAL 12.79 RAD 6644.1 VEL 11.955 PTH 6.96 VHP 3.157 DPA 2.62 RAP 45.65 ECC 1.3774 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3291 TRA -.5894 TC3 .5707 BAU .3402 RDE -.4313 RRA .0381 RC3 -.9515 FAU .30681 FDE .9114 FRA -2.3140 FC -11.5827 BSP 1670 BDE .5425 BRA .5906 BC3 1.1095 FSP 1612

Mid-Course Execution Accuracy: SGT 993.6 SGR 1048.4 SG3 994.4 RRT -.3162 RRF .7800 RTF -.3446 SGB 1444.4 R23 -.2799 R13 .7424 SG1 1173.6 SG2 842.1 THA 130.19

Orbit Determination Accuracy: ST 22.5 SR 25.8 SS 19.3 CRT .8564 CRS .7663 CST .3824 LSA 35.7 MSA 16.3 SSA 3.6 EL1 33.1 EL2 9.1 ALF 49.55

LAUNCH DATE AUG 24 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic: RL 151.25 LAL .00 LOL 330.69 VL 33.031 GAL 4.96 AZL 88.68 MCA 117.91 SMA 199.90 ECC .25740 INC 1.3247 V1 29.459 RP 234.53 LAP 1.17 LOP 88.60 VP 21.630 GAP 11.14 AZP 90.62 TAL 24.56 TAP 142.47 RCA 148.44 APO 251.35 V2 23.442 RC 180.313 GL 9.16 GP -14.23 ZAL 47.55 ZAP 132.72 ETS 195.44 ZAE 162.95 ETE 248.76 ZAC 69.26 ETC 283.32 LVI -3.13

Distance 389.972 Earth to Mars

Planetocentric Conic: C3 22.826 VHL 4.778 DLA 15.34 RAL 12.57 RAD 6644.1 VEL 11.950 PTH 6.95 VHP 3.093 DPA 2.10 RAP 45.34 ECC 1.3757 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

Differential Corrections: TDE -.3364 TRA -.6049 TC3 .5081 BAU .3420 RDE -.4204 RRA .0267 RC3 -.9988 FAU .31803 FDE .9955 FRA -2.4225 FC -12.0619 BSP 1744 BDE .5385 BRA .6054 BC3 1.1206 FSP 1704

Mid-Course Execution Accuracy: SGT 981.9 SGR 1079.9 SG3 1034.4 RRT -.2686 RRF .7965 RTF -.3242 SGB 1459.6 R23 -.2706 R13 .7578 SG1 1169.4 SG2 873.5 THA 125.24

Orbit Determination Accuracy: ST 23.1 SR 25.3 SS 20.5 CRT .8594 CRS .7743 CST .3978 LSA 36.0 MSA 16.8 SSA 3.6 EL1 33.0 EL2 9.0 ALF 47.93

LAUNCH DATE AUG 24 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.016 GAL 4.95 AZL 88.63 HCA 118.89 SMA 199.59 ECC .25629 INC 1.3650 V1 29.459  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.566 GAP 10.87 AZP 90.66 TAL 24.63 TAP 143.52 RCA 148.44 APO 250.75 V2 23.403  
 RC 183.270 GL 9.46 GP -14.63 ZAL 47.51 ZAP 131.23 ETS 195.12 ZAE 161.97 ETE 244.63 ZAC 68.98 ETC 283.40 LVI -2.89

DISTANCE 389.741 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.727 VHL 4.767 DLA 15.58 RAL 12.36 RAD 6644.0 VEL 11.946 PTH 6.95 VHP 3.032 DPA 1.57 RAP 45.01 ECC 1.3740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 0 13 3470.14 -45.90 126.12 248.20 104.19 9 58 11 2478.1 -35.37 97.21  
 60.00 9 22 7 3419.84 -39.54 122.61 249.94 98.51 10 19 7 2419.8 -31.92 94.36  
 70.00 9 54 7 3325.65 -33.93 115.76 250.71 94.14 10 49 32 2325.6 -28.73 88.28  
 80.00 10 43 17 3171.57 -29.84 104.30 250.94 91.18 11 36 9 2171.6 -26.32 77.43  
 90.00 11 56 7 2936.50 -28.28 87.04 250.96 90.09 12 45 3 1936.5 -25.39 60.40  
 100.00 13 26 9 2646.05 -29.84 65.67 250.94 91.18 14 10 15 1646.0 -26.32 38.79  
 110.00 14 53 33 2372.47 -33.93 44.67 250.71 94.14 15 33 6 1372.5 -28.73 17.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3384 TRA -.8168 TC3 .4497 BAU .3468 SGT 970.1 SGR 1115.1 S63 1076.6 ST 23.4 SR 24.7 SS 21.5  
 RDE -.4098 RRA .0141 RC3-1.0491 FAU .32987 RRT -.2238 RRF .8128 RTF -.2664 CRT .8608 CRS .7761 CST .4022  
 FDE 1.0720 FRA-2.5431 FC-12.5659 BSP 1782 SGB 1478.1 R23 -.2377 R13 .7821 LSA 36.2 MSA 17.5 SSA 3.6  
 BDE .5315 BRA .8168 BC3 1.1415 FSP 1788 S61 1173.8 S62 898.3 THA 119.01 EL1 32.8 EL2 9.0 ALF 46.78

LAUNCH DATE AUG 24 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 33.002 GAL 4.94 AZL 88.59 HCA 119.87 SMA 199.32 ECC .25526 INC 1.4059 V1 29.459  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.505 GAP 10.59 AZP 90.70 TAL 24.67 TAP 144.55 RCA 148.44 APO 250.19 V2 23.369  
 RC 186.232 GL 9.76 GP -15.04 ZAL 47.48 ZAP 129.72 ETS 194.80 ZAE 160.90 ETE 240.85 ZAC 68.66 ETC 283.50 LVI -2.64

DISTANCE 393.513 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.633 VHL 4.757 DLA 15.83 RAL 12.17 RAD 6644.0 VEL 11.942 PTH 6.95 VHP 2.974 DPA 1.02 RAP 44.66 ECC 1.3725  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 25 3482.26 -45.97 126.49 248.14 103.91 9 56 28 2482.3 -35.52 97.48  
 60.00 9 20 0 3424.82 -39.59 123.02 249.84 98.24 10 17 5 2424.8 -32.07 94.70  
 70.00 9 51 36 3331.80 -33.96 116.23 250.59 93.86 10 47 8 2331.8 -28.86 88.70  
 80.00 10 40 22 3178.99 -29.85 104.85 250.79 90.89 11 33 21 2179.0 -26.45 77.94  
 90.00 11 53 0 2944.55 -28.28 87.63 250.80 89.79 12 42 5 1944.5 -25.51 60.96  
 100.00 13 23 14 2653.48 -29.85 66.22 250.79 90.89 14 7 27 1653.5 -26.45 39.31  
 110.00 14 51 3 2378.62 -33.96 45.15 250.59 93.86 15 30 41 1378.6 -28.86 17.62

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3383 TRA -.6283 TC3 .3893 BAU .3535 SGT 980.2 SGR 1153.0 S63 1119.6 ST 23.6 SR 24.1 SS 22.5  
 RDE -.3989 RRA .0008 RC3-1.1016 FAU .34193 RRT -.1746 RRF .8282 RTF -.2048 CRT .8614 CRS .7763 CST .4029  
 FDE 1.1494 FRA-2.6669 FC-13.0790 BSP 1813 SGB 1500.4 R23 -.1862 R13 .8093 LSA 36.2 MSA 17.8 SSA 3.5  
 BDE .5231 BRA .6283 BC3 1.1683 FSP 1868 S61 1186.0 S62 919.1 THA 111.75 EL1 32.5 EL2 8.9 ALF 45.73

LAUNCH DATE AUG 24 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.989 GAL 4.94 AZL 88.55 HCA 120.85 SMA 199.06 ECC .25429 INC 1.4475 V1 29.459  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.446 GAP 10.31 AZP 90.74 TAL 24.71 TAP 145.58 RCA 148.44 APO 249.68 V2 23.332  
 RC 189.197 GL 10.07 GP -15.48 ZAL 47.47 ZAP 128.19 ETS 194.46 ZAE 159.74 ETE 237.39 ZAC 68.36 ETC 283.59 LVI -2.39

DISTANCE 397.269 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.545 VHL 4.748 DLA 16.09 RAL 11.99 RAD 6644.0 VEL 11.939 PTH 6.94 VHP 2.920 DPA .45 RAP 44.30 ECC 1.3710  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 56 38 3486.66 -46.04 126.89 248.11 103.61 9 54 45 2486.7 -35.89 97.76  
 60.00 9 17 52 3430.12 -39.64 123.46 249.77 97.94 10 15 2 2430.1 -32.23 95.06  
 70.00 9 49 3 3338.33 -33.99 116.74 250.48 93.56 10 44 42 2338.3 -29.01 89.18  
 80.00 10 37 23 3186.86 -29.85 105.43 250.66 90.58 11 30 30 2186.9 -26.58 78.49  
 90.00 11 49 49 2953.08 -28.28 88.25 250.66 89.48 12 39 2 1953.1 -25.64 61.55  
 100.00 13 20 15 2661.33 -29.85 66.80 250.66 90.58 14 4 37 1661.3 -26.58 39.86  
 110.00 14 48 30 2385.15 -33.99 45.66 250.48 93.56 15 28 15 1385.1 -29.01 18.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3377 TRA -.6409 TC3 .3247 BAU .3618 SGT 935.4 SGR 1192.8 S63 1162.7 ST 23.7 SR 23.4 SS 23.5  
 RDE -.3874 RRA -.0129 RC3-1.1558 FAU .33396 RRT -.1186 RRF .8425 RTF -.1076 CRT .8619 CRS .7761 CST .4031  
 FDE 1.2322 FRA-2.7914 FC-13.5923 BSP 1831 SGB 1527.0 R23 -.1210 R13 .8347 LSA 36.3 MSA 18.3 SSA 3.5  
 BDE .5139 BRA .6410 BC3 1.2003 FSP 1947 S61 1206.7 S62 935.8 THA 103.85 EL1 32.1 EL2 8.8 ALF 44.64

LAUNCH DATE AUG 24 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.976 GAL 4.93 AZL 88.51 HCA 121.82 SMA 198.82 ECC .25339 INC 1.4898 V1 29.459  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.388 GAP 10.04 AZP 90.79 TAL 24.74 TAP 146.56 RCA 148.44 APO 249.20 V2 23.297  
 RC 192.165 GL 10.38 GP -15.88 ZAL 47.48 ZAP 126.65 ETS 194.12 ZAE 158.49 ETE 234.24 ZAC 68.06 ETC 283.69 LVI -2.13

DISTANCE 401.067 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.462 VHL 4.739 DLA 16.36 RAL 11.81 RAD 6643.9 VEL 11.935 PTH 6.94 VHP 2.868 DPA -.13 RAP 43.92 ECC 1.3697  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 50 3491.33 -46.12 127.32 248.11 103.29 9 53 2 2491.3 -35.87 98.07  
 60.00 9 15 43 3435.74 -39.68 123.93 249.73 97.63 10 12 59 2435.7 -32.39 95.45  
 70.00 9 46 28 3345.24 -34.02 117.28 250.40 93.24 10 42 13 2345.2 -29.16 89.64  
 80.00 10 34 21 3195.19 -29.86 106.05 250.55 90.26 11 27 36 2195.2 -26.72 79.07  
 90.00 11 46 33 2962.12 -28.27 88.92 250.54 89.15 12 35 53 1962.1 -25.77 62.18  
 100.00 13 17 13 2669.66 -29.86 67.42 250.55 90.26 14 1 42 1669.7 -26.72 40.44  
 110.00 14 45 54 2392.06 -34.02 46.20 250.40 93.24 15 25 46 1392.1 -29.16 18.56

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3361 TRA -.6544 TC3 .2557 BAU .3717 SGT 950.6 SGR 1234.9 S63 1206.0 ST 23.8 SR 22.8 SS 24.5  
 RDE -.3754 RRA -.0271 RC3-1.2111 FAU .36801 RRT -.0559 RRF .8559 RTF -.0645 CRT .8620 CRS .7745 CST .4007  
 FDE 1.3169 FRA-2.9180 FC-14.1066 BSP 1899 SGB 1558.4 R23 -.0515 R13 .8545 LSA 36.3 MSA 18.8 SSA 3.5  
 BDE .5039 BRA .6550 BC3 1.2378 FSP 2025 S61 1237.7 S62 947.0 THA 95.96 EL1 31.8 EL2 8.6 ALF 43.54

LAUNCH DATE AUG 24 1973      FLIGHT TIME 178.00      ARRIVAL DATE FEB 18 1974

DISTANCE 404.849      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.965 GAL 4.92 AZL 88.47 HCA 122.80 SMA 198.60 ECC .25255 INC 1.5329 V1 29.459  
 RP 236.29 LAP 1.29 LOP 93.49 VP 21.332 GAP 9.77 AZP 90.83 TAL 24.75 TAP 147.55 RCA 148.44 APO 248.76 VE 23.261  
 RC 195.134 GL 10.70 GP -16.31 ZAL 47.30 ZAP 125.09 ETS 193.77 ZAE 137.18 ETE 231.36 ZAC 67.76 ETC 283.79 LVI -1.87

PLANETOCENTRIC CONIC  
 C3 22.385 VHL 4.731 DLA 16.64 RAL 11.65 RAD 6643.9 VEL 11.932 PTH 6.94 VHP 2.620 DPA -.72 RAP 43.52 ECC 1.3684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 53 2 3498.27 -46.19 127.77 248.13 102.99 9 51 18 2498.3 -36.05 98.40  
 60.00 9 13 32 3441.68 -39.75 124.43 249.70 97.29 10 10 54 2441.7 -32.56 95.86  
 70.00 9 43 49 3352.53 -34.04 117.85 250.34 92.90 10 39 42 2352.5 -29.32 90.15  
 80.00 10 31 13 3203.98 -29.66 106.71 250.46 89.91 11 24 37 2204.0 -26.86 79.68  
 90.00 11 43 12 2971.66 -28.26 89.61 250.44 88.80 12 32 44 1971.7 -25.90 62.85  
 100.00 13 14 5 2678.45 -29.86 68.07 250.46 89.91 13 58 44 1678.5 -26.86 41.05  
 110.00 14 43 16 2399.35 -34.04 46.76 250.34 92.90 15 23 15 1399.3 -29.32 19.07

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 949.1 SGR 1280.8 SGB 1250.7      ST 23.7 SR 22.1 SS 25.4  
 RRT .0071 RRF .8685 RTF .0084      CRT .8610 CRS .7664 CST .3901  
 SGB 1594.0 R23 .0052 R13 .8685      LSA 36.2 MSA 19.3 SBA 3.4  
 SGI 1280.7 SGT 949.1 THA 80.34      EL1 31.3 EL2 8.5 ALP 42.72

DIFFERENTIAL CORRECTIONS  
 TDE -.3308 TRA -.6861 TC3 .1876 BAU .3841  
 RDE -.3637 RRA -.0427 RC3-1.2695 FAU .37840  
 FDE 1.3943 FRA-3.0547 FC-14.6347 BSP 1941  
 BDE .4916 BRA .6675 BC3 1.2833 FSP 2089

LAUNCH DATE AUG 24 1973      FLIGHT TIME 180.00      ARRIVAL DATE FEB 20 1974

DISTANCE 408.632      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.955 GAL 4.90 AZL 88.42 HCA 123.77 SMA 198.40 ECC .25177 INC 1.5768 V1 29.459  
 RP 236.63 LAP 1.31 LOP 94.46 VP 21.278 GAP 9.50 AZP 90.88 TAL 24.78 TAP 148.52 RCA 148.45 APO 248.35 VE 23.226  
 RC 198.104 GL 11.03 GP -16.74 ZAL 47.54 ZAP 123.52 ETS 193.40 ZAE 135.80 ETE 228.75 ZAC 67.45 ETC 283.89 LVI -1.61

PLANETOCENTRIC CONIC  
 C3 22.312 VHL 4.724 DLA 16.93 RAL 11.50 RAD 6643.9 VEL 11.929 PTH 6.93 VHP 2.774 DPA -1.32 RAP 43.12 ECC 1.3672  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 13 3501.50 -46.27 126.25 248.18 102.59 9 49 35 2501.5 -36.25 98.74  
 60.00 9 11 20 3447.96 -39.80 124.96 249.70 96.94 10 8 48 2448.0 -32.75 96.29  
 70.00 9 41 8 3360.24 -34.07 118.45 250.29 92.55 10 37 8 2360.2 -29.48 90.69  
 80.00 10 28 1 3213.28 -29.85 107.40 250.39 89.55 11 21 35 2213.3 -27.00 80.34  
 90.00 11 39 45 2981.77 -28.24 90.35 250.35 88.43 12 29 26 1981.8 -26.04 63.56  
 100.00 13 10 53 2687.75 -29.85 68.77 250.39 89.55 13 55 41 1687.8 -27.00 41.70  
 110.00 14 40 34 2407.06 -34.07 47.36 250.29 92.55 15 20 41 1407.1 -29.48 19.61

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 964.5 SGR 1324.2 SGB 1290.8      ST 24.0 SR 21.3 SS 26.7  
 RRT .0892 RRF .8793 RTF .0971      CRT .8616 CRS .7704 CST .3942  
 SGB 1638.2 R23 .0668 R13 .8770      LSA 36.6 MSA 19.6 SBA 3.4  
 SGI 1330.0 SGT 956.4 THA 82.27      EL1 31.0 EL2 8.4 ALP 41.01

DIFFERENTIAL CORRECTIONS  
 TDE -.3323 TRA -.6870 TC3 .1007 BAU .3966  
 RDE -.3493 RRA -.0565 RC3-1.3258 FAU .38945  
 FDE 1.3020 FRA-3.1622 FC-15.1115 BSP 2040  
 BDE .4821 BRA .6693 BC3 1.3297 FSP 2184

LAUNCH DATE AUG 24 1973      FLIGHT TIME 182.00      ARRIVAL DATE FEB 22 1974

DISTANCE 412.417      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.946 GAL 4.89 AZL 88.38 HCA 124.73 SMA 198.22 ECC .25104 INC 1.6216 V1 29.459  
 RP 236.98 LAP 1.33 LOP 95.43 VP 21.226 GAP 9.24 AZP 90.92 TAL 24.75 TAP 149.48 RCA 148.46 APO 247.98 VE 23.191  
 RC 201.073 GL 11.36 GP -17.16 ZAL 47.59 ZAP 121.94 ETS 193.02 ZAE 134.36 ETE 226.35 ZAC 67.14 ETC 283.99 LVI -1.33

PLANETOCENTRIC CONIC  
 C3 22.243 VHL 4.716 DLA 17.23 RAL 11.35 RAD 6643.8 VEL 11.926 PTH 6.93 VHP 2.732 DPA -1.94 RAP 42.70 ECC 1.3661  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 23 3507.01 -46.35 128.76 248.25 102.20 9 47 50 2507.0 -36.45 99.11  
 60.00 9 9 5 3454.57 -39.85 125.51 249.72 96.57 10 6 40 2454.6 -32.93 96.75  
 70.00 9 38 22 3368.35 -34.09 119.08 250.27 92.10 10 34 31 2368.4 -29.65 91.26  
 80.00 10 24 44 3223.08 -29.85 108.12 250.33 89.17 11 18 27 2223.1 -27.16 81.02  
 90.00 11 36 11 2992.42 -28.22 91.13 250.28 88.04 12 26 3 1992.4 -26.16 64.31  
 100.00 13 7 35 2697.55 -29.85 69.49 250.33 89.17 13 52 33 1697.5 -27.16 42.39  
 110.00 14 37 49 2415.17 -34.09 48.00 250.27 92.10 15 18 4 1415.2 -29.65 20.18

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 982.5 SGR 1371.4 SGB 1332.3      ST 24.1 SR 20.5 SS 27.8  
 RRT .1869 RRF .8897 RTF .1510      CRT .8614 CRS .7672 CST .3894  
 SGB 1687.1 R23 .1078 R13 .8837      LSA 36.7 MSA 20.3 SBA 3.3  
 SGI 1390.4 SGT 955.6 THA 76.91      EL1 30.6 EL2 8.2 ALP 38.82

DIFFERENTIAL CORRECTIONS  
 TDE -.3296 TRA -.7053 TC3 .0160 BAU .4119  
 RDE -.3331 RRA -.0716 RC3-1.3850 FAU .40084  
 FDE 1.6023 FRA-3.2812 FC-15.6012 BSP 2129  
 BDE .4700 BRA .7089 BC3 1.3651 FSP 2260

LAUNCH DATE AUG 24 1973      FLIGHT TIME 184.00      ARRIVAL DATE FEB 24 1974

DISTANCE 416.204      EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.937 GAL 4.88 AZL 88.33 HCA 125.69 SMA 198.05 ECC .25036 INC 1.6673 V1 29.459  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.175 GAP 8.98 AZP 90.97 TAL 24.73 TAP 150.43 RCA 148.47 APO 247.64 VE 23.157  
 RC 204.040 GL 11.70 GP -17.63 ZAL 47.66 ZAP 120.35 ETS 192.63 ZAE 132.88 ETE 224.15 ZAC 66.84 ETC 284.09 LVI -1.08

PLANETOCENTRIC CONIC  
 C3 22.179 VHL 4.710 DLA 17.54 RAL 11.22 RAD 6643.8 VEL 11.924 PTH 6.93 VHP 2.692 DPA -2.57 RAP 42.28 ECC 1.3650  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 32 3512.81 -46.44 129.29 248.34 101.80 9 46 5 2512.8 -36.67 99.50  
 60.00 9 6 48 3461.52 -39.91 126.09 249.76 96.17 10 4 30 2461.5 -33.13 97.23  
 70.00 9 35 33 3376.88 -34.11 119.74 250.28 91.78 10 31 50 2376.9 -29.83 91.86  
 80.00 10 21 20 3233.39 -29.83 108.89 250.29 88.78 11 15 13 2233.4 -27.31 81.75  
 90.00 11 32 30 3003.65 -28.19 91.95 250.23 87.63 12 22 34 2003.7 -26.33 65.10  
 100.00 13 4 12 2707.87 -29.83 70.26 250.29 88.78 13 49 20 1707.9 -27.31 45.12  
 110.00 14 34 59 2423.70 -34.11 48.66 250.26 91.78 15 15 23 1423.7 -29.83 20.78

MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 SGT 1008.4 SGR 1420.3 SGB 1372.7      ST 24.2 SR 19.7 SS 29.0  
 RRT .2450 RRF .8991 RTF .2639      CRT .8609 CRS .7623 CST .3824  
 SGB 1741.8 R23 .1373 R13 .8897      LSA 36.9 MSA 20.9 SBA 3.3  
 SGI 1458.8 SGT 951.9 THA 72.48      EL1 30.1 EL2 8.0 ALP 38.18

DIFFERENTIAL CORRECTIONS  
 TDE -.3257 TRA -.7247 TC3 -.0731 BAU .4291  
 RDE -.3202 RRA -.0871 RC3-1.4432 FAU .41191  
 FDE 1.7080 FRA-3.3971 FC-16.0781 BSP 2236  
 BDE .4567 BRA .7299 BC3 1.4471 FSP 2338

LAUNCH DATE AUG 24 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.929 GAL 4.86 AZL 88.29 HCA 126.68 SMA 197.90 ECC .24973 INC 1.7140 V1 29.459  
 RP 237.65 LAP 1.38 LOP 97.36 VP 21.126 GAP 8.72 AZP 91.02 TAL 24.71 TAP 151.36 RCA 148.48 APO 247.32 V2 23.123  
 RC 207.005 GL 12.04 GP -18.08 ZAL 47.74 ZAP 118.75 ETS 192.23 ZAE 151.35 ETE 222.13 ZAC 66.53 ETC 284.20 LVI -.81

DISTANCE 419.992 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.120 VHL 4.703 DLA 17.87 RAL 11.09 RAD 6643.6 VEL 11.921 PTH 6.93 VHP 2.655 DPA -3.21 RAP 41.84 ECC 1.3640  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 40 3518.91 -46.52 129.86 248.46 101.37 9 44 19 2518.9 -36.89 99.91  
 60.00 9 4 29 3488.82 -39.96 126.71 249.82 95.76 10 2 17 2468.8 -33.33 97.74  
 70.00 9 32 39 3385.83 -34.13 120.44 250.27 91.37 10 29 5 2385.8 -30.01 92.49  
 80.00 10 17 50 3244.26 -29.82 109.70 250.26 88.34 11 11 54 2244.3 -27.47 82.52  
 90.00 11 28 42 3015.49 -28.15 92.81 250.19 87.20 12 18 58 2015.5 -26.47 65.93  
 100.00 13 0 42 2718.73 -29.82 71.07 250.26 88.34 13 46 1 1718.7 -27.47 43.89  
 110.00 14 32 6 2432.66 -34.13 49.36 250.27 91.37 15 12 39 1432.7 -30.01 21.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3213 TRA -.7459 TC3 -.1672 BAU .4483 SGT 1043.7 SGR 1470.9 SG3 1412.3 ST 24.2 SR 16.8 SS 30.2  
 RDE -.3046 RRA -.1028 RC3-1.5067 FAU .42269 RRT .3216 RRF .9077 RTF .3441 CRT .8604 CRS .7561 CST .3736  
 FDE 1.8130 FRA-3.5083 FC-16.5434 BSP 2354 SGB 1803.6 R23 .1587 R13 .8954 LSA 37.2 MSA 21.4 SSA 3.2  
 BDE .4427 BRA .7529 BC3 1.5159 FSP 2412 SG1 1534.9 SG2 947.0 THA 68.70 EL1 29.7 EL2 7.8 ALF 36.64

LAUNCH DATE AUG 24 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.922 GAL 4.85 AZL 88.24 HCA 127.61 SMA 197.77 ECC .24915 INC 1.7618 V1 29.459  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.078 GAP 8.46 AZP 91.08 TAL 24.67 TAP 152.26 RCA 148.49 APO 247.04 V2 23.090  
 RC 209.964 GL 12.40 GP -18.53 ZAL 47.84 ZAP 117.15 ETS 191.81 ZAE 149.78 ETE 220.26 ZAC 66.22 ETC 284.30 LVI -.53

DISTANCE 423.782 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.064 VHL 4.697 DLA 18.20 RAL 10.97 RAD 6643.7 VEL 11.919 PTH 6.93 VHP 2.621 DPA -3.85 RAP 41.40 ECC 1.3831  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 46 3525.30 -46.60 130.45 248.61 100.92 9 42 31 2525.3 -37.12 100.34  
 60.00 9 2 6 3476.47 -40.01 127.35 249.90 95.33 10 0 2 2476.5 -33.55 98.28  
 70.00 9 29 41 3395.26 -34.14 121.18 250.30 90.94 10 26 16 2395.3 -30.20 93.16  
 80.00 10 14 13 3255.68 -29.79 110.55 250.25 87.89 11 8 29 2255.7 -27.63 83.33  
 90.00 11 24 45 3027.97 -28.11 93.72 250.16 86.75 12 13 13 2028.0 -26.62 66.81  
 100.00 12 57 9 2730.15 -29.79 71.91 250.25 87.89 13 42 35 1730.2 -27.63 44.70  
 110.00 14 29 7 2442.08 -34.14 50.10 250.30 90.94 15 9 49 1442.1 -30.20 22.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3155 TRA -.7677 TC3 -.2651 BAU .4695 SGT 1087.1 SGR 1523.3 SG3 1451.0 ST 24.3 SR 17.9 SS 31.4  
 RDE -.2884 RRA -.1190 RC3-1.5693 FAU .43315 RRT .3945 RRF .9156 RTF .4194 CRT .8602 CRS .7469 CST .3616  
 FDE 1.9215 FRA-3.6199 FC-16.9953 BSP 2483 SGB 1871.4 R23 .1728 R13 .9014 LSA 37.4 MSA 21.9 SSA 3.2  
 BDE .4274 BRA .7768 BC3 1.5915 FSP 2479 SG1 1617.9 SG2 940.5 THA 65.54 EL1 29.2 EL2 7.6 ALF 35.08

LAUNCH DATE AUG 24 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.916 GAL 4.83 AZL 88.19 HCA 128.57 SMA 197.84 ECC .24860 INC 1.8106 V1 29.459  
 RP 238.30 LAP 1.42 LOP 99.27 VP 21.032 GAP 8.20 AZP 91.13 TAL 24.62 TAP 153.19 RCA 148.51 APO 246.78 V2 23.056  
 RC 212.919 GL 12.76 GP -18.99 ZAL 47.95 ZAP 115.55 ETS 191.38 ZAE 148.18 ETE 218.53 ZAC 65.91 ETC 284.40 LVI -.25

DISTANCE 427.573 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.013 VHL 4.692 DLA 18.55 RAL 10.85 RAD 6643.7 VEL 11.917 PTH 6.92 VHP 2.590 DPA -4.51 RAP 40.96 ECC 1.3623  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 50 3532.01 -46.69 131.08 248.78 100.44 9 40 42 2532.0 -37.37 100.80  
 60.00 8 59 40 3484.50 -40.06 128.03 250.00 94.87 9 57 45 2484.5 -33.76 98.83  
 70.00 9 26 37 3403.13 -34.15 121.99 250.35 90.48 10 23 22 2403.1 -30.39 93.87  
 80.00 10 10 28 3267.70 -29.78 111.44 250.25 87.43 11 4 56 2267.7 -27.79 84.19  
 90.00 11 20 40 3041.12 -28.05 94.68 250.15 86.27 12 11 21 2041.1 -26.77 67.75  
 100.00 12 53 20 2742.18 -29.76 72.81 250.25 87.43 13 39 2 1742.2 -27.79 45.55  
 110.00 14 26 4 2451.95 -34.15 50.87 250.35 90.48 15 6 56 1452.0 -30.39 22.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3084 TRA -.7906 TC3 -.3671 BAU .4924 SGT 1139.1 SGR 1576.9 SG3 1487.9 ST 24.3 SR 16.9 SS 32.6  
 RDE -.2716 RRA -.1356 RC3-1.6324 FAU .44307 RRT .4623 RRF .9228 RTF .4587 CRT .8602 CRS .7349 CST .3467  
 FDE 2.0320 FRA-3.7275 FC-17.4251 BSP 2627 SGB 1945.3 R23 .1822 R13 .9074 LSA 37.8 MSA 22.4 SSA 3.1  
 BDE .4110 BRA .8021 BC3 1.6731 FSP 2543 SG1 1706.9 SG2 933.2 THA 62.80 EL1 28.7 EL2 7.3 ALF 33.48

LAUNCH DATE AUG 24 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.910 GAL 4.81 AZL 88.14 HCA 129.52 SMA 197.53 ECC .24810 INC 1.8606 V1 29.459  
 RP 238.63 LAP 1.44 LOP 100.22 VP 20.987 GAP 7.94 AZP 91.18 TAL 24.57 TAP 154.09 RCA 148.52 APO 246.54 V2 23.024  
 RC 215.868 GL 13.13 GP -19.45 ZAL 48.08 ZAP 113.94 ETS 190.93 ZAE 146.55 ETE 216.91 ZAC 65.60 ETC 284.51 LVI .04

DISTANCE 431.365 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 21.967 VHL 4.687 DLA 18.91 RAL 10.74 RAD 6643.7 VEL 11.915 PTH 6.92 VHP 2.561 DPA -5.17 RAP 40.51 ECC 1.3615  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 51 3539.02 -46.77 131.73 248.97 99.94 9 38 50 2539.0 -37.62 101.26  
 60.00 8 57 10 3492.90 -40.10 128.74 250.12 94.39 9 55 23 2492.9 -33.99 99.45  
 70.00 9 23 28 3415.49 -34.15 122.76 250.41 90.00 10 20 23 2415.5 -30.58 94.61  
 80.00 10 6 35 3280.35 -29.71 112.38 250.27 86.93 11 1 15 2280.3 -27.96 85.09  
 90.00 11 16 24 3054.98 -27.99 95.69 250.14 85.77 12 7 19 2055.0 -26.93 68.73  
 100.00 12 49 27 2754.82 -29.71 73.74 250.27 86.93 13 35 21 1754.8 -27.96 46.48  
 110.00 14 22 54 2462.31 -34.15 51.68 250.41 90.00 15 3 57 1462.3 -30.58 23.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2992 TRA -.8137 TC3 -.4713 BAU .5173 SGT 1197.8 SGR 1633.2 SG3 1524.4 ST 24.2 SR 16.0 SS 33.7  
 RDE -.2547 RRA -.1531 RC3-1.6972 FAU .45283 RRT .5239 RRF .9295 RTF .5513 CRT .8603 CRS .7175 CST .3255  
 FDE 2.1362 FRA-3.8383 FC-17.8466 BSP 2781 SGB 2025.3 R23 .1865 R13 .9137 LSA 38.0 MSA 22.9 SSA 3.0  
 BDE .3930 BRA .8280 BC3 1.7615 FSP 2595 SG1 1801.9 SG2 924.7 THA 60.51 EL1 28.1 EL2 7.0 ALF 31.93

LAUNCH DATE AUG 24 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.909 GAL 4.79 AZL 88.09 HCA 130.47 SMA 197.44 ECC .24784 INC 1.9119 V1 29.489
RP 238.95 LAP 1.45 LOP 101.17 VP 20.944 GAP 7.69 AZP 91.24 TAL 24.50 TAP 194.98 RCA 148.54 APO 248.33 VE 22.991
RC 218.810 GL 13.31 GP -19.92 ZAL 48.22 ZAP 112.33 ETS 190.47 ZAE 144.69 ETE 215.40 ZAC 65.29 ETC 284.61 LVI .33

PLANETOCENTRIC CONIC

C3 21.924 VHL 4.682 DLA 19.28 RAL 10.64 RAD 6643.7 VEL 11.913 PTH 6.92 VHP 2.535 DPA -5.84 RAP 40.05 ECC 1.3608
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 37 50 3946.36 -46.86 132.42 249.18 89.42 9 36 57 2546.4 -37.88 101.79
60.00 8 54 37 3501.69 -40.14 129.48 250.26 93.89 9 52 59 2501.7 -34.22 100.06
70.00 9 20 12 3426.34 -34.15 123.61 250.48 89.50 10 17 18 2426.3 -30.79 98.39
80.00 10 2 32 3293.65 -29.66 113.36 250.30 86.42 10 57 26 2293.6 -28.13 86.04
90.00 11 11 57 3069.98 -27.91 96.75 250.15 85.25 12 3 6 2069.6 -27.08 69.77
100.00 12 48 24 2768.12 -29.66 74.73 250.30 86.42 13 31 32 1768.1 -28.13 47.41
110.00 14 19 38 2473.16 -34.15 52.52 250.48 89.50 15 0 52 1473.2 -30.79 24.31

DIFFERENTIAL CORRECTIONS

TDE -.2885 TRA -.8355 TC3 -.5748 BAU .5442 8GT 1259.3 SGR 1693.7 8G3 1561.7 8T 23.9 SR 15.2 88 34.7
RDE -.2385 RRA -.1722 RC3-1.7655 FAU .46286 RRT .5786 RRF .9358 RTF .6070 CRT .8603 CRS .6924 CST .2943
FDE 2.2265 FRA-3.9598 FC-18.2771 B8P 2941 8GB 2110.6 R23 .1851 R13 .9208 LSA 38.2 M8A 23.3 88A 3.0
BDE .3728 BRA .8531 BC3 1.6567 F8P 2623 8G1 1902.1 8G2 914.6 THA 58.73 EL1 27.5 EL2 6.7 ALF 30.86

LAUNCH DATE AUG 24 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.901 GAL 4.77 AZL 88.04 HCA 131.42 SMA 197.35 ECC .24722 INC 1.9645 V1 29.459
RP 239.26 LAP 1.47 LOP 102.12 VP 20.902 GAP 7.44 AZP 91.30 TAL 24.43 TAP 155.85 RCA 148.56 APO 246.14 V2 22.980
RC 221.744 GL 13.90 GP -20.38 ZAL 48.37 ZAP 110.73 ETS 190.00 ZAE 143.22 ETE 214.00 ZAC 64.98 ETC 284.72 LVI .62

PLANETOCENTRIC CONIC

C3 21.885 VHL 4.678 DLA 19.67 RAL 10.54 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 2.512 DPA -6.51 RAP 39.61 ECC 1.3602
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 35 47 3554.06 -46.94 133.15 249.42 98.87 9 35 1 2554.1 -38.15 102.33
60.00 8 51 59 3510.92 -40.18 130.27 250.42 93.36 9 50 30 2510.9 -34.46 100.74
70.00 9 16 49 3437.77 -34.14 124.50 250.58 88.97 10 14 7 2437.8 -30.99 96.22
80.00 9 58 19 3307.70 -29.60 114.40 250.34 85.88 10 53 27 2307.7 -28.30 87.05
90.00 11 7 17 3085.06 -27.82 97.87 250.17 84.69 11 58 42 2085.1 -27.23 70.88
100.00 12 41 11 2782.17 -29.60 75.77 250.34 85.88 13 27 33 1782.2 -28.30 48.42
110.00 14 16 16 2484.59 -34.14 53.42 250.58 88.97 14 57 40 1484.6 -30.99 25.14

DIFFERENTIAL CORRECTIONS

TDE -.2840 TRA -.8702 TC3 -.7040 BAU .5716 8GT 1354.9 SGR 1741.7 8G3 1585.3 8T 24.3 SR 13.9 88 36.5
RDE -.2144 RRA -.1847 RC3-1.8222 FAU .46876 RRT .6298 RRF .9405 RTF .6552 CRT .8667 CRS .6781 CST .2943
FDE 2.3991 FRA-3.9986 FC-18.5434 B8P 3141 8GB 2206.6 R23 .1984 R13 .9229 LSA 39.3 M8A 23.7 88A 2.9
BDE .3559 BRA .8896 BC3 1.9535 F8P 2734 8G1 2009.2 8G2 912.3 THA 55.97 EL1 27.3 EL2 6.2 ALF 27.81

LAUNCH DATE AUG 24 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.897 GAL 4.75 AZL 87.98 HCA 132.36 SMA 197.28 ECC .24683 INC 2.0186 V1 29.459
RP 239.57 LAP 1.49 LOP 103.07 VP 20.881 GAP 7.19 AZP 91.36 TAL 24.35 TAP 156.71 RCA 148.58 APO 245.97 V2 22.928
RC 224.672 GL 14.30 GP -20.86 ZAL 48.54 ZAP 109.14 ETS 189.91 ZAE 141.53 ETE 212.87 ZAC 64.67 ETC 284.82 LVI .92

PLANETOCENTRIC CONIC

C3 21.851 VHL 4.675 DLA 20.07 RAL 10.45 RAD 6643.7 VEL 11.910 PTH 6.92 VHP 2.491 DPA -7.19 RAP 39.16 ECC 1.3596
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 33 40 3562.10 -47.02 133.91 249.69 98.29 9 33 2 2562.1 -38.43 102.90
60.00 8 49 16 3520.96 -40.22 131.08 250.60 92.80 9 47 56 2520.6 -34.71 101.44
70.00 9 13 19 3449.72 -34.12 125.43 250.68 88.42 10 10 49 2449.7 -31.20 97.09
80.00 9 53 55 3322.47 -29.52 115.49 250.38 85.31 10 49 17 2322.5 -28.47 88.12
90.00 11 2 24 3101.38 -27.71 99.05 250.19 84.11 11 54 5 2101.4 -27.38 72.05
100.00 12 36 48 2796.95 -29.52 76.86 250.38 85.31 13 23 23 1796.9 -28.47 49.48
110.00 14 12 45 2496.54 -34.12 54.35 250.68 88.42 14 54 22 1496.5 -31.20 26.01

DIFFERENTIAL CORRECTIONS

TDE -.2731 TRA -.8988 TC3 -.8235 BAU .8011 8GT 1442.3 SGR 1798.0 8G3 1613.2 8T 24.3 SR 12.8 88 37.9
RDE -.1937 RRA -.2014 RC3-1.8898 FAU .47594 RRT .6728 RRF .9454 RTF .671 CRT .8722 CRS .6453 CST .2701
FDE 2.5249 FRA-4.0743 FC-18.8568 B8P 3335 8GB 2305.0 R23 .2000 R13 .9277 LSA 40.0 M8A 24.1 88A 2.8
BDE .3348 BRA .9211 BC3 2.0978 F8P 2787 8G1 2120.0 8G2 903.0 THA 54.14 EL1 26.9 EL2 5.7 ALF 28.88

LAUNCH DATE AUG 24 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.894 GAL 4.73 AZL 87.93 HCA 133.31 SMA 197.21 ECC .24647 INC 2.0741 V1 29.459
RP 239.88 LAP 1.51 LOP 104.01 VP 20.822 GAP 6.95 AZP 91.42 TAL 24.28 TAP 157.58 RCA 148.61 APO 245.82 V2 22.897
RC 227.591 GL 14.71 GP -21.33 ZAL 48.72 ZAP 107.55 ETS 189.01 ZAE 139.83 ETE 211.41 ZAC 64.36 ETC 284.92 LVI 1.23

PLANETOCENTRIC CONIC

C3 21.821 VHL 4.671 DLA 20.48 RAL 10.38 RAD 6643.6 VEL 11.909 PTH 6.92 VHP 2.472 DPA -7.87 RAP 38.71 ECC 1.3591
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 31 30 3570.49 -47.10 134.70 249.97 97.68 9 31 0 2570.5 -38.72 103.49
60.00 8 46 28 3530.64 -40.25 131.94 250.79 92.22 9 45 18 2530.6 -34.97 102.17
70.00 9 9 41 3462.27 -34.09 128.41 250.80 87.84 10 7 23 2462.3 -31.41 98.00
80.00 9 49 18 3338.05 -29.43 116.64 250.44 84.71 10 44 56 2338.1 -28.64 89.24
90.00 10 57 15 3118.65 -27.58 100.30 250.22 83.50 11 49 14 2118.7 -27.52 73.30
100.00 12 32 10 2812.53 -29.43 78.01 250.44 84.71 13 19 2 1812.5 -28.64 50.61
110.00 14 9 7 2509.09 -34.09 55.33 250.80 87.84 14 50 56 1509.1 -31.41 26.92

DIFFERENTIAL CORRECTIONS

TDE -.2609 TRA -.9285 TC3 -.9462 BAU .6322 8GT 1536.9 SGR 1855.7 8G3 1639.2 8T 24.3 SR 11.7 88 39.2
RDE -.1724 RRA -.2184 RC3-1.9494 FAU .48255 RRT .7102 RRF .9498 RTF .7330 CRT .8806 CRS .6009 CST .2417
FDE 2.6494 FRA-4.1469 FC-19.1446 B8P 3539 8GB 2409.5 R23 .2007 R13 .9321 LSA 40.8 M8A 24.4 88A 2.8
BDE .3127 BRA .9539 BC3 2.1669 F8P 2835 8G1 2235.9 8G2 898.0 THA 52.47 EL1 26.5 EL2 5.1 ALF 29.88

LAUNCH DATE AUG 24 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC										DISTANCE 450.331										EARTH TO MARS																																																									
RL	151.25	LAL	.00	LOL	330.89	VL	32.891	GAL	4.70	AZL	87.87	HCA	134.25	SMA	197.16	ECC	.24815	INC	2.1313	V1	29.459	RP	240.18	LAP	1.33	LOP	104.95	VP	20.784	GAP	6.70	AZP	91.49	TAL	24.16	TAP	156.41	RCA	148.63	APO	245.69	V2	22.866	RC	230.502	GL	15.14	GP	-21.80	ZAL	48.92	ZAP	105.97	ETS	188.49	ZAE	138.12	ETE	210.22	ZAC	64.04	ETC	285.02	LVI	1.54												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																									
C3	21.796	VHL	4.669	DLA	20.91	RAL	10.28	RAD	8643.6	VEL	11.908	PTH	6.92	VHP	2.456	DPA	-8.95	RAP	38.27	ECC	1.3587	SGT	1837.6	SGR	1913.8	SG3	1662.7	ST	24.3	SR	10.7	SS	40.6	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8922	CR8	.5410	CST	.2095	LSA	41.7	MSA	24.7	SSA	2.7	EL1	26.1	EL2	4.5	ALF	22.12
50.00	8	29	16	3579.27	-47.18	135.54	250.28	97.04	9	28	55	2579.3	-39.02	104.12	RR	.7424	RRF	.9539	RTF	.7837	CRT	24.3	SR	10.7	SS	40.6	60.00	8	43	33	3541.19	-40.27	132.84	251.01	91.61	9	42	34	2541.2	-35.23	102.95	SG8	2518.8	R23	.2006	R13	.9363	LSA	41.7	MSA	24.7	SSA	2.7	EL1	26.1	EL2	4.5	ALF	22.12																		
70.00	9	5	53	3475.44	-34.06	127.44	250.93	87.24	10	3	48	2475.4	-31.63	98.97	SG1	2355.9	SG2	891.2	THA	50.95	EL1	26.1	EL2	4.5	ALF	22.12	80.00	9	44	27	3354.50	-29.32	117.85	250.51	84.08	10	40	22	2354.5	-28.80	90.44	SG1	2355.9	SG2	891.2	THA	50.95	EL1	26.1	EL2	4.5	ALF	22.12																								
90.00	10	51	50	3136.96	-27.43	101.62	250.26	82.85	11	44	7	2137.0	-27.66	74.62	SG1	2355.9	SG2	891.2	THA	50.95	EL1	26.1	EL2	4.5	ALF	22.12	100.00	12	27	19	2828.98	-29.32	79.22	250.51	84.08	13	14	28	1829.0	-28.80	51.60	SG1	2355.9	SG2	891.2	THA	50.95	EL1	26.1	EL2	4.5	ALF	22.12																								
110.00	14	5	19	2522.26	-34.06	56.35	250.93	87.24	14	47	21	1522.3	-31.63	27.89	SG1	2355.9	SG2	891.2	THA	50.95	EL1	26.1	EL2	4.5	ALF	22.12																																																			

LAUNCH DATE AUG 24 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC										DISTANCE 454.125										EARTH TO MARS																																																									
RL	151.25	LAL	.00	LOL	330.89	VL	32.889	GAL	4.68	AZL	87.81	HCA	135.18	SMA	197.12	ECC	.24585	INC	2.1901	V1	29.459	RP	240.48	LAP	1.54	LOP	105.89	VP	20.747	GAP	6.46	AZP	91.55	TAL	24.05	TAP	159.24	RCA	148.63	APO	245.58	V2	22.836	RC	233.405	GL	15.57	GP	-22.28	ZAL	49.13	ZAP	104.41	ETS	187.95	ZAE	136.41	ETE	209.08	ZAC	63.73	ETC	285.12	LVI	1.86												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																									
C3	21.776	VHL	4.667	DLA	21.35	RAL	10.19	RAD	8643.6	VEL	11.907	PTH	6.92	VHP	2.442	DPA	-9.24	RAP	37.84	ECC	1.3584	SGT	1743.4	SGR	1972.9	SG3	1683.8	ST	24.3	SR	9.7	SS	42.0	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.9069	CR8	.4591	CST	.1720	LSA	42.6	MSA	24.9	SSA	2.6	EL1	25.8	EL2	3.8	ALF	20.42
50.00	8	26	57	3588.43	-47.25	136.41	250.62	96.37	9	26	45	2588.4	-39.32	104.78	RR	.7703	RRF	.9576	RTF	.7901	CRT	24.3	SR	9.7	SS	42.0	60.00	8	40	33	3552.23	-40.29	133.77	251.24	90.98	9	39	45	2552.2	-35.49	103.76	SG8	2632.8	R23	.1996	R13	.9402	LSA	42.6	MSA	24.9	SSA	2.6	EL1	25.8	EL2	3.8	ALF	20.42																		
70.00	9	1	55	3489.27	-34.00	128.51	251.07	86.60	10	0	4	2489.3	-31.85	99.99	SG1	2479.8	SG2	884.5	THA	49.57	EL1	25.8	EL2	3.8	ALF	20.42	80.00	9	39	21	3371.89	-29.19	119.13	250.58	83.42	10	35	33	2371.9	-28.96	91.70	SG1	2479.8	SG2	884.5	THA	49.57	EL1	25.8	EL2	3.8	ALF	20.42																								
90.00	10	46	6	3156.41	-27.26	103.02	250.30	82.17	11	38	42	2156.4	-27.79	76.02	SG1	2479.8	SG2	884.5	THA	49.57	EL1	25.8	EL2	3.8	ALF	20.42	100.00	12	22	13	2846.37	-29.19	80.49	250.58	83.42	13	9	39	1846.4	-28.96	53.07	SG1	2479.8	SG2	884.5	THA	49.57	EL1	25.8	EL2	3.8	ALF	20.42																								
110.00	14	1	22	2536.09	-34.00	57.43	251.07	86.60	14	43	38	1536.1	-31.85	28.91	SG1	2479.8	SG2	884.5	THA	49.57	EL1	25.8	EL2	3.8	ALF	20.42																																																			

LAUNCH DATE AUG 24 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC										DISTANCE 457.920										EARTH TO MARS																																																									
RL	151.25	LAL	.00	LOL	330.89	VL	32.887	GAL	4.65	AZL	87.75	HCA	136.12	SMA	197.08	ECC	.24558	INC	2.2508	V1	29.459	RP	240.78	LAP	1.56	LOP	106.83	VP	20.712	GAP	6.21	AZP	91.62	TAL	23.94	TAP	160.06	RCA	148.68	APO	245.48	V2	22.807	RC	236.297	GL	16.02	GP	-22.76	ZAL	49.35	ZAP	102.86	ETS	187.41	ZAE	134.69	ETE	207.99	ZAC	63.41	ETC	285.22	LVI	2.19												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																									
C3	21.762	VHL	4.665	DLA	21.81	RAL	10.11	RAD	8643.6	VEL	11.906	PTH	6.91	VHP	2.430	DPA	-9.92	RAP	37.41	ECC	1.3581	SGT	1851.8	SGR	2035.2	SG3	1704.3	ST	24.2	SR	8.9	SS	43.2	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.9229	CR8	.3492	CST	.1248	LSA	43.5	MSA	25.1	SSA	2.6	EL1	25.6	EL2	3.2	ALF	18.08
50.00	8	24	34	3598.01	-47.32	137.33	250.97	95.67	9	24	32	2598.0	-39.64	105.48	RR	.7949	RRF	.9611	RTF	.839	CRT	24.2	SR	8.9	SS	43.2	60.00	8	37	25	3563.78	-40.30	134.78	251.48	90.31	9	36	48	2563.8	-35.76	104.62	SG8	2751.6	R23	.1987	R13	.9443	LSA	43.5	MSA	25.1	SSA	2.6	EL1	25.6	EL2	3.2	ALF	18.08																		
70.00	8	57	47	3503.80	-33.94	129.64	251.22	85.94	9	56	10	2503.0	-32.06	101.06	SG1	2608.1	SG2	876.8	THA	48.39	EL1	25.6	EL2	3.2	ALF	18.08	80.00	9	33	58	3390.31	-29.04	120.47	250.85	82.73	10	30	28	2390.3	-29.12	93.05	SG1	2608.1	SG2	876.8	THA	48.39	EL1	25.6	EL2	3.2	ALF	18.08																								
90.00	10	40	0	3177.12	-27.06	104.50	250.34	81.46	11	32	57	2177.1	-27.92	77.53	SG1	2608.1	SG2	876.8	THA	48.39	EL1	25.6	EL2	3.2	ALF	18.08	100.00	12	16	50	2864.78	-29.04	81.84	250.65	82.73	13	4	35	1864.8	-29.12	54.42	SG1	2608.1	SG2	876.8	THA	48.39	EL1	25.6	EL2	3.2	ALF	18.08																								
110.00	13	57	13	2550.62	-33.94	58.56	251.22	85.94	14	39	43	1550.6	-32.06	29.98	SG1	2608.1	SG2	876.8	THA	48.39	EL1	25.6	EL2	3.2	ALF	18.08																																																			

LAUNCH DATE AUG 24 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC										DISTANCE 461.713										EARTH TO MARS																																																									
RL	151.25	LAL	.00	LOL	330.89	VL	32.888	GAL	4.63	AZL	87.69	HCA	137.05	SMA	197.05	ECC	.24534	INC	2.3133	V1	29.459	RP	241.07	LAP	1.58	LOP	107.76	VP	20.677	GAP	5.97	AZP	91.69	TAL	23.82	TAP	160.87	RCA	148.71	APO	245.40	V2	22.777	RC	239.179	GL	16.48	GP	-23.25	ZAL	49.59	ZAP	101.33	ETS	186.85	ZAE	132.98	ETE	206.95	ZAC	63.08	ETC	285.32	LVI	2.53												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																									
C3	21.752	VHL	4.664	DLA	22.28	RAL	10.03	RAD	8643.6	VEL	11.906	PTH	6.91	VHP	2.421	DPA	-10.81	RAP	37.00	ECC	1.3580	SGT	1974.8	SGR	2088.9	SG3	1715.1	ST	24.4	SR	8.0	SS	44.9	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.9391	CR8	.1954	CST	.0898	LSA	45.0	MSA	25.3	SSA	2.3	EL1	25.3	EL2	2.6	ALF	17.33
50.00	8	22	5	3608.02	-47.38	138.29	251.36	94.93	9	22	13	2608.0	-39.97	106.22	RR	.8150	RRF	.9639	RTF	.8314	CRT	24.4	SR	8.0	SS	44.9	60.00	8	34	9	3575.89	-40.30	135.79	251.75	89.61	9	33	45	2575.9	-36.04	105.53	SG8	2874.6	R23	.1991	R13	.9465	LSA	45.0	MSA	25.3	SSA	2.3	EL1	25.3	EL2	2.6	ALF	17.33																		
70.00	8	53	26	3519.11	-33.86	130.83	251.38	85.24	9	52	5	2519.1	-32.28	102.20	SG1	2758.9	SG2	872.8	THA	46.97	EL1	25.3	EL2	2.6	ALF	17.33	80.00	9	26	15	3409.88	-28.86	121.90	250.73	82.00	10	25	5	2409.9	-29.27	94.48	SG1	2758.9	SG2	872.8	THA	46.97	EL1	25.3	EL2	2.6	ALF	17.33																								
90.00	10	33	29	3199.28	-26.83	106.08	250.38	80.70	11	26	48	2199.3	-28.03	79.14	SG1	2758.9	SG2	872.8	THA	46.97	EL1	25.3																																																							

LAUNCH DATE AUG 24 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.888 GAL 4.60 AZL 87.62 HCA 137.98 SMA 197.04 ECC .24513 INC 2.3760 V1 29.489
RP 241.36 LAP 1.59 LOP 108.70 VP 20.644 GAP 5.74 AZP 91.77 TAL 23.89 TAP 161.67 RCA 148.74 APO 245.33 V2 22.749
RC 242.049 GL 16.96 GP -23.73 ZAL 49.84 ZAP 99.02 ETS 186.27 ZAE 131.27 ETE 208.95 ZAC 62.75 ETC 285.42 LVI 2.87

DISTANCE 469.506

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.748 VHL 4.663 DLA 22.77 RAL 9.95 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 2.414 DPA -11.29 RAP 36.60 ECC 1.3579
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 19 31 3618.49 -47.44 139.29 251.76 94.16 9 19 49 2618.5 -40.30 107.00
60.00 8 30 45 3588.57 -40.29 136.87 252.02 88.88 9 30 33 2588.6 -36.32 106.49
70.00 8 46 51 3535.22 -33.78 132.08 251.55 84.51 9 47 47 2533.2 -32.50 103.41
80.00 9 22 11 3430.69 -26.66 123.41 250.81 81.23 10 19 22 2430.7 -29.42 96.01
90.00 10 26 30 3223.02 -26.55 107.76 250.41 79.90 11 20 13 2223.0 -28.13 80.87
100.00 12 5 3 2905.16 -26.66 84.78 250.81 81.23 12 53 28 1905.2 -29.42 57.38
110.00 13 46 18 2562.04 -33.78 61.00 251.55 84.51 14 31 20 1562.0 -32.50 32.33

DIFFERENTIAL CORRECTIONS

TDE -.1768 TRA-1.0921 TC3-1.6012 BAU .8054 SGT 2096.4 SCR 2147.6 SG3 1726.7 ST 24.5 SR 7.5 SB 46.3
RDE -.0502 RRA -.3028 RC3-2.2606 FAU .50311 RRT .8328 RRF .9667 RTF .8477 CRT .9413 CR8 .0032 C8T .0410
FDE 3.2936 FRA-4.3826 FC-20.0277 B8P 4682 SGB 3001.2 R23 .1982 R13 .9493 L8A 46.4 M8A 25.5 88A 2.4
BDE .1838 BRA 1.1333 BC3 2.7702 F8P 2986 SGT 2673.1 SGT 867.5 THA 45.83 EL1 25.5 EL2 2.4 ALF 16.22

LAUNCH DATE AUG 24 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.884 GAL 4.57 AZL 87.56 HCA 138.91 SMA 197.02 ECC .24494 INC 2.4449 V1 29.459
RP 241.64 LAP 1.61 LOP 109.63 VP 20.612 GAP 5.50 AZP 91.84 TAL 23.56 TAP 162.47 RCA 148.77 APO 245.28 V2 22.720
RC 244.907 GL 17.45 GP -24.22 ZAL 50.10 ZAP 98.32 ETS 185.68 ZAE 129.56 ETE 204.98 ZAC 62.42 ETC 285.31 LVI 3.22

DISTANCE 469.301

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.751 VHL 4.664 DLA 23.27 RAL 9.87 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 2.409 DPA -11.98 RAP 36.22 ECC 1.3580
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 16 50 3629.42 -47.49 140.35 252.19 93.35 9 17 19 2629.4 -40.64 107.82
60.00 8 27 11 3601.85 -40.26 138.00 252.32 88.11 9 27 13 2601.8 -36.61 107.50
70.00 8 44 2 3552.19 -33.64 133.39 251.73 83.74 9 43 15 2552.2 -32.72 104.69
80.00 9 15 42 3452.86 -28.41 125.02 250.88 80.42 10 13 15 2452.9 -29.55 97.65
90.00 10 18 59 3248.56 -26.24 109.56 250.43 79.05 11 13 7 2248.6 -28.21 82.73
100.00 11 58 34 2927.34 -28.41 86.38 250.88 80.42 12 47 21 1927.3 -29.55 59.02
110.00 13 43 29 2599.01 -33.64 62.31 251.73 83.74 14 26 48 1599.0 -32.72 33.60

DIFFERENTIAL CORRECTIONS

TDE -.1512 TRA-1.1233 TC3-1.7300 BAU .8444 SGT 2212.5 SCR 2218.9 SG3 1744.5 ST 24.5 SR 7.5 SB 47.2
RDE -.0295 RRA -.3263 RC3-2.3320 FAU .50747 RRT .8499 RRF .9696 RTF .8644 CRT .9332 CR8 -.1792 C8T -.0313
FDE 3.3573 FRA-4.4690 FC-20.1984 B8P 4897 SGB 3133.4 R23 .1913 R13 .9536 L8A 47.2 M8A 25.5 88A 2.4
BDE .1540 BRA 1.1698 BC3 2.9036 F8P 2943 SGT 3013.6 SGT 858.4 THA 45.10 EL1 25.5 EL2 2.6 ALF 16.19

LAUNCH DATE AUG 24 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.884 GAL 4.54 AZL 87.49 HCA 139.84 SMA 197.02 ECC .24477 INC 2.5142 V1 29.459
RP 241.92 LAP 1.62 LOP 110.55 VP 20.581 GAP 5.26 AZP 91.92 TAL 23.41 TAP 163.25 RCA 148.80 APO 245.25 V2 22.692
RC 247.751 GL 17.98 GP -24.71 ZAL 50.38 ZAP 98.86 ETS 185.08 ZAE 127.87 ETE 204.05 ZAC 62.08 ETC 285.61 LVI 3.58

DISTANCE 473.092

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.759 VHL 4.665 DLA 23.80 RAL 9.79 RAD 6643.6 VEL 11.906 PTH 6.91 VHP 2.406 DPA -12.67 RAP 35.85 ECC 1.3581
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 14 2 3640.89 -47.53 141.45 252.64 92.50 9 14 43 2640.9 -41.00 108.69
60.00 8 23 27 3615.82 -40.23 139.18 252.62 87.31 9 23 43 2615.8 -36.90 108.57
70.00 8 38 58 3570.18 -33.90 134.77 251.91 82.93 9 38 27 2570.2 -32.93 108.05
80.00 9 8 44 3476.71 -28.13 126.73 250.94 79.56 10 6 41 2476.7 -29.66 99.41
90.00 10 10 47 3276.36 -25.88 111.51 250.44 78.14 11 5 23 2276.4 -28.26 84.76
100.00 11 31 36 2951.19 -28.13 88.10 250.94 79.56 12 40 47 1951.2 -29.66 60.78
110.00 13 38 23 2617.00 -33.50 63.69 251.91 82.93 14 22 0 1617.0 -32.93 34.98

DIFFERENTIAL CORRECTIONS

TDE -.1311 TRA-1.1633 TC3-1.8759 BAU .8813 SGT 2351.1 SCR 2265.1 SG3 1740.7 ST 24.9 SR 7.6 SB 49.2
RDE .0058 RRA -.3387 RC3-2.3791 FAU .50527 RRT .8617 RRF .9716 RTF .8338 CRT .8753 CR8 -.4303 C8T -.0688
FDE 3.5440 FRA-4.4199 FC-20.1033 B8P 5182 SGB 3264.7 R23 .1965 R13 .9542 L8A 49.4 M8A 25.6 88A 2.3
BDE .1312 BRA 1.2111 BC3 3.0297 F8P 3019 SGT 3190.0 SGT 857.7 THA 43.76 EL1 25.8 EL2 3.5 ALF 15.17

LAUNCH DATE AUG 24 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.884 GAL 4.51 AZL 87.41 HCA 140.76 SMA 197.03 ECC .24462 INC 2.5859 V1 29.459
RP 242.19 LAP 1.64 LOP 111.48 VP 20.551 GAP 5.03 AZP 92.00 TAL 23.26 TAP 164.03 RCA 148.83 APO 245.22 V2 22.688
RC 250.980 GL 18.48 GP -25.21 ZAL 50.87 ZAP 95.42 ETS 184.47 ZAE 126.19 ETE 203.15 ZAC 61.74 ETC 285.70 LVI 3.96

DISTANCE 478.884

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.775 VHL 4.666 DLA 24.34 RAL 9.71 RAD 6643.6 VEL 11.907 PTH 6.91 VHP 2.405 DPA -13.35 RAP 35.50 ECC 1.3584
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 11 7 3652.87 -47.56 142.81 253.12 91.61 9 12 0 2652.9 -41.36 109.61
60.00 8 19 32 3630.47 -40.17 140.42 252.94 86.47 9 20 2 2630.5 -37.20 109.70
70.00 8 33 32 3589.19 -33.33 136.23 252.09 82.09 9 33 21 2589.2 -33.14 107.49
80.00 9 1 13 3502.34 -27.80 128.58 251.00 78.65 9 59 35 2502.3 -29.75 101.31
90.00 10 1 48 3306.60 -25.42 113.62 250.43 77.17 10 56 55 2306.7 -28.28 86.98
100.00 11 44 5 2976.81 -27.80 89.93 251.00 78.65 12 33 42 1976.8 -29.75 62.68
110.00 13 32 58 2636.00 -33.33 65.15 252.09 82.09 14 16 54 1636.0 -33.14 36.41

DIFFERENTIAL CORRECTIONS

TDE -.1054 TRA-1.2003 TC3-2.0147 BAU .9203 SGT 2483.7 SCR 2323.4 SG3 1742.9 ST 25.3 SR 8.2 SB 50.7
RDE .0354 RRA -.3539 RC3-2.4361 FAU .50493 RRT .8735 RRF .9737 RTF .8841 CRT .8146 CR8 -.6111 C8T -.1286
FDE 3.6698 FRA-4.4294 FC-20.0750 B8P 5438 SGB 3401.0 R23 .1958 R13 .9563 L8A 51.1 M8A 25.7 88A 2.2
BDE .1112 BRA 1.2514 BC3 3.1613 F8P 3023 SGT 3292.2 SGT 853.3 THA 42.82 EL1 26.2 EL2 4.6 ALF 15.32



LAUNCH DATE AUG 24 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.885 GAL 4.48 AZL 87.34 HCA 141.88 SMA 197.04 ECC .24450 INC 2.6804 V1 29.489  
 RP 242.46 LAP 1.68 LOP 112.40 VP 20.522 GAP 4.60 AZP 92.09 TAL 23.11 TAP 164.79 RCA 148.86 APO 245.21 V2 22.638  
 RC 253.394 GL 19.02 GP -29.72 ZAL 50.97 ZAP 94.00 ETS 183.84 ZAE 124.92 ETE 202.27 ZAC 61.38 ETC 285.79 LVI 4.34

PLANETOCENTRIC CONIC  
 C3 21.798 VHL 4.669 DLA 24.90 RAL 9.62 RAD 6643.6 VEL 11.908 PTH 6.92 VHP 2.406 DPA -14.03 RAP 39.18 ECC 1.3587  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 3 3665.42 -47.57 143.82 253.61 90.67 9 9 9 2665.4 -41.73 110.59  
 60.00 8 15 23 3645.87 -40.10 141.73 253.28 85.59 9 16 9 2645.9 -37.49 110.90  
 70.00 8 27 47 3609.35 -33.13 137.77 252.27 81.20 9 27 56 2609.4 -33.34 109.03  
 80.00 8 53 2 3530.09 -27.41 130.54 251.04 77.68 9 51 53 2530.1 -29.82 103.37  
 90.00 9 51 51 3340.15 -24.90 115.93 250.38 76.13 10 47 31 2340.2 -28.25 89.42  
 100.00 11 35 54 3004.56 -27.41 91.90 251.04 77.68 12 25 59 2004.6 -29.82 64.74  
 110.00 13 27 13 2656.17 -33.13 66.89 252.27 81.20 14 11 29 1656.2 -33.34 37.95

MID-COURSE EXECUTION ACCURACY  
 SGT 2619.0 SGR 2382.0 SG3 1742.2  
 RRT .9838 RRF .9757 RTF .8932  
 SGB 3540.2 R23 .1952 R13 .9582  
 SGI 3436.8 SGI 849.3 THA 41.93

ORBIT DETERMINATION ACCURACY  
 ST 25.7 SR 9.2 88 52.2  
 CRT .7584 CRS -.7410 CBT -.1909  
 LSA 53.0 MSA 25.7 88A 2.1  
 EL1 26.7 EL2 5.8 ALP 16.00

LAUNCH DATE AUG 24 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.886 GAL 4.45 AZL 87.26 HCA 142.60 SMA 197.05 ECC .24439 INC 2.7378 V1 29.489  
 RP 242.73 LAP 1.68 LOP 113.32 VP 20.495 GAP 4.57 AZP 92.16 TAL 22.95 TAP 165.55 RCA 148.89 APO 245.21 V2 22.812  
 RC 256.191 GL 19.58 GP -26.23 ZAL 51.29 ZAP 92.62 ETS 183.20 ZAE 122.87 ETE 201.41 ZAC 61.02 ETC 285.89 LVI 4.73

PLANETOCENTRIC CONIC  
 C3 21.830 VHL 4.672 DLA 25.48 RAL 9.54 RAD 6643.6 VEL 11.909 PTH 6.92 VHP 2.410 DPA -14.72 RAP 34.87 ECC 1.3893  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 50 3678.98 -47.56 145.10 254.13 89.69 9 6 8 2678.6 -42.11 111.62  
 60.00 8 11 1 3662.08 -40.01 143.10 253.62 84.68 9 12 3 2662.1 -37.79 112.18  
 70.00 8 21 38 3630.80 -32.90 139.40 252.45 80.26 9 22 9 2630.8 -33.32 110.68  
 80.00 8 44 5 3560.36 -26.96 132.67 251.03 76.65 9 43 25 2560.4 -29.86 105.82  
 90.00 9 40 39 3377.66 -24.86 118.50 250.29 75.00 10 36 96 2377.7 -28.17 92.16  
 100.00 11 26 57 3034.83 -26.96 94.04 251.03 76.65 12 17 31 2034.8 -29.86 66.99  
 110.00 13 21 4 2677.62 -32.90 68.32 252.45 80.26 14 5 42 1677.6 -33.32 39.59

MID-COURSE EXECUTION ACCURACY  
 SGT 2756.3 SGR 2440.0 SG3 1738.0  
 RRT .8926 RRF .9775 RTF .9008  
 SGB 3681.1 R23 .1949 R13 .9599  
 SGI 3582.5 SGI 846.2 THA 41.10

ORBIT DETERMINATION ACCURACY  
 ST 26.4 SR 10.6 88 53.7  
 CRT .7147 CRS -.8302 CBT -.2542  
 LSA 55.0 MSA 25.7 88A 2.0  
 EL1 27.3 EL2 7.1 ALP 17.17

LAUNCH DATE AUG 24 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.887 GAL 4.42 AZL 87.16 HCA 143.52 SMA 197.08 ECC .24431 INC 2.8185 V1 29.489  
 RP 242.99 LAP 1.68 LOP 114.24 VP 20.488 GAP 4.34 AZP 92.27 TAL 22.78 TAP 166.31 RCA 148.93 APO 245.22 V2 22.586  
 RC 258.972 GL 20.17 GP -26.74 ZAL 51.83 ZAP 91.26 ETS 182.55 ZAE 121.24 ETE 200.58 ZAC 60.64 ETC 285.98 LVI 5.14

PLANETOCENTRIC CONIC  
 C3 21.871 VHL 4.677 DLA 26.08 RAL 9.44 RAD 6643.7 VEL 11.911 PTH 6.92 VHP 2.415 DPA -15.40 RAP 34.58 ECC 1.3999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 26 3692.39 -47.56 146.43 254.68 88.66 9 2 59 2692.4 -42.49 112.73  
 60.00 8 6 24 3679.17 -39.89 144.54 253.97 83.69 9 7 43 2679.2 -38.08 113.53  
 70.00 8 15 2 3653.69 -32.62 141.13 252.62 79.27 9 15 56 2653.7 -33.70 112.44  
 80.00 8 34 9 3593.71 -26.41 134.99 251.03 75.94 9 34 3 2593.7 -29.84 108.10  
 90.00 9 27 45 3420.57 -23.47 121.39 250.14 73.76 10 24 45 2420.6 -28.00 95.29  
 100.00 11 17 1 3066.16 -26.41 96.36 251.03 75.94 12 8 9 2066.2 -29.84 69.46  
 110.00 13 14 29 2700.51 -32.62 70.05 252.62 79.27 13 59 29 1700.5 -33.70 41.36

MID-COURSE EXECUTION ACCURACY  
 SGT 2894.8 SGR 2497.6 SG3 1730.6  
 RRT .9005 RRF .9791 RTF .5776  
 SGB 3923.4 R23 .1944 R13 .9614  
 SGI 3729.3 SGI 843.0 THA 40.33

ORBIT DETERMINATION ACCURACY  
 ST 27.1 SR 12.1 88 55.1  
 CRT .6914 CRS -.8866 CBT -.3187  
 LSA 57.1 MSA 25.7 88A 2.0  
 EL1 28.9 EL2 8.3 ALP 18.87

LAUNCH DATE AUG 24 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.888 GAL 4.38 AZL 87.10 HCA 144.44 SMA 197.10 ECC .24424 INC 2.9025 V1 29.459  
 RP 243.24 LAP 1.69 LOP 115.16 VP 20.442 GAP 4.11 AZP 92.36 TAL 22.61 TAP 167.05 RCA 148.96 APO 245.24 V2 22.560  
 RC 261.736 GL 20.77 GP -27.27 ZAL 51.98 ZAP 89.94 ETS 181.88 ZAE 119.82 ETE 199.78 ZAC 60.26 ETC 286.07 LVI 5.57

PLANETOCENTRIC CONIC  
 C3 21.922 VHL 4.682 DLA 26.71 RAL 9.34 RAD 6643.7 VEL 11.913 PTH 6.92 VHP 2.422 DPA -16.08 RAP 34.33 ECC 1.3608  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 57 51 3706.88 -47.53 147.83 255.24 87.59 8 59 38 2706.9 -42.89 113.90  
 60.00 8 1 29 3697.21 -39.74 146.05 254.32 82.68 9 3 6 2697.2 -38.38 114.98  
 70.00 8 7 56 3678.21 -32.30 142.96 252.70 78.23 9 9 14 2678.2 -33.85 114.34  
 80.00 8 22 59 3630.94 -25.75 137.56 250.95 74.35 9 23 30 2630.9 -29.77 110.86  
 90.00 9 12 21 3471.41 -22.46 124.78 249.87 72.35 10 10 13 2471.4 -27.69 98.98  
 100.00 11 5 51 3105.41 -25.75 98.93 250.95 74.35 11 57 36 2105.4 -29.77 72.23  
 110.00 13 7 22 2725.03 -32.30 71.88 252.70 78.23 13 52 47 1725.0 -33.85 43.25

MID-COURSE EXECUTION ACCURACY  
 SGT 3036.0 SGR 2555.9 SG3 1720.5  
 RRT .9074 RRF .9806 RTF .9134  
 SGB 3968.6 R23 .1942 R13 .9628  
 SGI 3878.5 SGI 840.7 THA 39.60

ORBIT DETERMINATION ACCURACY  
 ST 28.1 SR 13.9 88 56.6  
 CRT .6831 CRS -.9231 CBT -.3816  
 LSA 59.3 MSA 25.6 88A 1.9  
 EL1 29.8 EL2 9.6 ALP 20.93

LAUNCH DATE AUG 24 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

RL 131.28 LAL .00 LOL 330.89 VL 32.890 GAL 4.35 AZL 87.01 HCA 149.35 SMA 197.14 ECC .24419 INC 2.9901 V1 29.459
RP 243.90 LAP 1.70 LOP 116.08 VP 20.417 GAP 3.88 AZP 92.46 TAL 22.43 TAP 167.79 RCA 149.00 APO 245.26 V2 22.535
RC 264.483 GL 21.40 GP -27.80 ZAL 32.34 ZAP 86.65 ETS 181.20 ZAE 118.03 ETE 198.97 ZAC 59.86 ETC 286.17 LVI 6.00

DISTANCE 499.834

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 21.984 VHL 4.689 DLA 27.35 RAL 9.23 RAD 6643.7 VEL 11.915 PTH 6.92 VHP 2.432 DPA -16.76 RAP 34.09 ECC 1.3618
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 54 4 3722.12 -47.48 149.30 255.82 86.46 8 56 6 2722.1 -43.28 115.15
60.00 7 56 15 3716.29 -39.56 147.64 254.68 81.61 8 58 11 2716.3 -38.67 116.52
70.00 8 0 13 3704.58 -31.91 144.93 252.92 77.13 9 1 58 2704.6 -33.99 118.38
80.00 8 10 10 3673.35 -24.94 140.45 250.81 73.03 9 11 23 2673.3 -29.61 114.00
90.00 8 52 42 3535.85 -21.07 128.99 249.43 70.69 9 51 38 2535.9 -27.15 103.61
100.00 10 53 2 3147.82 -24.94 101.82 250.81 73.03 11 45 30 2147.8 -29.61 75.37
110.00 12 59 40 2751.40 -31.91 73.84 252.92 77.13 13 45 31 1751.4 -33.99 45.30

DIFFERENTIAL CORRECTIONS

TDE .0559 TRA-1.3937 TC3-2.7030 BAU 1.1226
RDE .2030 RRA -.4396 RC3-2.6990 FAU .49031
FDE 4.2510 FRA-4.3442 FC-19.3086 B8P 6779
BDE .2106 BRA 1.4614 BC3 3.8198 F8P 2960

MID-COURSE EXECUTION ACCURACY

SGT 3179.0 SGR 2614.0 SG3 1707.5
RRT .9136 RRF .9820 RTF .9186
SGB 4115.7 R23 .1941 R13 .9841
SG1 4029.4 SG2 838.6 TMA 36.92

ORBIT DETERMINATION ACCURACY

ST 29.2 SR 15.8 S8 58.0
CRT .6870 CRS -.9468 CST -.4424
LSA 61.7 MSA 25.6 S8A 1.8
EL1 31.5 EL2 10.7 ALP 23.26

LAUNCH DATE AUG 24 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.89 VL 32.892 GAL 4.31 AZL 86.92 HCA 146.26 SMA 197.18 ECC .24415 INC 3.0816 V1 29.459
RP 243.74 LAP 1.71 LOP 116.99 VP 20.394 GAP 3.66 AZP 92.56 TAL 22.25 TAP 168.51 RCA 149.04 APO 245.32 V2 22.511
RC 267.212 GL 22.05 GP -28.34 ZAL 32.72 ZAP 87.40 ETS 180.51 ZAE 116.46 ETE 198.19 ZAC 59.44 ETC 286.27 LVI 6.46

DISTANCE 499.622

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.057 VHL 4.697 DLA 28.02 RAL 9.12 RAD 6643.7 VEL 11.919 PTH 6.93 VHP 2.443 DPA -17.44 RAP 33.89 ECC 1.3630
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 50 2 3738.16 -47.40 150.85 256.42 85.27 8 52 21 2738.2 -43.88 116.48
60.00 7 50 39 3736.51 -39.35 149.32 255.04 80.49 8 52 56 2736.5 -38.95 118.16
70.00 7 51 48 3733.12 -31.46 147.03 253.03 75.97 8 54 2 2733.1 -34.09 118.61
80.00 7 54 58 3723.17 -23.91 143.79 250.55 71.56 8 57 2 2723.2 -29.31 117.67
90.00 8 22 3 3635.56 -18.70 135.33 248.51 68.39 9 22 38 2635.6 -25.97 110.67
100.00 10 37 50 3197.64 -23.91 105.16 250.55 71.56 11 31 8 2197.6 -29.31 79.04
110.00 12 51 15 2779.94 -31.46 75.94 253.03 75.97 13 37 35 1779.9 -34.09 47.52

DIFFERENTIAL CORRECTIONS

TDE .0954 TRA-1.4338 TC3-2.8358 BAU 1.1641
RDE .2407 RRA -.4578 RC3-2.7481 FAU .48487
FDE 4.3551 FRA-4.3092 FC-19.0306 B8P 7054
BDE .2569 BRA 1.5051 BC3 3.9475 F8P 2930

MID-COURSE EXECUTION ACCURACY

SGT 3322.0 SGR 2672.1 SG3 1691.4
RRT .9191 RRF .9833 RTF .9232
SGB 4263.2 R23 .1940 R13 .9853
SG1 4180.3 SG2 836.7 TMA 36.29

ORBIT DETERMINATION ACCURACY

ST 30.6 SR 17.9 S8 59.4
CRT .7000 CRS -.9825 CST -.5009
LSA 64.3 MSA 25.5 S8A 1.7
EL1 33.4 EL2 11.7 ALP 23.67

LAUNCH DATE AUG 24 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.89 VL 32.894 GAL 4.28 AZL 86.82 HCA 147.18 SMA 197.22 ECC .24413 INC 3.1775 V1 29.459
RP 243.98 LAP 1.72 LOP 117.90 VP 20.371 GAP 3.43 AZP 92.87 TAL 22.06 TAP 169.24 RCA 149.07 APO 245.37 V2 22.487
RC 269.924 GL 22.73 GP -28.90 ZAL 33.12 ZAP 86.19 ETS 179.81 ZAE 114.92 ETE 197.42 ZAC 59.01 ETC 286.36 LVI 6.93

DISTANCE 503.409

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.144 VHL 4.706 DLA 28.72 RAL 8.99 RAD 6643.8 VEL 11.922 PTH 6.93 VHP 2.457 DPA -18.13 RAP 33.71 ECC 1.3644
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 45 45 3759.06 -47.29 152.47 257.04 84.03 8 48 21 2755.1 -44.09 117.90
60.00 7 44 39 3757.99 -39.09 151.08 255.40 79.31 8 47 17 2756.0 -39.22 119.92
70.00 7 42 33 3764.21 -30.93 149.29 253.10 74.73 8 45 17 2764.2 -34.14 121.03
80.00 7 35 52 3785.23 -22.51 147.87 250.10 69.85 8 38 57 2785.2 -28.78 122.21
84.76 7 4 33 3886.17 -16.06 152.32 247.32 65.86 8 9 19 2886.2 -24.63 128.67
100.00 10 18 44 3259.70 -22.51 109.24 250.10 69.85 11 13 4 2259.7 -28.78 83.58
110.00 12 41 59 2811.03 -30.93 78.21 253.10 74.73 13 28 50 1811.0 -34.14 49.95

DIFFERENTIAL CORRECTIONS

TDE .1375 TRA-1.4746 TC3-2.9686 BAU 1.2080
RDE .2800 RRA -.4757 RC3-2.7916 FAU .47869
FDE 4.4841 FRA-4.2665 FC-18.7144 B8P 7331
BDE .3119 BRA 1.5495 BC3 4.0735 F8P 2896

MID-COURSE EXECUTION ACCURACY

SGT 3486.2 SGR 2730.4 SG3 1672.3
RRT .9240 RRF .9845 RTF .9272
SGB 4412.5 R23 .1940 R13 .9863
SG1 4332.7 SG2 835.4 TMA 37.69

ORBIT DETERMINATION ACCURACY

ST 32.1 SR 20.1 S8 60.8
CRT .7181 CRS -.9731 CST -.6554
LSA 67.0 MSA 25.4 S8A 1.7
EL1 35.7 EL2 12.6 ALP 27.97

LAUNCH DATE AUG 24 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.89 VL 32.897 GAL 4.24 AZL 86.72 HCA 148.08 SMA 197.27 ECC .24415 INC 3.2779 V1 29.459
RP 244.82 LAP 1.73 LOP 118.81 VP 20.349 GAP 3.21 AZP 92.78 TAL 21.87 TAP 169.98 RCA 149.11 APO 245.43 V2 22.484
RC 272.618 GL 23.44 GP -29.47 ZAL 33.53 ZAP 86.01 ETS 179.09 ZAE 113.40 ETE 196.88 ZAC 58.56 ETC 286.47 LVI 7.42

DISTANCE 507.195

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.246 VHL 4.717 DLA 29.45 RAL 8.89 RAD 6643.8 VEL 11.926 PTH 6.93 VHP 2.473 DPA -18.82 RAP 33.57 ECC 1.3681
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 11 3772.89 -47.15 154.17 257.87 82.72 8 44 4 2772.9 -44.49 119.43
60.00 7 38 12 3780.88 -38.79 152.95 255.74 78.08 8 41 13 2780.9 -39.48 121.81
70.00 7 32 15 3798.42 -30.29 151.75 253.12 73.40 8 35 34 2798.4 -34.15 123.70
80.00 7 7 52 3875.27 -20.29 153.63 249.21 67.81 8 12 27 2875.3 -27.73 128.69
81.44 8 37 20 3973.10 -16.41 159.10 247.43 65.20 7 43 33 2973.1 -25.22 138.26
100.00 9 50 44 3349.74 -20.29 115.00 249.21 67.81 10 46 34 2349.7 -27.73 90.06
110.00 12 31 41 2845.23 -30.29 80.67 253.12 73.40 13 19 7 1845.2 -34.15 52.62

DIFFERENTIAL CORRECTIONS

TDE .1820 TRA-1.5164 TC3-3.0945 BAU 1.2481
RDE .3209 RRA -.4945 RC3-2.8347 FAU .47172
FDE 4.5478 FRA-4.2194 FC-18.3575 B8P 7600
BDE .3689 BRA 1.5950 BC3 4.1966 F8P 2853

MID-COURSE EXECUTION ACCURACY

SGT 3611.7 SGR 2788.9 SG3 1650.8
RRT .9283 RRF .9856 RTF .9307
SGB 4563.2 R23 .1942 R13 .9872
SG1 4486.2 SG2 834.7 TMA 37.14

ORBIT DETERMINATION ACCURACY

ST 33.9 SR 22.4 S8 62.2
CRT .7386 CRS -.9803 CST -.6050
LSA 69.8 MSA 25.4 S8A 1.6
EL1 38.4 EL2 13.3 ALP 30.06

LAUNCH DATE AUG 24 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.00 VL 32.900 GAL 4.20 AZL 86.02 HCA 148.99 SMA 197.32 ECC .24414 INC 3.3834 V1 29.459  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.328 GAP 2.99 AZP 92.90 TAL 21.67 TAP 170.66 RCA 149.15 APO 245.30 V2 22.441  
 RC 275.293 GL 24.17 GP -30.03 ZAL 53.98 ZAP 83.87 ETS 178.36 ZAE 111.90 ETE 195.92 ZAC 58.09 ETC 286.57 LVI 7.93

PLANETOCENTRIC CONIC  
 C3 22.364 VHL 4.729 DLA 30.20 RAL 8.69 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.490 DPA -19.81 RAP 33.48 ECC 1.3681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 18 3781.74 -46.97 155.95 258.31 81.36 8 39 30 2791.7 -44.90 121.08  
 60.00 7 31 12 3805.33 -38.43 154.93 256.07 76.78 8 34 37 2805.3 -39.72 123.85  
 70.00 7 20 39 3836.51 -29.51 154.45 253.07 71.98 8 24 35 2836.5 -34.07 126.68  
 76.94 6 17 39 4035.31 -16.76 163.89 247.55 64.51 7 24 54 3035.3 -25.82 140.07  
 76.94 6 17 39 4035.31 -16.76 163.89 247.55 64.51 7 24 54 3035.3 -25.82 140.07  
 76.94 6 17 39 4035.31 -16.76 163.89 247.55 64.51 7 24 54 3035.3 -25.82 140.07  
 110.00 12 20 5 2883.33 -29.51 83.36 253.07 71.98 13 8 8 1883.3 -34.07 55.59

DIFFERENTIAL CORRECTIONS  
 TDE .2297 TRA-1.5582 TC3-3.2182 BAW 1.2903 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3637 RRA -.8138 RC3-2.8756 FAU .46400 8GT 3758.7 8GR 2847.8 8G3 1628.2 8T 35.9 8R 24.9 88 63.5  
 FDE 4.6362 FRA-4.1662 FC-17.9622 BSP 7882 RRT .9323 RRF .9867 RTF .9338 CRT .7606 CRS -.9854 CST -.6505  
 BDE .4302 BRA 1.6407 BC3 4.3158 FSP 2810 8GB 4714.1 R23 .1944 R13 .9681 LSA 72.8 MSA 25.3 8SA 1.5  
 8G1 4639.7 8G2 834.2 THA 36.63 EL1 41.4 EL2 14.0 ALF 31.89

LAUNCH DATE AUG 24 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.903 GAL 4.16 AZL 86.51 HCA 149.89 SMA 197.38 ECC .24416 INC 3.4945 V1 29.459  
 RP 244.68 LAP 1.75 LOP 120.63 VP 20.309 GAP 2.77 AZP 93.02 TAL 21.47 TAP 171.36 RCA 149.19 APO 245.57 V2 22.418  
 RC 277.948 GL 24.94 GP -30.66 ZAL 54.41 ZAP 82.78 ETS 177.62 ZAE 110.44 ETE 195.18 ZAC 57.60 ETC 286.68 LVI 8.46

PLANETOCENTRIC CONIC  
 C3 22.500 VHL 4.743 DLA 30.98 RAL 8.52 RAD 6643.9 VEL 11.937 PTH 6.94 VHP 2.511 DPA -20.20 RAP 33.38 ECC 1.3703  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 31 3 3811.70 -46.75 157.83 258.95 79.93 8 34 34 2811.7 -45.30 122.82  
 60.00 7 23 36 3831.57 -38.00 157.03 256.37 75.42 8 27 28 2831.6 -39.93 126.05  
 70.00 7 7 18 3879.72 -28.57 157.45 252.91 70.43 8 11 58 2879.7 -33.90 130.04  
 76.79 6 1 17 4086.51 -17.12 167.91 247.67 63.78 7 9 23 3086.5 -26.44 144.11  
 76.79 6 1 17 4086.51 -17.12 167.91 247.67 63.78 7 9 23 3086.5 -26.44 144.11  
 76.79 6 1 17 4086.51 -17.12 167.91 247.67 63.78 7 9 23 3086.5 -26.44 144.11  
 110.00 12 6 43 2926.54 -28.57 86.37 252.91 70.43 12 55 31 1926.5 -33.90 58.95

DIFFERENTIAL CORRECTIONS  
 TDE .2807 TRA-1.6008 TC3-3.3376 BAW 1.3327 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4094 RRA -.5328 RC3-2.9138 FAU .45552 8GT 3901.9 8GR 2906.8 8G3 1598.9 8T 38.1 8R 27.5 88 64.9  
 FDE 4.7241 FRA-4.1044 FC-17.5270 BSP 8162 RRT .9357 RRF .9876 RTF .9365 CRT .7822 CRS -.9891 CST -.6914  
 BDE .4964 BRA 1.6869 BC3 4.4305 FSP 2763 8GB 4865.6 R23 .1949 R13 .9686 LSA 76.1 MSA 25.2 8SA 1.4  
 8G1 4793.5 8G2 834.7 THA 36.15 EL1 44.7 EL2 14.6 ALF 33.46

LAUNCH DATE AUG 24 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.906 GAL 4.13 AZL 86.39 HCA 150.80 SMA 197.44 ECC .24420 INC 3.6115 V1 29.459  
 RP 244.90 LAP 1.76 LOP 121.53 VP 20.290 GAP 2.55 AZP 93.15 TAL 21.26 TAP 172.08 RCA 149.23 APO 245.66 V2 22.397  
 RC 280.584 GL 25.74 GP -31.28 ZAL 54.88 ZAP 81.72 ETS 176.87 ZAE 109.00 ETE 194.46 ZAC 57.09 ETC 286.79 LVI 9.02

PLANETOCENTRIC CONIC  
 C3 22.656 VHL 4.760 DLA 31.79 RAL 8.33 RAD 6644.0 VEL 11.943 PTH 6.95 VHP 2.533 DPA -20.91 RAP 33.34 ECC 1.3729  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 23 3832.87 -46.48 159.80 259.60 78.43 8 29 18 2832.9 -45.69 124.71  
 60.00 7 15 17 3859.84 -37.49 159.26 256.63 73.98 8 19 37 2859.8 -40.10 128.43  
 70.00 6 51 30 3930.16 -27.37 160.88 252.59 68.72 7 57 1 2930.2 -33.56 133.94  
 74.83 5 46 50 4131.21 -17.48 171.47 247.81 63.02 6 55 42 3131.2 -27.08 147.71  
 74.83 5 46 50 4131.21 -17.48 171.47 247.81 63.02 6 55 42 3131.2 -27.08 147.71  
 74.83 5 46 50 4131.21 -17.48 171.47 247.81 63.02 6 55 42 3131.2 -27.08 147.71  
 110.00 11 50 57 2976.98 -27.37 89.80 252.59 68.72 12 40 34 1977.0 -33.56 62.88

DIFFERENTIAL CORRECTIONS  
 TDE .3348 TRA-1.8432 TC3-3.4514 BAW 1.3781 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4587 RRA -.5830 RC3-2.9491 FAU .44628 8GT 4046.4 8GR 2986.1 8G3 1588.8 8T 40.6 8R 30.2 88 66.2  
 FDE 4.8013 FRA-4.0400 FC-17.0534 BSP 8445 RRT .9389 RRF .9885 RTF .9389 CRT .8034 CRS -.9917 CST -.7279  
 BDE .5663 BRA 1.7337 BC3 4.5398 FSP 2710 8GB 5017.1 R23 .1953 R13 .9695 LSA 79.4 MSA 25.1 8SA 1.4  
 8G1 4947.1 8G2 835.1 THA 35.71 EL1 48.3 EL2 15.1 ALF 34.73

LAUNCH DATE AUG 24 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.908 GAL 4.09 AZL 86.28 HCA 151.70 SMA 197.51 ECC .24425 INC 3.7351 V1 29.459  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.271 GAP 2.33 AZP 93.29 TAL 21.05 TAP 172.75 RCA 149.26 APO 245.75 V2 22.375  
 RC 283.198 GL 26.58 GP -31.92 ZAL 55.38 ZAP 80.71 ETS 176.10 ZAE 107.60 ETE 193.74 ZAC 56.55 ETC 286.92 LVI 9.60

PLANETOCENTRIC CONIC  
 C3 22.836 VHL 4.779 DLA 32.64 RAL 8.12 RAD 6644.1 VEL 11.951 PTH 6.95 VHP 2.558 DPA -21.62 RAP 33.33 ECC 1.3758  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 19 16 3855.39 -46.15 161.88 260.23 76.86 8 23 32 2855.4 -46.07 126.75  
 60.00 7 6 8 3890.48 -36.89 161.64 256.84 72.48 8 10 58 2890.5 -40.23 131.03  
 70.00 6 31 47 3992.18 -25.77 164.99 252.02 66.77 7 38 20 2992.2 -32.97 138.67  
 72.98 5 33 41 4171.49 -17.85 174.75 247.95 62.21 6 43 12 3171.5 -27.73 151.01  
 72.98 5 33 41 4171.49 -17.85 174.75 247.95 62.21 6 43 12 3171.5 -27.73 151.01  
 72.98 5 33 41 4171.49 -17.85 174.75 247.95 62.21 6 43 12 3171.5 -27.73 151.01  
 110.00 11 31 14 3038.99 -25.77 93.91 252.02 66.77 12 21 53 2039.0 -32.96 67.59

DIFFERENTIAL CORRECTIONS  
 TDE .3919 TRA-1.6873 TC3-3.5611 BAW 1.4183 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5057 RRA -.5749 RC3-2.9835 FAU .43688 8GT 4192.4 8GR 3027.9 8G3 1537.0 8T 43.3 8R 33.0 88 67.4  
 FDE 4.8685 FRA-3.9765 FC-16.5552 BSP 8720 RRT .9418 RRF .9893 RTF .9412 CRT .8231 CRS -.9935 CST -.7598  
 BDE .6396 BRA 1.7828 BC3 4.6457 FSP 2650 8GB 5171.5 R23 .1956 R13 .9702 LSA 82.9 MSA 25.0 8SA 1.3  
 8G1 5103.5 8G2 835.9 THA 35.31 EL1 52.2 EL2 15.6 ALF 35.74



LAUNCH DATE AUG 24 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.928 GAL 3.88 AZL 85.52 HCA 156.18 SMA 197.88 ECC .24468 INC 4.4771 V1 29.459  
 RP 246.12 LAP 1.81 LOP 126.93 VP 20.194 GAP 1.26 AZP 94.10 TAL 18.93 TAP 178.11 RCA 149.47 APO 246.30 V2 22.276  
 RC 295.928 GL 31.42 GP -35.51 ZAL 58.11 ZAP 76.38 ETS 172.05 ZAE 101.07 ETE 190.22 ZAC 53.38 ETC 267.65 LVI 12.97

DISTANCE 941.220 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 24.196 VHL 4.919 DLA 37.44 RAL 6.61 RAD 6644.7 VEL 12.007 PTH 7.00 VHP 2.724 DPA -25.34 RAP 33.92 ECC 1.3982  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 2 3994.34 -43.27 174.00 262.84 67.90 7 45 36 2994.3 -47.48 139.84  
 60.00 5 58 22 4103.32 -31.39 176.98 256.08 63.30 7 6 45 3103.3 -39.35 149.00  
 64.37 4 37 49 4336.19 -19.70 188.86 248.75 57.50 5 50 5 3336.2 -31.28 165.46  
 64.37 4 37 49 4336.19 -19.70 188.86 248.75 57.50 5 50 5 3336.2 -31.28 165.46  
 64.37 4 37 49 4336.19 -19.70 188.86 248.75 57.50 5 50 5 3336.2 -31.28 165.46  
 64.37 4 37 49 4336.19 -19.70 188.86 248.75 57.50 5 50 5 3336.2 -31.28 165.46

DIFFERENTIAL CORRECTIONS  
 TDE .7299 TRA-1.9193 TC3-3.9941 BAU 1.6351 SGT 4908.1 SGR 3347.4 SG3 1337.8 ORBIT DETERMINATION ACCURACY  
 RDE .7975 RRA -.6999 RC3-3.0979 FAU .37787 RRT .9529 RRF .9925 RTF .9488 CRT .8961 CRS -.9978 CST -.8670  
 FDE 5.0946 FRA-3.5832 FC-13.5200 B8P 10121 SGB 5941.0 R23 .1990 R13 .9724 LSA 103.3 MSA 24.7 SSA 1.0  
 BDE 1.0811 BRA 2.0429 BC3 5.0547 F8P 2301 SG1 5880.2 SG2 847.4 THA 33.82 EL1 75.8 EL2 17.3 ALF 38.57

LAUNCH DATE AUG 24 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.933 GAL 3.84 AZL 85.34 HCA 157.07 SMA 197.97 ECC .24479 INC 4.6570 V1 29.459  
 RP 246.30 LAP 1.81 LOP 127.83 VP 20.181 GAP 1.05 AZP 94.29 TAL 19.69 TAP 176.77 RCA 149.51 APO 246.43 V2 22.258  
 RC 296.401 GL 32.54 GP -36.32 ZAL 58.73 ZAP 75.67 ETS 171.20 ZAE 99.87 ETE 189.52 ZAC 52.64 ETC 267.84 LVI 13.78

DISTANCE 544.995 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 24.595 VHL 4.959 DLA 38.53 RAL 6.18 RAD 6644.8 VEL 12.024 PTH 7.01 VHP 2.768 DPA -26.14 RAP 34.18 ECC 1.4048  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 28 12 4029.28 -42.34 176.03 263.11 65.88 7 35 21 3029.3 -47.57 143.22  
 60.00 5 35 24 4171.06 -29.23 181.41 255.05 60.92 6 44 55 3171.1 -38.45 154.53  
 62.67 4 27 35 4364.93 -20.05 191.46 248.91 56.39 5 40 20 3364.9 -32.04 168.19  
 62.67 4 27 35 4364.93 -20.05 191.46 248.91 56.39 5 40 20 3364.9 -32.04 168.19  
 62.67 4 27 35 4364.93 -20.05 191.46 248.91 56.39 5 40 20 3364.9 -32.04 168.19  
 62.67 4 27 35 4364.93 -20.05 191.46 248.91 56.39 5 40 20 3364.9 -32.04 168.19

DIFFERENTIAL CORRECTIONS  
 TDE .8084 TRA-1.9694 TC3-4.0521 BAU 1.6793 SGT 8048.2 SGR 3416.4 SG3 1291.0 ORBIT DETERMINATION ACCURACY  
 RDE .8657 RRA -.7307 RC3-3.1087 FAU .36434 RRT .9547 RRF .9930 RTF .9499 CRT .9062 CRS -.9981 CST -.8805  
 FDE 5.1046 FRA-3.4973 FC-12.8246 B8P 10388 SGB 8095.6 R23 .1996 R13 .9728 LSA 107.9 MSA 24.6 SSA .9  
 BDE 1.1844 BRA 2.1006 BC3 5.1072 F8P 2217 SG1 6036.0 SG2 850.5 THA 33.62 EL1 81.2 EL2 17.6 ALF 38.86

LAUNCH DATE AUG 24 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.937 GAL 3.79 AZL 85.15 HCA 157.96 SMA 198.05 ECC .24492 INC 4.8503 V1 29.459  
 RP 246.48 LAP 1.82 LOP 128.72 VP 20.169 GAP .84 AZP 94.50 TAL 19.48 TAP 177.42 RCA 149.55 APO 246.56 V2 22.241  
 RC 300.850 GL 33.72 GP -37.17 ZAL 59.38 ZAP 75.01 ETS 170.33 ZAE 98.71 ETE 188.82 ZAC 51.86 ETC 268.04 LVI 14.57

DISTANCE 468.771 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 25.053 VHL 5.005 DLA 39.86 RAL 5.69 RAD 6645.0 VEL 12.043 PTH 7.03 VHP 2.818 DPA -26.95 RAP 34.48 ECC 1.4123  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 15 59 4067.58 -41.23 179.84 263.21 63.77 7 23 47 3067.6 -47.55 146.92  
 60.00 5 1 33 4268.22 -28.86 187.43 252.99 57.95 6 12 41 3268.2 -36.87 162.16  
 60.95 4 17 27 4392.90 -20.39 194.05 249.07 55.22 5 30 40 3392.9 -32.80 170.91  
 60.95 4 17 27 4392.90 -20.39 194.05 249.07 55.22 5 30 40 3392.9 -32.80 170.91  
 60.95 4 17 27 4392.90 -20.39 194.05 249.07 55.22 5 30 40 3392.9 -32.80 170.91  
 60.95 4 17 27 4392.90 -20.39 194.05 249.07 55.22 5 30 40 3392.9 -32.80 170.91

DIFFERENTIAL CORRECTIONS  
 TDE .8845 TRA-2.0270 TC3-4.1067 BAU 1.7307 SGT 8197.1 SGR 3509.6 SG3 1249.6 ORBIT DETERMINATION ACCURACY  
 RDE .9257 RRA -.7778 RC3-3.1382 FAU .35308 RRT .9576 RRF .9936 RTF .527 CRT .9187 CRS -.9982 CST -.8930  
 FDE 5.0471 FRA-3.4695 FC-12.2011 B8P 10321 SGB 8271.1 R23 .1953 R13 .9743 LSA 111.8 MSA 24.3 SSA .9  
 BDE 1.2803 BRA 2.1711 BC3 5.1673 F8P 2069 SG1 6213.0 SG2 846.2 THA 33.59 EL1 86.4 EL2 17.6 ALF 38.89

LAUNCH DATE AUG 24 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC  
 RL 151.25 LAL .00 LOL 330.69 VL 32.942 GAL 3.75 AZL 84.94 HCA 158.85 SMA 198.14 ECC .24505 INC 5.0588 V1 29.459  
 RP 246.65 LAP 1.82 LOP 129.61 VP 20.158 GAP .63 AZP 94.72 TAL 19.22 TAP 178.07 RCA 149.59 APO 246.70 V2 22.224  
 RC 303.274 GL 34.97 GP -38.06 ZAL 60.06 ZAP 74.42 ETS 169.46 ZAE 97.59 ETE 188.13 ZAC 51.02 ETC 268.26 LVI 15.44

DISTANCE 552.542 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 25.577 VHL 5.087 DLA 40.85 RAL 5.14 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.868 DPA -27.79 RAP 34.84 ECC 1.4209  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 2 1 4110.03 -39.90 183.04 263.09 61.57 7 10 31 3110.0 -47.37 151.01  
 59.20 4 7 19 4420.25 -20.72 196.62 249.21 53.97 5 21 0 3420.3 -33.58 173.65  
 59.20 4 7 19 4420.25 -20.72 196.62 249.21 53.97 5 21 0 3420.3 -33.58 173.65  
 59.20 4 7 19 4420.25 -20.72 196.62 249.21 53.97 5 21 0 3420.3 -33.58 173.65  
 59.20 4 7 19 4420.25 -20.72 196.62 249.21 53.97 5 21 0 3420.3 -33.58 173.65  
 59.20 4 7 19 4420.25 -20.72 196.62 249.21 53.97 5 21 0 3420.3 -33.58 173.65

DIFFERENTIAL CORRECTIONS  
 TDE .9722 TRA-2.0795 TC3-4.1383 BAU 1.7744 SGT 5332.4 SGR 3578.1 SG3 1198.1 ORBIT DETERMINATION ACCURACY  
 RDE 1.0068 RRA -.8107 RC3-3.1307 FAU .33762 RRT .9588 RRF .9940 RTF .9530 CRT .9237 CRS -.9985 CST -.9025  
 FDE 5.0495 FRA-3.3590 FC-11.4277 B8P 10835 SGB 6421.6 R23 .1974 R13 .9742 LSA 116.9 MSA 24.3 SSA .8  
 BDE 1.3996 BRA 2.2319 BC3 5.1891 F8P 1997 SG1 6364.8 SG2 852.0 THA 33.43 EL1 92.4 EL2 18.0 ALF 39.21

LAUNCH DATE AUG 24 1973 FLIGHT TIME 256.00 ARRIVAL DATE MAY 9 1974

**HELIOCENTRIC CONIC**  
 RL 151.25 LAL .00 LOL 330.69 VL 32.947 GAL 3.70 AZL 84.72 HCA 169.74 SMA 198.24 ECC .24520 INC 5.2845 V1 29.459  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.147 GAP .42 AZP 94.06 TAL 18.97 TAP 178.71 RCA 149.63 APO 246.84 V2 22.207  
 RC 305.673 GL 36.28 GP -39.00 ZAL 60.77 ZAP 73.89 ETS 169.57 ZAE 96.52 ETE 187.43 ZAC 50.14 ETC 286.50 LVI 16.35

**PLANETOCENTRIC CONIC**  
 C3 26.181 VHL 5.117 DLA 42.09 RAL 4.51 RAD 6645.5 VEL 12.089 PTH 7.07 VHP 2.926 DPA -26.65 RAP 35.26 ECC 1.4300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 45 48 4157.77 -36.30 186.48 262.67 59.27 6 55 6 3157.8 -46.98 155.56  
 57.42 3 57 8 4447.18 -21.02 199.19 249.35 52.65 5 11 16 3447.2 -34.36 176.43  
 57.42 3 57 8 4447.18 -21.02 199.19 249.35 52.65 5 11 16 3447.2 -34.36 176.43  
 57.42 3 57 8 4447.18 -21.02 199.19 249.35 52.65 5 11 16 3447.2 -34.36 176.43  
 57.42 3 57 8 4447.18 -21.02 199.19 249.35 52.65 5 11 16 3447.2 -34.36 176.43  
 57.42 3 57 8 4447.18 -21.02 199.19 249.35 52.65 5 11 16 3447.2 -34.36 176.43

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.0634 TRA-2.1338 TC3-4.1548 BAU 1.8184 SGT 5464.7 SGR 3649.1 SG3 1140.4 ST 76.9 SR 64.3 SS 73.7  
 RDE 1.0923 RRA -.8472 RC3-3.1186 FAU .32163 RRT .9599 RRF .9943 RTF .9533 CRT .9299 CRS -.9987 CST -.9106  
 PDE 5.0319 FRA-3.2476 FC-10.6384 B8P 11159 SGB 6571.0 R23 .1994 R13 .9741 LSA 122.0 MSA 24.4 S8A .7  
 BDE 1.5245 BRA 2.2956 BC3 5.1950 F8P 1920 SGI 6514.8 SGI 657.8 THA 33.31 EL1 98.5 EL2 18.5 ALF 39.80

LAUNCH DATE AUG 24 1973 FLIGHT TIME 260.00 ARRIVAL DATE MAY 11 1974

**HELIOCENTRIC CONIC**  
 RL 151.25 LAL .00 LOL 330.69 VL 32.951 GAL 3.66 AZL 84.47 HCA 160.62 SMA 198.33 ECC .24535 INC 5.5294 V1 29.459  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.138 GAP .21 AZP 95.22 TAL 18.72 TAP 179.35 RCA 149.67 APO 246.99 V2 22.191  
 RC 308.046 GL 37.67 GP -39.98 ZAL 61.51 ZAP 73.43 ETS 167.68 ZAE 95.49 ETE 186.74 ZAC 49.21 ETC 286.76 LVI 17.32

**PLANETOCENTRIC CONIC**  
 C3 26.879 VHL 5.185 DLA 43.39 RAL 3.78 RAD 6645.8 VEL 12.118 PTH 7.09 VHP 2.990 DPA -29.54 RAP 35.74 ECC 1.4424  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 26 30 4212.61 -36.32 190.24 261.81 96.86 6 36 43 3212.6 -46.30 160.66  
 55.61 3 46 49 4473.83 -21.29 201.78 249.46 51.25 5 1 23 3473.8 -35.13 179.26  
 55.61 3 46 49 4473.83 -21.29 201.78 249.46 51.25 5 1 23 3473.8 -35.13 179.26  
 55.61 3 46 49 4473.83 -21.29 201.78 249.46 51.25 5 1 23 3473.8 -35.13 179.26  
 55.61 3 46 49 4473.83 -21.29 201.78 249.46 51.25 5 1 23 3473.8 -35.13 179.26  
 55.61 3 46 49 4473.83 -21.29 201.78 249.46 51.25 5 1 23 3473.8 -35.13 179.26

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.1570 TRA-2.1924 TC3-4.1582 BAU 1.8642 SGT 5598.3 SGR 3726.3 SG3 1083.7 ST 81.4 SR 66.6 SS 73.8  
 RDE 1.1834 RRA -.8894 RC3-3.1020 FAU .30542 RRT .9611 RRF .9946 RTF .9536 CRT .9352 CRS -.9988 CST -.9172  
 PDE 4.9952 FRA-3.1407 FC3-9.8371 B8P 11453 SGB 6725.0 R23 .2012 R13 .9741 LSA 127.2 MSA 24.3 S8A .7  
 BDE 1.6550 BRA 2.3659 BC3 5.1878 F8P 1833 SGI 6669.3 SGI 663.7 THA 33.24 EL1 104.8 EL2 18.9 ALF 39.80

LAUNCH DATE AUG 24 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 13 1974

**HELIOCENTRIC CONIC**  
 RL 151.25 LAL .00 LOL 330.69 VL 32.956 GAL 3.81 AZL 84.20 HCA 161.51 SMA 198.43 ECC .24551 INC 5.7985 V1 29.459  
 RP 247.14 LAP 1.84 LOP 132.29 VP 20.129 GAP .01 AZP 95.50 TAL 18.47 TAP 179.98 RCA 149.71 APO 247.14 V2 22.176  
 RC 310.395 GL 39.15 GP -41.02 ZAL 62.29 ZAP 73.04 ETS 166.77 ZAE 94.51 ETE 186.04 ZAC 48.22 ETC 289.06 LVI 18.34

**PLANETOCENTRIC CONIC**  
 C3 27.689 VHL 5.262 DLA 44.74 RAL 2.95 RAD 6646.1 VEL 12.131 PTH 7.12 VHP 3.081 DPA -30.46 RAP 36.28 ECC 1.4557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 2 34 4278.09 -33.80 194.45 260.30 54.28 6 13 52 3278.1 -45.17 166.59  
 53.76 3 36 16 4500.37 -21.92 204.38 249.53 49.77 4 51 16 3500.4 -35.90 182.17  
 53.76 3 36 16 4500.37 -21.92 204.38 249.53 49.77 4 51 16 3500.4 -35.90 182.17  
 53.76 3 36 16 4500.37 -21.92 204.38 249.53 49.77 4 51 16 3500.4 -35.90 182.17  
 53.76 3 36 16 4500.37 -21.92 204.38 249.53 49.77 4 51 16 3500.4 -35.90 182.17  
 53.76 3 36 16 4500.37 -21.92 204.38 249.53 49.77 4 51 16 3500.4 -35.90 182.17

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.2526 TRA-2.2527 TC3-4.1432 BAU 1.9105 SGT 5727.1 SGR 3805.9 SG3 1024.6 ST 85.9 SR 73.1 SS 73.8  
 RDE 1.2792 RRA -.9335 RC3-3.0772 FAU .28866 RRT .9822 RRF .9949 RTF .9538 CRT .9396 CRS -.9988 CST -.9226  
 PDE 4.9334 FRA-3.0279 FC3-9.0252 B8P 11759 SGB 6876.4 R23 .2030 R13 .9740 LSA 132.3 MSA 24.6 S8A .6  
 BDE 1.7904 BRA 2.4392 BC3 5.1609 F8P 1742 SGI 6821.1 SGI 689.8 THA 33.21 EL1 111.1 EL2 19.3 ALF 40.09

LAUNCH DATE AUG 24 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 15 1974

**HELIOCENTRIC CONIC**  
 RL 151.25 LAL .00 LOL 330.69 VL 32.961 GAL 3.56 AZL 83.91 HCA 162.38 SMA 198.82 ECC .24568 INC 6.0890 V1 29.489  
 RP 247.28 LAP 1.84 LOP 133.17 VP 20.120 GAP -.20 AZP 95.81 TAL 18.22 TAP 180.61 RCA 149.78 APO 247.30 V2 22.181  
 RC 312.717 GL 40.70 GP -42.11 ZAL 63.11 ZAP 72.72 ETS 165.87 ZAE 93.59 ETE 185.38 ZAC 47.17 ETC 289.39 LVI 19.42

**PLANETOCENTRIC CONIC**  
 C3 28.633 VHL 5.351 DLA 46.16 RAL 2.00 RAD 6646.5 VEL 12.189 PTH 7.15 VHP 3.139 DPA -31.42 RAP 36.80 ECC 1.4712  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 30 5 4363.31 -30.29 199.55 257.82 91.38 5 42 48 3363.3 -43.23 173.86  
 51.86 3 25 24 4526.92 -21.70 207.02 249.55 48.20 4 40 51 3526.9 -36.64 185.15  
 51.86 3 25 24 4526.92 -21.70 207.02 249.55 48.20 4 40 51 3526.9 -36.64 185.15  
 51.86 3 25 24 4526.92 -21.70 207.02 249.55 48.20 4 40 51 3526.9 -36.64 185.15  
 51.86 3 25 24 4526.92 -21.70 207.02 249.55 48.20 4 40 51 3526.9 -36.64 185.15  
 51.86 3 25 24 4526.92 -21.70 207.02 249.55 48.20 4 40 51 3526.9 -36.64 185.15

**DIFFERENTIAL CORRECTIONS**  
 TDE 1.3471 TRA-2.3195 TC3-4.1129 BAU 1.9594 SGT 5857.6 SGR 3893.6 SG3 964.5 ST 90.2 SR 77.5 SS 72.8  
 RDE 1.3795 RRA -.9905 RC3-3.0470 FAU .27173 RRT .9635 RRF .9951 RTF .9540 CRT .9432 CRS -.9989 CST -.9267  
 PDE 4.8434 FRA-2.9225 FC3-8.2157 B8P 12012 SGB 7033.6 R23 .2044 R13 .9740 LSA 137.2 MSA 24.8 S8A .6  
 BDE 1.9281 BRA 2.5222 BC3 5.1186 F8P 1836 SGI 6979.0 SGI 675.1 THA 33.23 EL1 117.3 EL2 19.8 ALF 40.41

LAUNCH DATE AUG 24 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.967 GAL 3.32 AZL 83.59 HCA 163.27 SMA 198.62 ECC .24506 INC 6.4110 V1 29.459
RP 247.44 LAP 1.84 LOP 134.06 VP 20.113 GAP -.40 AZP 96.14 TAL 17.98 TAP 181.23 RCA 149.79 APO 247.46 V2 22.147
RC 319.013 GL 42.36 GP -43.25 ZAL 63.97 ZAP 72.48 ETS 164.96 ZAE 92.72 ETE 184.66 ZAC 46.06 ETC 289.76 LVI 20.58

DISTANCE 371.379

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.740 VHL 5.453 DLA 47.64 RAL .89 RAD 6646.9 VEL 12.234 PTH 7.18 VHP 3.227 DPA -32.40 RAP 37.59 ECC 1.4894
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25
49.92 3 14 6 4553.74 -21.81 209.69 249.50 46.53 4 30 0 3553.7 -37.35 188.25

DIFFERENTIAL CORRECTIONS

TDE 1.4441 TRA-2.3879 TC3-4.0589 BAW 2.0075
RDE 1.4888 RRA-1.0496 RC3-3.0032 FAU .25387
FDE 4.7356 FRA-2.8045 FC3-7.3902 B8P 12327
BDE 2.0741 BRA 2.6084 BC3 5.0491 F8P 1537

MID-COURSE EXECUTION ACCURACY

SGT 3980.1 SGR 3981.7 SG3 901.4
RRT .9645 RRF .9952 RTF .9539
SGB 7184.4 R23 .2066 R13 .9738
SG1 7130.1 S62 881.3 THA 33.28

ORBIT DETERMINATION ACCURACY

ST 94.4 SR 82.1 S8 71.8
CRT .9461 CRS -.9988 CST -.9298
LSA 142.1 MSA 25.0 S8A .6
EL1 123.5 EL2 20.3 ALF 40.79

LAUNCH DATE AUG 24 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.972 GAL 3.47 AZL 83.23 HCA 164.15 SMA 198.73 ECC .24605 INC 6.7673 V1 29.459
RP 247.58 LAP 1.84 LOP 134.94 VP 20.107 GAP -.61 AZP 96.51 TAL 17.71 TAP 181.86 RCA 149.83 APO 247.62 V2 22.133
RC 317.282 GL 44.11 GP -44.46 ZAL 64.87 ZAP 72.32 ETS 164.06 ZAE 91.91 ETE 183.98 ZAC 44.89 ETC 290.17 LVI 21.77

DISTANCE 375.142

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.045 VHL 5.572 DLA 49.17 RAL 359.60 RAD 6647.4 VEL 12.287 PTH 7.23 VHP 3.327 DPA -33.42 RAP 36.37 ECC 1.5109
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46
47.93 3 2 14 4580.96 -21.84 212.40 249.35 44.78 4 18 35 3581.0 -38.00 191.46

DIFFERENTIAL CORRECTIONS

TDE 1.5367 TRA-2.4616 TC3-3.9852 BAW 2.0584
RDE 1.6030 RRA-1.1180 RC3-2.9519 FAU .23584
FDE 4.5946 FRA-2.6858 FC3-6.5767 B8P 12616
BDE 2.2206 BRA 2.7036 BC3 4.9594 F8P 1429

MID-COURSE EXECUTION ACCURACY

SGT 8100.0 SGR 4078.0 SG3 837.1
RRT .9857 RRF .9952 RTF .9537
SGB 7337.6 R23 .2066 R13 .9738
SG1 7283.8 S62 887.2 THA 33.41

ORBIT DETERMINATION ACCURACY

ST 98.3 SR 86.7 S8 70.4
CRT .9481 CRS -.9988 CST -.9316
LSA 146.6 MSA 25.3 S8A .3
EL1 129.4 EL2 20.9 ALF 41.21

LAUNCH DATE AUG 24 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.977 GAL 3.42 AZL 82.84 HCA 165.03 SMA 198.83 ECC .24624 INC 7.1640 V1 29.459
RP 247.71 LAP 1.85 LOP 135.83 VP 20.101 GAP -.81 AZP 96.92 TAL 17.45 TAP 182.47 RCA 149.87 APO 247.79 V2 22.120
RC 319.522 GL 45.98 GP -45.73 ZAL 65.81 ZAP 72.25 ETS 163.17 ZAE 91.16 ETE 183.32 ZAC 43.64 ETC 290.64 LVI 23.04

DISTANCE 378.903

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.595 VHL 5.709 DLA 50.77 RAL 358.09 RAD 6648.0 VEL 12.350 PTH 7.27 VHP 3.439 DPA -34.48 RAP 39.23 ECC 1.5364
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80
45.90 2 49 41 4608.73 -21.78 215.15 249.07 42.93 4 6 30 3608.7 -38.58 194.80

DIFFERENTIAL CORRECTIONS

TDE 1.6231 TRA-2.5397 TC3-3.8864 BAW 2.1097
RDE 1.7232 RRA-1.1955 RC3-2.8870 FAU .21719
FDE 4.4220 FRA-2.5599 FC3-5.7675 B8P 12931
BDE 2.3673 BRA 2.8070 BC3 4.8414 F8P 1319

MID-COURSE EXECUTION ACCURACY

SGT 8211.8 SGR 4178.1 SG3 770.7
RRT .9868 RRF .9952 RTF .9533
SGB 7486.2 R23 .2110 R13 .9732
SG1 7432.8 S62 892.8 THA 33.58

ORBIT DETERMINATION ACCURACY

ST 101.6 SR 91.2 S8 68.4
CRT .9492 CRS -.9987 CST -.9321
LSA 150.5 MSA 25.7 S8A .3
EL1 134.8 EL2 21.6 ALF 41.72

LAUNCH DATE AUG 24 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

RL 151.25 LAL .00 LOL 330.69 VL 32.982 GAL 3.37 AZL 82.39 HCA 165.90 SMA 198.94 ECC .24644 INC 7.6081 V1 29.459
RP 247.84 LAP 1.85 LOP 136.71 VP 20.096 GAP -1.01 AZP 97.38 TAL 17.19 TAP 183.09 RCA 149.91 APO 247.96 V2 22.107
RC 321.734 GL 47.98 GP -47.07 ZAL 66.80 ZAP 72.27 ETS 162.31 ZAE 90.49 ETE 182.67 ZAC 42.33 ETC 291.16 LVI 24.30

DISTANCE 382.662

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.453 VHL 5.870 DLA 52.42 RAL 356.32 RAD 6648.7 VEL 12.424 PTH 7.33 VHP 3.586 DPA -35.57 RAP 40.19 ECC 1.5670
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28
43.83 2 36 14 4637.32 -21.59 217.94 248.61 40.98 3 53 32 3637.3 -39.06 198.28

DIFFERENTIAL CORRECTIONS

TDE 1.6925 TRA-2.6284 TC3-3.7687 BAW 2.1663
RDE 1.8460 RRA-1.2879 RC3-2.8135 FAU .19832
FDE 4.2103 FRA-2.4331 FC3-4.9833 B8P 13185
BDE 2.5044 BRA 2.9270 BC3 4.7031 F8P 1199

MID-COURSE EXECUTION ACCURACY

SGT 8324.8 SGR 4290.2 SG3 703.4
RRT .9679 RRF .9951 RTF .9527
SGB 7642.5 R23 .2140 R13 .9727
SG1 7589.4 S62 899.2 THA 33.82

ORBIT DETERMINATION ACCURACY

ST 104.2 SR 95.4 S8 65.9
CRT .9488 CRS -.9985 CST -.9303
LSA 153.6 MSA 26.3 S8A .4
EL1 139.4 EL2 22.5 ALF 42.35





LAUNCH DATE AUG 28 1973

FLIGHT TIME 100.00

ARRIVAL DATE DEC 3 1973

HELIOCENTRIC CONIC

DISTANCE 268.273

EARTH TO MARS

RL 181.21 LAL .00 LOL 331.68 VL 34.889 GAL 4.72 AZL 89.86 MCA 82.05 BMA 246.84 ECC .39427 INC .1414 V1 29.488
RP 221.71 LAP .14 LOP 83.70 VP 25.873 GAP 22.22 AZP 89.86 TAL 16.77 TAP 99.83 RCA 149.39 APO 343.88 V2 24.799
RC 91.436 GL .79 GP -8.61 ZAL 59.53 ZAP 170.88 ETS 216.84 ZAE 186.38 EYE 344.48 ZAC 77.11 ETC 282.39 LVI -10.43

PLANETOCENTRIC CONIC

C3 36.734 VHL 6.224 DLA 12.28 RAL 27.80 RAD 6680.2 VEL 12.894 PTH 7.46 VHP 7.721 DPA 11.28 RAP 48.63 ECC 1.6378
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT YIM INJ 2 LAT INJ 2 LONG
80.00 10 10 58 3543.78 -46.83 132.18 273.26 99.80 11 10 2 2543.0 -37.79 101.81
90.00 10 37 0 3474.91 -39.99 127.19 274.50 98.44 11 34 58 2474.8 -33.49 98.14
70.00 11 13 58 3368.89 -34.09 118.89 275.00 92.29 12 10 1 2368.9 -29.60 91.08
60.00 12 7 58 3196.55 -29.96 106.15 275.11 90.20 13 1 14 2196.6 -26.74 79.16
90.00 13 23 5 2984.10 -28.27 88.33 275.11 89.44 14 12 19 1984.1 -25.65 61.63
100.00 14 50 50 2671.02 -29.66 67.82 275.11 90.20 15 35 21 1671.0 -26.74 40.53
110.00 16 13 21 2412.71 -34.09 47.80 275.00 92.29 16 53 34 1412.7 -29.60 20.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2898 TRA -.7898 TCS .4014 BAV .2149 8GT 915.8 8GR 640.2 8G3 186.6 8T 17.5 8R 29.5 8S 4.1
RDE -.6371 RRA .2343 RC3 -.1080 PAU .06801 RRT -.1080 RRF .1402 RTP -.5442 CRT .7142 CR8 .8940 CBT .6586
PDE .1187 PRA -.0456 PC3 -1.4530 B8P 1191 8GB 1117.2 R23 -.0307 R13 .8497 LBA 32.7 M8A 11.1 88A 1.8
BDE .7041 BRA .7951 BC3 .4149 P8P 198 8G1 920.3 8G2 633.4 THA 171.89 EL1 32.5 EL2 11.1 ALP 63.73

LAUNCH DATE AUG 28 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 5 1973

HELIOCENTRIC CONIC

DISTANCE 268.180

EARTH TO MARS

RL 181.21 LAL .00 LOL 331.68 VL 34.783 GAL 4.78 AZL 89.82 MCA 83.15 BMA 242.70 ECC .39465 INC .1768 V1 29.488
RP 222.00 LAP .16 LOP 84.80 VP 25.482 GAP 22.12 AZP 89.96 TAL 17.17 TAP 100.32 RCA 149.34 APO 336.09 V2 24.787
RC 93.523 GL 1.00 GP -8.78 ZAL 57.88 ZAP 180.87 ETS 216.17 ZAE 188.29 ETE 343.94 ZAC 76.94 ETC 282.37 LVI -10.24

PLANETOCENTRIC CONIC

C3 37.441 VHL 6.119 DLA 12.28 RAL 27.10 RAD 6649.8 VEL 12.843 PTH 7.42 VHP 7.480 DPA 11.21 RAP 48.87 ECC 1.6188
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT YIM INJ 2 LAT INJ 2 LONG
80.00 10 8 19 3534.84 -46.72 131.31 271.89 100.28 11 7 13 2534.5 -37.48 100.98
90.00 10 34 23 3488.18 -39.93 126.40 273.02 98.97 11 32 8 2488.2 -33.23 97.49
70.00 11 11 20 3386.40 -34.06 118.18 273.58 92.73 12 7 17 2386.4 -29.40 90.42
80.00 12 5 28 3186.88 -29.88 108.44 273.72 90.88 12 58 33 2186.9 -26.88 78.49
90.00 13 20 34 2944.41 -28.28 87.82 273.73 89.80 14 9 39 1944.4 -26.81 60.98
100.00 14 48 18 2661.40 -29.66 66.81 273.72 90.88 15 32 38 1661.4 -26.88 39.66
110.00 16 10 46 2403.22 -34.06 47.07 273.80 92.73 16 50 50 1403.2 -29.40 19.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3001 TRA -.7493 TCS .4280 BAV .2223 8GT 932.8 8GR 646.4 8G3 167.2 8T 17.7 8R 29.7 8S 4.2
RDE -.6305 RRA .2323 RC3 -.1146 PAU .06882 RRT -.1122 RRF .1804 RTP -.5832 CRT .7192 CR8 .8920 CBT .6260
PDE .1254 PRA -.0691 PC3 -1.8778 B8P 1221 8GB 1134.9 R23 -.0336 R13 .8893 LBA 32.8 M8A 11.2 88A 1.9
BDE .6963 BRA .7848 BC3 .4441 P8P 211 8G1 938.1 8G2 638.7 THA 171.87 EL1 32.7 EL2 11.2 ALP 63.48

LAUNCH DATE AUG 28 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC

DISTANCE 271.117

EARTH TO MARS

RL 181.21 LAL .00 LOL 331.68 VL 34.643 GAL 4.77 AZL 89.79 MCA 84.25 BMA 239.11 ECC .37868 INC .2119 V1 29.488
RP 222.46 LAP .21 LOP 85.90 VP 25.888 GAP 21.72 AZP 89.98 TAL 17.88 TAP 101.81 RCA 149.29 APO 328.93 V2 24.718
RC 95.688 GL 1.22 GP -8.89 ZAL 57.84 ZAP 189.04 ETS 214.06 ZAE 188.29 ETE 343.38 ZAC 76.77 ETC 282.38 LVI -10.04

PLANETOCENTRIC CONIC

C3 38.280 VHL 6.022 DLA 12.28 RAL 26.41 RAD 6649.3 VEL 12.488 PTH 7.38 VHP 7.248 DPA 11.14 RAP 48.10 ECC 1.8967
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT YIM INJ 2 LAT INJ 2 LONG
80.00 10 5 39 3528.88 -46.81 130.80 270.18 100.88 11 4 88 2528.8 -37.14 100.38
90.00 10 31 46 3496.37 -39.87 125.88 271.59 98.48 11 29 22 2496.4 -32.88 96.87
70.00 11 8 48 3347.80 -34.03 117.48 272.89 93.14 12 4 33 2347.8 -29.21 89.80
80.00 12 8 54 3177.90 -29.84 104.77 272.38 90.83 12 58 82 2177.9 -26.43 77.88
90.00 13 18 3 2938.33 -28.28 86.86 272.38 90.13 14 8 88 1938.3 -26.37 60.38
100.00 14 48 48 2628.37 -29.64 66.14 272.38 90.93 15 29 58 1628.4 -26.43 39.23
110.00 16 8 18 2394.32 -34.03 46.37 272.80 93.14 16 48 8 1394.3 -29.21 18.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3006 TRA -.7387 TCS .4371 BAV .2297 8GT 949.7 8GR 658.8 8G3 176.4 8T 17.9 8R 29.9 8S 4.4
RDE -.6242 RRA .2301 RC3 -.1289 PAU .07163 RRT -.1199 RRF .1812 RTP -.5220 CRT .7244 CR8 .8883 CBT .6089
PDE .1288 PRA -.0691 PC3 -1.7101 B8P 1286 8GB 1182.3 R23 -.0367 R13 .8897 LBA 32.8 M8A 11.2 88A 2.0
BDE .6928 BRA .7737 BC3 .4739 P8P 220 8G1 959.7 8G2 643.7 THA 171.34 EL1 33.0 EL2 11.2 ALP 63.18

LAUNCH DATE AUG 28 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC

DISTANCE 274.188

EARTH TO MARS

RL 181.21 LAL .00 LOL 331.68 VL 34.834 GAL 4.80 AZL 89.78 MCA 85.34 BMA 235.84 ECC .36721 INC .2467 V1 29.488
RP 222.86 LAP .25 LOP 86.90 VP 25.085 GAP 21.38 AZP 89.98 TAL 17.98 TAP 103.30 RCA 149.24 APO 322.44 V2 24.673
RC 97.890 GL 1.43 GP -8.04 ZAL 56.81 ZAP 188.19 ETS 212.24 ZAE 186.33 ETE 342.78 ZAC 76.89 ETC 282.34 LVI -9.88

PLANETOCENTRIC CONIC

C3 38.180 VHL 5.931 DLA 12.19 RAL 25.78 RAD 6649.0 VEL 12.483 PTH 7.35 VHP 7.028 DPA 11.05 RAP 48.38 ECC 1.9760
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT YIM INJ 2 LAT INJ 2 LONG
80.00 10 3 1 3517.71 -46.80 129.75 269.73 101.48 11 1 39 2517.7 -36.88 99.83
90.00 10 30 9 3448.18 -39.80 124.87 270.21 98.83 11 26 37 2448.2 -32.78 96.30
70.00 11 6 11 3339.18 -33.99 116.81 270.88 93.82 12 1 50 2339.2 -29.03 89.82
80.00 12 0 21 3189.48 -29.83 104.14 271.00 91.86 12 53 11 2189.5 -26.88 77.28
90.00 13 18 38 2950.86 -28.28 86.34 271.11 90.44 14 4 19 1950.9 -25.84 60.74
100.00 14 43 13 2643.88 -29.63 65.81 271.08 91.86 15 27 17 1643.9 -26.28 38.85
110.00 16 8 38 2386.00 -33.99 45.75 270.88 93.82 16 48 24 1386.0 -29.03 18.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3006 TRA -.7279 TCS .4480 BAV .2370 8GT 968.9 8GR 668.4 8G3 190.3 8T 18.1 8R 30.0 8S 4.8
RDE -.6188 RRA .2279 RC3 -.1363 PAU .07581 RRT -.1264 RRF .1787 RTP -.5708 CRT .7288 CR8 .8827 CBT .6084
PDE .1339 PRA -.0691 PC3 -1.8500 B8P 1290 8GB 1188.9 R23 -.0398 R13 .8779 LBA 33.8 M8A 11.3 88A 2.1
BDE .6874 BRA .7628 BC3 .4838 P8P 247 8G1 978.6 8G2 649.4 THA 170.98 EL1 33.2 EL2 11.2 ALP 62.96

LAUNCH DATE AUG 25 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 34.429 GAL 4.82 AZL 89.72 HCA 86.43 SMA 232.85 ECC .35932 INC .2812 V1 29.465
RP 223.25 LAP .28 LOP 58.08 VP 24.879 GAP 20.93 AZP 89.98 TAL 18.35 TAP 104.78 RCA 149.18 APO 316.52 V2 24.631
RC 100.104 GL 1.65 GP -8.19 ZAL 55.99 ZAP 167.31 ETS 210.66 ZAE 158.43 ETE 342.09 ZAC 76.41 ETC 282.32 LVI -9.85

DISTANCE 277.284

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.191 VHL 5.847 DLA 12.17 RAL 23.05 RAD 6648.6 VEL 12.414 PTH 7.32 VHP 6.811 DPA 10.98 RAP 46.93 ECC 1.5687
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 10 0 24 3510.11 -46.40 129.04 267.34 101.99 10 58 54 2510.1 -36.57 99.32
60.00 10 26 34 3440.50 -39.74 124.33 268.89 97.36 11 23 54 2440.5 -32.53 95.77
70.00 11 3 37 3331.44 -33.86 116.21 269.60 93.87 11 59 9 2331.4 -28.86 88.68
80.00 11 57 49 3161.65 -29.82 103.56 269.83 91.56 12 30 31 2161.7 -26.15 76.74
90.00 13 13 0 2918.99 -28.27 85.76 269.86 90.73 14 1 39 1919.0 -25.12 59.19
100.00 14 40 41 2636.13 -29.82 64.93 269.83 91.56 15 24 37 1636.1 -26.15 38.11
110.00 16 3 4 2378.26 -33.96 45.12 269.60 93.87 16 42 42 1378.3 -28.86 17.60

DIFFERENTIAL CORRECTIONS

TDE -.3013 TRA -.7174 TC3 .5128 BAU .2440
RDE -.6124 RRA .2285 RC3 -.1481 FAU .07903
FDE .1397 FRA -.1532 FC3-2.0010 B8P 1326
BDE .6825 BRA .7520 BC3 .5338 F8P 267

MID-COURSE EXECUTION ACCURACY

SGT 981.8 SGR 864.2 S63 203.0
RRT -.1369 RRF .1848 RTF -.5782
SGB 1185.3 R23 -.0431 R13 .5863
SG1 989.3 S62 652.9 THA 170.57

ORBIT DETERMINATION ACCURACY

ST 18.3 SR 30.2 S8 4.7
CRT .7347 CR8 .8755 C8T .5399
LSA 33.7 MSA 11.3 S8A 2.1
EL1 33.5 EL2 11.2 ALF 62.69

LAUNCH DATE AUG 25 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 34.330 GAL 4.85 AZL 89.68 HCA 87.52 SMA 230.10 ECC .35191 INC .3157 V1 29.485
RP 223.64 LAP .32 LOP 59.17 VP 24.701 GAP 20.54 AZP 89.99 TAL 18.74 TAP 106.28 RCA 149.13 APO 311.08 V2 24.590
RC 102.397 GL 1.87 GP -6.35 ZAL 55.38 ZAP 166.42 ETS 209.28 ZAE 158.58 ETE 341.35 ZAC 76.23 ETC 282.31 LVI -9.46

DISTANCE 280.468

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.286 VHL 5.769 DLA 12.16 RAL 24.38 RAD 6648.3 VEL 12.377 PTH 7.29 VHP 6.604 DPA 10.85 RAP 46.72 ECC 1.5478
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 57 48 3503.03 -46.30 128.39 266.00 102.48 10 56 11 2503.0 -36.30 98.85
60.00 10 23 59 3433.36 -39.87 123.73 267.62 97.76 11 21 12 2433.4 -32.32 95.28
70.00 11 1 4 3324.24 -33.93 115.65 268.37 94.20 11 56 28 2324.2 -28.69 88.18
80.00 11 55 17 3154.39 -29.81 103.02 268.62 91.85 12 47 51 2154.4 -26.02 76.24
90.00 13 10 28 2911.70 -28.26 85.23 268.67 91.00 13 59 0 1911.7 -25.00 58.69
100.00 14 38 9 2628.86 -29.81 64.39 268.62 91.85 15 21 57 1628.9 -26.02 37.61
110.00 16 0 30 2371.06 -33.93 44.56 268.37 94.20 16 40 1 1371.1 -28.69 17.10

DIFFERENTIAL CORRECTIONS

TDE -.2912 TRA -.6963 TC3 .5530 BAU .2362
RDE -.6066 RRA .2232 RC3 -.1602 FAU .08289
FDE .1488 FRA -.1829 FC3-2.1558 B8P 1229
BDE .6728 BRA .7312 BC3 .5758 F8P 291

MID-COURSE EXECUTION ACCURACY

SGT 995.6 SGR 869.7 S63 215.9
RRT -.1562 RRF .1965 RTF -.6024
SGB 1199.9 R23 -.0306 R13 .6105
SG1 1005.3 S62 655.1 THA 169.50

ORBIT DETERMINATION ACCURACY

ST 18.0 SR 30.3 S8 5.0
CRT .7332 CR8 .8725 C8T .5155
LSA 33.7 MSA 11.2 S8A 2.2
EL1 33.4 EL2 11.1 ALF 63.37

LAUNCH DATE AUG 25 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 34.237 GAL 4.87 AZL 89.65 HCA 88.60 SMA 227.59 ECC .34498 INC .3498 V1 29.465
RP 224.03 LAP .35 LOP 60.25 VP 24.529 GAP 20.18 AZP 89.99 TAL 19.12 TAP 107.72 RCA 149.07 APO 306.10 V2 24.548
RC 104.735 GL 2.10 GP -6.51 ZAL 54.79 ZAP 165.50 ETS 208.06 ZAE 158.77 ETE 340.54 ZAC 76.04 ETC 282.30 LVI -9.28

DISTANCE 283.709

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.456 VHL 5.897 DLA 12.15 RAL 23.73 RAD 6647.9 VEL 12.344 PTH 7.27 VHP 6.405 DPA 10.73 RAP 46.90 ECC 1.5341
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 55 15 3498.49 -46.20 127.79 264.73 102.93 10 53 31 2498.5 -36.06 98.41
60.00 10 21 26 3426.80 -39.61 123.19 266.40 98.13 11 18 32 2426.8 -32.13 94.84
70.00 10 58 31 3317.65 -33.89 115.13 267.19 94.50 11 53 49 2317.6 -28.54 87.73
80.00 11 52 45 3147.75 -29.79 102.53 267.47 92.11 12 45 13 2147.8 -25.90 75.78
90.00 13 7 57 2905.05 -28.25 84.74 267.52 91.24 13 56 22 1905.0 -24.90 58.23
100.00 14 35 37 2622.25 -29.79 63.90 267.47 92.11 15 19 19 1622.2 -25.90 37.15
110.00 15 57 58 2364.47 -33.89 44.05 267.19 94.50 16 37 22 1364.5 -28.54 16.65

DIFFERENTIAL CORRECTIONS

TDE -.2956 TRA -.6897 TC3 .5757 BAU .2609
RDE -.6012 RRA .2205 RC3 -.1735 FAU .08719
FDE .1545 FRA -.2196 FC3-2.3256 B8P 1307
BDE .6700 BRA .7241 BC3 .6013 F8P 312

MID-COURSE EXECUTION ACCURACY

SGT 1011.0 SGR 878.4 S63 230.2
RRT -.1624 RRF .2105 RTF -.6330
SGB 1215.9 R23 -.0402 R13 .6124
SG1 1021.3 S62 659.7 THA 169.30

ORBIT DETERMINATION ACCURACY

ST 18.3 SR 30.4 S8 5.2
CRT .7412 CR8 .8600 C8T .4861
LSA 34.0 MSA 11.2 S8A 2.3
EL1 33.7 EL2 11.1 ALF 62.70

LAUNCH DATE AUG 25 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 34.150 GAL 4.90 AZL 89.62 HCA 89.68 SMA 225.27 ECC .33848 INC .3839 V1 29.465
RP 224.42 LAP .38 LOP 61.33 VP 24.364 GAP 19.78 AZP 90.00 TAL 19.50 TAP 109.18 RCA 149.02 APO 301.52 V2 24.506
RC 107.119 GL 2.32 GP -6.68 ZAL 54.22 ZAP 164.57 ETS 206.99 ZAE 159.01 ETE 339.66 ZAC 75.85 ETC 282.30 LVI -9.06

DISTANCE 287.002

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.695 VHL 5.630 DLA 12.15 RAL 23.09 RAD 6647.7 VEL 12.313 PTH 7.25 VHP 6.214 DPA 10.61 RAP 47.07 ECC 1.5216
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 52 43 3490.46 -46.10 127.24 263.52 103.35 10 50 53 2490.5 -35.83 98.01
60.00 10 18 54 3420.76 -39.55 122.69 265.24 98.46 11 15 55 2420.8 -31.95 94.42
70.00 10 56 0 3311.60 -33.86 114.67 266.06 94.78 11 51 11 2311.6 -28.41 87.31
80.00 11 50 14 3141.70 -29.77 102.08 266.38 92.34 12 42 35 2141.7 -25.79 75.36
90.00 13 5 26 2898.98 -28.25 84.30 266.42 91.46 13 53 45 1899.0 -24.80 57.82
100.00 14 33 5 2616.17 -29.77 63.45 266.36 92.34 15 16 42 1616.2 -25.79 36.73
110.00 15 55 26 2358.42 -33.86 43.58 266.06 94.78 16 34 44 1358.4 -28.41 16.23

DIFFERENTIAL CORRECTIONS

TDE -.2987 TRA -.6821 TC3 .5988 BAU .2659
RDE -.5981 RRA .2175 RC3 -.1875 FAU .09167
FDE .1609 FRA -.2566 FC3-2.5041 B8P 1369
BDE .6667 BRA .7160 BC3 .6275 F8P 335

MID-COURSE EXECUTION ACCURACY

SGT 1025.3 SGR 881.1 S63 245.1
RRT -.1700 RRF .2251 RTF -.6049
SGB 1230.9 R23 -.0483 R13 .6156
SG1 1036.5 S62 663.9 THA 169.00

ORBIT DETERMINATION ACCURACY

ST 18.6 SR 30.5 S8 5.4
CRT .7483 CR8 .8489 C8T .4583
LSA 34.2 MSA 11.3 S8A 2.4
EL1 34.0 EL2 11.1 ALF 62.31

LAUNCH DATE AUG 28 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 34.067 GAL 4.92 AZL 89.58 HCA 90.78 SMA 223.13 ECC .33239 INC .4178 V1 29.465  
 RP 224.91 LAP .42 LOP 62.40 VP 24.206 GAP 19.41 AZP 90.01 TAL 19.88 TAP 110.63 RCA 148.97 APO 297.30 V2 24.464  
 RC 109.544 GL 2.93 GP -6.86 ZAL 53.66 ZAP 163.62 ETS 206.02 ZAE 159.29 ETE 338.68 ZAC 75.66 ETC 282.29 LVI -8.80

PLANETOCENTRIC CONIC  
 C3 30.998 VHL 5.587 DLA 12.15 RAL 22.47 RAD 6647.4 VEL 12.285 PTH 7.22 VHP 6.029 DPA 10.47 RAP 47.22 ECC 1.5101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 50 13 3484.93 -46.02 126.73 262.36 103.73 10 48 17 2484.9 -35.62 97.85  
 60.00 10 16 24 3415.24 -39.50 122.23 264.13 98.77 11 13 19 2415.2 -31.78 94.05  
 70.00 10 53 29 3306.09 -33.83 114.24 264.98 95.03 11 48 35 2306.1 -26.28 86.93  
 80.00 11 47 43 3136.21 -29.78 101.67 265.30 92.56 12 39 59 2136.2 -25.69 74.99  
 90.00 13 2 55 2893.50 -28.24 83.90 265.37 91.66 13 51 8 1893.5 -24.71 57.44  
 100.00 14 30 35 2610.68 -29.78 63.04 265.30 92.56 15 14 5 1610.7 -25.69 36.36  
 110.00 15 52 55 2352.91 -33.83 43.16 264.98 95.03 16 32 8 1352.9 -28.28 15.85

DIFFERENTIAL CORRECTIONS  
 TDE -.3012 TRA -.6738 TC3 .6221 BAU .2711 MID-COURSE EXECUTION ACCURACY SGT 1036.8 SGR 686.8 S63 160.9 ORBIT DETERMINATION ACCURACY ST 18.8 SR 30.8 S8 5.7  
 RDE -.5910 RRA .2145 RC3 -.2022 FAU .09641 RRT -.1789 RRF .2404 RTF -.6077 CRT .7549 CRS .8370 CST .4329  
 FDE .1682 FRA -.3002 FC3-2.6928 B8P 1421 SGB 1245.3 R23 -.0556 R13 .6198 LSA 34.5 MSA 11.4 S8A 2.5  
 BDE .6634 BRA .7071 BC3 .6541 F8P 360 S61 1051.1 S62 667.8 THA 168.61 EL1 34.2 EL2 11.1 ALF 61.89

LAUNCH DATE AUG 25 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.989 GAL 4.94 AZL 89.55 HCA 91.82 SMA 221.16 ECC .32668 INC .4515 V1 29.465  
 RP 225.20 LAP .45 LOP 63.47 VP 24.054 GAP 19.04 AZP 90.01 TAL 20.24 TAP 112.06 RCA 148.91 APO 293.41 V2 24.422  
 RC 112.011 GL 2.78 GP -7.04 ZAL 53.12 ZAP 162.65 ETS 205.16 ZAE 159.61 ETE 337.61 ZAC 75.47 ETC 282.29 LVI -8.66

PLANETOCENTRIC CONIC  
 C3 30.353 VHL 5.509 DLA 12.16 RAL 21.86 RAD 6647.1 VEL 12.259 PTH 7.20 VHP 5.852 DPA 10.32 RAP 47.36 ECC 1.4995  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 47 45 3479.88 -45.93 126.27 261.27 104.08 10 45 44 2479.9 -35.43 97.32  
 60.00 10 13 55 3410.22 -39.44 121.81 263.07 99.05 11 10 45 2410.2 -31.63 93.71  
 70.00 10 51 0 3301.12 -33.80 113.85 263.95 95.25 11 46 1 2301.1 -26.16 86.59  
 80.00 11 45 12 3131.27 -29.74 101.31 264.29 92.75 12 37 24 2131.3 -25.60 74.65  
 90.00 13 0 24 2888.59 -28.22 83.54 264.36 91.84 13 48 33 1888.6 -24.62 57.11  
 100.00 14 28 4 2605.75 -29.74 62.67 264.29 92.75 15 11 30 1605.7 -25.60 36.02  
 110.00 15 50 26 2347.94 -33.80 42.77 263.95 95.25 16 29 34 1347.9 -28.16 15.51

DIFFERENTIAL CORRECTIONS  
 TDE -.3029 TRA -.6652 TC3 .6451 BAU .2763 MID-COURSE EXECUTION ACCURACY SGT 1051.3 SGR 692.5 S63 277.5 ORBIT DETERMINATION ACCURACY ST 19.0 SR 30.7 S8 5.9  
 RDE -.5861 RRA .2112 RC3 -.2178 FAU .10137 RRT -.1889 RRF .2564 RTF -.6109 CRT .7609 CRS .8250 CST .4093  
 FDE .1763 FRA -.3444 FC3-2.8914 B8P 1463 SGB 1258.9 R23 -.0621 R13 .6245 LSA 34.7 MSA 11.4 S8A 2.6  
 BDE .6596 BRA .6979 BC3 .6808 F8P 386 S61 1065.0 S62 671.4 THA 168.14 EL1 34.4 EL2 11.0 ALF 61.54

LAUNCH DATE AUG 25 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.916 GAL 4.97 AZL 89.51 HCA 92.89 SMA 219.34 ECC .32132 INC .4854 V1 29.465  
 RP 225.99 LAP .48 LOP 64.94 VP 23.907 GAP 18.67 AZP 90.02 TAL 20.60 TAP 113.49 RCA 148.86 APO 289.82 V2 24.380  
 RC 114.516 GL 3.01 GP -7.23 ZAL 52.60 ZAP 161.67 ETS 204.39 ZAE 159.97 ETE 336.44 ZAC 75.27 ETC 282.29 LVI -8.46

PLANETOCENTRIC CONIC  
 C3 29.762 VHL 5.456 DLA 12.18 RAL 21.27 RAD 6646.9 VEL 12.235 PTH 7.18 VHP 5.680 DPA 10.16 RAP 47.49 ECC 1.4898  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 45 19 3475.30 -45.86 125.86 260.22 104.39 10 43 14 2475.3 -35.26 97.03  
 60.00 10 11 28 3405.70 -39.39 121.44 262.06 99.30 11 8 14 2405.7 -31.49 93.41  
 70.00 10 48 31 3296.66 -33.77 113.51 262.97 95.46 11 43 28 2296.7 -26.06 86.29  
 80.00 11 42 42 3126.89 -29.73 100.98 263.32 92.92 12 34 49 2126.9 -25.51 74.35  
 90.00 12 57 54 2884.24 -28.21 83.22 263.39 92.00 13 45 56 1884.2 -24.55 56.81  
 100.00 14 25 34 2601.38 -29.73 62.35 263.32 92.92 15 8 56 1601.4 -25.51 35.72  
 110.00 15 47 57 2343.48 -33.77 42.43 262.97 95.46 16 27 1 1343.5 -28.06 15.21

DIFFERENTIAL CORRECTIONS  
 TDE -.3046 TRA -.6583 TC3 .6672 BAU .2813 MID-COURSE EXECUTION ACCURACY SGT 1062.8 SGR 698.4 S63 295.0 ORBIT DETERMINATION ACCURACY ST 19.2 SR 30.7 S8 6.2  
 RDE -.5813 RRA .2077 RC3 -.2341 FAU .10659 RRT -.1994 RRF .2730 RTF -.6.41 CRT .7670 CRS .8141 CST .3894  
 FDE .1838 FRA -.3816 FC3-3.1004 B8P 1499 SGB 1271.7 R23 -.0688 R13 .6293 LSA 34.8 MSA 11.4 S8A 2.7  
 BDE .6583 BRA .6884 BC3 .7071 F8P 415 S61 1077.9 S62 674.7 THA 167.62 EL1 34.5 EL2 11.0 ALF 61.20

LAUNCH DATE AUG 25 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.846 GAL 4.99 AZL 89.48 HCA 93.95 SMA 217.68 ECC .31630 INC .5190 V1 29.465  
 RP 225.98 LAP .52 LOP 65.60 VP 23.766 GAP 18.31 AZP 90.04 TAL 20.95 TAP 114.90 RCA 148.81 APO 286.50 V2 24.338  
 RC 117.057 GL 3.24 GP -7.43 ZAL 52.10 ZAP 160.66 ETS 203.68 ZAE 160.37 ETE 335.14 ZAC 75.06 ETC 282.29 LVI -8.25

PLANETOCENTRIC CONIC  
 C3 29.219 VHL 5.403 DLA 12.20 RAL 20.89 RAD 6646.7 VEL 12.213 PTH 7.17 VHP 5.516 DPA 9.99 RAP 47.60 ECC 1.4809  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 42 55 3471.18 -45.79 125.49 259.23 104.67 10 40 47 2471.2 -35.10 96.76  
 60.00 10 9 3 3401.66 -39.35 121.10 261.11 99.52 11 5 44 2401.7 -31.37 93.13  
 70.00 10 46 4 3292.72 -33.74 113.20 262.03 95.63 11 40 57 2292.7 -27.96 86.02  
 80.00 11 40 13 3123.05 -29.71 100.70 262.39 93.07 12 32 16 2123.1 -25.44 74.09  
 90.00 12 55 23 2880.45 -28.21 82.95 262.47 92.14 13 43 24 1880.4 -24.48 56.55  
 100.00 14 23 5 2597.52 -29.71 62.06 262.39 93.07 15 6 23 1597.5 -25.44 35.46  
 110.00 15 45 30 2339.54 -33.74 42.12 262.03 95.63 16 24 30 1339.5 -27.96 14.94

DIFFERENTIAL CORRECTIONS  
 TDE -.3058 TRA -.6474 TC3 .6885 BAU .2863 MID-COURSE EXECUTION ACCURACY SGT 1073.3 SGR 704.4 S63 313.5 ORBIT DETERMINATION ACCURACY ST 19.4 SR 30.7 S8 6.5  
 RDE -.5765 RRA .2040 RC3 -.2513 FAU .11211 RRT -.2109 RRF .2906 RTF -.6170 CRT .7727 CRS .8027 CST .3702  
 FDE .1958 FRA -.4424 FC3-3.3217 B8P 1531 SGB 1283.8 R23 -.0750 R13 .6341 LSA 35.0 MSA 11.5 S8A 2.8  
 BDE .6526 BRA .6788 BC3 .7329 F8P 445 S61 1090.3 S62 677.9 THA 167.03 EL1 34.7 EL2 10.9 ALF 60.89

LAUNCH DATE AUG 25 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.781 GAL 5.01 AZL 89.45 HCA 95.01 SMA 216.09 ECC .31158 INC .5327 V1 29.465
RP 226.37 LAP .55 LOP 66.66 VP 23.631 GAP 17.96 AZP 90.09 TAL 21.29 TAP 116.30 RCA 148.76 APO 283.42 V2 24.297
RC 119.633 GL 3.47 GP -7.63 ZAL 51.61 ZAP 159.64 ETS 203.04 ZAE 160.79 ETE 333.71 ZAC 74.66 ETC 282.30 LVI -8.05

PLANETOCENTRIC CONIC

C3 28.718 VHL 5.359 DLA 12.23 RAL 20.13 RAD 6646.5 VEL 12.193 PTH 7.15 VHP 5.357 DPA 9.80 RAP 47.69 ECC 1.4726
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 40 34 3467.50 -45.72 125.16 258.30 104.91 10 38 22 2467.5 -34.96 96.52
60.00 10 6 39 3398.08 -39.31 120.81 260.20 99.72 11 3 17 2398.1 -31.26 92.90
70.00 10 43 38 3289.27 -33.72 112.94 261.14 95.79 11 38 27 2289.3 -27.88 85.79
80.00 11 37 45 3119.74 -29.70 100.45 261.51 93.20 12 29 44 2119.7 -25.38 73.86
90.00 12 52 54 2877.20 -28.20 82.71 261.60 92.26 13 40 51 1877.2 -24.43 58.33
100.00 14 20 36 2594.21 -29.70 61.82 261.51 93.20 15 3 51 1594.2 -25.38 35.23
110.00 15 43 4 2336.09 -33.72 41.86 261.14 95.79 16 22 0 1336.1 -27.88 14.71

DIFFERENTIAL CORRECTIONS

TDE -.3072 TRA -.6389 TC3 .7083 BAU .2909 SGT 1082.9 SGR 710.7 S63 332.9 ST 19.5 SR 30.7 S8 6.0
RDE -.5719 RRA .2000 RC3 -.2694 FAU .11788 RRT -.2226 RRF .3089 RTF -.6193 CRT .7784 CR8 .7917 C8T .3533
FDE .2065 FRA -.4960 FC3-3.5536 B8P 1557 SGB 1295.3 R23 -.0821 R13 .6384 LSA 35.1 MSA 11.5 S8A 2.9
BDE .6492 BRA .6695 BC3 .7578 F8P 477 S61 1101.9 S62 681.0 THA 166.41 EL1 34.8 EL2 10.8 ALF 60.57

LAUNCH DATE AUG 25 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.720 GAL 5.03 AZL 89.41 HCA 96.07 SMA 214.64 ECC .30716 INC .5863 V1 29.465
RP 226.76 LAP .58 LOP 67.72 VP 23.500 GAP 17.60 AZP 90.06 TAL 21.62 TAP 117.69 RCA 148.71 APO 280.57 V2 24.255
RC 122.240 GL 3.71 GP -7.85 ZAL 51.15 ZAP 158.60 ETS 202.45 ZAE 161.24 ETE 332.12 ZAC 74.65 ETC 282.31 LVI -7.85

PLANETOCENTRIC CONIC

C3 28.256 VHL 5.316 DLA 12.27 RAL 19.59 RAD 6646.3 VEL 12.174 PTH 7.14 VHP 5.204 DPA 9.61 RAP 47.77 ECC 1.4650
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 38 16 3464.26 -45.67 124.86 257.41 105.13 10 36 0 2464.3 -34.83 96.32
60.00 10 4 18 3394.96 -39.27 120.55 259.33 99.89 11 0 53 2395.0 -31.17 92.69
70.00 10 41 13 3286.32 -33.70 112.71 260.30 95.92 11 35 59 2286.3 -27.81 85.59
80.00 11 35 17 3116.95 -29.69 100.24 260.68 93.30 12 27 14 2117.0 -25.33 73.67
90.00 12 50 24 2874.49 -28.19 82.51 260.76 92.36 13 38 19 1874.5 -24.38 58.14
100.00 14 18 8 2591.42 -29.69 61.61 260.68 93.30 15 1 20 1591.4 -25.33 35.04
110.00 15 40 39 2333.14 -33.70 41.63 260.30 95.92 16 19 32 1333.1 -27.81 14.50

DIFFERENTIAL CORRECTIONS

TDE -.3086 TRA -.6306 TC3 .7266 BAU .2953 SGT 1091.4 SGR 717.3 S63 333.4 ST 19.7 SR 30.7 S8 7.2
RDE -.5672 RRA .1958 RC3 -.2885 FAU .12396 RRT -.2348 RRF .3281 RTF -.6211 CRT .7841 CR8 .7819 C8T .3394
FDE .2187 FRA -.5534 FC3-3.7981 B8P 1584 SGB 1306.0 R23 -.0894 R13 .6426 LSA 35.2 MSA 11.6 S8A 2.9
BDE .6457 BRA .6603 BC3 .7818 F8P 511 S61 1112.6 S62 683.9 THA 165.75 EL1 34.9 EL2 10.8 ALF 60.24

LAUNCH DATE AUG 25 1973

FLIGHT TIME 128.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.662 GAL 5.05 AZL 89.38 HCA 97.12 SMA 213.30 ECC .30301 INC .6199 V1 29.465
RP 227.15 LAP .62 LOP 68.77 VP 23.374 GAP 17.25 AZP 90.06 TAL 21.94 TAP 119.06 RCA 148.67 APO 277.93 V2 24.214
RC 124.878 GL 3.94 GP -8.07 ZAL 50.71 ZAP 157.54 ETS 201.91 ZAE 161.72 ETE 330.37 ZAC 74.43 ETC 282.32 LVI -7.64

PLANETOCENTRIC CONIC

C3 27.830 VHL 5.275 DLA 12.32 RAL 19.07 RAD 6646.1 VEL 12.156 PTH 7.12 VHP 5.057 DPA 9.39 RAP 47.83 ECC 1.4580
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 35 59 3461.43 -45.61 124.61 256.58 105.32 10 33 41 2461.4 -34.72 96.13
60.00 10 1 58 3392.28 -39.24 120.33 258.52 100.03 10 58 30 2392.3 -31.08 92.51
70.00 10 38 49 3283.84 -33.68 112.52 259.49 96.04 11 33 33 2283.8 -27.75 85.42
80.00 11 32 49 3114.67 -29.68 100.08 259.88 93.39 12 24 44 2114.7 -25.28 73.92
90.00 12 47 55 2872.31 -28.18 82.35 259.97 92.44 13 35 47 1872.3 -24.34 58.99
100.00 14 15 41 2589.14 -29.68 61.44 259.88 93.39 14 58 50 1589.1 -25.28 34.88
110.00 15 38 16 2330.65 -33.68 41.44 259.49 96.04 16 17 6 1330.7 -27.75 14.34

DIFFERENTIAL CORRECTIONS

TDE -.3098 TRA -.6226 TC3 .7433 BAU .2994 SGT 1098.8 SGR 724.2 S63 335.0 ST 19.8 SR 30.7 S8 7.6
RDE -.5628 RRA .1912 RC3 -.3086 FAU .13036 RRT -.2474 RRF .3482 RTF -.6223 CRT .7894 CR8 .7718 C8T .3262
FDE .2313 FRA -.6140 FC3-4.0553 B8P 1608 SGB 1316.0 R23 -.0972 R13 .6465 LSA 35.3 MSA 11.6 S8A 3.0
BDE .6422 BRA .6513 BC3 .8048 F8P 547 S61 1122.5 S62 686.9 THA 165.01 EL1 35.0 EL2 10.7 ALF 59.93

LAUNCH DATE AUG 25 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.607 GAL 5.07 AZL 89.35 HCA 98.17 SMA 212.08 ECC .29912 INC .6536 V1 29.465
RP 227.54 LAP .65 LOP 69.82 VP 23.252 GAP 16.91 AZP 90.09 TAL 22.25 TAP 120.42 RCA 148.62 APO 275.48 V2 24.172
RC 127.944 GL 4.18 GP -8.29 ZAL 50.29 ZAP 156.45 ETS 201.41 ZAE 162.21 ETE 328.42 ZAC 74.21 ETC 282.34 LVI -7.43

PLANETOCENTRIC CONIC

C3 27.436 VHL 5.238 DLA 12.38 RAL 18.58 RAD 6646.0 VEL 12.140 PTH 7.11 VHP 4.919 DPA 9.17 RAP 47.87 ECC 1.4515
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 33 48 3459.00 -45.57 124.39 255.79 105.49 10 31 25 2459.0 -34.63 95.98
60.00 9 59 40 3390.04 -39.21 120.14 257.75 100.16 10 56 10 2390.0 -31.01 92.36
70.00 10 36 27 3281.82 -33.67 112.38 258.74 96.13 11 31 9 2281.8 -27.70 85.28
80.00 11 30 22 3112.89 -29.67 99.94 259.13 93.46 12 22 15 2112.9 -25.25 73.40
90.00 12 45 26 2870.64 -28.18 82.23 259.22 92.50 13 33 16 1870.6 -24.31 58.88
100.00 14 13 14 2587.36 -29.67 61.31 259.13 93.46 14 56 21 1587.4 -25.25 34.76
110.00 15 35 53 2328.84 -33.67 41.28 258.74 96.13 16 14 42 1328.6 -27.70 14.20

DIFFERENTIAL CORRECTIONS

TDE -.3111 TRA -.6150 TC3 .7577 BAU .3031 SGT 1104.6 SGR 731.6 S63 337.5 ST 19.9 SR 30.7 S8 8.0
RDE -.5579 RRA .1864 RC3 -.3296 FAU .13702 RRT -.2601 RRF .3688 RTF -.6225 CRT .7948 CR8 .7632 C8T .3159
FDE .2457 FRA -.6786 FC3-4.3237 B8P 1625 SGB 1324.9 R23 -.1056 R13 .6498 LSA 35.4 MSA 11.7 S8A 3.1
BDE .6388 BRA .6428 BC3 .8263 F8P 585 S61 1131.2 S62 689.8 THA 164.23 EL1 35.0 EL2 10.6 ALF 59.60

LAUNCH DATE AUG 25 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.956 GAL 5.09 AZL 89.31 HCA 99.21 SMA 210.00 ECC .28947 INC .6673 V1 29.465  
 RP 227.93 LAP .68 LOP 70.86 VP 23.135 GAP 16.57 AZP 90.11 TAL 22.85 TAP 121.76 RCA 148.58 APO 273.20 V2 24.131  
 RC 130.237 GL 4.42 GP -8.53 ZAL 49.89 ZAP 155.35 ETS 200.95 ZAE 162.72 ETE 326.26 ZAC 73.99 ETC 282.36 LVI -7.23

DISTANCE 318.284 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.072 VHL 5.203 DLA 12.44 RAL 18.08 RAD 6648.8 VEL 12.126 PTH 7.10 VHP 4.778 DPA 8.93 RAP 47.89 ECC 1.4455  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 34 3486.97 -45.53 124.21 255.05 105.62 10 29 11 2457.0 -34.55 95.85  
 60.00 9 57 24 3388.21 -39.19 119.99 257.02 100.26 10 53 53 2368.2 -30.96 92.24  
 70.00 10 34 6 3280.25 -33.65 112.24 258.02 96.20 11 28 46 2280.3 -27.66 85.18  
 80.00 11 27 55 3111.60 -29.67 99.85 258.41 93.51 12 19 47 2111.6 -25.22 73.31  
 90.00 12 42 57 2869.48 -29.18 82.14 258.50 92.54 13 30 48 1869.5 -24.29 55.80  
 100.00 14 10 47 2586.07 -29.67 61.22 258.41 93.51 14 53 53 1586.1 -25.22 34.68  
 110.00 15 33 32 2327.07 -33.65 41.16 258.02 96.20 16 12 19 1327.1 -27.66 14.09

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3126 TRA -.6079 TC3 .7700 BAU .3064 SGT 1109.3 SGR 739.5 SG3 421.2 ST 20.1 SR 30.6 SS 8.4  
 RDE -.5532 RRA .1813 RC3 -.3518 FAU .14404 RRT -.2728 RRF .3904 RTF -.6210 CRT .8001 CR8 .7551 CST .3073  
 FDE .2811 FRA -.7467 FC3-4.8062 BSP 1643 SGB 1333.2 R23 -.1148 R13 .6528 LSA 35.5 MSA 11.8 S8A 3.2  
 BDE .6354 BRA .6344 BC3 .8465 FSP 625 SG1 1138.9 SG2 692.9 THA 163.39 EL1 35.1 EL2 10.5 ALF 59.25

LAUNCH DATE AUG 25 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.508 GAL 5.10 AZL 89.28 HCA 100.25 SMA 209.81 ECC .29204 INC .7211 V1 29.465  
 RP 228.32 LAP .71 LOP 71.91 VP 23.022 GAP 16.23 AZP 90.13 TAL 22.84 TAP 123.09 RCA 148.53 APO 271.08 V2 24.090  
 RC 132.954 GL 4.66 GP -8.77 ZAL 49.51 ZAP 154.23 ETS 200.51 ZAE 163.24 ETE 323.85 ZAC 73.77 ETC 282.38 LVI -7.02

DISTANCE 321.888 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.735 VHL 5.171 DLA 12.51 RAL 17.81 RAD 6645.7 VEL 12.112 PTH 7.09 VHP 4.647 DPA 8.68 RAP 47.90 ECC 1.4400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 29 25 3455.32 -45.90 124.06 254.38 105.73 10 27 1 2455.3 -34.48 95.75  
 60.00 9 55 10 3386.79 -39.17 119.88 256.34 100.33 10 51 37 2386.8 -30.91 92.14  
 70.00 10 31 45 3279.13 -33.65 112.15 257.34 96.25 11 26 24 2279.1 -27.64 85.10  
 80.00 11 25 29 3110.79 -29.67 99.79 257.74 93.54 12 17 20 2110.8 -25.21 73.25  
 90.00 12 40 28 2868.81 -28.17 82.10 257.83 92.56 13 28 16 1868.8 -24.28 55.76  
 100.00 14 8 21 2585.26 -29.67 61.16 257.74 93.54 14 51 26 1585.3 -25.21 34.62  
 110.00 15 31 12 2325.95 -33.65 41.07 257.34 96.25 16 9 57 1326.0 -27.64 14.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3140 TRA -.8014 TC3 .7803 BAU .3095 SGT 1112.8 SGR 748.0 SG3 446.1 ST 20.2 SR 30.5 SS 8.9  
 RDE -.5485 RRA .1758 RC3 -.3750 FAU .15130 RRT -.2855 RRF .4126 RTF -.6203 CRT .8052 CR8 .7479 CST .3005  
 FDE .2780 FRA -.8188 FC3-4.9018 BSP 1657 SGB 1340.8 R23 -.1246 R13 .6554 LSA 35.6 MSA 11.9 S8A 3.3  
 BDE .6320 BRA .6266 BC3 .8658 FSP 667 SG1 1146.0 SG2 696.2 THA 162.50 EL1 35.1 EL2 10.4 ALF 58.88

LAUNCH DATE AUG 25 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.462 GAL 5.12 AZL 89.24 HCA 101.29 SMA 208.80 ECC .28883 INC .7551 V1 29.465  
 RP 228.70 LAP .74 LOP 72.94 VP 22.912 GAP 15.90 AZP 90.15 TAL 23.11 TAP 124.40 RCA 148.49 APO 269.11 V2 24.049  
 RC 135.694 GL 4.90 GP -9.02 ZAL 49.15 ZAP 153.09 ETS 200.10 ZAE 163.75 ETE 321.18 ZAC 73.54 ETC 282.41 LVI -6.81

DISTANCE 325.511 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.423 VHL 5.140 DLA 12.59 RAL 17.16 RAD 6645.6 VEL 12.099 PTH 7.08 VHP 4.521 DPA 8.41 RAP 47.88 ECC 1.4349  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 27 19 3454.04 -45.48 123.95 253.71 105.82 10 24 53 2454.0 -34.43 95.67  
 60.00 9 52 58 3385.76 -39.16 119.79 255.70 100.39 10 49 23 2385.8 -30.88 92.08  
 70.00 10 29 26 3278.44 -33.64 112.10 256.70 96.28 11 24 4 2278.4 -27.62 85.05  
 80.00 11 23 3 3110.44 -29.66 99.76 257.10 93.56 12 14 54 2110.4 -25.20 73.23  
 90.00 12 37 59 2868.63 -28.17 82.08 257.19 92.57 13 25 47 1868.6 -24.26 55.74  
 100.00 14 5 55 2584.91 -29.66 61.13 257.10 93.56 14 49 0 1584.9 -25.20 34.60  
 110.00 15 28 52 2325.26 -33.64 41.02 256.70 96.28 16 7 37 1325.3 -27.62 13.97

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3155 TRA -.5954 TC3 .7879 BAU .3120 SGT 1114.5 SGR 757.2 SG3 472.0 ST 20.4 SR 30.4 SS 9.3  
 RDE -.5436 RRA .1699 RC3 -.3994 FAU .15902 RRT -.2979 RRF .4353 RTF -.6175 CRT .8102 CR8 .7418 CST .2956  
 FDE .2968 FRA -.8048 FC3-5.2103 BSP 1669 SGB 1347.4 R23 -.1352 R13 .6576 LSA 35.7 MSA 12.1 S8A 3.3  
 BDE .6285 BRA .6192 BC3 .8833 FSP 711 SG1 1151.6 SG2 699.6 THA 161.53 EL1 35.1 EL2 10.3 ALF 58.51

LAUNCH DATE AUG 25 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 33.420 GAL 5.13 AZL 89.21 HCA 102.32 SMA 207.87 ECC .28881 INC .7892 V1 29.465  
 RP 229.09 LAP .77 LOP 73.98 VP 22.807 GAP 15.57 AZP 90.17 TAL 23.37 TAP 125.70 RCA 148.46 APO 267.28 V2 24.008  
 RC 138.457 GL 5.15 GP -9.28 ZAL 48.81 ZAP 151.93 ETS 199.72 ZAE 164.25 ETE 318.21 ZAC 73.30 ETC 282.44 LVI -6.60

DISTANCE 329.150 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.134 VHL 5.112 DLA 12.68 RAL 16.72 RAD 6645.5 VEL 12.087 PTH 7.07 VHP 4.399 DPA 8.13 RAP 47.85 ECC 1.4301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 25 14 3453.12 -45.46 123.87 253.10 105.88 10 22 47 2453.1 -34.40 95.61  
 60.00 9 50 47 3385.13 -39.15 119.74 255.10 100.42 10 47 12 2385.1 -30.86 92.03  
 70.00 10 27 7 3278.17 -33.64 112.08 256.10 96.29 11 21 46 2278.2 -27.61 85.04  
 80.00 11 20 37 3110.56 -29.67 99.77 256.50 93.55 12 12 28 2110.6 -25.20 73.24  
 90.00 12 35 29 2868.93 -28.17 82.10 256.59 92.56 13 23 18 1868.9 -24.28 55.77  
 100.00 14 3 29 2585.03 -29.67 61.14 256.50 93.55 14 46 34 1585.0 -25.20 34.61  
 110.00 15 26 34 2324.99 -33.64 41.00 256.10 96.29 16 5 19 1325.0 -27.61 13.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3170 TRA -.5901 TC3 .7932 BAU .3144 SGT 1115.1 SGR 767.3 SG3 499.3 ST 20.5 SR 30.3 SS 9.6  
 RDE -.5387 RRA .1637 RC3 -.4250 FAU .16704 RRT -.3102 RRF .4587 RTF -.6139 CRT .8150 CR8 .7365 CST .2921  
 FDE .3168 FRA -.9745 FC3-5.5336 BSP 1679 SGB 1353.6 R23 -.1465 R13 .6596 LSA 35.7 MSA 12.2 S8A 3.4  
 BDE .6250 BRA .6124 BC3 .8999 FSP 758 SG1 1156.5 SG2 703.3 THA 160.48 EL1 35.1 EL2 10.3 ALF 58.11

LAUNCH DATE AUG 28 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 12 1974

Heliocentric Conic: RL 191.21 LAL .00 LOL 331.68 VL 33.379 GAL 5.14 AZL 89.10 HCA 103.38 SMA 207.00 ECC .28298 INC .8234 V1 29.485  
 RP 229.48 LAP .80 LOP 78.01 VP 22.705 GAP 15.24 ZAP 19.20 TAL 23.82 TAP 126.98 RCA 148.42 APO 265.87 V2 23.867  
 RC 141.241 GL 5.39 GP -9.88 ZAL 48.80 ZAP 190.75 ETS 199.38 ZAE 164.74 ETE 314.92 ZAC 73.07 ETC 282.48 LVI -6.38

Distance 332.804 Earth to Mars

Planetocentric Conic: C3 25.885 VHL 5.086 DLA 12.78 RAL 16.31 RAD 8645.3 VEL 12.078 PTH 7.06 VHP 4.282 DPA 7.83 RAP 47.60 ECC 1.4287  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 23 12 3452.54 -45.45 123.82 252.54 105.92 10 20 44 2452.5 -34.37 95.57  
 60.00 9 48 38 3384.86 -39.15 119.72 254.53 100.44 10 48 2 2384.9 -30.85 92.02  
 70.00 10 24 50 3278.32 -33.64 112.09 255.54 96.28 11 19 28 2278.3 -27.62 85.05  
 80.00 11 18 12 3111.13 -29.67 99.81 255.94 93.53 12 10 3 2111.1 -25.21 73.28  
 90.00 12 33 0 2869.70 -26.18 82.16 256.03 92.53 13 20 50 1869.7 -24.30 55.82  
 100.00 14 1 4 2595.60 -29.67 61.18 255.94 93.53 14 44 9 1585.6 -25.21 34.64  
 110.00 15 24 16 2325.14 -33.64 41.01 255.54 96.28 16 3 1 1325.1 -27.62 13.96

Differential Corrections: TDE -.3186 TRA -.5853 TC3 .7953 BAV .3163 SGT 1113.7 8GR 778.2 5G3 827.6 ST 20.6 SR 30.2 88 10.3  
 RDE -.5337 RRA .1571 RC3 -.4518 FAU .17538 RRT -.3216 RRF .4824 RTF -.6087 CRT .8197 CR8 .7316 C8T .2895  
 FDE .3386 FRA -1.0588 FC3 -5.8694 B8P 1686 8GB 1358.7 R23 -.1588 R13 .6610 LSA 35.8 M8A 12.4 88A 3.4  
 BDE .6215 BRA .6060 BC3 .9147 F8P 807 8G1 1159.9 8G2 707.5 THA 159.36 EL1 35.1 EL2 10.2 ALF 57.70

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973 FLIGHT TIME 142.00 ARRIVAL DATE JAN 14 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.68 VL 33.341 GAL 5.16 AZL 89.14 HCA 104.38 SMA 206.18 ECC .28032 INC .8878 V1 29.485  
 RP 229.86 LAP .83 LOP 76.04 VP 22.607 GAP 14.92 AZP 90.21 TAL 23.86 TAP 128.24 RCA 148.39 APO 263.96 V2 23.927  
 RC 144.046 GL 5.64 GP -9.82 ZAL 48.20 ZAP 149.84 ETS 199.00 ZAE 165.19 ETE 311.28 ZAC 72.83 ETC 282.51 LVI -6.17

Distance 336.471 Earth to Mars

Planetocentric Conic: C3 25.815 VHL 5.081 DLA 12.88 RAL 15.91 RAD 8645.2 VEL 12.088 PTH 7.05 VHP 4.169 DPA 7.52 RAP 47.73 ECC 1.4216  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 12 3452.30 -45.45 123.79 252.01 105.93 10 18 44 2452.3 -34.36 95.55  
 60.00 9 48 30 3384.97 -39.15 119.73 254.01 100.43 10 42 55 2385.0 -30.86 92.02  
 70.00 10 22 33 3278.87 -33.64 112.13 255.01 96.28 11 17 12 2278.9 -27.63 85.08  
 80.00 11 15 46 3112.14 -29.67 99.89 255.41 93.49 12 7 38 2112.1 -25.23 73.33  
 90.00 12 30 30 2870.93 -26.18 82.25 255.50 92.49 13 18 21 1870.9 -24.32 55.90  
 100.00 13 58 38 2586.61 -29.67 61.26 255.41 93.49 14 41 44 1586.6 -25.23 34.71  
 110.00 15 21 59 2325.69 -33.64 41.05 255.01 96.28 16 0 45 1325.7 -27.63 14.00

Differential Corrections: TDE -.3203 TRA -.5816 TC3 .7946 BAV .3179 SGT 1111.1 8GR 790.1 5G3 597.1 ST 20.8 SR 30.0 88 10.9  
 RDE -.5284 RRA .1501 RC3 -.4800 FAU .18404 RRT -.3322 RRF .5065 RTF -.6021 CRT .8241 CR8 .7284 C8T .2894  
 FDE .3631 FRA -1.1465 FC3 -6.2199 B8P 1692 8GB 1363.4 R23 -.1719 R13 .6623 LSA 35.8 M8A 12.6 88A 3.5  
 BDE .6179 BRA .6006 BC3 .9283 F8P 858 8G1 1162.5 8G2 712.3 THA 158.15 EL1 35.1 EL2 10.1 ALF 57.25

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973 FLIGHT TIME 144.00 ARRIVAL DATE JAN 16 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.68 VL 33.308 GAL 5.17 AZL 89.11 HCA 105.41 SMA 205.43 ECC .27783 INC .8924 V1 29.485  
 RP 230.25 LAP .86 LOP 77.08 VP 22.511 GAP 14.60 AZP 90.24 TAL 24.08 TAP 129.49 RCA 148.35 APO 262.30 V2 23.887  
 RC 146.870 GL 5.89 GP -10.11 ZAL 47.93 ZAP 148.31 ETS 198.67 ZAE 165.60 ETE 307.26 ZAC 72.58 ETC 282.56 LVI -5.98

Distance 340.152 Earth to Mars

Planetocentric Conic: C3 25.383 VHL 5.038 DLA 13.00 RAL 15.53 RAD 8645.2 VEL 12.058 PTH 7.04 VHP 4.061 DPA 7.19 RAP 47.83 ECC 1.4177  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 19 14 3452.38 -45.45 123.80 251.83 105.93 10 16 46 2452.4 -34.37 95.56  
 60.00 9 44 23 3385.41 -39.16 119.76 253.52 100.41 10 40 49 2385.4 -30.87 92.05  
 70.00 10 20 17 3279.79 -33.65 112.21 254.52 96.22 11 14 58 2279.8 -27.65 85.14  
 80.00 11 13 20 3113.57 -29.68 99.89 254.91 93.43 12 3 13 2113.6 -25.26 73.44  
 90.00 12 28 0 2872.60 -26.18 82.37 255.00 92.43 13 15 32 1872.6 -24.35 56.01  
 100.00 13 56 12 2588.04 -29.68 61.38 254.91 93.43 14 39 20 1588.0 -25.26 34.61  
 110.00 15 19 43 2326.61 -33.65 41.12 254.52 96.22 15 58 29 1326.6 -27.65 14.08

Differential Corrections: TDE -.3131 TRA -.8683 TC3 .6030 BAV .3234 SGT 1107.4 8GR 803.9 5G3 589.0 ST 20.4 SR 29.9 88 11.4  
 RDE -.5235 RRA .1423 RC3 -.5101 FAU .19339 RRT -.3342 RRF .5321 RTF -.6167 CRT .8285 CR8 .7176 C8T .2792  
 FDE .3828 FRA -1.2458 FC3 -6.5960 B8P 1591 8GB 1368.4 R23 -.1708 R13 .6738 LSA 35.5 M8A 12.8 88A 3.8  
 BDE .6100 BRA .5868 BC3 .9531 F8P 904 8G1 1168.2 8G2 712.6 THA 158.30 EL1 34.8 EL2 9.9 ALF 57.61

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973 FLIGHT TIME 146.00 ARRIVAL DATE JAN 18 1974

Heliocentric Conic: RL 181.21 LAL .00 LOL 331.68 VL 33.273 GAL 5.18 AZL 89.07 HCA 106.43 SMA 204.72 ECC .27549 INC .9272 V1 29.485  
 RP 230.63 LAP .89 LOP 78.08 VP 22.420 GAP 14.28 AZP 90.28 TAL 24.29 TAP 130.71 RCA 148.32 APO 261.12 V2 23.847  
 RC 149.713 GL 6.14 GP -10.40 ZAL 47.67 ZAP 147.07 ETS 198.34 ZAE 165.96 ETE 302.87 ZAC 72.33 ETC 282.60 LVI -8.74

Distance 343.844 Earth to Mars

Planetocentric Conic: C3 25.187 VHL 5.017 DLA 13.12 RAL 15.17 RAD 8645.1 VEL 12.047 PTH 7.03 VHP 3.957 DPA 6.85 RAP 47.52 ECC 1.4142  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 18 3452.78 -45.46 123.84 251.08 105.90 10 14 50 2452.8 -34.38 95.59  
 60.00 9 42 18 3386.23 -39.17 119.83 253.06 100.38 10 38 44 2386.2 -30.89 92.11  
 70.00 10 18 1 3281.13 -33.68 112.31 254.06 96.16 11 12 42 2281.1 -27.69 85.24  
 80.00 11 10 84 3115.45 -29.69 100.13 254.48 93.38 12 2 49 2115.9 -25.30 73.57  
 90.00 12 25 28 2874.74 -26.19 82.53 254.53 92.35 13 13 23 1874.7 -24.39 56.16  
 100.00 13 53 45 2589.92 -29.69 61.50 254.45 93.38 14 36 59 1589.9 -25.30 34.94  
 110.00 15 17 27 2327.95 -33.68 41.23 254.06 96.16 15 56 15 1328.0 -27.69 14.15

Differential Corrections: TDE -.3184 TRA -.5708 TC3 .7924 BAV .3228 SGT 1101.1 8GR 817.9 5G3 620.7 ST 20.8 SR 29.7 88 12.0  
 RDE -.5178 RRA .1346 RC3 -.5408 FAU .20265 RRT -.3375 RRF .5561 RTF -.5918 CRT .8307 CR8 .7184 C8T .2822  
 FDE .4134 FRA -1.3388 FC3 -6.9711 B8P 1638 8GB 1371.7 R23 -.1914 R13 .6706 LSA 35.7 M8A 13.1 88A 3.6  
 BDE .6078 BRA .5865 BC3 .9593 F8P 963 8G1 1167.1 8G2 720.7 THA 158.08 EL1 34.9 EL2 9.9 ALF 56.79

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 25 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 347.546 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 33.241 GAL 5.18 AZL 89.04 HCA 107.44 SMA 204.07 ECC .27330 INC .9623 V1 29.465  
 RP 231.01 LAP .92 LOP 79.10 VP 22.331 GAP 13.97 AZP 90.29 TAL 24.48 TAP 131.93 RCA 148.30 APO 259.84 V2 23.007  
 RC 192.872 GL 6.39 GP -10.70 ZAL 47.44 ZAP 145.80 ETS 198.03 ZAE 166.24 ETE 298.12 ZAC 72.08 ETC 282.65 LVI -5.53

PLANETOCENTRIC CONIC  
 C3 24.964 VHL 4.996 DLA 13.25 RAL 14.82 RAD 6645.0 VEL 12.039 PTH 7.03 VHP 3.858 DPA 6.49 RAP 47.39 ECC 1.4109  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 15 23 3453.51 -45.47 123.90 250.87 105.85 10 12 57 2453.5 -34.41 95.63  
 60.00 9 40 14 3387.38 -39.18 119.92 252.65 100.30 10 36 41 2387.4 -30.93 92.18  
 70.00 10 15 45 3282.88 -33.67 112.44 253.63 96.08 11 10 28 2282.8 -27.73 85.35  
 80.00 11 8 27 3117.76 -29.69 100.30 254.01 93.27 12 0 25 2117.8 -25.34 73.73  
 90.00 12 22 56 2877.33 -28.20 82.72 254.10 92.25 13 10 54 1877.3 -24.43 56.34  
 100.00 13 31 19 2592.23 -29.69 61.67 254.01 93.27 14 34 31 1592.2 -25.34 35.10  
 110.00 15 15 12 2329.67 -33.67 41.36 253.63 96.08 15 54 1 1329.7 -27.73 14.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3227 TRA -.5718 TC3 .7781 BAV .3225 SGT 1093.3 SGR 833.3 SG3 653.6 ST 21.1 SR 29.4 SS 12.6  
 RDE -.5119 RRA .1264 RC3 -.5728 FAU .21225 RRT -.3603 RRF .5802 RTF -.5764 CRT .8355 CRS .7189 CST .2883  
 FDE .4462 FRA -1.4375 FC3 -7.3605 BSP 1661 SGB 1374.7 R23 -.2110 R13 .6688 LSA 35.8 MSA 13.4 SBA 3.6  
 BDE .6051 BRA .5856 BC3 .9662 FSP 1023 SG1 1165.2 SG2 729.4 THA 153.67 EL1 34.9 EL2 9.8 ALF 56.04

LAUNCH DATE AUG 25 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 351.257 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 33.212 GAL 5.19 AZL 89.00 HCA 108.46 SMA 203.46 ECC .27124 INC .9977 V1 29.465  
 RP 231.39 LAP .95 LOP 80.11 VP 22.245 GAP 13.66 AZP 90.32 TAL 24.66 TAP 133.12 RCA 148.27 APO 258.64 V2 23.767  
 RC 155.447 GL 6.64 GP -11.01 ZAL 47.23 ZAP 144.50 ETS 197.72 ZAE 166.43 ETE 293.02 ZAC 71.82 ETC 282.71 LVI -5.31

PLANETOCENTRIC CONIC  
 C3 24.776 VHL 4.978 DLA 13.40 RAL 14.49 RAD 6644.9 VEL 12.031 PTH 7.02 VHP 3.762 DPA 6.11 RAP 47.24 ECC 1.4077  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 13 31 3454.53 -45.49 123.99 250.30 105.79 10 11 5 2454.5 -34.45 95.70  
 60.00 9 38 11 3388.86 -39.20 120.05 252.26 100.22 10 34 40 2388.9 -30.98 92.28  
 70.00 10 13 30 3284.94 -33.69 112.60 253.24 95.99 11 8 15 2284.9 -27.78 85.49  
 80.00 11 5 59 3120.48 -29.70 100.51 253.61 93.17 11 58 0 2120.5 -25.39 73.91  
 90.00 12 20 23 2880.36 -28.21 82.94 253.69 92.14 13 8 23 1880.4 -24.48 56.54  
 100.00 13 48 51 2594.95 -29.70 61.87 253.61 93.17 14 32 6 1595.0 -25.39 35.28  
 110.00 15 12 56 2331.76 -33.69 41.52 253.24 95.99 15 51 48 1331.8 -27.78 14.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3261 TRA -.5729 TC3 .7618 BAV .3225 SGT 1084.3 SGR 850.1 SG3 687.7 ST 21.4 SR 29.2 SS 13.2  
 RDE -.5056 RRA .1179 RC3 -.6064 FAU .22218 RRT -.3622 RRF .6042 RTF -.5602 CRT .8396 CRS .7206 CST .2954  
 FDE .4827 FRA -1.5395 FC3 -7.7638 BSP 1677 SGB 1377.8 R23 -.2293 R13 .6682 LSA 35.8 MSA 13.7 SBA 3.6  
 BDE .6017 BRA .5849 BC3 .9737 FSP 1086 SG1 1163.0 SG2 738.7 THA 152.08 EL1 34.8 EL2 9.7 ALF 55.33

LAUNCH DATE AUG 25 1973 FLIGHT TIME 152.00 ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 354.978 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 33.184 GAL 5.19 AZL 88.97 HCA 109.47 SMA 202.89 ECC .26931 INC 1.0533 V1 29.465  
 RP 231.77 LAP .97 LOP 81.12 VP 22.161 GAP 13.35 AZP 90.34 TAL 24.83 TAP 134.30 RCA 148.25 APO 257.53 V2 23.728  
 RC 158.336 GL 6.90 GP -11.33 ZAL 47.03 ZAP 143.19 ETS 197.42 ZAE 166.52 ETE 287.65 ZAC 71.56 ETC 282.76 LVI -5.09

PLANETOCENTRIC CONIC  
 C3 24.599 VHL 4.960 DLA 13.55 RAL 14.18 RAD 6644.8 VEL 12.024 PTH 7.01 VHP 3.670 DPA 5.72 RAP 47.08 ECC 1.4048  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 40 3455.84 -45.51 124.11 249.96 105.70 10 9 16 2455.8 -34.50 95.78  
 60.00 9 36 9 3390.67 -39.22 120.20 251.91 100.12 10 32 40 2390.7 -31.03 92.40  
 70.00 10 11 15 3287.39 -33.71 112.79 252.87 95.87 11 6 2 2287.4 -27.84 85.86  
 80.00 11 3 31 3123.61 -29.72 100.74 253.24 93.04 11 55 35 2123.6 -25.45 74.13  
 90.00 12 17 49 2883.82 -28.21 83.19 253.31 92.02 13 5 53 1883.8 -24.54 56.78  
 100.00 13 46 23 2598.09 -29.72 62.11 253.24 93.04 14 29 41 1598.1 -25.45 35.50  
 110.00 15 10 41 2334.21 -33.71 41.71 252.87 95.87 15 49 35 1334.2 -27.84 14.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3284 TRA -.5741 TC3 .7431 BAV .3229 SGT 1073.6 SGR 868.6 SG3 723.2 ST 21.6 SR 28.9 SS 13.9  
 RDE -.4994 RRA .1087 RC3 -.6418 FAU .23250 RRT -.3629 RRF .6281 RTF -.5.25 CRT .8430 CRS .7200 CST .2987  
 FDE .3191 FRA -1.8474 FC3 -8.1828 BSP 1679 SGB 1381.0 R23 -.2463 R13 .6691 LSA 35.8 MSA 14.0 SBA 3.8  
 BDE .5976 BRA .5843 BC3 .9817 FSP 1148 SG1 1160.3 SG2 748.9 THA 150.24 EL1 34.8 EL2 9.7 ALF 54.71

LAUNCH DATE AUG 25 1973 FLIGHT TIME 154.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 358.708 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 33.159 GAL 5.20 AZL 88.93 HCA 110.48 SMA 202.38 ECC .26750 INC 1.0693 V1 29.465  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.081 GAP 13.05 AZP 90.37 TAL 24.99 TAP 135.46 RCA 148.23 APO 256.49 V2 23.689  
 RC 161.238 GL 7.16 GP -11.66 ZAL 46.88 ZAP 141.85 ETS 197.12 ZAE 166.49 ETE 282.07 ZAC 71.30 ETC 282.82 LVI -4.87

PLANETOCENTRIC CONIC  
 C3 24.434 VHL 4.943 DLA 13.71 RAL 13.88 RAD 6644.8 VEL 12.017 PTH 7.01 VHP 3.583 DPA 5.31 RAP 46.87 ECC 1.4021  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 50 3457.44 -45.54 124.25 249.65 105.59 10 7 28 2457.4 -34.57 95.88  
 60.00 9 34 8 3392.80 -39.25 120.37 251.58 100.01 10 30 40 2392.8 -31.10 92.54  
 70.00 10 8 59 3290.21 -33.72 113.01 252.53 95.75 11 3 49 2290.2 -27.90 85.85  
 80.00 11 1 2 3127.16 -29.73 101.00 252.89 92.91 11 53 9 2127.2 -25.52 74.37  
 90.00 12 15 13 2887.71 -28.22 83.48 252.96 91.87 13 3 21 1887.7 -24.61 57.05  
 100.00 13 43 53 2601.63 -29.73 62.37 252.89 92.91 14 27 15 1601.6 -25.52 35.74  
 110.00 15 8 25 2337.03 -33.72 41.93 252.53 95.75 15 47 23 1337.0 -27.90 14.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3307 TRA -.5764 TC3 .7208 BAV .3233 SGT 1061.9 SGR 888.6 SG3 759.7 ST 21.8 SR 28.6 SS 14.5  
 RDE -.4927 RRA .0991 RC3 -.6782 FAU .24308 RRT -.3606 RRF .6514 RTF -.5220 CRT .8462 CRS .7212 CST .3040  
 FDE .5599 FRA -1.7576 FC3 -8.6129 BSP 1682 SGB 1384.6 R23 -.2629 R13 .6709 LSA 35.9 MSA 14.4 SBA 3.6  
 BDE .5934 BRA .5848 BC3 .9897 FSP 1215 SG1 1156.9 SG2 760.7 THA 148.21 EL1 34.7 EL2 9.6 ALF 54.04

LAUNCH DATE AUG 25 1973 FLIGHT TIME 196.00 ARRIVAL DATE JAN 20 1974

Table with columns for Heliocentric Conic, Planetary Centric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1.

LAUNCH DATE AUG 25 1973 FLIGHT TIME 196.00 ARRIVAL DATE JAN 30 1974

Table with columns for Heliocentric Conic, Planetary Centric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1.

LAUNCH DATE AUG 25 1973 FLIGHT TIME 160.00 ARRIVAL DATE FEB 1 1974

Table with columns for Heliocentric Conic, Planetary Centric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1.

LAUNCH DATE AUG 25 1973 FLIGHT TIME 182.00 ARRIVAL DATE FEB 3 1974

Table with columns for Heliocentric Conic, Planetary Centric Conic, Differential Corrections, Mid-Course Execution Accuracy, and Orbit Determination Accuracy. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1.



LAUNCH DATE AUG 25 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.053 GAL 5.19 AZL 88.74 HCA 115.46 SMA 200.22 ECC .26002 INC 1.2552 V1 29.465
RP 233.99 LAP 1.13 LOP 87.12 VP 21.715 GAP 11.58 AZP 90.54 TAL 25.57 TAP 141.03 RCA 148.16 APO 252.28 V2 23.488
RC 175.866 GL 8.51 GP -13.43 ZAL 46.27 ZAP 134.83 ETS 195.63 ZAE 164.36 ETE 254.86 ZAC 69.93 ETC 283.19 LVI -3.74

PLANETOCENTRIC CONIC

C3 23.747 VHL 4.873 DLA 14.64 RAL 12.80 RAD 8644.5 VEL 11.989 PTH 6.98 VHP 3.199 DPA 3.03 RAP 45.60 ECC 1.3008
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 1 0 3469.62 -45.76 125.35 248.58 104.77 9 58 50 2469.6 -35.04 96.66
60.00 9 24 7 3408.10 -39.42 121.63 250.40 99.16 10 20 55 2408.1 -31.57 93.57
70.00 9 37 34 3309.64 -33.85 114.51 251.26 94.87 10 52 44 2309.6 -28.36 87.18
80.00 10 48 13 3150.96 -29.80 102.77 251.54 91.98 11 40 44 2151.0 -25.96 76.00
90.00 12 1 44 2913.62 -28.27 85.37 251.59 90.93 12 50 18 1913.6 -25.04 58.82
100.00 13 31 4 2625.43 -29.80 64.13 251.54 91.98 14 14 50 1625.4 -25.96 37.37
110.00 14 57 0 2356.46 -33.85 43.43 251.26 94.87 15 36 17 1356.5 -28.36 16.10

DIFFERENTIAL CORRECTIONS

TDE -.3384 TRA -.6022 TC3 .5515 BAW .3311
RDE -.4542 RRA .0441 RC3 -.8851 FAU .29997
FDE .8113 FRA-2.3562 FC-10.9358 B8P 1681
BDE .5663 BRA .6038 BC3 1.0429 F8P 1571

MID-COURSE EXECUTION ACCURACY

SGT 991.3 SGR 1016.0 SG3 957.1
RRT -.2884 RRF .7580 RTF -.3653
SGB 1419.4 R23 -.3005 R13 .7126
SG1 1139.7 SG2 846.1 THA 132.58

ORBIT DETERMINATION ACCURACY

ST 22.7 SR 26.7 SS 18.3
CRT .8573 CR8 .7275 CST .3256
LSA 35.8 MSA 16.4 SSA 3.6
EL1 33.9 EL2 9.2 ALF 50.39

LAUNCH DATE AUG 25 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.036 GAL 5.19 AZL 88.71 HCA 116.45 SMA 199.88 ECC .25880 INC 1.2937 V1 29.465
RP 234.35 LAP 1.16 LOP 88.11 VP 21.649 GAP 11.30 AZP 90.56 TAL 25.65 TAP 142.10 RCA 148.15 APO 251.61 V2 23.461
RC 178.836 GL 8.79 GP -13.81 ZAL 46.20 ZAP 133.36 ETS 195.32 ZAE 163.54 ETE 250.17 ZAC 69.65 ETC 283.27 LVI -3.51

PLANETOCENTRIC CONIC

C3 23.634 VHL 4.861 DLA 14.86 RAL 12.38 RAD 8644.4 VEL 11.984 PTH 6.98 VHP 3.133 DPA 2.52 RAP 45.28 ECC 1.3090
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 59 16 3472.85 -45.82 125.64 248.45 104.55 9 57 9 2472.9 -35.16 96.87
60.00 9 22 6 3412.06 -39.46 121.96 250.24 98.94 10 18 59 2412.1 -31.69 93.83
70.00 9 55 14 3314.57 -33.87 114.90 251.07 94.64 10 50 29 2314.6 -28.47 87.52
80.00 10 45 33 3156.92 -29.81 103.21 251.34 91.75 11 38 10 2156.9 -26.06 76.41
90.00 11 58 55 2920.09 -28.27 85.84 251.38 90.69 12 47 35 1920.1 -25.14 59.27
100.00 13 28 25 2631.39 -29.81 64.58 251.34 91.75 14 12 16 1631.4 -26.06 37.78
110.00 14 54 40 2361.38 -33.87 43.81 251.07 94.64 15 34 2 1361.4 -26.47 16.43

DIFFERENTIAL CORRECTIONS

TDE -.3324 TRA -.6043 TC3 .5160 BAW .3369
RDE -.4464 RRA .0308 RC3 -.9331 FAU .31263
FDE .8563 FRA-2.5006 FC-11.4522 B8P 1633
BDE .5568 BRA .6051 BC3 1.0663 F8P 1630

MID-COURSE EXECUTION ACCURACY

SGT 973.8 SGR 1049.4 SG3 1001.3
RRT -.2707 RRF .7776 RTF -.3310
SGB 1431.6 R23 -.2787 R13 .7374
SG1 1145.3 SG2 858.9 THA 127.27

ORBIT DETERMINATION ACCURACY

ST 22.5 SR 26.3 SS 19.0
CRT .8569 CR8 .7200 CST .3140
LSA 35.6 MSA 16.8 SSA 3.6
EL1 33.4 EL2 9.1 ALF 50.23

LAUNCH DATE AUG 25 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 33.020 GAL 5.18 AZL 88.67 HCA 117.44 SMA 199.57 ECC .25766 INC 1.3329 V1 29.465
RP 234.71 LAP 1.18 LOP 89.09 VP 21.584 GAP 11.02 AZP 90.61 TAL 25.71 TAP 143.15 RCA 148.15 APO 250.99 V2 23.424
RC 181.791 GL 9.07 GP -14.20 ZAL 46.15 ZAP 131.88 ETS 195.01 ZAE 162.61 ETE 245.85 ZAC 69.37 ETC 283.36 LVI -3.28

PLANETOCENTRIC CONIC

C3 23.528 VHL 4.850 DLA 15.08 RAL 12.18 RAD 8644.4 VEL 11.979 PTH 6.98 VHP 3.070 DPA 2.01 RAP 44.85 ECC 1.3872
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 57 33 3476.36 -45.87 125.98 248.35 104.31 9 55 30 2476.4 -35.30 97.09
60.00 9 20 6 3416.34 -39.51 122.32 250.11 98.71 10 17 2 2416.3 -31.82 94.12
70.00 9 52 53 3319.87 -33.90 115.31 250.92 94.40 10 48 13 2319.9 -28.60 87.88
80.00 10 42 50 3163.32 -29.82 103.68 251.16 91.50 11 35 34 2163.3 -26.18 76.05
90.00 11 56 3 2927.03 -28.28 86.35 251.19 90.44 12 44 50 1927.0 -25.25 59.75
100.00 13 25 42 2637.80 -29.82 65.05 251.18 91.50 14 9 40 1637.8 -26.18 38.22
110.00 14 52 19 2368.69 -33.90 44.22 250.92 94.40 15 31 46 1366.7 -28.60 16.80

DIFFERENTIAL CORRECTIONS

TDE -.3385 TRA -.6199 TC3 .4555 BAW .3397
RDE -.4359 RRA .0187 RC3 -.9792 FAU .32410
FDE .9359 FRA-2.8160 FC-11.9267 B8P 1696
BDE .5520 BRA .6202 BC3 1.0800 F8P 1722

MID-COURSE EXECUTION ACCURACY

SGT 964.5 SGR 1080.8 SG3 1041.5
RRT -.2217 RRF .7942 RTF -.2.90
SGB 1448.6 R23 -.2540 R13 .7585
SG1 1144.2 SG2 888.4 THA 121.39

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 25.8 SS 20.0
CRT .8593 CR8 .7292 CST .3296
LSA 35.8 MSA 17.3 SSA 3.5
EL1 33.3 EL2 9.1 ALF 48.78

LAUNCH DATE AUG 25 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.68 VL 33.003 GAL 5.18 AZL 88.63 HCA 118.42 SMA 199.28 ECC .25859 INC 1.3728 V1 29.465
RP 235.08 LAP 1.21 LOP 90.08 VP 21.522 GAP 10.74 AZP 90.65 TAL 25.76 TAP 144.18 RCA 148.15 APO 250.41 V2 23.387
RC 184.750 GL 9.36 GP -14.59 ZAL 46.12 ZAP 130.38 ETS 194.69 ZAE 161.58 ETE 241.89 ZAC 69.08 ETC 283.48 LVI -3.04

PLANETOCENTRIC CONIC

C3 23.424 VHL 4.840 DLA 15.32 RAL 11.99 RAD 8644.3 VEL 11.975 PTH 6.97 VHP 3.010 DPA 1.47 RAP 44.61 ECC 1.3855
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 55 50 3480.13 -45.94 126.30 248.28 104.06 9 53 50 2480.1 -35.44 97.34
60.00 9 18 5 3420.92 -39.55 122.70 250.01 98.45 10 15 6 2420.9 -31.95 94.43
70.00 9 50 30 3325.52 -33.93 115.75 250.78 94.14 10 45 55 2325.5 -28.72 88.27
80.00 10 40 5 3170.14 -29.83 104.19 251.01 91.23 11 32 55 2170.1 -26.30 77.33
90.00 11 53 7 2934.42 -28.28 86.89 251.03 90.17 12 42 1 1934.4 -25.36 60.26
100.00 13 22 57 2644.61 -29.83 65.56 251.01 91.23 14 7 1 1644.6 -26.30 38.69
110.00 14 49 56 2372.34 -33.93 44.66 250.78 94.14 15 29 28 1372.3 -28.72 17.19

DIFFERENTIAL CORRECTIONS

TDE -.3404 TRA -.6329 TC3 .3968 BAW .3451
RDE -.4237 RRA .0056 RC3-1.0280 FAU .33602
FDE 1.0094 FRA-2.7424 FC-12.4193 B8P 1733
BDE .5451 BRA .6329 BC3 1.1019 F8P 1803

MID-COURSE EXECUTION ACCURACY

SGT 955.7 SGR 1115.4 SG3 1083.5
RRT -.1730 RRF .8104 RTF -.2072
SGB 1468.8 R23 -.2058 R13 .7868
SG1 1151.7 SG2 911.6 THA 114.06

ORBIT DETERMINATION ACCURACY

ST 23.3 SR 25.2 SS 20.9
CRT .8604 CR8 .7323 CST .3349
LSA 35.8 MSA 17.8 SSA 3.5
EL1 33.1 EL2 9.0 ALF 47.69

LAUNCH DATE AUG 25 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC DISTANCE 392.526 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 32.992 GAL 5.17 AZL 88.59 HCA 119.40 BMA 109.01 ECC .25559 INC 1.4129 V1 29.465  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.462 GAP 10.46 AZP 90.69 TAL 25.81 TAP 145.20 RCA 148.14 APO 249.87 V2 23.351  
 RC 187.714 GL 9.66 GP -14.99 ZAL 46.10 ZAP 126.85 ETS 194.36 ZAE 160.45 ETE 238.26 ZAC 68.79 ETC 283.54 LVI -2.80

PLANETOCENTRIC CONIC  
 C3 23.328 VHL 4.830 DLA 15.56 RAL 11.81 RAD 6844.3 VEL 11.971 PTH 6.97 VHP 2.954 DPA .92 RAP 44.24 ECC 1.3839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 7 3484.15 -46.00 126.66 248.23 103.78 9 52 11 2484.2 -35.59 97.60  
 60.00 9 16 3 3425.78 -39.60 123.10 249.92 98.18 10 13 9 2425.8 -32.10 94.77  
 70.00 9 48 4 3331.52 -33.96 116.21 250.67 93.87 10 43 36 2331.5 -28.86 88.69  
 80.00 10 37 16 3177.36 -29.84 104.73 250.87 90.95 11 30 14 2177.4 -26.42 77.83  
 90.00 11 50 7 2942.24 -28.28 87.46 250.88 89.68 12 39 9 1942.2 -25.48 60.60  
 100.00 13 20 8 2651.83 -29.84 66.09 250.87 90.95 14 4 20 1651.8 -26.42 39.19  
 110.00 14 47 31 2378.34 -33.96 45.13 250.67 93.87 15 27 9 1378.3 -28.86 17.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3359 TRA -.8413 TC3 .3439 BAU .3535 SGT 944.8 SGR 1154.4 SG3 1128.2 ST 23.2 SR 24.7 SS 21.7  
 RDE -.4162 RRA -.0090 RC3-1.0801 FAU .34871 RRT -.1294 RRF .8264 RTF -.1302 CRT .8597 CR8 .7273 C8T .3263  
 FDE 1.0700 FRA-2.8843 FC-12.9409 BSP 1735 SGB 1491.7 R23 -.1433 R13 .8150 LSA 35.6 M8A 18.3 88A 3.5  
 BDE .5348 BRA .6414 BC3 1.1335 FSP 1867 SGI 1172.2 SG2 922.7 THA 106.34 EL1 32.7 EL2 9.0 ALF 47.16

LAUNCH DATE AUG 25 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC DISTANCE 396.303 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 32.979 GAL 5.16 AZL 88.55 HCA 120.37 SMA 198.78 ECC .25465 INC 1.4539 V1 29.465  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.403 GAP 10.18 AZP 90.74 TAL 25.84 TAP 146.21 RCA 148.15 APO 249.38 V2 23.315  
 RC 190.680 GL 9.96 GP -15.40 ZAL 46.11 ZAP 127.32 ETS 194.02 ZAE 159.24 ETE 234.97 ZAC 68.50 ETC 283.63 LVI -2.56

PLANETOCENTRIC CONIC  
 C3 23.237 VHL 4.820 DLA 15.82 RAL 11.84 RAD 6844.2 VEL 11.968 PTH 6.97 VHP 2.901 DPA .36 RAP 43.87 ECC 1.3824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 24 3488.45 -46.07 127.05 248.21 103.49 9 50 33 2488.5 -35.76 97.88  
 60.00 9 14 0 3430.97 -39.65 123.54 249.86 97.89 10 11 11 2431.0 -32.25 95.12  
 70.00 9 45 37 3337.90 -33.99 116.71 250.57 93.58 10 41 15 2337.9 -29.00 89.13  
 80.00 10 34 24 3185.03 -29.85 105.30 250.75 90.65 11 27 29 2185.0 -26.55 78.36  
 90.00 11 47 3 2950.56 -28.28 88.07 250.76 89.57 12 36 13 1950.6 -25.60 61.38  
 100.00 13 17 16 2659.51 -29.85 66.67 250.75 90.65 14 1 35 1659.5 -26.55 39.73  
 110.00 14 45 4 2384.72 -33.99 45.63 250.57 93.58 15 24 48 1384.7 -29.00 18.05

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3401 TRA -.6603 TC3 .2702 BAU .3611 SGT 947.0 SGR 1191.5 SG3 1168.9 ST 23.6 SR 24.1 SS 22.7  
 RDE -.4042 RRA -.0222 RC3-1.1306 FAU .36019 RRT -.0598 RRF .8400 RTF -.0707 CRT .8609 CR8 .7340 C8T .3371  
 FDE 1.1619 FRA-3.0003 FC-13.4195 BSP 1811 SGB 1522.0 R23 -.0633 R13 .8379 LSA 35.9 M8A 18.9 88A 3.4  
 BDE .5282 BRA .6607 BC3 1.1625 FSP 1960 SGI 1195.1 SG2 942.4 THA 97.24 EL1 32.5 EL2 8.9 ALF 45.62

LAUNCH DATE AUG 25 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC DISTANCE 400.084 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 32.968 GAL 5.15 AZL 88.50 HCA 121.35 SMA 198.54 ECC .25378 INC 1.4956 V1 29.465  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.346 GAP 9.91 AZP 90.78 TAL 25.85 TAP 147.20 RCA 148.15 APO 248.92 V2 23.279  
 RC 193.649 GL 10.26 GP -15.81 ZAL 46.12 ZAP 125.77 ETS 193.67 ZAE 157.96 ETE 231.97 ZAC 68.21 ETC 283.73 LVI -2.32

PLANETOCENTRIC CONIC  
 C3 23.151 VHL 4.812 DLA 16.08 RAL 11.48 RAD 6844.2 VEL 11.964 PTH 6.96 VHP 2.851 DPA -.21 RAP 43.48 ECC 1.3810  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 41 3493.01 -46.14 127.47 248.21 103.17 9 48 54 2493.0 -35.93 98.18  
 60.00 9 11 56 3436.45 -39.70 123.99 249.82 97.59 10 9 12 2436.5 -32.41 95.50  
 70.00 9 43 7 3344.63 -34.02 117.23 250.50 93.27 10 38 32 2344.6 -29.15 89.60  
 80.00 10 31 28 3193.14 -29.86 105.90 250.65 90.34 11 24 41 2193.1 -26.68 78.93  
 90.00 11 43 54 2959.34 -28.27 88.71 250.65 89.25 12 33 13 1959.3 -25.73 61.99  
 100.00 13 14 20 2667.81 -29.86 67.27 250.65 90.34 13 58 47 1667.6 -26.68 40.29  
 110.00 14 42 34 2391.45 -34.02 46.15 250.50 93.27 15 22 25 1391.5 -29.15 18.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3385 TRA -.6754 TC3 .2012 BAU .3718 SGT 949.0 SGR 1232.8 SG3 1211.9 ST 23.7 SR 23.4 SS 23.7  
 RDE -.3926 RRA -.0368 RC3-1.1844 FAU .37231 RRT .0051 RRF .8533 RTF .542 CRT .8607 CR8 .7334 C8T .3353  
 FDE 1.2429 FRA-3.1310 FC-13.9223 BSP 1864 SGB 1555.7 R23 .0064 R13 .8533 LSA 35.9 M8A 19.4 88A 3.4  
 BDE .5184 BRA .6784 BC3 1.2014 FSP 2037 SGI 1232.8 SG2 948.9 THA 89.45 EL1 32.2 EL2 8.8 ALF 44.98

LAUNCH DATE AUG 25 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC DISTANCE 403.867 EARTH TO MARS  
 RL 151.21 LAL .00 LOL 331.65 VL 32.957 GAL 5.14 AZL 88.46 HCA 122.32 SMA 198.33 ECC .25297 INC 1.5380 V1 29.465  
 RP 236.48 LAP 1.30 LOP 93.98 VP 21.292 GAP 9.64 AZP 90.82 TAL 25.86 TAP 148.18 RCA 148.16 APO 248.50 V2 23.244  
 RC 196.619 GL 10.57 GP -16.23 ZAL 46.15 ZAP 124.20 ETS 193.31 ZAE 156.60 ETE 229.23 ZAC 67.92 ETC 283.83 LVI -2.07

PLANETOCENTRIC CONIC  
 C3 23.071 VHL 4.803 DLA 16.36 RAL 11.32 RAD 6844.2 VEL 11.961 PTH 6.96 VHP 2.803 DPA -.60 RAP 43.07 ECC 1.3797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 57 3497.82 -46.22 127.91 248.24 102.84 9 47 15 2497.8 -36.11 98.50  
 60.00 9 9 50 3442.24 -39.75 124.48 249.81 97.26 10 7 12 2442.2 -32.58 95.89  
 70.00 9 40 35 3351.73 -34.04 117.78 250.44 92.94 10 36 27 2351.7 -29.30 90.09  
 80.00 10 28 28 3201.68 -29.86 106.53 250.57 90.00 11 21 49 2201.7 -26.82 79.52  
 90.00 11 40 40 2968.61 -28.26 89.39 250.55 88.91 12 30 9 1968.6 -25.86 62.64  
 100.00 13 11 20 2676.15 -29.86 67.90 250.57 90.00 13 55 58 1676.2 -26.82 40.89  
 110.00 14 40 1 2398.55 -34.04 46.70 250.44 92.94 15 20 0 1398.5 -29.30 19.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3326 TRA -.6880 TC3 .1339 BAU .3850 SGT 951.6 SGR 1277.9 SG3 1256.5 ST 23.6 SR 22.9 SS 24.6  
 RDE -.3817 RRA -.0530 RC3-1.2410 FAU .38485 RRT .0688 RRF .8661 RTF .0779 CRT .8591 CR8 .7262 C8T .3222  
 FDE 1.3113 FRA-3.2751 FC-14.4415 BSP 1910 SGB 1593.3 R23 .0541 R13 .8646 LSA 35.7 M8A 20.0 88A 3.4  
 BDE .5063 BRA .6901 BC3 1.2482 FSP 2094 SGI 1281.6 SG2 946.6 THA 83.52 EL1 31.7 EL2 8.7 ALF 43.90

LAUNCH DATE AUG 25 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC										DISTANCE 407.052										EARTH TO MARS																																																																																																																																												
RL	151.21	LAL	.00	LOL	331.65	VL	32.947	GAL	5.12	AZL	88.42	HCA	123.28	SMA	198.14	ECC	.25221	INC	1.5812	V1	29.465	RP	236.81	LAP	1.32	LOP	94.95	VP	21.238	GAP	9.38	AZP	90.87	TAL	25.86	TAP	149.14	RCA	148.16	APO	248.11	V2	23.209	RC	199.589	GL	10.89	GP	-16.65	ZAL	46.20	ZAP	122.63	ETS	192.94	ZAE	155.19	ETE	226.74	ZAC	67.63	ETC	283.92	LVI	-1.82																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	22.994	VHL	4.795	DLA	16.64	RAL	11.18	RAD	6644.1	VEL	11.957	PTH	6.96	VHP	2.759	DPA	-1.40	RAP	42.65	ECC	1.3784	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		8	47	13	3502.92	-46.29		126.36		248.30		102.49		9	45	36	2502.9		-36.30		98.84		60.00		9	7	43	3448.36	-39.80		124.99		249.81		96.92		10	5	11	2448.4		-32.76		96.32		70.00		9	37	59	3359.23	-34.07		118.37		250.41		92.60		10	33	59	2359.2		-29.46		90.62		80.00		10	25	23	3210.72	-29.86		107.21		250.51		89.65		11	18	53	2210.7		-26.96		80.16		90.00		11	37	21	2978.42	-28.25		90.11		250.48		88.56		12	26	59	1978.4		-26.00		63.32		100.00		13	8	15	2685.19	-29.86		68.57		250.51		89.65		13	53	0	1685.2		-26.96		41.52		110.00		14	37	26	2406.05	-34.07		47.29		250.41		92.60		15	17	32	1406.1		-29.46		19.54
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-0.3360	TRA	-0.7121	TC3	.0443	BAU	.3981		SGT	975.5	SGR	1319.1	SG3	1294.9		ST	24.1	SR	22.1	SS	25.8	RDE	-0.3672	RRA	-0.0666	RC3	-1.2942	FAU	.39552		RRT	.1532	RRF	.8766	RTF	.1678		CRT	.8599	CRS	.7327	CST	.3325	FDE	1.4229	FRA	-3.3786	FC	-14.8918	BSP	2021		SGB	1640.6	R23	.1119	R13	.8701		LSA	36.0	MSA	20.5	SSA	3.3	BDE	.4977	BRA	.7152	BC3	1.2950	FSP	2195		SG1	1336.6	SG2	951.3	THA	76.71		EL1	31.5	EL2	8.6	ALF	42.07																																																																									

LAUNCH DATE AUG 25 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC										DISTANCE 411.439										EARTH TO MARS																																																																																																																																												
RL	151.21	LAL	.00	LOL	331.65	VL	32.938	GAL	5.11	AZL	88.37	HCA	124.25	SMA	197.98	ECC	.25151	INC	1.6253	V1	29.465	RP	237.14	LAP	1.34	LOP	95.91	VP	21.187	GAP	9.11	AZP	90.91	TAL	25.85	TAP	150.09	RCA	148.17	APO	247.75	V2	23.174	RC	202.557	GL	11.21	GP	-17.08	ZAL	46.26	ZAP	121.04	ETS	192.56	ZAE	153.72	ETE	224.46	ZAC	67.34	ETC	284.02	LVI	-1.57																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	22.922	VHL	4.788	DLA	16.94	RAL	11.05	RAD	6644.1	VEL	11.954	PTH	6.96	VHP	2.718	DPA	-2.01	RAP	42.23	ECC	1.3772	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		8	45	28	3508.28	-46.37		128.87		248.37		102.11		9	43	56	2308.3		-36.50		99.20		60.00		9	3	33	3454.78	-39.85		125.53		249.84		96.55		10	3	8	2454.8		-32.94		96.76		70.00		9	35	20	3367.12	-34.09		118.98		250.39		92.23		10	31	27	2367.1		-29.63		91.17		80.00		10	22	13	3220.22	-29.85		107.91		250.46		89.28		11	15	53	2220.2		-27.11		80.82		90.00		11	33	55	2988.74	-28.23		90.86		250.42		88.18		12	23	44	1988.7		-26.13		64.05		100.00		13	5	5	2694.69	-29.85		69.28		250.46		89.28		13	49	59	1694.7		-27.11		42.19		110.00		14	34	47	2413.94	-34.09		47.90		250.39		92.23		15	15	1	1413.9		-29.63		20.09
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-0.3333	TRA	-0.7322	TC3	-0.0403	BAU	.4143		SGT	999.8	SGR	1365.2	SG3	1335.8		ST	24.2	SR	21.3	SS	26.8	RDE	-0.3537	RRA	-0.0821	RC3	-1.3512	FAU	.40691		RRT	.2292	RRF	.8870	RTF	.2494		CRT	.8592	CRS	.7302	CST	.3277	FDE	1.5167	FRA	-3.5009	FC	-15.3687	BSP	2117		SGB	1692.2	R23	.1436	R13	.8766		LSA	36.1	MSA	21.1	SSA	3.3	BDE	.4861	BRA	.7368	BC3	1.3518	FSP	2270		SG1	1401.8	SG2	947.8	THA	72.05		EL1	31.1	EL2	8.5	ALF	40.75																																																																									

LAUNCH DATE AUG 25 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC										DISTANCE 415.227										EARTH TO MARS																																																																																																																																												
RL	151.21	LAL	.00	LOL	331.65	VL	32.930	GAL	5.09	AZL	88.33	HCA	125.21	SMA	197.81	ECC	.25085	INC	1.6703	V1	29.465	RP	237.48	LAP	1.36	LOP	96.87	VP	21.137	GAP	8.85	AZP	90.96	TAL	25.82	TAP	151.03	RCA	148.19	APO	247.43	V2	23.140	RC	205.923	GL	11.54	GP	-17.51	ZAL	46.34	ZAP	119.45	ETS	192.17	ZAE	152.21	ETE	222.37	ZAC	67.05	ETC	284.12	LVI	-1.31																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	22.854	VHL	4.781	DLA	17.25	RAL	10.93	RAD	6644.1	VEL	11.952	PTH	6.95	VHP	2.679	DPA	-2.63	RAP	41.79	ECC	1.3761	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		8	43	41	3513.92	-46.45		129.40		248.47		101.72		9	42	15	2313.9		-36.71		99.57		60.00		9	3	22	3461.54	-39.91		126.10		249.88		96.17		10	1	3	2461.5		-33.13		97.23		70.00		9	32	38	3373.40	-34.11		119.63		250.39		91.85		10	28	53	2375.4		-29.80		91.76		80.00		10	18	57	3230.22	-29.84		108.65		250.43		88.89		11	12	47	2230.2		-27.26		81.53		90.00		11	30	24	2999.61	-28.20		91.65		250.37		87.78		12	20	23	1999.6		-26.28		64.81		100.00		13	1	49	2704.69	-29.84		70.02		250.43		88.89		13	46	54	1704.7		-27.26		42.90		110.00		14	32	4	2422.22	-34.11		48.55		250.39		91.85		15	12	26	1422.2		-29.80		20.87
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-0.3300	TRA	-0.7535	TC3	-0.1295	BAU	.4323		SGT	1032.5	SGR	1412.6	SG3	1375.6		ST	24.3	SR	20.5	SS	27.9	RDE	-0.3394	RRA	-0.0978	RC3	-1.4090	FAU	.41790		RRT	.3043	RRF	.8886	RTF	.3286		CRT	.8584	CRS	.7270	CST	.3222	FDE	1.6169	FRA	-3.6187	FC	-15.8309	BSP	2228		SGB	1749.7	R23	.1657	R13	.8829		LSA	36.2	MSA	21.6	SSA	3.2	BDE	.4734	BRA	.7599	BC3	1.4149	FSP	2344		SG1	1474.2	SG2	942.4	THA	68.16		EL1	30.7	EL2	8.3	ALF	39.35																																																																									

LAUNCH DATE AUG 25 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC										DISTANCE 419.017										EARTH TO MARS																																																																																																																																												
RL	151.21	LAL	.00	LOL	331.65	VL	32.923	GAL	5.08	AZL	88.28	HCA	126.17	SMA	197.86	ECC	.25025	INC	1.7162	V1	29.465	RP	237.81	LAP	1.39	LOP	97.83	VP	21.088	GAP	8.59	AZP	91.01	TAL	25.79	TAP	151.96	RCA	148.20	APO	247.13	V2	23.106	RC	208.485	GL	11.87	GP	-17.95	ZAL	46.43	ZAP	117.83	ETS	191.76	ZAE	150.66	ETE	220.44	ZAC	66.76	ETC	284.23	LVI	-1.05																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	22.790	VHL	4.774	DLA	17.56	RAL	10.81	RAD	6644.1	VEL	11.949	PTH	6.95	VHP	2.644	DPA	-3.26	RAP	41.34	ECC	1.3751	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		8	41	54	3519.84	-46.53		129.95		248.60		101.30		9	40	34	2315.8		-36.92		99.97		60.00		9	1	8	3468.63	-39.96		126.69		249.95		95.77		9	58	57	2468.6		-33.33		97.73		70.00		9	29	51	3384.10	-34.13		120.31		250.41		91.45		10	26	15	2384.1		-29.97		92.37		80.00		10	15	35	3240.73	-29.82		109.44		250.41		88.48		11	9	36	2240.7		-27.42		82.27		90.00		11	26	44	3011.05	-28.17		92.49		250.34		87.36		12	16	56	2011.1		-26.42		65.62		100.00		12	58	27	2715.20	-29.82		70.80		250.41		88.48		13	43	42	1715.2		-27.42		43.64		110.00		14	29	17	2430.92	-34.13		49.22		250.41		91.45		15	9	48	1430.9		-29.97		21.29
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-0.3260	TRA	-0.7765	TC3	-0.2235	BAU	.4523		SGT	1074.3	SGR	1461.4	SG3	1414.2		ST	24.5	SR	19.7	SS	29.0	RDE	-0.3244	RRA	-0.1139	RC3	-1.4677	FAU	.42853		RRT	.3768	RRF	.9051	RTF	.4040		CRT	.8576	CRS	.7219	CST	.3143																																																																																																																					

LAUNCH DATE AUG 25 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.916 GAL 5.06 AZL 88.24 HCA 127.13 SMA 197.54 ECC .24968 INC 1.7630 V1 29.488  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.042 GAP 8.33 AZP 91.06 TAL 25.74 TAP 152.87 RCA 148.22 APO 246.86 V2 23.073  
 RC 211.443 GL 12.22 GP -18.39 ZAL 46.53 ZAP 116.24 ETS 191.34 ZAE 149.07 ETE 218.68 ZAC 66.46 ETC 284.33 LVI -.79

PLANETOCENTRIC CONIC  
 C3 22.730 VHL 4.768 DLA 17.89 RAL 10.70 RAD 8644.0 VEL 11.946 PTH 6.95 VHP 2.611 DPA -3.89 RAP 40.89 ECC 1.3741  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 40 5 3528.05 -46.61 130.52 248.74 100.87 9 38 51 2526.1 -37.15 100.40  
 60.00 8 58 51 3476.06 -40.00 127.32 250.04 95.38 9 56 47 2476.1 -33.53 98.25  
 70.00 9 26 59 3393.22 -34.14 121.02 250.45 91.03 10 23 33 2393.2 -30.16 93.02  
 80.00 10 12 7 3251.78 -29.80 110.26 250.40 88.05 11 6 19 2251.8 -27.58 83.05  
 90.00 11 22 58 3023.10 -28.13 93.37 250.32 86.93 12 13 21 2023.1 -26.57 66.47  
 100.00 12 54 59 2726.25 -29.60 71.62 250.40 88.05 13 40 25 1726.3 -27.58 44.42  
 110.00 14 26 26 2440.04 -34.14 49.94 250.45 91.03 15 7 6 1440.0 -30.16 21.94

DIFFERENTIAL CORRECTIONS  
 TDE -.3209 TRA -.8004 TC3 -.3213 BAU .4743 SGT 1124.4 SGR 1511.8 SG3 1451.7 ST 24.5 SR 18.8 SS 30.2  
 RDE -.3087 RRA -.1302 RC3-1.5273 FAU .43879 RRT .4444 RRF .9130 RTF .4734 CRT .8569 CRS .7151 CST .3045  
 FDE 1.8251 FRA-3.8436 FC-16.7127 BSP 2489 SGB 1884.1 R23 .1909 R13 .8960 LSA 36.6 MSA 22.8 SSA 3.1  
 BDE .4452 BRA .8109 BC3 1.5607 FSP 2481 SG1 1639.1 SG2 929.0 THA 62.03 EL1 29.9 EL2 8.0 ALF 36.34

LAUNCH DATE AUG 25 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.910 GAL 5.04 AZL 88.19 HCA 128.08 SMA 197.42 ECC .24916 INC 1.8110 V1 29.465  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.996 GAP 8.07 AZP 91.12 TAL 25.69 TAP 153.77 RCA 148.23 APO 246.61 V2 23.040  
 RC 214.394 GL 12.57 GP -18.84 ZAL 46.65 ZAP 114.64 ETS 190.91 ZAE 147.45 ETE 217.00 ZAC 66.17 ETC 284.43 LVI -.52

PLANETOCENTRIC CONIC  
 C3 22.674 VHL 4.762 DLA 18.23 RAL 10.60 RAD 8644.0 VEL 11.944 PTH 6.95 VHP 2.580 DPA -4.54 RAP 40.44 ECC 1.3732  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 13 3532.55 -46.69 131.13 248.91 100.40 9 37 6 2532.6 -37.39 100.84  
 60.00 8 56 31 3483.84 -40.05 127.97 250.14 94.91 9 54 35 2483.8 -33.75 98.80  
 70.00 9 24 3 3402.78 -34.15 121.77 250.50 90.59 10 20 46 2402.8 -30.34 93.70  
 80.00 10 8 31 3263.39 -29.77 111.12 250.41 87.59 11 2 55 2263.4 -27.74 83.88  
 90.00 11 19 2 3035.78 -28.08 94.29 250.31 86.47 12 9 38 2035.8 -26.71 67.37  
 100.00 12 51 23 2737.87 -29.77 72.49 250.41 87.59 13 37 1 1737.9 -27.74 45.25  
 110.00 14 23 29 2449.60 -34.15 50.68 250.50 90.59 15 4 19 1449.6 -30.34 22.62

DIFFERENTIAL CORRECTIONS  
 TDE -.3142 TRA -.8250 TC3 -.4224 BAU .4981 SGT 1182.0 SGR 1563.9 SG3 1488.2 ST 24.6 SR 18.0 SS 31.3  
 RDE -.2926 RRA -.1471 RC3-1.5879 FAU .44870 RRT .5065 RRF .9203 RTF .5364 CRT .8562 CRS .7046 CST .2903  
 FDE 1.9290 FRA-3.9536 FC-17.1319 BSP 2639 SGB 1960.3 R23 .1963 R13 .9028 LSA 36.8 MSA 23.3 SSA 3.1  
 BDE .4294 BRA .8380 BC3 1.6432 FSP 2542 SG1 1730.4 SG2 921.1 THA 59.62 EL1 29.4 EL2 7.7 ALF 34.82

LAUNCH DATE AUG 25 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.905 GAL 5.02 AZL 88.14 HCA 129.03 SMA 197.32 ECC .24868 INC 1.8602 V1 29.465  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.952 GAP 7.62 AZP 91.17 TAL 25.63 TAP 154.66 RCA 148.25 APO 246.39 V2 23.008  
 RC 217.340 GL 12.93 GP -19.28 ZAL 46.78 ZAP 115.03 ETS 190.46 ZAE 145.81 ETE 215.46 ZAC 65.88 ETC 284.53 LVI -.25

PLANETOCENTRIC CONIC  
 C3 22.622 VHL 4.756 DLA 18.59 RAL 10.50 RAD 8644.0 VEL 11.942 PTH 6.95 VHP 2.552 DPA -5.19 RAP 39.98 ECC 1.3723  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 36 20 3539.55 -46.78 131.77 249.11 99.92 9 35 20 2539.4 -37.63 101.31  
 60.00 8 54 8 3491.98 -40.10 128.86 250.28 94.44 9 52 20 2492.0 -33.97 99.36  
 70.00 9 21 1 3412.80 -34.15 122.55 250.56 90.13 10 17 54 2412.8 -30.53 94.42  
 80.00 10 4 48 3275.59 -29.73 112.02 250.44 87.12 10 59 23 2275.6 -27.90 84.75  
 90.00 11 14 57 3049.12 -28.02 95.26 250.32 85.98 12 5 46 2049.1 -26.86 68.32  
 100.00 12 47 40 2750.07 -29.73 73.39 250.44 87.12 13 33 30 1750.1 -27.90 46.12  
 110.00 14 20 28 2459.62 -34.15 51.47 250.56 90.13 15 1 27 1459.6 -30.53 23.34

DIFFERENTIAL CORRECTIONS  
 TDE -.3054 TRA -.8498 TC3 -.5256 BAU .5238 SGT 1245.7 SGR 1618.3 SG3 1524.0 ST 24.5 SR 17.1 SS 32.4  
 RDE -.2764 RRA -.1847 RC3-1.6302 FAU .45839 RRT .5622 RRF .9271 RTF .5227 CRT .8553 CRS .6897 CST .2703  
 FDE 2.0295 FRA-4.0648 FC-17.3420 BSP 2800 SGB 2042.2 R23 .1977 R13 .9098 LSA 37.0 MSA 23.8 SSA 3.0  
 BDE .4118 BRA .8657 BC3 1.7318 FSP 2591 SG1 1827.0 SG2 912.5 THA 57.60 EL1 28.9 EL2 7.5 ALF 33.36

LAUNCH DATE AUG 25 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.900 GAL 5.00 AZL 88.09 HCA 129.98 SMA 197.23 ECC .24823 INC 1.9105 V1 29.465  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.910 GAP 7.56 AZP 91.23 TAL 25.56 TAP 155.54 RCA 148.27 APO 246.19 V2 22.975  
 RC 220.278 GL 13.30 GP -19.73 ZAL 46.93 ZAP 111.42 ETS 190.00 ZAE 144.14 ETE 214.01 ZAC 65.58 ETC 284.63 LVI .03

PLANETOCENTRIC CONIC  
 C3 22.575 VHL 4.751 DLA 18.95 RAL 10.41 RAD 8644.0 VEL 11.940 PTH 6.94 VHP 2.527 DPA -5.84 RAP 39.52 ECC 1.3715  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 34 25 3546.46 -46.86 132.43 249.32 99.41 9 33 31 2546.5 -37.88 101.80  
 60.00 8 51 41 3500.49 -40.14 129.38 250.40 93.95 9 50 1 2500.5 -34.19 99.99  
 70.00 9 17 54 3423.29 -34.15 123.37 250.64 89.64 10 14 57 2423.3 -30.73 95.17  
 80.00 10 0 56 3288.41 -29.68 112.97 250.47 86.62 10 55 44 2288.4 -28.06 85.66  
 90.00 11 10 42 3063.17 -27.95 96.28 250.33 85.48 12 1 45 2063.2 -27.01 68.32  
 100.00 12 43 47 2762.88 -29.68 74.34 250.47 86.62 13 29 50 1762.9 -28.06 47.03  
 110.00 14 17 20 2470.11 -34.15 52.29 250.64 89.64 14 58 30 1470.1 -30.73 24.09

DIFFERENTIAL CORRECTIONS  
 TDE -.2928 TRA -.8730 TC3 -.6274 BAU .5515 SGT 1311.2 SGR 1677.6 SG3 1561.2 ST 24.3 SR 16.4 SS 33.3  
 RDE -.2617 RRA -.1845 RC3-1.7161 FAU .46849 RRT .6117 RRF .9335 RTF .6429 CRT .8542 CRS .6656 CST .2376  
 FDE 2.1064 FRA-4.1926 FC-17.9663 BSP 2968 SGB 2129.2 R23 .1935 R13 .9177 LSA 36.9 MSA 24.3 SSA 3.0  
 BDE .3927 BRA .8923 BC3 1.8272 FSP 2612 SG1 1928.5 SG2 902.3 THA 56.07 EL1 28.4 EL2 7.3 ALF 32.25

LAUNCH DATE AUG 25 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.896 GAL 4.98 AZL 88.04 HCA 130.93 SMA 197.15 ECC .24782 INC 1.9621 V1 29.465
RP 239.42 LAP 1.48 LOP 102.60 VP 20.868 GAP 7.31 AZP 91.29 TAL 25.48 TAP 156.41 RCA 148.29 APO 246.01 V2 22.944
RC 223.209 GL 13.67 GP -20.18 ZAL 47.09 ZAP 109.83 ETS 189.32 ZAE 142.46 ETE 212.66 ZAC 65.29 ETC 284.73 LVI .31

PLANETOCENTRIC CONIC

C3 22.530 VHL 4.747 DLA 19.33 RAL 10.32 RAD 6643.9 VEL 11.938 PTH 6.94 VHP 2.505 DPA -6.50 RAP 39.07 ECC 1.3708
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 27 3553.92 -46.94 133.14 249.56 98.88 9 31 41 2533.9 -38.14 102.32
60.00 8 49 9 3509.42 -40.18 130.14 250.57 93.44 9 47 39 2509.4 -34.43 100.63
70.00 9 14 39 3434.33 -34.14 124.23 250.74 89.13 10 11 54 2434.3 -30.93 95.97
80.00 9 56 53 3301.94 -29.63 113.97 250.51 86.10 10 51 55 2301.9 -28.23 86.64
90.00 11 6 15 3078.04 -27.86 97.36 250.36 84.94 11 57 35 2078.0 -27.16 70.38
100.00 12 39 45 2776.41 -29.63 78.34 250.51 86.10 13 26 2 1776.4 -28.23 48.00
110.00 14 14 6 2481.15 -34.14 53.15 250.74 89.13 14 55 27 1481.2 -30.93 24.89

DIFFERENTIAL CORRECTIONS

TDE -.2919 TRA -.9107 TC3 -.7571 BAU .5794
RDE -.2374 RRA -.1962 RC3-1.7683 FAU .47369
FDE 2.2858 FRA-4.2184 FC-18.2019 B&P 3170
BDE .3763 BRA .9316 BC3 1.9236 F&P 2730

MID-COURSE EXECUTION ACCURACY

SGT 1413.4 SGR 1721.4 SG3 1582.1
RRT .6576 RRF .9381 RTF .6852
SGB 2227.3 R23 .2063 R13 .9196
SG1 2037.6 SG2 899.6 THA 53.39

ORBIT DETERMINATION ACCURACY

ST 24.8 SR 15.0 SS 35.1
CRT .8599 CR8 .6599 CST .2456
LSA 38.1 MSA 24.7 S8A 2.9
EL1 28.2 EL2 6.7 ALF 29.32

LAUNCH DATE AUG 25 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.893 GAL 4.98 AZL 87.98 HCA 131.87 SMA 197.09 ECC .24745 INC 2.0150 V1 29.465
RP 239.73 LAP 1.50 LOP 103.54 VP 20.829 GAP 7.06 AZP 91.35 TAL 25.39 TAP 157.26 RCA 148.32 APO 245.85 V2 22.912
RC 226.132 GL 14.08 GP -20.64 ZAL 47.28 ZAP 108.24 ETS 189.03 ZAE 140.77 ETE 211.38 ZAC 64.99 ETC 284.83 LVI .80

PLANETOCENTRIC CONIC

C3 22.490 VHL 4.742 DLA 19.72 RAL 10.24 RAD 6643.9 VEL 11.937 PTH 6.94 VHP 2.484 DPA -7.16 RAP 38.61 ECC 1.3701
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 30 26 3561.69 -47.02 133.87 249.82 98.32 9 29 47 2561.7 -38.41 102.87
60.00 8 46 33 3518.74 -40.21 130.93 250.74 92.91 9 45 12 2518.7 -34.67 101.31
70.00 9 11 18 3445.87 -34.13 125.13 250.84 88.60 10 8 44 2445.9 -31.13 96.81
80.00 9 52 41 3316.14 -29.55 115.02 250.57 85.55 10 47 57 2316.1 -28.40 87.66
90.00 11 1 36 3093.68 -27.76 98.50 250.39 84.38 11 53 9 2093.7 -27.31 71.50
100.00 12 35 33 2790.81 -29.55 76.39 250.57 85.55 13 22 4 1790.6 -28.40 49.03
110.00 14 10 44 2492.69 -34.13 54.05 250.84 88.60 14 52 17 1492.7 -31.13 25.72

DIFFERENTIAL CORRECTIONS

TDE -.2817 TRA -.9411 TC3 -.8751 BAU .6097
RDE -.2177 RRA -.2131 RC3-1.8292 FAU .48086
FDE 2.4052 FRA-4.2961 FC-18.5099 B&P 3366
BDE .3560 BRA .9650 BC3 2.0278 F&P 2780

MID-COURSE EXECUTION ACCURACY

SGT 1504.6 SGR 1776.0 SG3 1609.6
RRT .6960 RRF .9431 RTF .7222
SGB 2327.6 R23 .2065 R13 .9248
SG1 2149.7 SG2 892.5 THA 51.73

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 14.0 SS 36.3
CRT .8637 CR8 .6334 CST .2235
LSA 38.7 MSA 25.2 S8A 2.8
EL1 27.9 EL2 6.3 ALF 27.47

LAUNCH DATE AUG 25 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.890 GAL 4.93 AZL 87.93 HCA 132.81 SMA 197.03 ECC .24710 INC 2.0694 V1 29.465
RP 240.03 LAP 1.52 LOP 104.48 VP 20.790 GAP 6.82 AZP 91.47 TAL 25.29 TAP 158.11 RCA 148.34 APO 245.72 V2 22.882
RC 229.048 GL 14.46 GP -21.09 ZAL 47.45 ZAP 108.66 ETS 188.53 ZAE 139.06 ETE 210.17 ZAC 64.70 ETC 284.93 LVI .89

PLANETOCENTRIC CONIC

C3 22.455 VHL 4.739 DLA 20.12 RAL 10.16 RAD 6643.9 VEL 11.935 PTH 6.94 VHP 2.467 DPA -7.83 RAP 38.17 ECC 1.3696
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 28 21 3569.81 -47.09 134.64 250.10 97.73 9 27 51 2569.8 -38.69 103.44
60.00 8 43 52 3528.48 -40.24 131.76 250.94 92.35 9 42 41 2528.5 -34.91 102.02
70.00 9 7 49 3457.96 -34.10 128.07 250.96 88.04 10 5 27 2458.0 -31.34 97.69
80.00 9 48 17 3331.09 -29.47 116.13 250.63 84.98 10 43 48 2331.1 -28.56 88.74
90.00 10 56 42 3110.21 -27.65 99.69 250.43 83.79 11 48 33 2110.2 -27.45 72.66
100.00 12 31 9 2805.57 -29.47 77.49 250.63 84.98 13 17 55 1805.6 -28.56 30.11
110.00 14 7 15 2504.78 -34.10 54.99 250.96 88.04 14 49 0 1504.8 -31.34 26.61

DIFFERENTIAL CORRECTIONS

TDE -.2702 TRA -.9727 TC3 -.9965 BAU .6413
RDE -.1970 RRA -.2299 RC3-1.8895 FAU .48718
FDE 2.5272 FRA-4.3657 FC-18.7821 B&P 3575
BDE .3344 BRA .9995 BC3 2.1362 F&P 2829

MID-COURSE EXECUTION ACCURACY

SGT 1802.3 SGR 1830.6 SG3 1834.3
RRT .7295 RRF .9478 RTF .7140
SGB 2432.8 R23 .2062 R13 .9294
SG1 2266.0 SG2 885.4 THA 50.19

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 13.0 SS 37.6
CRT .8698 CR8 .5988 CST .1985
LSA 39.3 MSA 25.8 S8A 2.8
EL1 27.5 EL2 5.8 ALF 25.60

LAUNCH DATE AUG 25 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.887 GAL 4.91 AZL 87.87 HCA 133.75 SMA 196.98 ECC .24679 INC 2.1254 V1 29.465
RP 240.34 LAP 1.54 LOP 105.42 VP 20.733 GAP 6.57 AZP 91.47 TAL 25.19 TAP 158.94 RCA 148.37 APO 245.60 V2 22.851
RC 231.955 GL 14.87 GP -21.55 ZAL 47.65 ZAP 109.09 ETS 188.01 ZAE 137.35 ETE 209.02 ZAC 64.40 ETC 285.02 LVI 1.19

PLANETOCENTRIC CONIC

C3 22.424 VHL 4.735 DLA 20.54 RAL 10.09 RAD 6643.9 VEL 11.934 PTH 6.94 VHP 2.451 DPA -8.49 RAP 37.72 ECC 1.3690
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 26 13 3578.29 -47.17 135.45 250.41 97.11 9 25 51 2578.3 -38.98 104.05
60.00 8 41 6 3536.67 -40.27 132.62 251.15 91.76 9 40 4 2538.7 -35.16 102.76
70.00 9 4 11 3470.65 -34.07 127.08 251.10 87.48 10 2 2 2470.6 -31.55 98.62
80.00 9 43 40 3346.86 -29.37 117.29 250.70 84.37 10 39 27 2346.9 -28.73 89.88
90.00 10 51 34 3127.70 -27.51 100.95 250.47 83.18 11 43 41 2127.7 -27.59 73.95
100.00 12 26 32 2821.33 -29.37 78.66 250.70 84.37 13 13 34 1821.3 -28.73 51.25
110.00 14 3 38 2517.46 -34.07 55.98 251.10 87.46 14 45 35 1517.5 -31.55 27.53

DIFFERENTIAL CORRECTIONS

TDE -.2573 TRA -1.0032 TC3 -1.1206 BAU .6743
RDE -.1757 RRA -.2469 RC3-1.9501 FAU .49284
FDE 2.6484 FRA-4.4291 FC-19.0276 B&P 3787
BDE .3116 BRA 1.0351 BC3 2.2492 F&P 2866

MID-COURSE EXECUTION ACCURACY

SGT 1705.9 SGR 1886.3 SG3 1856.9
RRT .7585 RRF .9517 RTF .7813
SGB 2543.3 R23 .2053 R13 .9338
SG1 2386.7 SG2 878.7 THA 48.78

ORBIT DETERMINATION ACCURACY

ST 25.0 SR 12.0 SS 38.9
CRT .8788 CR8 .5529 CST .1696
LSA 40.1 MSA 25.8 S8A 2.7
EL1 27.2 EL2 5.3 ALF 23.79

LAUNCH DATE AUG 25 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 17 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.65 VL 32.885 GAL 4.88 AZL 87.82 HCA 134.69 SMA 196.94 ECC .24651 INC 2.1829 V1 29.465  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.717 GAP 6.33 AZP 91.54 TAL 25.08 TAP 159.76 RCA 148.40 APO 245.49 V2 22.821  
 RC 234.852 GL 15.29 GP -22.01 ZAL 47.86 ZAP 103.53 ET8 187.48 ZAE 135.64 ETE 207.92 ZAC 64.10 ETC 285.12 LVI 1.49

PLANETOCENTRIC CONIC: C3 22.397 VHL 4.733 DLA 20.97 RAL 10.01 RAD 6643.9 VEL 11.933 PTH 6.94 VHP 2.438 DPA -9.16 RAP 37.29 ECC 1.3686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 1 3587.14 -47.24 136.29 250.74 96.46 9 23 48 2587.1 -39.28 104.69  
 60.00 8 38 13 3549.32 -40.29 133.53 251.38 91.15 9 37 22 2549.3 -35.42 103.55  
 70.00 9 0 25 3483.95 -34.03 126.10 251.24 86.65 9 58 29 2483.9 -31.76 99.60  
 80.00 9 38 50 3363.49 -29.25 116.51 250.78 83.74 10 34 53 2363.5 -26.89 91.09  
 90.00 10 46 8 3146.23 -27.35 102.29 250.52 82.53 11 36 34 2146.2 -27.73 75.29  
 100.00 12 21 42 2837.97 -29.25 79.88 250.78 83.74 13 8 59 1838.0 -28.89 52.46  
 110.00 13 59 51 2530.77 -34.03 57.02 251.24 86.65 14 42 2 1530.8 -31.76 28.51

Differential Corrections: TDE -.2425 TRA-1.0383 TC3-1.2487 BAU .7084 SGT 1814.1 SGR 1942.7 SG3 1677.1 ST 25.0 SR 11.0 SB 40.2  
 RDE -.1539 RRA -.2643 RC3-2.0107 FAU .49782 RRT .7837 RRF .9555 RTF .8049 CRT .8908 CRS .4916 CBT .1356  
 FDE 2.7658 FRA-4.4879 FC-19.2426 B5P 4007 SGB 2658.0 R23 .2037 R13 .9379 LSA 40.9 MSA 26.1 S8A 2.6  
 BDE .2872 BRA 1.0714 BC3 2.3658 F8P 2894 SG1 2510.9 SG2 871.9 THA 47.50 EL1 26.9 EL2 4.6 ALF 22.10

LAUNCH DATE AUG 25 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.65 VL 32.884 GAL 4.86 AZL 87.76 HCA 135.62 SMA 196.91 ECC .24625 INC 2.2422 V1 29.465  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.682 GAP 6.09 AZP 91.60 TAL 24.96 TAP 160.58 RCA 148.42 APO 245.40 V2 22.792  
 RC 237.739 GL 15.72 GP -22.47 ZAL 48.09 ZAP 101.99 ET5 186.94 ZAE 133.92 ETE 206.87 ZAC 63.80 ETC 285.21 LVI 1.81

PLANETOCENTRIC CONIC: C3 22.376 VHL 4.730 DLA 21.41 RAL 9.94 RAD 6643.9 VEL 11.932 PTH 6.94 VHP 2.427 DPA -9.83 RAP 36.86 ECC 1.3683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 44 3596.38 -47.31 137.17 251.09 95.79 9 21 40 2596.4 -39.59 105.36  
 60.00 8 35 13 3560.45 -40.30 134.47 251.62 90.50 9 34 34 2560.5 -35.69 104.38  
 70.00 8 56 28 3497.91 -33.97 129.18 251.39 86.21 9 54 45 2497.9 -31.98 100.63  
 80.00 9 33 43 3381.07 -29.12 119.80 250.86 83.08 10 30 4 2381.1 -29.05 92.37  
 90.00 10 40 22 3165.90 -27.17 103.70 250.57 81.84 11 33 8 2165.9 -27.85 76.71  
 100.00 12 16 35 2855.54 -29.12 81.17 250.86 83.08 13 4 11 1855.5 -29.05 53.74  
 110.00 13 55 54 2544.73 -33.97 58.10 251.39 86.21 14 38 19 1544.7 -31.98 29.55

Differential Corrections: TDE -.2247 TRA-1.0706 TC3-1.3721 BAU .7440 SGT 1923.4 SGR 2003.5 SG3 1698.0 ST 25.0 SR 10.2 SB 41.2  
 RDE -.1334 RRA -.2833 RC3-2.0746 FAU .50303 RRT .8059 RRF .9591 RTF .8259 CRT .9044 CRS .4108 CBT .0906  
 FDE 2.8614 FRA-4.5582 FC-19.4626 B5P 4229 SGB 2777.3 R23 .1997 R13 .9424 LSA 41.6 MSA 26.3 S8A 2.6  
 BDE .2613 BRA 1.1075 BC3 2.4872 F8P 2897 SG1 2639.4 SG2 864.5 THA 46.45 EL1 26.7 EL2 4.1 ALF 20.80

LAUNCH DATE AUG 25 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.65 VL 32.883 GAL 4.83 AZL 87.70 HCA 136.55 SMA 196.89 ECC .24602 INC 2.3034 V1 29.465  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.648 GAP 5.85 AZP 91.67 TAL 24.83 TAP 161.38 RCA 148.45 APO 245.33 V2 22.763  
 RC 240.615 GL 16.17 GP -22.93 ZAL 48.33 ZAP 100.47 ET5 186.38 ZAE 132.22 ETE 205.86 ZAC 63.49 ETC 285.30 LVI 2.13

PLANETOCENTRIC CONIC: C3 22.359 VHL 4.729 DLA 21.88 RAL 9.88 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.418 DPA -10.49 RAP 36.45 ECC 1.3680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 23 3606.04 -47.37 136.10 251.46 95.08 9 19 29 2606.0 -39.90 106.07  
 60.00 8 32 7 3572.12 -40.30 135.47 251.88 89.83 9 31 39 2572.1 -35.96 105.25  
 70.00 8 52 19 3512.80 -33.90 130.33 251.56 85.54 9 50 52 2512.6 -32.19 101.72  
 80.00 9 28 19 3399.72 -26.96 121.16 250.95 82.38 10 24 59 2399.7 -29.20 93.74  
 90.00 10 34 14 3186.90 -26.96 105.20 250.62 81.12 11 27 21 2186.9 -27.97 78.24  
 100.00 12 11 11 2874.19 -26.96 82.53 250.95 82.38 12 59 5 1874.2 -29.20 55.11  
 110.00 13 51 45 2559.42 -33.90 59.24 251.56 85.54 14 34 25 1559.4 -32.19 30.84

Differential Corrections: TDE -.2102 TRA-1.1090 TC3-1.5091 BAU .7798 SGT 2049.0 SGR 2052.6 SG3 1706.6 ST 25.3 SR 9.2 SB 43.0  
 RDE -.1055 RRA -.2971 RC3-2.1270 FAU .50448 RRT .8239 RRF .9820 RTF .5.14 CRT .9261 CRS .3012 CBT .0641  
 FDE 3.0231 FRA-4.5608 FC-19.5337 B5P 4479 SGB 2900.3 R23 .2026 R13 .9444 LSA 43.1 MSA 26.5 S8A 2.5  
 BDE .2352 BRA 1.1481 BC3 2.6080 F8P 2960 SG1 2769.6 SG2 860.7 THA 45.06 EL1 26.7 EL2 3.3 ALF 18.84

LAUNCH DATE AUG 25 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 151.21 LAL .00 LOL 331.65 VL 32.882 GAL 4.80 AZL 87.63 HCA 137.48 SMA 196.88 ECC .24581 INC 2.3686 V1 29.465  
 RP 241.80 LAP 1.60 LOP 109.16 VP 20.616 GAP 5.61 AZP 91.74 TAL 24.69 TAP 162.18 RCA 148.49 APO 245.28 V2 22.734  
 RC 243.479 GL 16.63 GP -23.40 ZAL 48.58 ZAP 98.97 ET8 185.81 ZAE 130.51 ETE 204.89 ZAC 63.16 ETC 285.39 LVI 2.49

PLANETOCENTRIC CONIC: C3 22.348 VHL 4.727 DLA 22.35 RAL 9.81 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.411 DPA -11.16 RAP 36.05 ECC 1.3678  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 56 3616.13 -47.43 139.07 251.86 94.33 9 17 12 2616.1 -40.23 106.82  
 60.00 8 28 52 3584.33 -40.29 136.51 252.16 89.12 9 28 36 2584.3 -36.23 106.17  
 70.00 8 47 58 3528.05 -33.81 131.52 251.73 84.83 9 46 46 2528.0 -32.40 102.87  
 80.00 9 22 35 3419.50 -28.77 122.60 251.03 81.64 10 19 34 2419.5 -29.34 95.19  
 90.00 10 27 41 3209.32 -26.71 106.79 250.68 80.38 11 21 10 2209.3 -28.08 79.87  
 100.00 12 5 27 2893.97 -26.77 83.97 251.03 81.64 12 53 41 1894.0 -29.34 56.58  
 110.00 13 47 25 2574.87 -33.81 60.44 251.73 84.83 14 30 19 1574.9 -32.40 31.79

Differential Corrections: TDE -.1912 TRA-1.1452 TC3-1.6423 BAU .8166 SGT 2171.9 SGR 2108.5 SG3 1717.6 ST 25.4 SR 8.4 SB 44.3  
 RDE -.0804 RRA -.3139 RC3-2.1848 FAU .50675 RRT .8402 RRF .9649 RTF .8561 CRT .9429 CRS .1587 CBT .0210  
 FDE 3.1459 FRA-4.5893 FC-19.6312 B5P 4720 SGB 3027.1 R23 .2018 R13 .9473 LSA 44.3 MSA 26.6 S8A 2.4  
 BDE .2074 BRA 1.1875 BC3 2.7333 F8P 2979 SG1 2903.7 SG2 858.3 THA 43.99 EL1 26.7 EL2 2.7 ALF 17.58

LAUNCH DATE AUG 25 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.882 GAL 4.77 AZL 87.57 HCA 138.41 SMA 196.88 ECC .24563 INC 2.4319 V1 29.465  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.584 GAP 5.37 AZP 91.82 TAL 24.55 TAP 162.97 RCA 148.52 APO 245.24 V2 22.706  
 RC 246.330 GL 17.11 GP -23.87 ZAL 48.84 ZAP 97.49 ETS 185.23 ZAE 128.82 ETE 203.98 ZAC 62.87 ETC 285.48 LVI 2.70

DISTANCE 468.335  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.342 VHL 4.727 DLA 22.84 RAL 9.74 RAD 6643.9 VEL 11.930 PTH 6.94 VHP 2.407 DPA -11.83 RAP 35.67 ECC 1.3677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 23 3628.67 -47.48 140.08 252.28 93.55 9 14 49 2626.7 -40.56 107.61  
 60.00 8 25 28 3597.11 -40.27 137.59 252.45 88.39 9 25 25 2597.1 -36.51 107.14  
 70.00 8 43 24 3544.31 -33.70 132.78 251.91 84.10 9 42 28 2544.3 -32.62 104.09  
 80.00 9 16 29 3440.55 -28.55 124.13 251.12 80.87 10 13 49 2440.6 -29.48 96.74  
 90.00 10 20 39 3233.37 -26.43 108.49 250.70 79.55 11 14 32 2233.4 -28.16 81.82  
 100.00 11 59 21 2915.03 -28.55 85.49 251.12 80.87 12 47 56 1915.0 -29.48 58.11  
 110.00 13 42 50 2591.13 -33.70 61.70 251.91 84.10 14 26 1 1591.1 -32.62 33.01

DIFFERENTIAL CORRECTIONS  
 TDE -.1706 TRA -1.1822 TC3-1.7771 BAU .8543 SGT 2298.5 SGR 2163.8 SG3 1725.2 ST 25.6 SR 8.0 SS 45.7  
 RDE -.0542 RRA -.3306 RC3-2.2411 FAU .50798 RRT .8543 RRF .9675 RTF .8686 CRT .9506 CRS -.0176 CST -.0253  
 FDE 3.2682 FRA -4.6078 FC-19.6839 BSP 4967 SGB 3156.7 R23 .2005 R13 .9499 LSA 45.7 MSA 26.8 S8A 2.4  
 BDE .1790 BRA 1.2276 BC3 2.8601 F8P 2992 SG1 3040.1 SG2 850.3 THA 42.98 EL1 26.7 EL2 2.4 ALF 16.59

LAUNCH DATE AUG 25 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.882 GAL 4.74 AZL 87.50 HCA 139.34 SMA 196.88 ECC .24547 INC 2.4994 V1 29.465  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.554 GAP 5.14 AZP 91.90 TAL 24.41 TAP 163.74 RCA 148.55 APO 245.21 V2 22.679  
 RC 249.167 GL 17.60 GP -24.34 ZAL 49.12 ZAP 96.03 ETS 184.64 ZAE 127.13 ETE 203.05 ZAC 62.54 ETC 285.57 LVI 3.14

DISTANCE 472.128  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.343 VHL 4.727 DLA 23.55 RAL 9.67 RAD 6643.9 VEL 11.930 PTH 6.94 VHP 2.404 DPA -12.49 RAP 35.30 ECC 1.3677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 43 3637.70 -47.52 141.14 252.72 92.73 9 12 21 2637.7 -40.90 108.45  
 60.00 8 21 55 3610.51 -40.24 138.73 252.75 87.61 9 22 6 2610.5 -36.79 108.16  
 70.00 8 38 34 3561.47 -33.57 134.10 252.09 83.32 9 37 55 2561.5 -32.83 105.39  
 80.00 9 9 57 3463.04 -28.30 125.75 251.19 80.05 10 7 40 2463.0 -29.60 98.40  
 90.00 10 13 2 3259.32 -26.10 110.32 250.73 78.70 11 7 22 2259.3 -28.23 83.51  
 100.00 11 52 49 2937.51 -28.30 87.12 251.19 80.05 12 41 46 1937.5 -29.60 59.77  
 110.00 13 38 0 2608.29 -33.57 63.02 252.09 83.32 14 21 29 1608.3 -32.83 34.31

DIFFERENTIAL CORRECTIONS  
 TDE -.1480 TRA -1.2198 TC3-1.9125 BAU .8929 SGT 2427.9 SGR 2220.0 SG3 1730.5 ST 25.9 SR 7.8 SS 47.0  
 RDE -.0273 RRA -.3475 RC3-2.2973 FAU .50860 RRT .8667 RRF .9699 RTF .8796 CRT .9407 CRS -.2180 CST -.0758  
 FDE 3.3869 FRA -4.6207 FC-19.7072 B8P 5219 SGB 3289.8 R23 .1994 R13 .9524 LSA 47.1 MSA 26.8 S8A 2.3  
 BDE .1505 BRA 1.2683 BC3 2.9892 F8P 2999 SG1 3179.3 SG2 845.8 THA 42.05 EL1 26.9 EL2 2.5 ALF 15.94

LAUNCH DATE AUG 25 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.883 GAL 4.71 AZL 87.43 HCA 140.26 SMA 196.89 ECC .24533 INC 2.5694 V1 29.465  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.525 GAP 4.90 AZP 91.98 TAL 24.25 TAP 164.51 RCA 148.59 APO 245.19 V2 22.652  
 RC 251.989 GL 18.11 GP -24.82 ZAL 49.42 ZAP 94.60 ETS 184.03 ZAE 125.46 ETE 202.17 ZAC 62.22 ETC 285.66 LVI 3.49

DISTANCE 475.921  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.350 VHL 4.728 DLA 23.88 RAL 9.60 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.404 DPA -13.15 RAP 34.96 ECC 1.3678  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 56 3649.23 -47.55 142.26 253.19 91.88 9 9 45 2649.2 -41.25 109.33  
 60.00 8 18 11 3624.57 -40.20 139.92 253.07 86.81 9 18 36 2624.6 -37.08 109.25  
 70.00 8 33 27 3579.60 -33.42 135.50 252.28 82.51 9 33 7 2579.6 -33.03 106.76  
 80.00 9 2 56 3487.14 -28.00 127.48 251.27 79.19 10 1 3 2487.1 -29.70 100.16  
 90.00 10 4 45 3287.47 -25.70 112.29 250.74 77.79 10 59 33 2287.5 -28.27 85.57  
 100.00 11 45 47 2961.61 -28.00 88.85 251.27 79.19 12 35 9 1961.6 -29.70 61.55  
 110.00 13 32 53 2626.42 -33.42 64.41 252.28 82.51 14 16 40 1626.4 -33.03 35.88

DIFFERENTIAL CORRECTIONS  
 TDE -.1235 TRA -1.2582 TC3-2.0487 BAU .9319 SGT 2580.4 SGR 2275.4 SG3 1732.4 ST 26.3 SR 8.0 SS 48.5  
 RDE .0012 RRA -.3643 RC3-2.3517 FAU .50818 RRT .8775 RRF .9721 RTF .8889 CRT .9085 CRS -.4182 CST -.1288  
 FDE 3.5090 FRA -4.6245 FC-19.6844 B8P 5476 SGB 3425.4 R23 .1987 R13 .9548 LSA 48.8 MSA 26.8 S8A 2.2  
 BDE .1235 BRA 1.3099 BC3 3.1189 F8P 3001 SG1 3320.4 SG2 841.4 THA 41.16 EL1 27.3 EL2 3.2 ALF 15.64

LAUNCH DATE AUG 25 1973

FLIGHT TIME 218.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.68 VL 32.883 GAL 4.68 AZL 87.36 HCA 141.18 SMA 196.90 ECC .24521 INC 2.6420 V1 29.465  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.497 GAP 4.67 AZP 92.06 TAL 24.09 TAP 165.27 RCA 148.62 APO 245.19 V2 22.625  
 RC 254.795 GL 18.63 GP -25.30 ZAL 48.72 ZAP 93.20 ETS 183.41 ZAE 123.80 ETE 201.32 ZAC 61.88 ETC 285.75 LVI 3.86

DISTANCE 479.713  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 22.365 VHL 4.729 DLA 24.43 RAL 9.53 RAD 6643.9 VEL 11.931 PTH 6.94 VHP 2.405 DPA -13.81 RAP 34.63 ECC 1.3681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 1 3661.29 -47.57 143.42 253.67 90.98 9 7 3 2661.3 -41.61 110.27  
 60.00 8 14 16 3639.34 -40.13 141.18 253.40 85.96 9 14 55 2639.3 -37.37 110.39  
 70.00 8 28 1 3598.80 -33.24 136.97 252.47 81.66 9 28 0 2598.8 -33.23 108.22  
 80.00 8 55 20 3513.11 -27.66 129.33 251.32 78.27 9 53 53 2513.1 -29.79 102.11  
 90.00 9 55 40 3318.29 -25.24 114.43 250.73 76.81 10 50 58 2318.3 -28.28 87.83  
 100.00 11 38 12 2987.58 -27.66 90.70 251.32 78.27 12 27 59 1987.6 -29.79 63.48  
 110.00 13 27 28 2645.62 -33.24 65.88 252.47 81.66 14 11 33 1645.6 -33.23 37.14

DIFFERENTIAL CORRECTIONS  
 TDE -.0972 TRA -1.2971 TC3-2.1854 BAU .9716 SGT 2695.5 SGR 2330.6 SG3 1731.2 ST 26.7 SR 8.5 SS 49.9  
 RDE .0308 RRA -.3808 RC3-2.4048 FAU .50689 RRT .8869 RRF .9741 RTF .8970 CRT .8604 CRS -.5885 CST -.1836  
 FDE 3.6294 FRA -4.6171 FC-19.6215 B8P 5738 SGB 3563.3 R23 .1982 R13 .9564 LSA 50.5 MSA 26.8 S8A 2.2  
 BDE .1019 BRA 1.3519 BC3 3.2494 F8P 3001 SG1 3463.4 SG2 837.8 THA 40.33 EL1 27.7 EL2 4.2 ALF 15.74

LAUNCH DATE AUG 25 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.884 GAL 4.64 AZL 87.28 HCA 142.10 SMA 196.92 ECC .24511 INC 2.7174 V1 29.468
RP 242.86 LAP 1.67 LOP 113.78 VP 20.469 GAP 4.44 AZP 92.14 TAL 23.93 TAP 166.03 RCA 148.66 APO 245.19 V2 22.589
RC 257.584 GL 19.17 GP -25.79 ZAL 50.04 ZAP 91.83 ETS 182.78 ZAE 122.16 ETE 200.48 ZAC 61.93 ETC 285.83 LVI 4.24

DISTANCE 483.504

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.387 VHL 4.732 DLA 24.98 RAL 9.45 RAD 8643.9 VEL 11.932 PTH 6.94 VHP 2.409 DPA -14.47 RAP 34.32 ECC 1.3684
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 58 3673.93 -47.58 144.65 254.18 90.04 9 4 12 2673.9 -41.88 111.28
60.00 8 10 7 3854.86 -40.05 142.49 253.74 85.07 9 11 2 2654.9 -37.66 111.61
70.00 8 22 14 3619.17 -33.03 138.52 252.65 80.77 9 22 33 2619.2 -33.42 109.78
80.00 8 47 4 3541.25 -27.25 131.32 251.36 77.30 9 46 5 2541.3 -29.84 104.20
90.00 9 45 33 3352.38 -24.69 116.77 250.68 75.76 10 41 25 2352.4 -28.23 90.32
100.00 11 29 56 3015.72 -27.25 92.69 251.36 77.30 12 20 11 2015.7 -29.84 65.57
110.00 13 21 40 2665.99 -33.03 67.43 252.65 80.77 14 6 6 1666.0 -33.42 38.70

DIFFERENTIAL CORRECTIONS

TDE -.0688 TRA-1.3365 TC3-2.3217 BAU 1.0116
RDE .0613 RRA -.3976 RC3-2.4562 FAU .50469
FDE 3.7447 FRA-4.6045 FC-19.5168 BSP 6001
BDE .0921 BRA 1.3944 BC3 3.3798 FSP 2992

MID-COURSE EXECUTION ACCURACY

SGT 2832.4 SGR 2385.5 SG3 1726.9
RRT .8953 RRF .9760 RTF .9041
SGB 3703.1 R23 .1976 R13 .9582
SG1 3607.9 SG2 834.2 THA 39.54

ORBIT DETERMINATION ACCURACY

ST 27.3 SR 9.5 SS 51.3
CRT .8111 CRS -.7184 CBT -.2406
LSA 52.4 MSA 26.8 SBA 2.1
EL1 28.4 EL2 5.3 ALF 16.28

LAUNCH DATE AUG 25 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.886 GAL 4.61 AZL 87.20 HCA 143.02 SMA 196.95 ECC .24503 INC 2.7957 V1 29.465
RP 243.12 LAP 1.68 LOP 114.70 VP 20.443 GAP 4.21 AZP 92.23 TAL 23.75 TAP 166.77 RCA 148.69 APO 245.21 V2 22.573
RC 260.356 GL 19.74 GP -26.29 ZAL 50.38 ZAP 90.49 ETS 182.14 ZAE 120.54 ETE 199.67 ZAC 61.18 ETC 285.92 LVI 4.63

DISTANCE 487.294

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.418 VHL 4.735 DLA 25.58 RAL 9.37 RAD 8643.9 VEL 11.934 PTH 6.94 VHP 2.414 DPA -15.13 RAP 34.04 ECC 1.3689
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 59 45 3687.18 -47.57 145.93 254.71 89.05 9 1 12 2687.2 -42.35 112.31
60.00 8 5 45 3671.21 -39.95 143.87 254.09 84.14 9 6 56 2671.2 -37.95 112.90
70.00 8 16 3 3640.85 -32.78 140.16 252.84 79.83 9 16 44 2640.8 -33.60 111.45
80.00 8 37 59 3572.00 -26.77 133.48 251.37 76.26 9 37 31 2572.0 -29.86 106.48
90.00 9 34 7 3390.68 -24.03 119.38 250.58 74.62 10 30 38 2390.7 -28.12 93.11
100.00 11 20 51 3046.47 -26.77 94.85 251.37 76.26 12 11 37 2046.5 -29.86 67.85
110.00 13 15 29 2687.66 -32.78 69.08 252.84 79.83 14 0 17 1687.7 -33.60 40.37

DIFFERENTIAL CORRECTIONS

TDE -.0383 TRA-1.3766 TC3-2.4577 BAU 1.0522
RDE .0932 RRA -.4144 RC3-2.5068 FAU .50177
FDE 3.8583 FRA-4.5831 FC-19.3769 BSP 6268
BDE .1007 BRA 1.4377 BC3 3.3106 FSP 2980

MID-COURSE EXECUTION ACCURACY

SGT 2971.5 SGR 2440.7 SG3 1720.0
RRT .9026 RRF .9777 RTF .9102
SGB 3845.4 R23 .1973 R13 .9597
SG1 3754.4 SG2 831.4 THA 38.81

ORBIT DETERMINATION ACCURACY

ST 28.0 SR 10.7 SS 52.7
CRT .7702 CRS -.8097 CBT -.2983
LSA 54.3 MSA 26.8 SBA 2.0
EL1 29.3 EL2 6.5 ALF 17.24

LAUNCH DATE AUG 25 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.888 GAL 4.57 AZL 87.12 HCA 143.93 SMA 196.99 ECC .24497 INC 2.8773 V1 29.465
RP 243.37 LAP 1.69 LOP 115.62 VP 20.418 GAP 3.98 AZP 92.33 TAL 23.58 TAP 167.51 RCA 148.73 APO 245.24 V2 22.548
RC 263.112 GL 20.32 GP -26.79 ZAL 50.73 ZAP 89.18 ETS 181.48 ZAE 118.94 ETE 198.88 ZAC 60.81 ETC 286.01 LVI 5.03

DISTANCE 491.084

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.459 VHL 4.739 DLA 26.18 RAL 9.28 RAD 8643.9 VEL 11.935 PTH 6.94 VHP 2.421 DPA -15.79 RAP 33.79 ECC 1.3686
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 58 21 3701.09 -47.54 147.27 255.27 88.02 8 58 2 2701.1 -42.73 113.43
60.00 8 1 6 3688.44 -39.82 145.31 254.44 83.17 9 2 35 2688.4 -38.24 114.27
70.00 8 9 24 3663.99 -32.49 141.90 253.01 78.83 9 10 28 2664.0 -33.77 113.24
80.00 8 27 53 3605.94 -26.20 135.84 251.34 75.15 9 27 59 2605.9 -29.83 109.01
90.00 9 20 53 3434.72 -23.20 122.34 250.41 73.38 10 18 8 2434.7 -27.92 96.32
100.00 11 10 49 3080.41 -26.20 97.21 251.34 75.15 12 2 5 2080.4 -29.83 70.37
110.00 13 8 50 2710.81 -32.49 70.82 253.01 78.83 13 54 1 1710.8 -33.77 42.15

DIFFERENTIAL CORRECTIONS

TDE -.0053 TRA-1.4171 TC3-2.3922 BAU 1.0929
RDE .1264 RRA -.4312 RC3-2.5553 FAU .49790
FDE 3.9704 FRA-4.5542 FC-19.1930 BSP 6538
BDE .1265 BRA 1.4812 BC3 3.6399 FSP 2962

MID-COURSE EXECUTION ACCURACY

SGT 3111.5 SGR 2495.3 SG3 1700.0
RRT .9091 RRF .9793 RTF .5.56
SGB 3988.5 R23 .1972 R13 .9811
SG1 3901.4 SG2 828.9 THA 38.12

ORBIT DETERMINATION ACCURACY

ST 28.9 SR 12.1 SS 54.1
CRT .7427 CRS -.8712 CBT -.3563
LSA 56.5 MSA 26.7 SBA 1.9
EL1 30.4 EL2 7.7 ALF 18.80

LAUNCH DATE AUG 25 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.890 GAL 4.54 AZL 87.04 HCA 144.85 SMA 197.02 ECC .24492 INC 2.9624 V1 29.465
RP 243.82 LAP 1.71 LOP 116.53 VP 20.394 GAP 3.76 AZP 92.42 TAL 23.39 TAP 168.24 RCA 148.77 APO 245.28 V2 22.523
RC 265.850 GL 20.93 GP -27.30 ZAL 51.09 ZAP 87.90 ETS 180.81 ZAE 117.36 ETE 198.11 ZAC 60.43 ETC 286.10 LVI 5.43

DISTANCE 494.873

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.509 VHL 4.744 DLA 26.81 RAL 9.19 RAD 8643.9 VEL 11.937 PTH 6.94 VHP 2.431 DPA -16.44 RAP 33.56 ECC 1.3704
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 46 3715.69 -47.50 148.68 255.84 86.93 8 54 42 2715.7 -43.12 114.62
60.00 7 56 10 3706.63 -39.66 146.83 254.80 82.15 8 57 57 2706.6 -38.52 115.74
70.00 8 2 13 3688.79 -32.15 143.75 253.16 77.79 9 3 42 2688.8 -33.91 115.16
80.00 8 16 30 3643.95 -25.51 138.45 251.26 73.94 9 17 14 2643.9 -29.73 111.83
90.00 9 4 58 3487.33 -22.13 125.82 250.12 71.93 10 3 5 2487.3 -27.57 100.13
100.00 10 59 22 3118.42 -25.51 99.82 251.26 73.94 11 51 20 2118.4 -29.73 73.19
110.00 13 1 39 2735.61 -32.15 72.67 253.16 77.79 13 47 15 1735.6 -33.91 44.08

DIFFERENTIAL CORRECTIONS

TDE .0298 TRA-1.4580 TC3-2.7254 BAU 1.1340
RDE .1608 RRA -.4482 RC3-2.6026 FAU .49332
FDE 4.0771 FRA-4.5186 FC-18.9739 BSP 6809
BDE .1636 BRA 1.5253 BC3 3.7685 FSP 2938

MID-COURSE EXECUTION ACCURACY

SGT 3252.9 SGR 2550.3 SG3 1697.0
RRT .9149 RRF .9807 RTF .9203
SGB 4133.4 R23 .1971 R13 .9624
SG1 4049.9 SG2 827.0 THA 37.48

ORBIT DETERMINATION ACCURACY

ST 29.9 SR 13.8 SS 55.5
CRT .7290 CRS -.9115 CBT -.4131
LSA 58.7 MSA 26.6 SBA 1.9
EL1 31.7 EL2 8.9 ALF 20.29





LAUNCH DATE AUG 25 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.903 GAL 4.35 AZL 86.55 MCA 149.38 SMA 197.29 ECC .24491 INC 3.4508 V1 29.465
RP 244.79 LAP 1.76 LOP 121.08 VP 20.289 GAP 2.64 AZP 92.97 TAL 22.40 TAP 171.78 RCA 148.97 APO 245.60 V2 22.407
RC 279.268 GL 24.34 GP -30.04 ZAL 53.15 ZAP 82.08 ETS 177.30 ZAE 109.83 ETE 194.42 ZAC 58.26 ETC 286.57 LVI 7.81

DISTANCE 513.804

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 22.957 VHL 4.791 DLA 30.33 RAL 8.57 RAD 8644.1 VEL 11.956 PTH 6.96 VHP 2.507 DPA -19.76 RAP 32.86 ECC 1.3778
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 31 5 3801.24 -46.87 156.85 258.92 80.67 8 34 26 2801.2 -45.09 121.89
60.00 7 25 36 3815.87 -38.26 155.78 256.54 76.23 8 29 12 2815.9 -39.81 124.73
70.00 7 14 8 3849.71 -29.23 155.37 253.40 71.50 8 18 18 2849.7 -34.03 127.70
78.55 6 10 18 4050.88 -16.64 164.99 247.86 64.27 7 17 49 3050.9 -25.81 141.23
78.55 6 10 18 4050.88 -16.64 164.99 247.86 64.27 7 17 49 3050.9 -25.81 141.23
78.55 6 10 18 4050.88 -16.64 164.99 247.86 64.27 7 17 49 3050.9 -25.81 141.23
110.00 12 13 35 2896.53 -29.23 84.29 253.40 71.50 13 1 51 1896.5 -34.03 56.62

DIFFERENTIAL CORRECTIONS

TDE .2438 TRA-1.6897 TC3-3.3538 BAU 1.3432
RDE .3562 RRA -.5386 RC3-2.8120 FAU .45914
FDE 4.5463 FRA-4.2573 FC-17.3148 BSP 8180
BDE .4318 BRA 1.7544 BC3 4.3765 FSP 2749

MID-COURSE EXECUTION ACCURACY

SGT 3970.3 SGR 2828.4 SG3 1592.3
RRT .9359 RRF .9866 RTF .9368
SGB 4874.7 R23 .1985 R13 .9872
SG1 4804.7 SG2 823.1 THA 34.86

ORBIT DETERMINATION ACCURACY

ST 37.9 SR 24.4 SS 62.2
CRT .7759 CRS -.9828 CST -.6569
LSA 72.2 MSA 26.2 SSA 1.5
EL1 43.0 EL2 13.6 ALF 29.78

LAUNCH DATE AUG 25 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.907 GAL 4.31 AZL 86.44 MCA 150.29 SMA 197.35 ECC .24494 INC 3.5637 V1 29.465
RP 245.01 LAP 1.77 LOP 121.99 VP 20.272 GAP 2.43 AZP 93.10 TAL 22.19 TAP 172.47 RCA 149.01 APO 245.69 V2 22.386
RC 281.893 GL 25.11 GP -30.64 ZAL 53.61 ZAP 81.03 ETS 176.56 ZAE 108.41 ETE 193.71 ZAC 57.77 ETC 286.68 LVI 8.35

DISTANCE 517.587

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.096 VHL 4.806 DLA 31.12 RAL 8.40 RAD 8644.2 VEL 11.962 PTH 6.96 VHP 2.529 DPA -20.43 RAP 32.81 ECC 1.3801
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 25 47 3821.38 -46.63 158.74 259.57 79.24 8 29 28 2821.4 -45.48 123.68
60.00 7 17 54 3842.43 -37.81 157.89 256.83 74.86 8 21 56 2842.4 -40.00 126.96
70.00 7 0 26 3894.01 -28.24 158.43 253.21 69.94 8 5 20 2894.0 -33.82 131.14
76.44 5 54 20 4100.80 -17.00 168.92 247.99 63.54 7 2 41 3100.8 -26.43 145.18
76.44 5 54 20 4100.80 -17.00 168.92 247.99 63.54 7 2 41 3100.8 -26.43 145.18
76.44 5 54 20 4100.80 -17.00 168.92 247.99 63.54 7 2 41 3100.8 -26.43 145.18
110.00 11 59 53 2940.83 -28.24 87.35 253.21 69.94 12 48 54 1940.8 -33.82 60.06

DIFFERENTIAL CORRECTIONS

TDE .2952 TRA-1.7133 TC3-3.4676 BAU 1.3854
RDE .4009 RRA -.5582 RC3-2.8475 FAU .45015
FDE 4.6249 FRA-4.1896 FC-16.8737 BSP 8455
BDE .4978 BRA 1.8020 BC3 4.4869 FSP 2698

MID-COURSE EXECUTION ACCURACY

SGT 4114.0 SGR 2885.0 SG3 1563.5
RRT .9390 RRF .9876 RTF .9391
SGB 5024.8 R23 .1991 R13 .9679
SG1 4956.8 SG2 823.8 THA 34.45

ORBIT DETERMINATION ACCURACY

ST 40.2 SR 26.9 SS 63.4
CRT .7937 CRS -.9870 CST -.6947
LSA 75.4 MSA 26.1 SSA 1.4
EL1 46.2 EL2 14.2 ALF 31.28

LAUNCH DATE AUG 25 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.910 GAL 4.27 AZL 86.32 MCA 151.19 SMA 197.42 ECC .24499 INC 3.6829 V1 29.465
RP 245.22 LAP 1.77 LOP 122.89 VP 20.253 GAP 2.21 AZP 93.23 TAL 21.97 TAP 173.16 RCA 149.05 APO 245.79 V2 22.365
RC 284.497 GL 25.92 GP -31.25 ZAL 54.09 ZAP 80.03 ETS 175.80 ZAE 107.02 ETE 193.01 ZAC 57.25 ETC 286.79 LVI 8.91

DISTANCE 521.389

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.256 VHL 4.822 DLA 31.94 RAL 8.21 RAD 8644.3 VEL 11.968 PTH 6.97 VHP 2.533 DPA -21.11 RAP 32.81 ECC 1.3827
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 20 4 3842.78 -46.34 160.72 260.20 77.74 8 24 6 2842.8 -45.86 125.60
60.00 7 9 27 3871.09 -37.27 160.14 257.08 73.42 8 13 58 2871.1 -40.15 129.39
70.00 6 44 6 3946.10 -26.97 161.95 252.85 68.20 7 49 32 2946.1 -33.43 135.16
74.50 5 40 9 4144.66 -17.36 172.43 248.13 62.76 6 49 13 3144.7 -27.07 148.72
74.50 5 40 9 4144.66 -17.36 172.43 248.13 62.76 6 49 13 3144.7 -27.07 148.72
74.50 5 40 9 4144.66 -17.36 172.43 248.13 62.76 6 49 13 3144.7 -27.07 148.72
110.00 11 43 32 2992.92 -26.97 90.87 252.85 68.20 12 33 25 1992.9 -33.43 64.08

DIFFERENTIAL CORRECTIONS

TDE .3500 TRA-1.7573 TC3-3.5762 BAU 1.4277
RDE .4483 RRA -.5782 RC3-2.8805 FAU .44050
FDE 4.7010 FRA-4.1148 FC-16.3980 BSP 8735
BDE .5688 BRA 1.8499 BC3 4.5920 FSP 2642

MID-COURSE EXECUTION ACCURACY

SGT 4257.1 SGR 2942.3 SG3 1532.3
RRT .9417 RRF .9884 RTF .9410
SGB 5175.0 R23 .1999 R13 .9685
SG1 5108.8 SG2 824.9 THA 34.07

ORBIT DETERMINATION ACCURACY

ST 42.7 SR 29.6 SS 64.7
CRT .8112 CRS -.9901 CST -.7288
LSA 78.8 MSA 26.0 SSA 1.3
EL1 49.8 EL2 14.8 ALF 32.59

LAUNCH DATE AUG 25 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.914 GAL 4.23 AZL 86.19 MCA 152.09 SMA 197.49 ECC .24506 INC 3.8087 V1 29.465
RP 245.43 LAP 1.78 LOP 123.79 VP 20.236 GAP 1.99 AZP 93.37 TAL 21.75 TAP 173.84 RCA 149.10 APO 245.89 V2 22.344
RC 287.079 GL 26.77 GP -31.89 ZAL 54.59 ZAP 79.08 ETS 175.04 ZAE 105.66 ETE 192.31 ZAC 56.70 ETC 286.91 LVI 9.50

DISTANCE 525.150

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.441 VHL 4.842 DLA 32.79 RAL 8.00 RAD 8644.3 VEL 11.976 PTH 6.97 VHP 2.579 DPA -21.81 RAP 32.84 ECC 1.3858
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 13 52 3865.54 -45.99 162.80 260.83 76.16 8 18 18 2865.5 -46.23 127.68
60.00 7 0 8 3902.20 -36.64 162.54 257.27 71.90 8 5 10 2902.2 -40.26 132.03
70.00 6 23 23 4011.06 -25.25 166.22 252.20 66.20 7 30 14 3011.1 -32.74 140.10
72.66 5 27 12 4184.23 -17.73 175.65 248.27 61.95 6 36 56 3184.2 -27.73 151.99
72.66 5 27 12 4184.23 -17.73 175.65 248.27 61.95 6 36 56 3184.2 -27.73 151.99
72.66 5 27 12 4184.23 -17.73 175.65 248.27 61.95 6 36 56 3184.2 -27.73 151.99
110.00 11 22 50 3057.88 -25.25 95.14 252.20 66.20 12 13 48 2057.9 -32.74 69.02

DIFFERENTIAL CORRECTIONS

TDE .4071 TRA-1.8029 TC3-3.6800 BAU 1.4703
RDE .4970 RRA -.6000 RC3-2.9114 FAU .43030
FDE 4.7634 FRA-4.0421 FC-15.8923 BSP 9009
BDE .6425 BRA 1.9001 BC3 4.6924 FSP 2583

MID-COURSE EXECUTION ACCURACY

SGT 4401.5 SGR 3001.2 SG3 1498.9
RRT .9443 RRF .9892 RTF .9429
SGB 5327.2 R23 .2006 R13 .9691
SG1 5262.7 SG2 826.2 THA 33.72

ORBIT DETERMINATION ACCURACY

ST 45.4 SR 32.3 SS 65.8
CRT .8280 CRS -.9923 CST -.7583
LSA 82.2 MSA 25.9 SSA 1.3
EL1 53.5 EL2 15.3 ALF 33.65

LAUNCH DATE AUG 25 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.918 GAL 4.19 AZL 86.06 HCA 152.98 SMA 197.87 ECC .24513 INC 3.9422 V1 29.465  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.220 GAP 1.78 AZP 93.51 TAL 21.83 TAP 174.51 RCA 146.14 APO 246.00 V2 22.324  
 RC 289.637 GL 27.65 GP -32.55 ZAL 55.12 ZAP 78.17 ETS 174.26 ZAE 104.33 ETE 181.62 ZAC 56.12 ETC 287.03 LVI 10.11

DISTANCE 526.930

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.652 VHL 4.863 DLA 33.68 RAL 7.76 RAD 6644.4 VEL 11.965 PTH 6.98 VHP 2.608 DPA -22.51 RAP 32.91 ECC 1.3893  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 7 8 3889.83 -45.57 165.00 261.44 74.52 8 11 58 2889.8 -46.57 129.92  
 60.00 6 49 46 3936.21 -35.89 165.11 257.39 70.29 7 55 22 2936.2 -40.30 134.92  
 70.00 5 52 37 4106.02 -22.51 172.23 250.89 63.61 7 1 3 3106.0 -31.37 147.16  
 70.89 5 15 7 4220.73 -18.09 178.68 248.42 61.09 6 25 28 3220.7 -28.40 155.06  
 70.89 5 15 7 4220.73 -18.09 178.68 248.42 61.09 6 25 28 3220.7 -28.40 155.06  
 70.89 5 15 7 4220.73 -18.09 178.68 248.42 61.09 6 25 28 3220.7 -28.40 155.06  
 110.00 10 52 3 3152.84 -22.51 101.14 250.89 63.61 11 44 38 2152.8 -31.37 76.08

DIFFERENTIAL CORRECTIONS

TDE .4682 TRA-1.8482 TC3-3.7759 BAU 1.5131  
 RDE .5485 RRA -.6227 RC3-2.9397 FAU .41951  
 FDE 4.8197 FRA-3.9642 FC-15.3552 BSP 9286  
 BDE .7212 BRA 1.9503 BC3 4.7853 FSP 2518

MID-COURSE EXECUTION ACCURACY

SGT 4543.1 SR 3061.1 SG3 1483.2  
 RRT .9468 RRF .9900 RTF .9445  
 SGB 5478.2 R23 .2012 R13 .9696  
 SG1 8415.3 SG2 827.9 THA 33.41

ORBIT DETERMINATION ACCURACY

ST 48.3 SR 35.2 SS 66.9  
 CRT .8442 CR3 -.9939 CST -.7831  
 LSA 85.9 MSA 25.7 SSA 1.2  
 EL1 57.6 EL2 15.8 ALF 34.56

LAUNCH DATE AUG 25 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.922 GAL 4.15 AZL 85.92 HCA 153.88 SMA 197.65 ECC .24521 INC 4.0837 V1 29.465  
 RP 245.83 LAP 1.80 LOP 125.59 VP 20.205 GAP 1.56 AZP 93.67 TAL 21.30 TAP 175.18 RCA 149.18 APO 246.11 V2 22.305  
 RC 292.172 GL 26.58 GP -33.24 ZAL 55.66 ZAP 77.30 ETS 173.46 ZAE 103.03 ETE 190.93 ZAC 55.51 ETC 287.17 LVI 10.76

DISTANCE 532.708

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 23.894 VHL 4.888 DLA 34.61 RAL 7.49 RAD 6644.5 VEL 11.995 PTH 6.99 VHP 2.640 DPA -23.22 RAP 33.02 ECC 1.3932  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 59 47 3915.82 -45.07 167.30 262.01 72.80 8 5 3 2915.8 -46.88 132.35  
 60.00 6 38 6 3973.78 -34.99 167.89 257.41 68.58 7 44 19 2973.8 -40.25 138.11  
 69.16 5 3 41 4254.83 -18.46 181.56 248.58 60.19 6 14 36 3254.8 -29.09 158.00  
 69.16 5 3 41 4254.83 -18.46 181.56 248.58 60.19 6 14 36 3254.8 -29.09 158.00  
 69.16 5 3 41 4254.83 -18.46 181.56 248.58 60.19 6 14 36 3254.8 -29.09 158.00  
 69.16 5 3 41 4254.83 -18.46 181.56 248.58 60.19 6 14 36 3254.8 -29.09 158.00  
 69.16 5 3 41 4254.83 -18.46 181.56 248.58 60.19 6 14 36 3254.8 -29.09 158.00

DIFFERENTIAL CORRECTIONS

TDE .5323 TRA-1.8949 TC3-3.8658 BAU 1.5563  
 RDE .6032 RRA -.6464 RC3-2.9649 FAU .40811  
 FDE 4.8701 FRA-3.8811 FC-14.7887 BSP 9559  
 BDE .8045 BRA 2.0021 BC3 4.8719 FSP 2451

MID-COURSE EXECUTION ACCURACY

SGT 4685.6 SGR 3122.4 SG3 1425.2  
 RRT .9467 RRF .9907 RTF .9459  
 SGB 5630.7 R23 .2021 R13 .9700  
 SG1 8569.1 SG2 830.4 THA 33.13

ORBIT DETERMINATION ACCURACY

ST 51.4 SR 38.2 SS 68.0  
 CRT .8586 CR3 -.9952 CST -.8082  
 LSA 89.8 MSA 25.6 SSA 1.1  
 EL1 62.0 EL2 16.3 ALF 35.32

LAUNCH DATE AUG 25 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.926 GAL 4.10 AZL 85.77 HCA 154.77 SMA 197.73 ECC .24531 INC 4.2344 V1 29.465  
 RP 246.02 LAP 1.80 LOP 126.48 VP 20.191 GAP 1.35 AZP 93.83 TAL 21.07 TAP 175.84 RCA 149.22 APO 246.23 V2 22.286  
 RC 294.682 GL 29.55 GP -33.98 ZAL 56.22 ZAP 76.49 ETS 172.65 ZAE 101.77 ETE 190.24 ZAC 54.87 ETC 287.31 LVI 11.44

DISTANCE 536.486

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.171 VHL 4.916 DLA 35.57 RAL 7.19 RAD 6644.6 VEL 12.006 PTH 7.00 VHP 2.674 DPA -23.95 RAP 33.18 ECC 1.3978  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 43 3943.73 -44.48 169.73 262.93 71.01 7 57 26 2943.7 -47.15 134.99  
 60.00 6 24 45 4015.83 -33.91 170.93 257.27 66.77 7 31 41 3015.8 -40.08 141.68  
 67.46 4 52 41 4287.16 -18.83 184.34 248.74 59.24 6 4 8 3287.2 -29.80 160.85  
 67.46 4 52 41 4287.16 -18.83 184.34 248.74 59.24 6 4 8 3287.2 -29.80 160.85  
 67.46 4 52 41 4287.16 -18.83 184.34 248.74 59.24 6 4 8 3287.2 -29.80 160.85  
 67.46 4 52 41 4287.16 -18.83 184.34 248.74 59.24 6 4 8 3287.2 -29.80 160.85  
 67.46 4 52 41 4287.16 -18.83 184.34 248.74 59.24 6 4 8 3287.2 -29.80 160.85

DIFFERENTIAL CORRECTIONS

TDE .5999 TRA-1.9426 TC3-3.9474 BAU 1.5996  
 RDE .6603 RRA -.6721 RC3-2.9872 FAU .39617  
 FDE 4.9083 FRA-3.7983 FC-14.1893 BSP 9831  
 BDE .8921 BRA 2.0553 BC3 4.9503 FSP 2377

MID-COURSE EXECUTION ACCURACY

SGT 4827.1 SGR 3185.4 SG3 1385.1  
 RRT .9507 RRF .9913 RTF .5472  
 SGB 5783.4 R23 .2028 R13 .9705  
 SG1 8723.1 SG2 832.8 THA 32.89

ORBIT DETERMINATION ACCURACY

ST 54.8 SR 41.3 SS 68.9  
 CRT .8720 CR3 -.9961 CST -.8285  
 LSA 93.8 MSA 25.5 SSA 1.1  
 EL1 66.6 EL2 16.6 ALF 35.95

LAUNCH DATE AUG 25 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 151.21 LAL .00 LOL 331.65 VL 32.930 GAL 4.06 AZL 85.60 HCA 155.66 SMA 197.81 ECC .24541 INC 4.3951 V1 29.465  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.178 GAP 1.14 AZP 94.01 TAL 20.83 TAP 176.49 RCA 149.27 APO 246.36 V2 22.267  
 RC 297.167 GL 30.58 GP -34.71 ZAL 56.81 ZAP 75.73 ETS 171.83 ZAE 100.55 ETE 189.56 ZAC 54.19 ETC 287.47 LVI 12.16

DISTANCE 540.262

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.488 VHL 4.949 DLA 36.58 RAL 6.85 RAD 6644.8 VEL 12.019 PTH 7.01 VHP 2.712 DPA -24.70 RAP 33.38 ECC 1.4030  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 42 48 3973.84 -43.79 172.29 262.98 69.14 7 49 2 2973.8 -47.37 137.87  
 60.00 6 9 10 4063.86 -32.56 174.29 256.93 64.81 7 16 54 3063.9 -39.75 145.72  
 65.76 4 42 4 4317.89 -19.19 187.04 248.90 58.24 5 54 2 3317.9 -30.53 163.63  
 65.76 4 42 4 4317.89 -19.19 187.04 248.90 58.24 5 54 2 3317.9 -30.53 163.63  
 65.76 4 42 4 4317.89 -19.19 187.04 248.90 58.24 5 54 2 3317.9 -30.53 163.63  
 65.76 4 42 4 4317.89 -19.19 187.04 248.90 58.24 5 54 2 3317.9 -30.53 163.63

DIFFERENTIAL CORRECTIONS

TDE .6718 TRA-1.9910 TC3-4.0198 BAU 1.6431  
 RDE .7218 RRA -.6987 RC3-3.0052 FAU .38355  
 FDE 4.9430 FRA-3.7078 FC-13.5599 BSP 10113  
 BDE .9861 BRA 2.1100 BC3 5.0189 FSP 2306

MID-COURSE EXECUTION ACCURACY

SGT 4967.3 SGR 3249.5 SG3 1342.5  
 RRT .9525 RRF .9919 RTF .9483  
 SGB 5935.8 R23 .2038 R13 .9708  
 SG1 8876.6 SG2 836.4 THA 32.67

ORBIT DETERMINATION ACCURACY

ST 58.3 SR 44.7 SS 69.8  
 CRT .8839 CR3 -.9968 CST -.8462  
 LSA 98.1 MSA 25.5 SSA 1.0  
 EL1 71.5 EL2 17.1 ALF 36.50

LAUNCH DATE AUG 25 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.935 GAL 4.02 AZL 85.43 HCA 156.56 SMA 197.90 ECC .24553 INC 4.5670 V1 29.465  
 RP 246.39 LAP 1.82 LOP 126.27 VP 20.166 GAP .93 AZP 94.19 TAL 20.59 TAP 177.15 RCA 149.31 APO 246.49 V2 22.249  
 RC 299.628 GL 31.65 GP -39.49 ZAL 57.43 ZAP 75.02 ETS 171.00 ZAE 99.36 ETE 166.87 ZAC 53.48 ETC 287.64 LVI 12.81

PLANETOCENTRIC CONIC  
 C3 24.851 VHL 4.985 DLA 37.64 RAL 6.46 RAD 6644.9 VEL 12.034 PTH 7.02 VHP 2.753 DPA -25.46 RAP 33.63 ECC 1.4080  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 32 54 4006.46 -42.96 174.99 263.34 67.19 7 39 40 3006.5 -47.52 141.01  
 60.00 5 50 20 4120.56 -30.86 178.13 256.28 62.67 6 59 0 3120.6 -39.15 150.42  
 64.06 4 31 41 4347.46 -19.55 189.68 249.06 57.18 5 44 9 3347.5 -31.27 166.38  
 64.06 4 31 41 4347.46 -19.55 189.68 249.06 57.18 5 44 9 3347.5 -31.27 166.38  
 64.06 4 31 41 4347.46 -19.55 189.68 249.06 57.18 5 44 9 3347.5 -31.27 166.38  
 64.06 4 31 41 4347.46 -19.55 189.68 249.06 57.18 5 44 9 3347.5 -31.27 166.38  
 64.06 4 31 41 4347.46 -19.55 189.68 249.06 57.18 5 44 9 3347.5 -31.27 166.38

DIFFERENTIAL CORRECTIONS  
 TDE .7466 TRA-2.0412 TC3-4.0825 BAW 1.6871 SGT 5106.9 SGR 3316.4 SG3 1298.0 ST 62.1 SR 48.1 SS 70.5  
 RDE .7859 RRA -.7282 RC3-3.0199 FAU .37049 RRT .9542 RRF .9925 RTF .9493 CRT .8946 CRS -.9973 CST -.8615  
 FDE 4.9613 FRA-3.6190 FC-12.9069 BSP 10378 SGB 6089.2 R23 .2046 R13 .0712 LSA 102.4 MSA 25.4 S8A 1.0  
 BDE 1.0840 BRA 2.1672 BC3 5.0781 FSP 2224 SG1 6031.1 SG2 839.8 THA 32.49 EL1 76.6 EL2 17.4 ALF 36.95

LAUNCH DATE AUG 25 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.940 GAL 3.97 AZL 85.25 HCA 157.45 SMA 197.99 ECC .24565 INC 4.7515 V1 29.465  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.154 GAP .72 AZP 94.39 TAL 20.35 TAP 177.80 RCA 149.35 APO 246.63 V2 22.232  
 RC 302.065 GL 32.79 GP -36.31 ZAL 58.07 ZAP 74.36 ETS 170.14 ZAE 98.20 ETE 168.19 ZAC 52.72 ETC 287.63 LVI 13.70

PLANETOCENTRIC CONIC  
 C3 25.267 VHL 5.027 DLA 38.73 RAL 6.02 RAD 6645.1 VEL 12.031 PTH 7.04 VHP 2.798 DPA -26.24 RAP 33.92 ECC 1.4158  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 21 49 4042.01 -41.98 177.84 263.56 65.16 7 29 11 3042.0 -47.58 144.45  
 60.00 5 26 1 4191.89 -28.53 182.74 255.09 60.24 6 35 53 3191.9 -38.11 156.20  
 62.35 4 21 28 4376.05 -19.90 192.28 249.22 56.05 5 34 24 3376.0 -32.03 169.10  
 62.35 4 21 28 4376.05 -19.90 192.28 249.22 56.05 5 34 24 3376.0 -32.03 169.10  
 62.35 4 21 28 4376.05 -19.90 192.28 249.22 56.05 5 34 24 3376.0 -32.03 169.10  
 62.35 4 21 28 4376.05 -19.90 192.28 249.22 56.05 5 34 24 3376.0 -32.03 169.10  
 62.35 4 21 28 4376.05 -19.90 192.28 249.22 56.05 5 34 24 3376.0 -32.03 169.10

DIFFERENTIAL CORRECTIONS  
 TDE .8198 TRA-2.0974 TC3-4.1406 BAW 1.7371 SGT 5253.1 SGR 3404.8 SG3 1258.4 ST 65.8 SR 51.1 SS 70.5  
 RDE .8423 RRA -.7722 RC3-3.0493 FAU .35947 RRT .9570 RRF .9931 RTF .9519 CRT .9063 CRS -.9975 CST -.8761  
 FDE 4.9144 FRA-3.5844 FC-12.3166 BSP 10512 SGB 6260.0 R23 .2006 R13 .9726 LSA 106.2 MSA 25.1 S8A .9  
 BDE 1.1754 BRA 2.2351 BC3 5.1423 FSP 2081 SG1 6203.9 SG2 836.4 THA 32.47 EL1 81.5 EL2 17.5 ALF 37.11

LAUNCH DATE AUG 25 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.944 GAL 3.93 AZL 85.05 HCA 158.33 SMA 198.08 ECC .24579 INC 4.9500 V1 29.465  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.143 GAP .51 AZP 94.60 TAL 20.10 TAP 178.44 RCA 149.40 APO 246.77 V2 22.215  
 RC 304.476 GL 33.98 GP -37.17 ZAL 58.74 ZAP 73.77 ETS 169.28 ZAE 97.10 ETE 187.50 ZAC 51.91 ETC 288.03 LVI 14.54

PLANETOCENTRIC CONIC  
 C3 25.744 VHL 5.074 DLA 39.88 RAL 5.52 RAD 6645.3 VEL 12.071 PTH 7.05 VHP 2.848 DPA -27.05 RAP 34.27 ECC 1.4237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 15 4081.13 -40.82 180.87 263.61 63.05 7 17 16 3081.1 -47.51 148.23  
 60.00 4 47 37 4301.56 -24.64 189.41 252.60 57.04 5 59 19 3301.6 -35.93 164.69  
 60.62 4 11 19 4403.92 -20.23 194.86 249.37 54.86 5 24 43 3403.9 -32.79 171.83  
 60.62 4 11 19 4403.92 -20.23 194.86 249.37 54.86 5 24 43 3403.9 -32.79 171.83  
 60.62 4 11 19 4403.92 -20.23 194.86 249.37 54.86 5 24 43 3403.9 -32.79 171.83  
 60.62 4 11 19 4403.92 -20.23 194.86 249.37 54.86 5 24 43 3403.9 -32.79 171.83  
 60.62 4 11 19 4403.92 -20.23 194.86 249.37 54.86 5 24 43 3403.9 -32.79 171.83

DIFFERENTIAL CORRECTIONS  
 TDE .9038 TRA-2.1494 TC3-4.1781 BAW 1.7802 SGT 5387.3 SGR 3470.8 SG3 1207.2 ST 70.0 SR 55.0 SS 71.1  
 RDE .9183 RRA -.8033 RC3-3.0490 FAU .34445 RRT .9582 RRF .9935 RTF .9522 CRT .9140 CRS -.9979 CST -.8871  
 FDE 4.9269 FRA-3.4721 FC-11.5833 BSP 10821 SGB 6408.6 R23 .2028 R13 .9726 LSA 111.1 MSA 25.1 S8A .8  
 BDE 1.2884 BRA 2.2947 BC3 5.1724 FSP 2012 SG1 6353.0 SG2 842.1 THA 32.33 EL1 87.2 EL2 17.9 ALF 37.55

LAUNCH DATE AUG 25 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.949 GAL 3.88 AZL 84.84 HCA 159.22 SMA 198.18 ECC .24593 INC 5.1842 V1 29.465  
 RP 246.90 LAP 1.83 LOP 130.95 VP 20.133 GAP .30 AZP 94.83 TAL 19.85 TAP 179.07 RCA 149.44 APO 246.91 V2 22.199  
 RC 306.863 GL 35.24 GP -38.08 ZAL 59.44 ZAP 73.23 ETS 168.41 ZAE 96.03 ETE 186.82 ZAC 51.06 ETC 288.25 LVI 16.43

PLANETOCENTRIC CONIC  
 C3 26.294 VHL 5.128 DLA 41.09 RAL 4.95 RAD 6645.5 VEL 12.094 PTH 7.07 VHP 2.902 DPA -27.88 RAP 34.67 ECC 1.4327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 54 52 4124.61 -39.43 184.11 263.41 60.85 7 3 36 3124.6 -47.27 152.41  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59  
 58.86 4 1 9 4431.23 -20.55 197.43 249.51 53.60 5 15 1 3431.2 -33.57 174.59

DIFFERENTIAL CORRECTIONS  
 TDE .9907 TRA-2.2040 TC3-4.2031 BAW 1.8242 SGT 5521.0 SGR 3540.2 SG3 1154.3 ST 74.2 SR 59.0 SS 71.8  
 RDE .9988 RRA -.8383 RC3-3.0437 FAU .32900 RRT .9593 RRF .9936 RTF .9524 CRT .9207 CRS -.9982 CST -.8964  
 FDE 4.9227 FRA-3.3600 FC-10.8325 BSP 11122 SGB 6558.6 R23 .2050 R13 .9725 LSA 116.1 MSA 25.1 S8A .8  
 BDE 1.4068 BRA 2.3581 BC3 5.1895 FSP 1938 SG1 6503.5 SG2 848.4 THA 32.21 EL1 93.0 EL2 18.4 ALF 37.96

LAUNCH DATE AUG 25 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.66 VL 32.984 GAL 3.03 AZL 84.60 HCA 160.11 SMA 198.27 ECC .24608 INC 5.3964 V1 29.465  
 RP 247.06 LAP 1.83 LOP 131.84 VP 20.124 GAP .10 AZP 95.08 TAL 19.60 TAP 179.71 RCA 149.48 APO 247.06 V2 22.183  
 RC 309.224 GL 36.38 GP -39.03 ZAL 60.18 ZAP 72.76 ETS 167.92 ZAE 95.01 ETE 186.13 ZAC 50.15 ETC 288.50 LVI 16.36

PLANETOCENTRIC CONIC  
 C3 26.928 VHL 5.189 DLA 42.34 RAL 4.30 RAD 6645.8 VEL 12.120 PTH 7.09 VHP 2.962 DPA -28.74 RAP 35.13 ECC 1.4432  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 38 4 4173.67 -37.74 187.59 262.89 58.55 6 47 38 3173.7 -46.81 157.06  
 57.07 3 50 55 4458.16 -20.84 200.01 249.63 52.27 5 5 13 3458.2 -34.34 177.38  
 57.07 3 50 55 4458.16 -20.84 200.01 249.63 52.27 5 5 13 3458.2 -34.34 177.38  
 57.07 3 50 55 4458.16 -20.84 200.01 249.63 52.27 5 5 13 3458.2 -34.34 177.38  
 57.07 3 50 55 4458.16 -20.84 200.01 249.63 52.27 5 5 13 3458.2 -34.34 177.38  
 57.07 3 50 55 4458.16 -20.84 200.01 249.63 52.27 5 5 13 3458.2 -34.34 177.38

DIFFERENTIAL CORRECTIONS  
 TDE 1.0812 TRA-2.2600 TC3-4.2125 BAU 1.8687 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.0835 RRA -.8772 RC3-3.0331 FAU .31317 SGT 5651.2 SGR 3613.5 SG3 1099.6 ST 78.6 SR 63.1 S8 71.8  
 FDE 4.8972 FRA-3.2478 FC-10.0687 B8P 11431 RRT .9805 RRF .9942 RTF .9527 CRT .9268 CRS -.9983 CST -.9046  
 BDE 1.5307 BRA 2.4243 BC3 5.1908 F8P 1857 SGB 6707.7 R23 .2068 R13 .9725 LSA 121.1 MSA 25.2 S8A .7  
 SG1 6653.1 SG2 854.1 THA 32.15 EL1 99.0 EL2 18.8 ALF 38.32

LAUNCH DATE AUG 25 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.959 GAL 3.79 AZL 84.35 HCA 160.99 SMA 198.37 ECC .24623 INC 5.6490 V1 29.465  
 RP 247.22 LAP 1.84 LOP 132.73 VP 20.116 GAP -.11 AZP 95.34 TAL 19.35 TAP 180.34 RCA 149.53 APO 247.22 V2 22.168  
 RC 311.559 GL 37.99 GP -40.03 ZAL 60.95 ZAP 72.36 ETS 166.63 ZAE 94.03 ETE 185.45 ZAC 49.19 ETC 288.77 LVI 17.35

PLANETOCENTRIC CONIC  
 C3 27.662 VHL 5.259 DLA 43.66 RAL 3.55 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 3.028 DPA -29.63 RAP 35.66 ECC 1.4552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 17 56 4230.42 -35.65 191.41 261.90 56.12 6 28 26 3230.4 -46.03 162.31  
 55.24 3 40 31 4484.84 -21.09 202.60 249.73 50.85 4 55 15 3484.8 -35.11 180.23  
 55.24 3 40 31 4484.84 -21.09 202.60 249.73 50.85 4 55 15 3484.8 -35.11 180.23  
 55.24 3 40 31 4484.84 -21.09 202.60 249.73 50.85 4 55 15 3484.8 -35.11 180.23  
 55.24 3 40 31 4484.84 -21.09 202.60 249.73 50.85 4 55 15 3484.8 -35.11 180.23  
 55.24 3 40 31 4484.84 -21.09 202.60 249.73 50.85 4 55 15 3484.8 -35.11 180.23

DIFFERENTIAL CORRECTIONS  
 TDE 1.1742 TRA-2.3191 TC3-4.2069 BAU 1.9144 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.1740 RRA -.9206 RC3-3.0168 FAU .29698 RRT .9616 RRF .9943 RTF .9528 CRT .9320 CRS -.9985 CST -.9113  
 FDE 4.8540 FRA-3.1343 FC3-9.2946 B8P 11724 SGB 6856.5 R23 .2087 R13 .9724 LSA 126.2 MSA 25.3 S8A .7  
 BDE 1.6605 BRA 2.4951 BC3 5.1768 F8P 1768 SG1 6804.3 SG2 860.5 THA 32.13 EL1 105.1 EL2 19.3 ALF 38.69

LAUNCH DATE AUG 25 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.984 GAL 3.74 AZL 84.68 HCA 161.87 SMA 198.47 ECC .24640 INC 5.9249 V1 29.465  
 RP 247.37 LAP 1.84 LOP 133.81 VP 20.108 GAP -.31 AZP 95.63 TAL 19.09 TAP 180.96 RCA 149.57 APO 247.38 V2 22.154  
 RC 313.869 GL 39.48 GP -41.08 ZAL 61.76 ZAP 72.03 ETS 165.73 ZAE 93.11 ETE 184.76 ZAC 48.18 ETC 289.08 LVI 18.40

PLANETOCENTRIC CONIC  
 C3 28.516 VHL 5.340 DLA 45.03 RAL 2.69 RAD 6646.4 VEL 12.184 PTH 7.14 VHP 3.102 DPA -30.55 RAP 36.25 ECC 1.4693  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 52 37 4299.03 -32.96 193.75 260.18 53.52 6 4 16 3299.0 -44.74 168.42  
 53.38 3 29 51 4511.47 -21.30 205.21 249.78 49.34 4 45 2 3511.5 -35.86 183.16  
 53.38 3 29 51 4511.47 -21.30 205.21 249.78 49.34 4 45 2 3511.5 -35.86 183.16  
 53.38 3 29 51 4511.47 -21.30 205.21 249.78 49.34 4 45 2 3511.5 -35.86 183.16  
 53.38 3 29 51 4511.47 -21.30 205.21 249.78 49.34 4 45 2 3511.5 -35.86 183.16  
 53.38 3 29 51 4511.47 -21.30 205.21 249.78 49.34 4 45 2 3511.5 -35.86 183.16

DIFFERENTIAL CORRECTIONS  
 TDE 1.2689 TRA-2.3809 TC3-4.1831 BAU 1.9806 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.2700 RRA -.9890 RC3-2.9917 FAU .28017 RRT .9627 RRF .9947 RTF .5.29 CRT .9364 CRS -.9985 CST -.9187  
 FDE 4.7881 FRA-3.0176 FC3-8.5059 B8P 12019 SGB 7007.7 R23 .2108 R13 .9723 LSA 131.2 MSA 25.4 S8A .6  
 BDE 1.7953 BRA 2.5705 BC3 5.1428 F8P 1674 SG1 6953.8 SG2 866.8 THA 32.15 EL1 111.3 EL2 19.8 ALF 39.08

LAUNCH DATE AUG 25 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC  
 RL 151.21 LAL .00 LOL 331.65 VL 32.970 GAL 3.69 AZL 83.77 HCA 162.75 SMA 198.58 ECC .24657 INC 6.2275 V1 29.465  
 RP 247.51 LAP 1.84 LOP 134.50 VP 20.102 GAP -.52 AZP 95.95 TAL 18.83 TAP 181.58 RCA 149.61 APO 247.54 V2 22.140  
 RC 316.151 GL 41.07 GP -42.19 ZAL 62.60 ZAP 71.77 ETS 164.83 ZAE 92.24 ETE 184.08 ZAC 47.10 ETC 289.42 LVI 19.50

PLANETOCENTRIC CONIC  
 C3 29.514 VHL 5.433 DLA 46.46 RAL 1.70 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 3.184 DPA -31.51 RAP 36.91 ECC 1.4837  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 17 3 4391.47 -29.08 201.15 257.05 50.53 5 30 15 3391.5 -42.48 176.15  
 51.46 3 18 50 4538.18 -21.46 207.85 249.77 47.75 4 34 28 3538.2 -36.59 186.18  
 51.46 3 18 50 4538.18 -21.46 207.85 249.77 47.75 4 34 28 3538.2 -36.59 186.18  
 51.46 3 18 50 4538.18 -21.46 207.85 249.77 47.75 4 34 28 3538.2 -36.59 186.18  
 51.46 3 18 50 4538.18 -21.46 207.85 249.77 47.75 4 34 28 3538.2 -36.59 186.18  
 51.46 3 18 50 4538.18 -21.46 207.85 249.77 47.75 4 34 28 3538.2 -36.59 186.18

DIFFERENTIAL CORRECTIONS  
 TDE 1.3609 TRA-2.4493 TC3-4.1442 BAU 2.0097 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.3705 RRA -1.0257 RC3-2.9611 FAU .26316 SGT 6033.0 SGR 3860.9 SG3 925.1 ST 91.4 SR 76.2 S8 70.6  
 FDE 4.6941 FRA-2.9046 FC3-7.7193 B8P 12287 RRT .9638 RRF .9948 RTF .9529 CRT .9397 CRS -.9986 CST -.9205  
 BDE 1.9314 BRA 2.6554 BC3 5.0934 F8P 1574 SGB 7162.7 R23 .2125 R13 .9721 LSA 136.0 MSA 25.6 S8A .6  
 SG1 7109.2 SG2 873.2 THA 32.21 EL1 117.2 EL2 20.3 ALF 39.47

LAUNCH DATE AUG 25 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC DISTANCE 574.190 EARTH TO MARS
RL 151.21 LAL .00 LOL 331.65 VL 32.975 GAL 3.64 AZL 83.44 HCA 163.63 SMA 198.68 ECC .24676 INC 6.5613 V1 29.465
RP 247.65 LAP 1.85 LOP 133.38 VP 20.095 GAP -.72 AZP 96.30 TAL 18.57 TAP 182.20 RCA 149.66 APO 247.71 V2 22.126
RC 318.406 GL 42.75 GP -43.36 ZAL 83.49 ZAP 71.59 ETS 163.92 ZAE 91.43 ETE 183.40 ZAC 45.96 ETC 289.79 LVI 20.67
PLANETOCENTRIC CONIC
C3 30.688 VHL 5.540 DLA 47.95 RAL .54 RAD 6647.3 VEL 12.273 PTH 7.21 VHP 3.275 DPA -32.50 RAP 37.65 ECC 1.5050
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
49.51 3 7 21 4565.15 -21.55 210.53 249.69 46.06 4 23 26 3565.1 -37.28 189.30
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.4534 TRA-2.5200 TC3-4.0824 BAU 2.0593 SGT 6153.3 SGR 3953.8 SG3 863.3 ST 95.4 SR 80.6 SS 69.5
RDE 1.4778 RRA-1.0890 RC3-2.9202 FAU .24550 RRT .9650 RRF .9949 RTF .9528 CRT .9424 CR3 -.9985 CST -.9233
FDE 4.5759 FRA-2.7857 FC3-6.9281 BSP 12572 SGB 7314.1 R23 .2143 R13 .9720 LSA 140.6 MSA 25.8 SSA .5
BDE 2.0728 BRA 2.7453 BC3 5.0193 FSP 1469 SG1 7261.1 SG2 879.1 THA 32.33 EL1 123.2 EL2 20.9 ALF 39.91

LAUNCH DATE AUG 25 1973 FLIGHT TIME 270.00 ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC DISTANCE 577.951 EARTH TO MARS
RL 151.21 LAL .00 LOL 331.65 VL 32.980 GAL 3.60 AZL 83.07 HCA 164.51 SMA 198.79 ECC .24694 INC 6.9316 V1 29.465
RP 247.78 LAP 1.85 LOP 136.27 VP 20.090 GAP -.92 AZP 96.68 TAL 18.31 TAP 182.81 RCA 149.70 APO 247.88 V2 22.113
RC 320.632 GL 44.54 GP -44.60 ZAL 64.42 ZAP 71.50 ETS 163.03 ZAE 90.68 ETE 182.72 ZAC 44.75 ETC 290.22 LVI 21.91
PLANETOCENTRIC CONIC
C3 32.077 VHL 5.664 DLA 49.51 RAL 359.19 RAD 6647.8 VEL 12.329 PTH 7.26 VHP 3.379 DPA -33.53 RAP 38.48 ECC 1.5279
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
47.50 2 55 16 4592.59 -21.56 213.26 249.50 44.28 4 11 49 3592.6 -37.91 192.55
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.5408 TRA-2.5965 TC3-3.9988 BAU 2.1103 SGT 6269.9 SGR 4052.1 SG3 799.5 ST 99.0 SR 85.1 SS 68.0
RDE 1.5917 RRA-1.1612 RC3-2.8680 FAU .22743 RRT .9660 RRF .9950 RTF .9524 CRT .9441 CR3 -.9983 CST -.9246
FDE 4.4300 FRA-2.6618 FC3-6.1382 BSP 12861 SGB 7465.4 R23 .2168 R13 .9716 LSA 144.8 MSA 26.2 SSA .5
BDE 2.2153 BRA 2.8443 BC3 4.9210 FSP 1362 SG1 7412.6 SG2 885.6 THA 32.50 EL1 128.8 EL2 21.6 ALF 40.43

LAUNCH DATE AUG 25 1973 FLIGHT TIME 272.00 ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC DISTANCE 581.711 EARTH TO MARS
RL 151.21 LAL .00 LOL 331.65 VL 32.986 GAL 3.55 AZL 82.66 HCA 165.38 SMA 198.90 ECC .24714 INC 7.3446 V1 29.465
RP 247.91 LAP 1.85 LOP 137.15 VP 20.086 GAP -1.12 AZP 97.11 TAL 18.04 TAP 183.43 RCA 149.74 APO 248.05 V2 22.101
RC 322.829 GL 46.44 GP -45.90 ZAL 65.41 ZAP 71.50 ETS 162.16 ZAE 89.99 ETE 182.06 ZAC 43.46 ETC 290.70 LVI 23.22
PLANETOCENTRIC CONIC
C3 33.733 VHL 5.808 DLA 51.13 RAL 357.62 RAD 6648.4 VEL 12.395 PTH 7.31 VHP 3.496 DPA -34.59 RAP 39.40 ECC 1.5552
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
45.45 2 42 26 4620.66 -21.46 216.02 249.16 42.40 3 59 27 3620.7 -38.46 195.93
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.6160 TRA-2.6804 TC3-3.8947 BAU 2.1649 SGT 6384.3 SGR 4159.1 SG3 734.3 ST 101.9 SR 89.4 SS 68.9
RDE 1.7095 RRA-1.2447 RC3-2.8063 FAU .20896 RRT .9671 RRF .9949 RTF .9517 CRT .9444 CR3 -.9983 CST -.9238
FDE 4.2491 FRA-2.5333 FC3-5.3630 BSP 13116 SGB 7619.5 R23 .2198 R13 .9711 LSA 146.4 MSA 26.7 SSA .5
BDE 2.3524 BRA 2.9553 BC3 4.8004 FSP 1248 SG1 7567.0 SG2 892.9 THA 32.72 EL1 133.7 EL2 22.4 ALF 41.03

LAUNCH DATE AUG 25 1973 FLIGHT TIME 274.00 ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC DISTANCE 585.469 EARTH TO MARS
RL 151.21 LAL .00 LOL 331.65 VL 32.991 GAL 3.50 AZL 82.19 HCA 166.26 SMA 199.01 ECC .24734 INC 7.8086 V1 29.465
RP 248.03 LAP 1.85 LOP 138.03 VP 20.082 GAP -1.32 AZP 97.59 TAL 17.77 TAP 184.03 RCA 149.78 APO 248.23 V2 22.089
RC 324.997 GL 48.46 GP -47.27 ZAL 66.44 ZAP 71.59 ETS 161.31 ZAE 89.38 ETE 181.43 ZAC 42.11 ETC 291.25 LVI 24.60
PLANETOCENTRIC CONIC
C3 35.724 VHL 5.977 DLA 52.80 RAL 355.75 RAD 6649.2 VEL 12.475 PTH 7.37 VHP 3.620 DPA -35.69 RAP 40.42 ECC 1.5879
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
43.36 2 28 38 4649.62 -21.23 218.82 248.62 40.44 3 46 7 3649.6 -38.90 199.44
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 1.6759 TRA-2.7705 TC3-3.7645 BAU 2.2214 SGT 6490.2 SGR 4273.8 SG3 667.5 ST 104.1 SR 93.5 SS 63.3
RDE 1.8313 RRA-1.3411 RC3-2.7317 FAU .19002 RRT .9681 RRF .9946 RTF .9508 CRT .9434 CR3 -.9980 CST -.9209
FDE 4.0332 FRA-2.3972 FC3-4.6049 BSP 13398 SGB 7771.0 R23 .2234 R13 .9704 LSA 151.1 MSA 27.4 SSA .4
BDE 2.4824 BRA 3.0780 BC3 4.6513 FSP 1132 SG1 7716.7 SG2 900.3 THA 33.02 EL1 138.0 EL2 23.4 ALF 41.75

LAUNCH DATE AUG 25 1973

FLIGHT TIME 276.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

DISTANCE 589,225

EARTH TO MARS

RL 151.21 LAL .00 LOL 331.85 VL 32.997 GAL 3.45 AZL 81.67 HCA 167.13 SMA 199.12 ECC .24755 INC 0.3338 V1 29.469  
 RP 248.14 LAP 1.85 LOP 136.92 VP 20.079 GAP -1.52 AZP 98.13 TAL 17.51 TAP 184.64 RCA 149.82 APO 248.41 V2 22.078  
 RC 327.134 GL 50.62 GP -46.70 ZAL 67.52 ZAP 71.79 ETS 160.50 ZAE 88.85 ETE 180.82 ZAC 40.67 ETC 291.87 LVI 26.05

PLANETOCENTRIC CONIC

C3 38.143 VHL 6.176 DLA 54.51 RAL 353.55 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 3.784 DPA -36.83 RAP 41.55 ECC 1.6277  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09  
 41.24 2 13 38 4679.68 -20.84 221.64 247.81 38.40 3 31 38 3679.7 -39.20 203.09

DIFFERENTIAL CORRECTIONS

TDE 1.7065 TRA-2.8700 TC3-3.6104 BAU 2.2823  
 RDE 1.9517 RRA-1.4546 RC3-2.6451 FAU .17075  
 FDE 3.7751 FRA-2.2539 FC3-3.8754 BSP 13653  
 BDE 2.5925 BRA 3.2176 BC3 4.4757 FSP 1011

MID-COURSE EXECUTION ACCURACY

SGT 6590.1 SGR 4399.6 SG3 599.5  
 RRT .9691 RRF .9942 RTF .9493  
 SGB 7923.7 R23 .2281 R13 .9694  
 SGI 7871.5 SG2 908.5 THA 33.41

ORBIT DETERMINATION ACCURACY

ST 105.1 SR 97.1 SS 60.0  
 CRT .9402 CRS -.9976 CST -.9146  
 LSA 152.5 MSA 28.4 SSA .4  
 EL1 141.0 EL2 24.7 ALF 42.61

LAUNCH DATE AUG 26 1973      FLIGHT TIME 100.00      ARRIVAL DATE DEC 4 1973

Heliocentric Conic: RL 131.18 LAL .00 LOL 332.02 VL 34.038 GAL 5.03 AZL 89.84 HCA 81.84 SMA 244.85 ECC .38102 INC .1595 V1 28.471  
 RP 221.90 LAP .16 LOP 54.25 VP 25.576 GAP 22.41 AZP 89.98 TAL 17.97 TAP 99.61 RCA 149.11 APO 340.59 V2 24.778  
 RC 92.473 GL .09 GP -5.64 ZAL 56.74 ZAP 170.30 ETS 217.14 ZAE 158.33 ETE 344.29 ZAC 77.07 ETC 282.38 LVI -10.37

Planetocentric Conic: C3 39.208 VHL 6.262 DLA 12.07 RAL 26.97 RAD 8650.4 VEL 12.613 PTH 7.47 VHP 7.642 DPA 11.28 RAP 45.74 ECC 1.6433  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 4 32 3542.68 -46.81 132.08 272.53 99.68 11 3 35 2542.7 -37.75 101.54  
 60.00 10 30 49 3472.75 -39.98 127.04 273.78 95.54 11 28 41 2472.8 -33.44 98.02  
 70.00 11 8 1 3363.29 -34.08 118.68 274.30 92.41 12 4 4 2363.3 -29.55 90.90  
 80.00 12 2 20 3193.08 -29.86 105.90 274.41 90.34 12 55 33 2193.1 -26.68 78.92  
 90.00 13 17 35 2950.22 -28.28 88.05 274.41 89.59 14 6 45 1950.2 -25.60 61.36  
 100.00 14 45 12 2667.53 -29.86 67.26 274.41 90.34 15 29 40 1667.5 -26.68 40.29  
 110.00 16 7 27 2410.11 -34.08 47.60 274.30 92.41 16 47 37 1410.1 -29.55 19.82

Differential Corrections: TDE -.2992 TRA -.7499 TC3 .4040 BAU .2189 SGT 907.4 SGR 641.5 SG3 158.7 ST 17.3 SR 29.6 S8 3.8  
 RDE -.6422 RRA .2354 RC3 -.1059 FAU .06627 RRT -.1045 RRF .1415 RTF -.5382 CRT .7187 CRS .8705 CST .5700  
 FDE .1087 FRA -.0873 FC3-1.4632 B8P 1183 SGB 1111.2 R23 -.0315 R13 .5441 LSA 32.6 MSA 11.0 S8A 1.8  
 BDE .7085 BRA .7880 BC3 .4177 F8P 198 SG1 912.2 SG2 634.6 THA 171.78 EL1 32.5 EL2 11.0 ALF 64.04

LAUNCH DATE AUG 26 1973      FLIGHT TIME 102.00      ARRIVAL DATE DEC 6 1973

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 34.715 GAL 5.05 AZL 89.80 HCA 82.74 SMA 241.04 ECC .38162 INC .1946 V1 29.471  
 RP 222.28 LAP .19 LOP 55.35 VP 25.367 GAP 22.01 AZP 89.98 TAL 18.38 TAP 101.11 RCA 149.05 APO 333.02 V2 24.736  
 RC 94.587 GL 1.10 GP -5.77 ZAL 56.09 ZAP 169.48 ETS 214.84 ZAE 158.31 ETE 343.76 ZAC 76.90 ETC 282.38 LVI -10.19

Planetocentric Conic: C3 37.944 VHL 6.160 DLA 12.04 RAL 26.27 RAD 8649.9 VEL 12.563 PTH 7.43 VHP 7.404 DPA 11.21 RAP 45.97 ECC 1.6245  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 10 1 54 3533.68 -46.71 131.23 270.98 100.32 11 0 47 2533.7 -37.43 100.92  
 60.00 10 28 13 3463.64 -39.92 126.27 272.33 96.05 11 25 56 2463.6 -33.19 97.38  
 70.00 11 5 28 3354.03 -34.05 117.96 272.90 92.84 12 1 22 2354.0 -29.35 90.25  
 80.00 11 59 50 3183.67 -29.85 105.20 273.05 90.71 12 52 54 2183.7 -26.53 78.27  
 90.00 13 15 7 2940.74 -28.28 87.35 273.06 89.93 14 4 7 1940.7 -25.46 60.70  
 100.00 14 42 42 2658.14 -29.85 66.56 273.05 90.71 15 27 0 1658.1 -26.53 39.63  
 110.00 16 4 54 2400.85 -34.05 46.88 272.90 92.84 16 44 55 1400.8 -29.35 19.17

Differential Corrections: TDE -.2996 TRA -.7396 TC3 .4308 BAU .2263 SGT 924.2 SGR 647.8 SG3 169.5 ST 17.5 SR 29.8 S8 4.0  
 RDE -.6361 RRA .2333 RC3 -.1157 FAU .06958 RRT -.1116 RRF .1517 RTF -.5469 CRT .7237 CRS .8631 CST .5360  
 FDE .1127 FRA -.1133 FC3-1.5875 B8P 1199 SGB 1128.6 R23 -.0345 R13 .5534 LSA 32.9 MSA 11.0 S8A 1.9  
 BDE .7031 BRA .7755 BC3 .4460 F8P 215 SG1 929.6 SG2 640.0 THA 171.45 EL1 32.7 EL2 11.0 ALF 63.79

LAUNCH DATE AUG 26 1973      FLIGHT TIME 104.00      ARRIVAL DATE DEC 8 1973

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 34.598 GAL 5.07 AZL 89.77 HCA 83.83 SMA 237.56 ECC .37282 INC .2294 V1 29.471  
 RP 222.67 LAP .23 LOP 56.45 VP 25.187 GAP 21.81 AZP 89.98 TAL 18.78 TAP 102.61 RCA 149.00 APO 326.13 V2 24.694  
 RC 96.756 GL 1.31 GP -5.92 ZAL 55.45 ZAP 168.65 ETS 212.88 ZAE 158.33 ETE 343.17 ZAC 76.75 ETC 282.35 LVI -10.00

Planetocentric Conic: C3 36.788 VHL 6.069 DLA 12.01 RAL 25.59 RAD 8649.5 VEL 12.517 PTH 7.40 VHP 7.174 DPA 11.13 RAP 46.18 ECC 1.6054  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 59 16 3525.23 -46.60 130.45 269.50 100.92 10 58 2 2525.2 -37.12 100.34  
 60.00 10 25 38 3455.09 -39.86 125.55 270.92 96.54 11 23 13 2455.1 -32.95 98.78  
 70.00 11 2 55 3345.35 -34.02 117.29 271.55 93.23 11 58 41 2345.4 -29.16 89.65  
 80.00 11 57 20 3174.86 -29.84 104.54 271.73 91.05 12 50 15 2174.9 -26.38 77.65  
 90.00 13 12 38 2931.87 -28.28 86.70 271.75 90.26 14 1 30 1931.9 -25.32 60.08  
 100.00 14 40 12 2649.33 -29.84 65.91 271.73 91.05 15 24 22 1649.3 -26.38 39.02  
 110.00 16 2 22 2392.17 -34.02 46.21 271.55 93.23 16 42 14 1392.2 -29.16 18.56

Differential Corrections: TDE -.2999 TRA -.7290 TC3 .4579 BAU .2336 SGT 940.5 SGR 653.9 SG3 180.9 ST 17.7 SR 30.0 S8 4.1  
 RDE -.6302 RRA .2311 RC3 -.1260 FAU .07307 RRT -.1194 RRF .1626 RTF -.5556 CRT .7267 CRS .8535 CST .5016  
 FDE .1170 FRA -.1416 FC3-1.7196 B8P 1232 SGB 1145.4 R23 -.0375 R13 .5627 LSA 33.2 MSA 11.1 S8A 2.0  
 BDE .6979 BRA .7647 BC3 .4749 F8P 232 SG1 946.6 SG2 645.0 THA 171.09 EL1 33.0 EL2 11.0 ALF 63.96

LAUNCH DATE AUG 26 1973      FLIGHT TIME 106.00      ARRIVAL DATE DEC 10 1973

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 34.489 GAL 5.09 AZL 89.74 HCA 84.92 SMA 234.40 ECC .36458 INC .2641 V1 29.471  
 RP 223.06 LAP .26 LOP 57.54 VP 24.976 GAP 21.21 AZP 89.98 TAL 19.18 TAP 104.10 RCA 148.94 APO 319.85 V2 24.652  
 RC 98.976 GL 1.52 GP -6.06 ZAL 54.83 ZAP 167.76 ETS 211.18 ZAE 158.41 ETE 342.53 ZAC 76.55 ETC 282.33 LVI -9.81

Planetocentric Conic: C3 35.732 VHL 5.978 DLA 11.98 RAL 24.91 RAD 8649.2 VEL 12.475 PTH 7.37 VHP 6.953 DPA 11.04 RAP 46.39 ECC 1.5881  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 56 40 3517.33 -46.50 129.71 268.08 101.48 10 55 18 2517.3 -36.83 99.80  
 60.00 10 23 3 3447.10 -39.79 124.88 269.58 96.99 11 20 31 2447.1 -32.72 96.23  
 70.00 11 0 23 3337.26 -33.99 116.66 270.25 93.61 11 56 0 2337.3 -28.98 89.08  
 80.00 11 54 51 3166.66 -29.83 103.93 270.46 91.37 12 47 37 2166.7 -26.23 77.08  
 90.00 13 10 9 2923.61 -28.27 86.10 270.49 90.56 13 58 52 1923.6 -25.19 59.51  
 100.00 14 37 42 2641.13 -29.83 65.30 270.46 91.37 15 21 44 1641.1 -26.23 38.45  
 110.00 15 59 50 2384.08 -33.99 45.58 270.25 93.61 16 39 34 1384.1 -28.98 18.00

Differential Corrections: TDE -.3004 TRA -.7187 TC3 .4847 BAU .2406 SGT 956.3 SGR 659.8 SG3 192.9 ST 17.9 SR 30.1 S8 4.3  
 RDE -.6245 RRA .2288 RC3 -.1370 FAU .07677 RRT -.1274 RRF .1739 RTF -.5634 CRT .7339 CRS .8434 CST .4690  
 FDE .1220 FRA -.1725 FC3-1.8600 B8P 1268 SGB 1161.9 R23 -.0406 R13 .5713 LSA 33.4 MSA 11.1 S8A 2.1  
 BDE .6930 BRA .7542 BC3 .5037 F8P 251 SG1 963.2 SG2 649.8 THA 170.72 EL1 33.3 EL2 11.0 ALF 63.32



LAUNCH DATE AUG 26 1973 FLIGHT TIME 106.00 ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC										DISTANCE 275.966										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	34.366	GAL	5.11	AZL	89.70	HCA	86.01	SMA	231.80	ECC	.35687	INC	.2986	V1	29.471	RP	223.44	LAP	.30	LOP	58.63	VP	24.792	GAP	20.82	AZP	89.98	TAL	19.58	TAP	105.59	RCA	148.88	APO	314.11	V2	24.611	RC	101.244	GL	1.74	GP	-6.22	ZAL	54.22	ZAP	166.87	ETS	209.70	ZAE	158.94	ETE	341.82	ZAC	76.38	ETC	282.32	LVI	-9.61
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	34.763	VHL	5.898	DLA	11.98	RAL	24.24	RAD	6648.8	VEL	12.437	PTH	7.34	VHP	6.740	DPA	10.95	RAP	46.58	ECC	1.5721	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	9	54	8	3509.97	-48.40	129.03	266.72	102.00	10	52	36	2510.0	-36.56	99.31	ST	18.1	SR	30.3	SS	4.5																																													
60.00	10	20	30	3439.87	-39.73	124.26	266.28	97.41	11	17	50	2439.7	-32.51	95.72	CRT	.7392	CRS	.6308	CST	.4361																																													
70.00	10	57	52	3329.74	-33.95	116.07	269.00	93.95	11	53	22	2329.7	-28.82	88.56	LSA	33.7	MSA	11.1	SSA	2.2																																													
80.00	11	52	21	3159.05	-29.82	103.37	269.24	91.67	12	45	0	2159.0	-26.10	76.56	EL1	33.5	EL2	11.0	ALF	63.08																																													
90.00	13	7	40	2915.96	-28.27	85.54	269.28	90.84	13	56	16	1916.0	-25.07	58.98																																																			
100.00	14	35	13	2633.52	-29.82	64.73	269.24	91.67	15	19	6	1633.5	-26.10	37.93																																																			
110.00	15	57	18	2376.56	-33.95	44.99	269.00	93.95	16	36	55	1376.6	-28.82	17.48																																																			

LAUNCH DATE AUG 26 1973 FLIGHT TIME 110.00 ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC										DISTANCE 279.177										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	34.289	GAL	5.14	AZL	89.67	HCA	87.09	SMA	228.83	ECC	.34964	INC	.3329	V1	29.471	RP	223.83	LAP	.33	LOP	59.71	VP	24.615	GAP	20.43	AZP	89.98	TAL	19.98	TAP	107.07	RCA	148.83	APO	308.84	V2	24.569	RC	103.560	GL	1.96	GP	-6.38	ZAL	53.62	ZAP	165.96	ETS	208.40	ZAE	158.72	ETE	341.05	ZAC	76.20	ETC	282.31	LVI	-9.42
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.879	VHL	5.821	DLA	11.94	RAL	23.58	RAD	6648.5	VEL	12.401	PTH	7.31	VHP	6.535	DPA	10.84	RAP	46.77	ECC	1.5576	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	9	51	32	3503.11	-46.30	128.40	265.42	102.47	10	49	55	2503.1	-36.31	98.85	ST	17.8	SR	30.4	SS	4.8																																													
60.00	10	17	58	3432.76	-39.67	123.68	267.04	97.79	11	15	11	2432.8	-32.30	95.24	CRT	.7384	CRS	.6238	CST	.4091																																													
70.00	10	55	21	3322.76	-33.92	115.53	267.80	94.27	11	50	44	2322.8	-28.66	88.08	LSA	33.7	MSA	11.1	SSA	2.3																																													
80.00	11	49	52	3152.00	-29.80	102.84	268.06	91.94	12	42	24	2152.0	-25.98	76.07	EL1	33.5	EL2	10.9	ALF	63.69																																													
90.00	13	5	11	2908.88	-28.28	85.02	268.11	91.10	13	53	40	1908.9	-24.96	58.50																																																			
100.00	14	32	43	2626.47	-29.80	64.21	268.06	91.94	15	16	30	1626.5	-25.98	37.44																																																			
110.00	15	54	47	2369.58	-33.92	44.45	267.80	94.27	16	34	17	1369.6	-28.66	17.00																																																			

LAUNCH DATE AUG 26 1973 FLIGHT TIME 112.00 ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC										DISTANCE 282.444										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	34.198	GAL	5.16	AZL	89.63	HCA	88.17	SMA	226.39	ECC	.34287	INC	.3669	V1	29.471	RP	224.22	LAP	.37	LOP	60.79	VP	24.445	GAP	20.04	AZP	89.99	TAL	20.37	TAP	108.54	RCA	148.77	APO	304.02	V2	24.527	RC	105.921	GL	2.18	GP	-6.54	ZAL	53.04	ZAP	165.03	ETS	207.25	ZAE	158.94	ETE	340.21	ZAC	76.01	ETC	282.30	LVI	-9.23
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.067	VHL	5.750	DLA	11.93	RAL	22.94	RAD	6648.2	VEL	12.369	PTH	7.29	VHP	6.339	DPA	10.72	RAP	46.93	ECC	1.5442	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	9	49	1	3496.80	-46.20	127.82	264.19	102.91	10	47	18	2496.8	-36.07	98.43	ST	18.1	SR	30.5	SS	5.0																																													
60.00	10	15	28	3426.42	-39.61	123.16	265.86	98.15	11	12	34	2426.4	-32.12	94.81	CRT	.7461	CRS	.6078	CST	.3779																																													
70.00	10	52	52	3316.38	-33.88	115.04	266.65	94.96	11	48	8	2316.4	-28.52	87.64	LSA	34.0	MSA	11.1	SSA	2.3																																													
80.00	11	47	23	3145.57	-29.76	102.37	266.94	92.19	12	39	48	2145.6	-25.86	75.63	EL1	33.8	EL2	10.9	ALF	63.15																																													
90.00	13	2	43	2902.43	-28.25	84.55	266.99	91.34	13	51	6	1902.4	-24.85	58.05																																																			
100.00	14	30	15	2620.04	-29.78	63.73	266.94	92.19	15	13	55	1620.0	-25.86	37.00																																																			
110.00	15	52	18	2363.19	-33.88	43.95	266.65	94.96	16	31	41	1363.2	-28.52	16.56																																																			

LAUNCH DATE AUG 26 1973 FLIGHT TIME 114.00 ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC										DISTANCE 285.780										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	34.112	GAL	5.18	AZL	89.60	HCA	89.25	SMA	224.19	ECC	.33653	INC	.4009	V1	29.471	RP	224.61	LAP	.40	LOP	61.87	VP	24.283	GAP	19.67	AZP	89.99	TAL	20.75	TAP	110.00	RCA	148.71	APO	299.58	V2	24.488	RC	108.326	GL	2.40	GP	-6.71	ZAL	52.47	ZAP	164.09	ETS	206.23	ZAE	159.21	ETE	339.28	ZAC	75.83	ETC	282.30	LVI	-9.03
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.323	VHL	5.685	DLA	11.93	RAL	22.32	RAD	6647.9	VEL	12.339	PTH	7.26	VHP	6.149	DPA	10.59	RAP	47.09	ECC	1.5319	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	9	46	32	3490.98	-46.11	127.29	263.01	103.31	10	44	43	2491.0	-35.85	98.05	ST	18.3	SR	30.6	SS	5.2																																													
60.00	10	12	59	3420.59	-39.55	122.67	264.73	98.47	11	10	0	2420.6	-31.94	94.41	CRT	.7531	CRS	.7916	CST	.3491																																													
70.00	10	50	23	3310.53	-33.85	114.58	265.56	94.83	11	45	34	2310.5	-28.38	87.24	LSA	34.2	MSA	11.2	SSA	2.4																																													
80.00	11	44	55	3139.71	-29.77	101.93	265.86	92.42	12	37	14	2139.7	-25.75	75.23	EL1	34.0	EL2	10.9	ALF	62.71																																													
90.00	13	0	15	2896.56	-28.24	84.12	265.92	91.55	13	48	32	1896.6	-24.76	57.85																																																			
100.00	14	27	47	2614.18	-29.77	63.30	265.86	92.42	15	11	21	1614.2	-25.75	36.60																																																			
110.00	15	49	49	2357.35	-33.85	43.50	265.56	94.83	16	29	7	1357.4	-28.38	16.16																																																			



LAUNCH DATE AUG 26 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.751 GAL 5.28 AZL 89.43 HCA 94.57 SMA 215.24 ECC .31032 INC .5686 V1 29.471
RP 226.56 LAP .57 LOP 67.19 VP 23.557 GAP 17.83 AZP 90.05 TAL 22.55 TAP 117.12 RCA 148.44 APO 292.03 V2 24.276
RC 120.933 GL 3.53 GP -7.66 ZAL 49.93 ZAP 159.08 ETS 202.48 ZAE 161.11 ETE 333.03 ZAC 74.84 ETC 282.31 LVI -8.04

PLANETOCENTRIC CONIC

C3 29.408 VHL 5.423 DLA 12.01 RAL 19.43 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 5.302 DPA 9.76 RAP 47.64 ECC 1.4840
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 34 41 3460.98 -45.75 125.20 257.95 104.82 10 32 30 2469.0 -35.01 96.62
60.00 10 1 2 3398.83 -39.32 120.87 259.84 99.67 10 57 41 2398.8 -31.28 92.95
70.00 10 38 19 3289.12 -33.72 112.93 260.78 95.80 11 33 8 2289.1 -27.88 85.78
80.00 11 32 44 3118.65 -29.70 100.37 261.16 93.24 12 24 43 2118.7 -25.36 73.79
90.00 12 48 1 2875.67 -20.19 82.60 261.24 92.31 13 35 57 1875.7 -24.40 56.22
100.00 14 15 36 2593.12 -29.70 61.74 261.16 93.24 14 58 49 1593.1 -25.36 35.16
110.00 15 37 46 2335.94 -33.72 41.84 260.78 95.80 16 16 42 1335.9 -27.88 14.69

DIFFERENTIAL CORRECTIONS

TDE -.3068 TRA -.6324 TC3 .6943 BAU .2926
RDE -.5815 RRA .1996 RC3 -.2681 FAU .12062
FDE .1857 FRA -.5776 FC3-3.5508 BSP 1523
BDE .6575 BRA .6631 BC3 .7443 FSP 485

MID-COURSE EXECUTION ACCURACY

SGT 1067.1 SGR 713.2 SG3 337.5
RRT -.2196 RRF .3105 RTF -.6087
SGB 1293.5 R23 -.0850 R13 .6294
SG1 1086.4 SG2 683.4 THA 166.03

ORBIT DETERMINATION ACCURACY

ST 19.2 SR 30.9 SS 6.8
CRT .7824 CRS .7229 CST .2459
LSA 35.1 MSA 11.5 SSA 2.9
EL1 34.8 EL2 10.6 ALF 61.12

LAUNCH DATE AUG 26 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.690 GAL 5.30 AZL 89.40 HCA 95.63 SMA 213.83 ECC .30602 INC .6020 V1 29.471
RP 226.95 LAP .60 LOP 68.24 VP 23.428 GAP 17.48 AZP 90.06 TAL 22.88 TAP 118.51 RCA 148.40 APO 279.27 V2 24.234
RC 123.556 GL 3.76 GP -7.87 ZAL 49.48 ZAP 158.03 ETS 201.91 ZAE 161.58 ETE 331.36 ZAC 74.63 ETC 282.32 LVI -7.84

PLANETOCENTRIC CONIC

C3 28.955 VHL 5.381 DLA 12.05 RAL 18.90 RAD 6646.6 VEL 12.202 PTH 7.16 VHP 5.151 DPA 9.56 RAP 47.70 ECC 1.4765
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 32 27 3485.87 -45.69 125.01 257.09 105.03 10 30 12 2465.9 -34.89 96.42
60.00 9 58 45 3395.07 -39.28 120.62 259.01 99.84 10 55 20 2395.9 -31.19 92.75
70.00 10 35 58 3286.32 -33.70 112.71 259.97 95.92 11 30 45 2286.3 -27.81 85.59
80.00 11 30 20 3116.01 -29.69 100.18 260.35 93.34 12 22 16 2116.0 -25.31 73.61
90.00 12 45 36 2873.11 -26.19 82.41 260.44 92.41 13 33 29 1873.1 -24.36 56.05
100.00 14 13 12 2590.49 -29.69 61.54 260.35 93.34 14 56 22 1590.5 -25.31 34.98
110.00 15 35 25 2333.14 -33.70 41.63 259.97 95.92 16 14 18 1333.1 -27.81 14.50

DIFFERENTIAL CORRECTIONS

TDE -.3079 TRA -.6243 TC3 .7111 BAU .2988
RDE -.5772 RRA .1951 RC3 -.2869 FAU .12687
FDE .1963 FRA -.6393 FC3-3.7933 BSP 1543
BDE .6542 BRA .6541 BC3 .7667 FSP 519

MID-COURSE EXECUTION ACCURACY

SGT 1074.8 SGR 719.9 SG3 358.3
RRT -.2316 RRF .3297 RTF -.6102
SGB 1293.6 R23 -.0923 R13 .6335
SG1 1096.4 SG2 686.5 THA 165.32

ORBIT DETERMINATION ACCURACY

ST 19.3 SR 30.9 SS 7.1
CRT .7877 CRS .7115 CST .2323
LSA 35.2 MSA 11.6 SSA 3.0
EL1 34.9 EL2 10.5 ALF 60.84

LAUNCH DATE AUG 26 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.634 GAL 5.32 AZL 89.36 HCA 96.68 SMA 212.53 ECC .30198 INC .6354 V1 29.471
RP 227.34 LAP .63 LOP 69.29 VP 23.304 GAP 17.13 AZP 90.07 TAL 23.20 TAP 119.88 RCA 148.35 APO 276.70 V2 24.193
RC 126.208 GL 3.99 GP -8.09 ZAL 49.06 ZAP 156.95 ETS 201.39 ZAE 162.08 ETE 329.50 ZAC 74.42 ETC 282.34 LVI -7.64

PLANETOCENTRIC CONIC

C3 28.537 VHL 5.342 DLA 12.10 RAL 18.40 RAD 6646.4 VEL 12.185 PTH 7.15 VHP 5.005 DPA 9.34 RAP 47.78 ECC 1.4898
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 30 14 3483.19 -45.65 124.77 256.29 105.21 10 27 57 2463.2 -34.79 96.25
60.00 9 56 29 3393.34 -39.25 120.41 258.22 99.98 10 53 2 2393.3 -31.12 92.58
70.00 10 33 39 3283.98 -33.68 112.53 259.19 96.03 11 28 23 2284.0 -27.75 85.43
80.00 11 27 57 3113.67 -29.68 100.02 259.58 93.42 12 19 50 2113.9 -25.27 73.46
90.00 12 43 10 2871.07 -26.18 82.26 259.67 92.48 13 31 2 1871.1 -24.32 55.91
100.00 14 10 48 2588.35 -29.68 61.39 259.58 93.42 14 53 57 1588.3 -25.27 34.83
110.00 15 33 5 2330.80 -33.68 41.45 259.19 96.03 16 11 56 1330.8 -27.75 14.35

DIFFERENTIAL CORRECTIONS

TDE -.3093 TRA -.6172 TC3 .7255 BAU .3005
RDE -.5729 RRA .1904 RC3 -.3065 FAU .13339
FDE .2081 FRA -.7042 FC3-4.0468 BSP 1566
BDE .6510 BRA .6459 BC3 .7876 FSP 555

MID-COURSE EXECUTION ACCURACY

SGT 1081.3 SGR 726.9 SG3 380.0
RRT -.2435 RRF .3495 RTF -.6104
SGB 1302.9 R23 -.1006 R13 .6367
SG1 1105.4 SG2 689.6 THA 164.58

ORBIT DETERMINATION ACCURACY

ST 19.5 SR 30.9 SS 7.5
CRT .7931 CRS .7019 CST .2220
LSA 35.3 MSA 11.7 SSA 3.0
EL1 35.0 EL2 10.5 ALF 60.52

LAUNCH DATE AUG 26 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.581 GAL 5.34 AZL 89.33 HCA 97.72 SMA 211.31 ECC .29820 INC .6668 V1 29.471
RP 227.73 LAP .66 LOP 70.34 VP 23.184 GAP 16.78 AZP 90.09 TAL 23.51 TAP 121.23 RCA 148.30 APO 274.33 V2 24.152
RC 128.887 GL 4.22 GP -8.32 ZAL 48.63 ZAP 155.86 ETS 200.91 ZAE 162.59 ETE 327.44 ZAC 74.21 ETC 282.36 LVI -7.44

PLANETOCENTRIC CONIC

C3 28.150 VHL 5.306 DLA 12.15 RAL 17.91 RAD 6646.3 VEL 12.170 PTH 7.13 VHP 4.865 DPA 9.11 RAP 47.77 ECC 1.4633
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 28 4 3460.90 -45.61 124.56 255.53 105.36 10 25 45 2460.9 -34.70 96.10
60.00 9 54 15 3391.23 -39.23 120.24 257.48 100.09 10 50 46 2391.2 -31.05 92.44
70.00 10 31 20 3282.09 -33.67 112.38 258.46 96.11 11 26 2 2282.1 -27.71 85.30
80.00 11 25 34 3112.22 -29.67 99.89 258.86 93.49 12 17 26 2112.2 -25.23 73.35
90.00 12 40 46 2869.52 -26.18 82.15 258.95 92.54 13 28 35 1869.5 -24.29 55.81
100.00 14 8 26 2586.69 -29.67 61.26 258.86 93.49 14 51 32 1586.7 -25.23 34.72
110.00 15 30 47 2328.91 -33.67 41.30 258.46 96.11 16 9 36 1328.9 -27.71 14.22

DIFFERENTIAL CORRECTIONS

TDE -.3107 TRA -.6103 TC3 .7382 BAU .3039
RDE -.5685 RRA .1853 RC3 -.3271 FAU .14023
FDE .2214 FRA -.7729 FC3-4.3128 BSP 1584
BDE .6479 BRA .6378 BC3 .8075 FSP 594

MID-COURSE EXECUTION ACCURACY

SGT 1086.6 SGR 734.4 SG3 402.8
RRT -.2556 RRF .3701 RTF -.6100
SGB 1311.5 R23 -.1094 R13 .6397
SG1 1113.6 SG2 692.8 THA 163.77

ORBIT DETERMINATION ACCURACY

ST 19.6 SR 30.9 SS 7.9
CRT .7982 CRS .6937 CST .2143
LSA 35.4 MSA 11.8 SSA 3.1
EL1 35.1 EL2 10.4 ALF 60.20

LAUNCH DATE AUG 26 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC

DISTANCE 317.102

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.530 GAL 5.35 AZL 89.30 HCA 98.77 SMA 210.19 ECC .29465 INC .7023 V1 29.471
RP 228.12 LAP .69 LOP 71.38 VP 23.068 GAP 16.44 AZP 90.11 TAL 23.80 TAP 122.57 RCA 148.26 APO 272.12 V2 24.110
RC 131.982 GL 4.45 GP -8.55 ZAL 48.27 ZAP 154.74 ETS 200.46 ZAE 163.11 ETE 325.15 ZAC 73.99 ETC 282.38 LVI -7.24

PLANETOCENTRIC CONIC

C3 27.793 VHL 5.272 DLA 12.22 RAL 17.44 RAD 6646.1 VEL 12.155 PTH 7.12 VHP 4.730 DPA 8.87 RAP 47.78 ECC 1.4574
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C&T TIM INJ 2 LAT INJ 2 LONG
50.00 9 25 57 3459.00 -45.57 124.39 254.82 105.49 10 23 36 2459.0 -34.63 95.98
60.00 9 52 3 3389.52 -39.21 120.10 256.78 100.18 10 48 33 2389.5 -31.00 92.32
70.00 10 29 3 3280.65 -33.66 112.27 257.77 96.18 11 23 44 2280.7 -27.67 85.20
80.00 11 23 11 3111.05 -29.67 99.81 258.17 93.53 12 15 2 2111.0 -25.21 73.27
90.00 12 38 21 2868.48 -26.17 82.07 258.26 92.58 13 26 9 1868.5 -24.28 55.73
100.00 14 6 3 2583.52 -29.67 61.18 258.17 93.53 14 49 9 1583.5 -25.21 34.64
110.00 15 28 29 2327.47 -33.66 41.19 257.77 96.18 16 7 17 1327.5 -27.67 14.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3120 TRA -.6037 TC3 .7487 BAU .3069 SGT 1090.3 SGR 742.4 SG3 426.7 ST 19.8 SR 30.8 SS 8.3
RDE -.5641 RRA .1799 RC3 -.3489 FAU .14742 RRT -.2878 RRF .3916 RTF -.6085 CRT .8033 CRS .6848 CST .2061
FDE .2350 FRA -.8464 FC3-4.5923 BSP 1597 SGB 1319.1 R23 -.1188 R13 .6423 LSA 35.5 MSA 11.9 SBA 3.2
BDE .6447 BRA .6299 BC3 .8260 FSP 634 SG1 1120.5 SG2 696.1 THA 162.89 EL1 35.1 EL2 10.3 ALF 59.88

LAUNCH DATE AUG 26 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC

DISTANCE 320.796

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.483 GAL 5.37 AZL 89.26 HCA 99.81 SMA 209.14 ECC .29132 INC .7359 V1 29.471
RP 228.51 LAP .73 LOP 72.42 VP 22.956 GAP 16.10 AZP 90.13 TAL 24.09 TAP 123.89 RCA 148.21 APO 270.06 V2 24.069
RC 134.321 GL 4.69 GP -8.79 ZAL 47.90 ZAP 153.61 ETS 200.04 ZAE 163.63 ETE 322.60 ZAC 73.77 ETC 282.40 LVI -7.04

PLANETOCENTRIC CONIC

C3 27.461 VHL 5.240 DLA 12.29 RAL 18.98 RAD 6646.0 VEL 12.141 PTH 7.11 VHP 4.600 DPA 8.61 RAP 47.77 ECC 1.4519
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C&T TIM INJ 2 LAT INJ 2 LONG
50.00 9 23 52 3457.46 -45.54 124.25 254.15 105.59 10 21 30 2457.5 -34.57 95.88
60.00 9 49 53 3388.22 -39.19 119.99 256.12 100.26 10 46 21 2388.2 -30.96 92.24
70.00 10 26 47 3279.64 -33.65 112.19 257.12 96.22 11 21 27 2279.6 -27.65 85.13
80.00 11 20 49 3110.34 -29.66 99.76 257.52 93.56 12 12 40 2110.3 -25.20 73.22
90.00 12 35 56 2867.91 -26.17 82.03 257.61 92.60 13 23 44 1867.9 -24.27 55.70
100.00 14 3 41 2584.81 -29.66 61.12 257.32 93.56 14 46 46 1584.8 -25.20 34.59
110.00 15 26 13 2326.46 -33.65 41.11 257.12 96.22 16 5 0 1326.5 -27.65 14.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3136 TRA -.5978 TC3 .7569 BAU .3096 SGT 1092.9 SGR 751.0 SG3 451.8 ST 19.9 SR 30.7 SS 8.8
RDE -.5596 RRA .1741 RC3 -.3716 FAU .15492 RRT -.2796 RRF .4135 RTF -.6061 CRT .8084 CRS .6792 CST .2030
FDE .2513 FRA -.9232 FC3-4.8839 BSP 1611 SGB 1326.0 R23 -.1291 R13 .6444 LSA 35.5 MSA 12.1 SBA 3.2
BDE .6415 BRA .6227 BC3 .8432 FSP 677 SG1 1126.5 SG2 699.5 THA 161.97 EL1 35.2 EL2 10.2 ALF 59.91

LAUNCH DATE AUG 26 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC

DISTANCE 324.428

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.439 GAL 5.38 AZL 89.23 HCA 100.84 SMA 208.16 ECC .28819 INC .7695 V1 29.471
RP 228.90 LAP .76 LOP 73.46 VP 22.848 GAP 15.77 AZP 90.14 TAL 24.38 TAP 125.20 RCA 148.17 APO 268.15 V2 24.028
RC 137.073 GL 4.92 GP -9.04 ZAL 47.56 ZAP 152.45 ETS 199.64 ZAE 164.15 ETE 319.76 ZAC 73.54 ETC 282.43 LVI -6.83

PLANETOCENTRIC CONIC

C3 27.154 VHL 5.251 DLA 12.37 RAL 16.55 RAD 6645.9 VEL 12.129 PTH 7.10 VHP 4.473 DPA 8.34 RAP 47.74 ECC 1.4469
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C&T TIM INJ 2 LAT INJ 2 LONG
50.00 9 21 50 3456.29 -45.52 124.15 253.53 105.87 10 19 26 2456.3 -34.52 95.81
60.00 9 47 45 3387.29 -39.18 119.92 255.51 100.31 10 44 12 2387.3 -30.93 92.18
70.00 10 24 32 3279.05 -33.65 112.15 256.51 96.25 11 19 11 2279.0 -27.63 85.09
80.00 11 18 28 3110.09 -29.66 99.74 256.91 93.57 12 10 18 2110.1 -25.19 73.21
90.00 12 33 32 2867.82 -26.17 82.02 257.00 92.60 13 21 19 1867.8 -24.27 55.69
100.00 14 1 20 2584.56 -29.66 61.10 256.91 93.57 14 44 24 1584.6 -25.19 34.57
110.00 15 23 58 2325.87 -33.65 41.07 256.51 96.25 16 2 44 1325.9 -27.63 14.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3150 TRA -.5925 TC3 .7628 BAU .3119 SGT 1094.0 SGR 760.4 SG3 478.1 ST 20.0 SR 30.7 SS 9.2
RDE -.5551 RRA .1680 RC3 -.3955 FAU .16276 RRT -.2813 RRF .4362 RTF -.6126 CRT .8131 CRS .6751 CST .1991
FDE .2681 FRA -1.0045 FC3-5.1893 BSP 1821 SGB 1332.3 R23 -.1401 R13 .6463 LSA 35.6 MSA 12.2 SBA 3.3
BDE .6383 BRA .6158 BC3 .8392 FSP 723 SG1 1131.5 SG2 703.2 THA 160.96 EL1 35.2 EL2 10.2 ALF 59.16

LAUNCH DATE AUG 26 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC

DISTANCE 328.076

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.397 GAL 5.39 AZL 89.20 HCA 101.88 SMA 207.25 ECC .28526 INC .8033 V1 29.471
RP 229.28 LAP .79 LOP 74.49 VP 22.744 GAP 15.44 AZP 90.17 TAL 24.61 TAP 126.49 RCA 148.13 APO 266.38 V2 23.988
RC 139.847 GL 5.18 GP -9.30 ZAL 47.24 ZAP 151.28 ETS 199.26 ZAE 164.63 ETE 316.60 ZAC 73.31 ETC 282.46 LVI -6.83

PLANETOCENTRIC CONIC

C3 26.869 VHL 5.183 DLA 12.46 RAL 16.13 RAD 6645.8 VEL 12.117 PTH 7.09 VHP 4.355 DPA 8.06 RAP 47.69 ECC 1.4422
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO C&T TIM INJ 2 LAT INJ 2 LONG
50.00 9 19 49 3455.46 -45.51 124.00 252.95 105.72 10 17 25 2455.5 -34.49 95.75
60.00 9 45 38 3386.75 -39.17 119.87 254.93 100.34 10 42 5 2386.7 -30.91 92.14
70.00 10 22 18 3278.87 -33.64 112.13 255.93 96.26 11 16 57 2278.9 -27.63 85.08
80.00 11 16 6 3110.29 -29.66 99.75 256.34 93.56 12 7 57 2110.3 -25.20 73.22
90.00 12 31 7 2868.20 -26.17 82.05 256.43 92.59 13 18 55 1868.2 -24.27 55.72
100.00 13 58 58 2584.76 -29.66 61.12 256.34 93.56 14 42 3 1584.8 -25.20 34.59
110.00 15 21 44 2325.68 -33.64 41.05 255.93 96.26 16 0 30 1325.7 -27.63 14.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3165 TRA -.5879 TC3 .7660 BAU .3139 SGT 1093.6 SGR 770.5 SG3 505.5 ST 20.2 SR 30.6 SS 9.7
RDE -.5505 RRA .1614 RC3 -.4205 FAU .17096 RRT -.3026 RRF .4595 RTF -.5978 CRT .8177 CRS .6677 CST .1964
FDE .2863 FRA -1.0896 FC3-5.5086 BSP 1627 SGB 1337.8 R23 -.1920 R13 .6478 LSA 35.6 MSA 12.4 SBA 3.4
BDE .6350 BRA .6097 BC3 .8739 FSP 769 SG1 1135.5 SG2 707.3 THA 159.87 EL1 35.2 EL2 10.1 ALF 58.79

LAUNCH DATE AUG 26 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC										DISTANCE 331.730										EARTH TO MARS																																																																																									
RL	151.18	LAL	.00	LOL	332.62	VL	33.358	GAL	5.40	AZL	89.16	HCA	102.90	SMA	206.41	ECC	.28251	INC	.8372	V1	29.471	RP	229.87	LAP	.82	LOP	75.52	VP	22.844	GAP	15.11	AZP	90.19	TAL	24.86	TAP	127.78	RCA	148.10	APO	264.72	V2	23.947	RC	142.841	GL	5.40	GP	-9.57	ZAL	46.94	ZAP	190.08	ETS	198.90	ZAE	165.13	ETE	313.10	ZAC	73.08	ETC	282.50	LVI	-6.42																																												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																									
C3	26.803	VHL	5.158	DLA	12.55	RAL	15.74	RAD	6645.7	VEL	12.108	PTH	7.08	VHP	4.240	DPA	7.78	RAP	47.62	ECC	1.4378	SGT	1091.6	SGR	781.5	SG3	534.1	ST	20.3	SR	30.4	SS	10.2	CRT	.8223	CRS	.6645	CST	.1971																																																																						
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	35.7	MSA	12.6	SSA	3.4	EL1	35.2	EL2	10.0	ALF	58.36																																																																								
50.00	9	17	51	3454.96	-45.50	124.03	252.41	105.76	10	15	26	2455.0	-34.47	95.72	92.13	60.00	9	43	33	3386.56	-39.17	119.86	254.39	100.35	10	40	2386.6	-30.91	92.13	85.10	70.00	10	20	5	3279.09	-33.65	112.15	255.39	96.25	11	14	44	2279.1	-27.64	85.10	73.26	80.00	11	13	45	3110.92	-29.67	99.80	255.79	93.54	12	5	36	2110.9	-25.21	73.26	55.77	90.00	12	28	42	2869.03	-28.17	82.11	255.89	92.56	13	16	31	1869.0	-24.29	55.77	34.63	100.00	13	56	37	2585.40	-29.67	61.17	255.79	93.54	14	39	42	1585.4	-25.21	34.63	14.01	110.00	15	19	31	2325.90	-33.65	41.07	255.39	96.25	15	58	17	1325.9	-27.64	14.01
TDE	-.3185	TRA	-.5841	TC3	.7661	BAU	.3154	SGT	1091.6	SGR	781.5	SG3	534.1	ST	20.3	SR	30.4	SS	10.2	RDE	-.5457	RRA	.1545	RC3	-.4467	FAU	.17946	RRT	-.3126	RRF	.4830	RTF	-.5912	CRT	.8223	CRS	.6645	CST	.1971	FDE	.3072	FRA	-1.1791	FC3	-5.8402	BSP	1634	SGB	1342.5	R23	-.1851	R13	.6488	LSA	35.7	MSA	12.6	SSA	3.4	BDE	.6318	BRA	.6042	BC3	.8868	FSP	819	SG1	1138.1	SG2	712.0	THA	158.72	EL1	35.2	EL2	10.0	ALF	58.36																														

LAUNCH DATE AUG 26 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC										DISTANCE 335.414										EARTH TO MARS																																																																																										
RL	151.18	LAL	.00	LOL	332.62	VL	33.321	GAL	5.41	AZL	89.13	HCA	103.93	SMA	205.82	ECC	.27993	INC	.8713	V1	29.471	RP	230.05	LAP	.85	LOP	76.55	VP	22.546	GAP	14.79	AZP	90.21	TAL	25.09	TAP	129.02	RCA	148.06	APO	263.18	V2	23.907	RC	145.456	GL	5.64	GP	-9.84	ZAL	46.66	ZAP	148.85	ETS	198.56	ZAE	165.57	ETE	309.22	ZAC	72.85	ETC	282.54	LVI	-6.22																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																										
C3	26.357	VHL	5.134	DLA	12.66	RAL	15.35	RAD	6645.6	VEL	12.096	PTH	7.07	VHP	4.129	DPA	7.44	RAP	47.53	ECC	1.4338	SGT	1089.4	SGR	794.4	SG3	565.2	ST	19.8	SR	30.3	SS	10.7	CRT	.8219	CRS	.6488	CST	.1752																																																																							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	35.3	MSA	12.8	SSA	3.5	EL1	34.8	EL2	9.8	ALF	59.12																																																																									
50.00	9	13	55	3454.77	-45.49	124.01	251.91	105.77	10	13	30	2454.8	-34.46	95.71	92.14	60.00	9	41	29	3386.71	-39.17	119.87	253.89	100.34	10	37	56	2386.7	-30.91	92.14	85.14	70.00	10	17	52	3279.67	-33.65	112.20	254.89	96.22	11	12	32	2279.7	-27.65	85.14	73.33	80.00	11	11	24	3111.96	-29.67	99.87	255.29	93.50	12	3	16	2112.0	-25.23	73.33	55.86	90.00	12	26	17	2870.28	-28.18	82.20	255.37	92.51	13	14	7	1870.3	-24.31	55.86	34.70	100.00	13	54	16	2586.43	-29.67	61.24	255.29	93.50	14	37	22	1586.4	-25.23	34.70	14.05	110.00	15	17	18	2326.49	-33.65	41.11	254.89	96.22	15	56	5	1326.5	-27.65	14.05
TDE	-.3072	TRA	-.5683	TC3	.7832	BAU	.3228	SGT	1089.4	SGR	794.4	SG3	565.2	ST	19.8	SR	30.3	SS	10.7	RDE	-.5413	RRA	.1467	RC3	-.4751	FAU	.18875	RRT	-.3399	RRF	.5086	RTF	-.6018	CRT	.8219	CRS	.6488	CST	.1752	FDE	.3203	FRA	-1.2815	FC3	-6.1997	BSP	1489	SGB	1348.3	R23	-.1571	R13	.6648	LSA	35.3	MSA	12.8	SSA	3.5	BDE	.6224	BRA	.5869	BC3	.9160	FSP	860	SG1	1146.1	SG2	710.1	THA	156.68	EL1	34.8	EL2	9.8	ALF	59.12																															

LAUNCH DATE AUG 26 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC										DISTANCE 339.101										EARTH TO MARS																																																																																										
RL	151.18	LAL	.00	LOL	332.62	VL	33.288	GAL	5.42	AZL	89.09	HCA	104.95	SMA	204.89	ECC	.27751	INC	.9056	V1	29.471	RP	230.44	LAP	.87	LOP	77.57	VP	22.453	GAP	14.47	AZP	90.23	TAL	25.31	TAP	130.26	RCA	148.03	APO	261.75	V2	23.867	RC	148.289	GL	5.88	GP	-10.12	ZAL	46.40	ZAP	147.61	ETS	198.23	ZAE	165.96	ETE	304.97	ZAC	72.61	ETC	282.59	LVI	-6.01																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																										
C3	26.127	VHL	5.111	DLA	12.77	RAL	14.99	RAD	6645.5	VEL	12.087	PTH	7.07	VHP	4.022	DPA	7.11	RAP	47.42	ECC	1.4300	SGT	1083.8	SGR	807.3	SG3	596.0	ST	20.2	SR	30.1	SS	11.2	CRT	.8280	CRS	.6511	CST	.1854																																																																							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	35.5	MSA	13.1	SSA	3.5	EL1	35.0	EL2	9.8	ALF	58.21																																																																									
50.00	9	14	1	3454.93	-45.50	124.03	251.45	105.76	10	11	58	2454.9	-34.47	95.72	92.17	60.00	9	39	27	3387.24	-39.18	119.91	253.42	100.31	10	35	55	2387.2	-30.93	92.17	85.20	70.00	10	15	40	3280.67	-33.66	112.27	254.42	96.18	11	10	21	2280.7	-27.67	85.20	73.44	80.00	11	9	2	3113.46	-29.68	99.99	254.81	93.44	12	0	56	2113.5	-25.26	73.44	55.98	90.00	12	23	51	2872.02	-28.18	82.33	254.90	92.45	13	11	43	1872.0	-24.34	55.98	34.80	100.00	13	51	54	2587.93	-29.68	61.35	254.81	93.44	14	35	2	1587.9	-25.26	34.80	14.12	110.00	15	15	6	2327.49	-33.66	41.19	254.42	96.18	15	53	54	1327.5	-27.67	14.12
TDE	-.3140	TRA	-.5710	TC3	.7703	BAU	.3215	SGT	1083.8	SGR	807.3	SG3	596.0	ST	20.2	SR	30.1	SS	11.2	RDE	-.5361	RRA	.1590	RC3	-.5037	FAU	.19787	RRT	-.3415	RRF	.5323	RTF	-.554	CRT	.8280	CRS	.6511	CST	.1854	FDE	.3475	FRA	-1.3770	FC3	-6.5585	BSP	1547	SGB	1351.4	R23	-.1798	R13	.6599	LSA	35.5	MSA	13.1	SSA	3.5	BDE	.6213	BRA	.5877	BC3	.9203	FSP	917	SG1	1144.6	SG2	718.4	THA	155.59	EL1	35.0	EL2	9.8	ALF	58.21																															

LAUNCH DATE AUG 26 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC										DISTANCE 342.799										EARTH TO MARS																																																																																										
RL	151.18	LAL	.00	LOL	332.62	VL	33.254	GAL	5.42	AZL	89.06	HCA	105.97	SMA	204.21	ECC	.27524	INC	.9400	V1	29.471	RP	230.82	LAP	.90	LOP	78.59	VP	22.362	GAP	14.15	AZP	90.26	TAL	25.51	TAP	131.48	RCA	148.00	APO	260.42	V2	23.827	RC	151.140	GL	6.13	GP	-10.42	ZAL	46.16	ZAP	146.35	ETS	197.91	ZAE	166.29	ETE	300.33	ZAC	72.36	ETC	282.63	LVI	-5.80																																													
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																										
C3	25.912	VHL	5.090	DLA	12.90	RAL	14.64	RAD	6645.4	VEL	12.078	PTH	7.06	VHP	3.920	DPA	6.76	RAP	47.30	ECC	1.4264	SGT	1076.9	SGR	821.3	SG3	627.8	ST	20.6	SR	30.0	SS	11.8	CRT	.8330	CRS	.6540	CST	.1931																																																																							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	35.6	MSA	13.4	SSA	3.5	EL1	35.0	EL2	9.7	ALF	57.42																																																																									
50.00	9	12	10	3455.39	-45.50	124.07	251.02	105.73	10	9	45	2455.4	-34.49	95.75	92.23	60.00	9	37	27	3388.09	-39.19	119.98	252.99	100.26	10	33	55	2388.1	-30.95	92.23	85.30	70.00	10	13	29	3292.05	-33.67	112.38	253.98	96.12	11	8	11	2282.0	-27.71	85.30	73.57	80.00	11	6	41	3115.37	-29.68	100.13	254.37	93.36	11	58	36	2115.4	-25.30	73.57	56.12	90.00	12	21	24	2874.19	-28.19	82.49	254.46	92.37	13	9	19	1874.2	-24.38	56.12	34.93	100.00	13	49	33	2589.84	-29.68	61.50	254.37	93.36	14	32	42	1589.8	-25.30	34.93	14.22	110.00	15	12	55	2328.86	-33.67	41.30	253.98	96.12	15	51	44	1328.9	-27.71	14.22
TDE	-.3192	TRA	-.5730	TC3	.7563	BAU	.3206	SGT	1076.9	SGR	821.3	SG3	627.8	ST	20.6	SR	30.0	SS	11.8	RDE	-.5306	RRA	.1310	RC3	-.5335	FAU	.20729	RRT	-.3434	RRF	.5361	RTF	-.5692	CRT																																																																												

LAUNCH DATE AUG 26 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.223 GAL 5.43 AZL 89.03 HCA 106.99 SMA 203.57 ECC .27312 INC .9748 V1 29.471  
 RP 231.20 LAP .93 LOP 79.61 VP 22.274 GAP 13.84 AZP 90.20 TAL 25.70 TAP 132.89 RCA 147.97 APO 259.17 V2 23.787  
 RC 154.008 GL 6.37 GP -10.71 ZAL 45.94 ZAP 145.07 ETS 197.80 ZAE 166.93 ETE 295.32 ZAC 72.12 ETC 282.69 LVI -5.59

DISTANCE 346.507

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.711 VHL 5.071 DLA 13.03 RAL 14.31 RAD 6645.3 VEL 12.070 PTH 7.05 VHP 3.822 DPA 6.40 RAP 47.15 ECC 1.4231  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 10 20 3456.15 -45.52 124.14 250.63 105.68 10 7 56 2456.1 -34.51 95.80  
 60.00 9 35 27 3389.28 -39.20 120.08 252.60 100.20 10 31 56 2389.3 -30.99 92.31  
 70.00 10 11 18 3283.79 -33.68 112.51 253.58 96.04 11 6 2 2283.8 -27.75 85.42  
 80.00 11 4 19 3117.69 -29.69 100.30 253.96 93.27 11 56 16 2117.7 -25.34 73.72  
 90.00 12 18 37 2876.78 -28.20 82.68 254.04 92.27 13 6 54 1876.8 -24.42 56.30  
 100.00 13 47 11 2592.16 -29.69 61.67 253.96 93.27 14 30 23 1592.2 -25.34 35.09  
 110.00 15 10 44 2330.60 -33.68 41.43 253.58 96.04 15 49 35 1330.6 -27.75 14.33

DIFFERENTIAL CORRECTIONS

TDE -.3232 TRA -.5748 TC3 .7412 BAU .3203  
 RDE -.5249 RRA .1225 RC3 -.5649 FAU .21709  
 FDE .4081 FRA -1.5804 FC3 -7.3099 B8P 1605  
 BDE .6164 BRA .5877 BC3 .9319 F8P 1038

MID-COURSE EXECUTION ACCURACY

SGT 1069.0 SGR 836.7 S63 661.0  
 RRT -.3451 RRF .5800 RTF -.5525  
 SGB 1357.5 R23 -.2200 R13 .6549  
 S61 1140.7 S62 736.0 THA 152.82

ORBIT DETERMINATION ACCURACY

ST 20.8 SR 29.7 S8 12.4  
 CRT .8373 CR3 .6558 C8T .2025  
 LSA 35.7 MSA 13.7 S8A 3.5  
 EL1 35.0 EL2 9.7 ALF 36.72

LAUNCH DATE AUG 26 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.195 GAL 5.43 AZL 89.99 HCA 108.00 SMA 202.98 ECC .27112 INC 1.0097 V1 29.471  
 RP 231.58 LAP .96 LOP 80.62 VP 22.189 GAP 13.53 AZP 90.31 TAL 25.88 TAP 133.87 RCA 147.95 APO 258.02 V2 23.748  
 RC 156.890 GL 6.62 GP -11.02 ZAL 45.75 ZAP 143.76 ETS 197.29 ZAE 166.67 ETE 289.99 ZAC 71.86 ETC 282.74 LVI -5.38

DISTANCE 350.224

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.523 VHL 5.032 DLA 13.17 RAL 14.00 RAD 6645.2 VEL 12.062 PTH 7.05 VHP 3.728 DPA 6.02 RAP 46.98 ECC 1.4200  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 8 31 3457.19 -45.54 124.23 250.28 105.61 10 6 9 2457.2 -34.56 95.86  
 60.00 9 33 28 3390.78 -39.22 120.20 252.23 100.12 10 29 59 2390.8 -31.04 92.41  
 70.00 10 9 7 3285.88 -33.69 112.68 253.20 95.94 11 3 53 2285.9 -27.60 85.56  
 80.00 11 1 56 3120.41 -29.70 100.50 253.57 93.17 11 53 56 2120.4 -25.39 73.91  
 90.00 12 18 29 2879.80 -28.20 82.90 253.65 92.16 13 4 29 1879.8 -24.47 56.51  
 100.00 13 44 48 2594.88 -29.70 61.87 253.57 93.17 14 28 3 1594.9 -25.39 35.28  
 110.00 15 8 33 2332.70 -33.69 41.59 253.20 95.94 15 47 26 1332.7 -27.60 14.48

DIFFERENTIAL CORRECTIONS

TDE -.3265 TRA -.5769 TC3 .7233 BAU .3201  
 RDE -.5191 RRA .1135 RC3 -.5976 FAU .22721  
 FDE .4412 FRA -1.6884 FC3 -7.7070 B8P 1618  
 BDE .6132 BRA .5880 BC3 .9382 F8P 1099

MID-COURSE EXECUTION ACCURACY

SGT 1059.8 SGR 855.6 S63 695.3  
 RRT -.3451 RRF .6038 RTF -.5342  
 SGB 1360.6 R23 -.2387 R13 .6543  
 S61 1137.9 S62 746.0 THA 151.13

ORBIT DETERMINATION ACCURACY

ST 21.1 SR 29.5 S8 13.0  
 CRT .8410 CR3 .6577 C8T .2095  
 LSA 35.7 MSA 14.0 S8A 3.5  
 EL1 35.0 EL2 9.6 ALF 36.05

LAUNCH DATE AUG 26 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.168 GAL 5.44 AZL 89.99 HCA 109.01 SMA 202.43 ECC .26925 INC 1.0450 V1 29.471  
 RP 231.95 LAP .99 LOP 81.63 VP 22.107 GAP 13.23 AZP 90.34 TAL 26.04 TAP 135.04 RCA 147.93 APO 256.94 V2 23.708  
 RC 159.785 GL 6.87 GP -11.34 ZAL 45.57 ZAP 142.43 ETS 196.99 ZAE 166.70 ETE 284.42 ZAC 71.61 ETC 282.80 LVI -5.17

DISTANCE 353.950

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.347 VHL 5.035 DLA 13.32 RAL 13.70 RAD 6645.1 VEL 12.055 PTH 7.04 VHP 3.638 DPA 5.63 RAP 46.78 ECC 1.4171  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 6 45 3458.52 -45.56 124.35 249.96 105.52 10 4 23 2458.5 -34.61 95.95  
 60.00 9 31 31 3392.60 -39.24 120.35 251.90 100.02 10 28 3 2392.6 -31.09 92.53  
 70.00 10 6 56 3288.34 -33.71 112.87 252.85 95.83 11 1 45 2288.3 -27.86 85.72  
 80.00 10 59 33 3123.53 -29.72 100.73 253.22 93.05 11 51 36 2123.5 -25.45 74.12  
 90.00 12 14 0 2883.23 -28.21 83.15 253.29 92.04 13 2 3 1883.2 -24.53 56.74  
 100.00 13 42 24 2598.00 -29.72 62.10 253.22 93.05 14 25 42 1598.0 -25.45 35.49  
 110.00 15 6 23 2335.16 -33.71 41.78 252.85 95.83 15 45 10 1335.2 -27.86 14.84

DIFFERENTIAL CORRECTIONS

TDE -.3291 TRA -.5793 TC3 .7028 BAU .3202  
 RDE -.5130 RRA .1040 RC3 -.6318 FAU .23768  
 FDE .4766 FRA -1.8008 FC3 -8.1180 B8P 1619  
 BDE .6095 BRA .5886 BC3 .9450 F8P 1163

MID-COURSE EXECUTION ACCURACY

SGT 1048.8 SGR 871.9 S63 730.8  
 RRT -.3433 RRF .6274 RTF -.5441  
 SGB 1363.9 R23 -.2582 R13 .6551  
 S61 1134.5 S62 757.1 THA 149.21

ORBIT DETERMINATION ACCURACY

ST 21.3 SR 29.3 S8 13.6  
 CRT .8443 CR3 .6593 C8T .2158  
 LSA 35.8 MSA 14.4 S8A 3.6  
 EL1 34.9 EL2 9.6 ALF 35.42

LAUNCH DATE AUG 26 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 33.143 GAL 5.44 AZL 89.92 HCA 110.01 SMA 201.92 ECC .26750 INC 1.0806 V1 29.471  
 RP 232.33 LAP 1.02 LOP 82.63 VP 22.028 GAP 12.92 AZP 90.37 TAL 26.19 TAP 136.20 RCA 147.91 APO 255.94 V2 23.670  
 RC 162.693 GL 7.12 GP -11.66 ZAL 45.41 ZAP 141.07 ETS 196.69 ZAE 166.61 ETE 278.89 ZAC 71.35 ETC 282.88 LVI -4.96

DISTANCE 357.683

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.181 VHL 5.018 DLA 13.47 RAL 13.42 RAD 6645.1 VEL 12.048 PTH 7.03 VHP 3.551 DPA 5.22 RAP 46.57 ECC 1.4144  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 59 3460.13 -45.59 124.49 249.67 105.41 10 2 39 2460.1 -34.67 96.05  
 60.00 9 29 34 3394.73 -39.27 120.53 251.59 99.90 10 26 8 2394.7 -31.16 92.67  
 70.00 10 4 46 3291.14 -33.73 113.08 252.54 95.71 10 59 37 2291.1 -27.93 85.91  
 80.00 10 57 8 3127.04 -29.73 100.99 252.89 92.91 11 49 15 2127.0 -25.52 74.36  
 90.00 12 11 29 2887.09 -28.22 83.43 252.96 91.90 12 59 36 1887.1 -24.60 57.00  
 100.00 13 40 0 2601.51 -29.73 62.36 252.89 92.91 14 23 21 1601.5 -25.52 35.73  
 110.00 15 4 12 2337.96 -33.73 42.00 252.54 95.71 15 43 10 1338.0 -27.93 14.83

DIFFERENTIAL CORRECTIONS

TDE -.3314 TRA -.5826 TC3 .6790 BAU .3205  
 RDE -.5066 RRA .0940 RC3 -.6674 FAU .24845  
 FDE .5148 FRA -1.9173 FC3 -8.5417 B8P 1619  
 BDE .6054 BRA .5902 BC3 .9521 F8P 1229

MID-COURSE EXECUTION ACCURACY

SGT 1037.1 SGR 891.9 S63 767.5  
 RRT -.3386 RRF .6505 RTF -.4911  
 SGB 1367.8 R23 -.2725 R13 .6571  
 S61 1130.7 S62 769.7 THA 147.05

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 29.0 S8 14.3  
 CRT .8472 CR3 .6614 C8T .2219  
 LSA 35.8 MSA 14.7 S8A 3.6  
 EL1 34.8 EL2 9.5 ALF 34.78

LAUNCH DATE AUG 26 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC

DISTANCE 361.423

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.119 GAL 5.44 AZL 88.88 MCA 111.01 SMA 201.45 ECC .26586 INC 1.1166 V1 29.471  
 RP 232.70 LAP 1.04 LOP 83.84 VP 21.951 GAP 12.62 AZP 90.40 TAL 26.32 TAP 137.34 RCA 147.89 APO 253.00 V2 23.631  
 RC 165.610 GL 7.38 GP -12.00 ZAL 45.28 ZAP 139.70 ETS 196.40 ZAE 166.38 ETE 272.93 ZAC 71.10 ETC 282.93 LVI -4.75

PLANETOCENTRIC CONIC

C3 25.026 VHL 5.003 DLA 13.64 RAL 13.15 RAD 6645.0 VEL 12.041 PTH 7.03 VHP 3.469 DPA 4.79 RAP 46.34 ECC 1.4119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 3 15 3462.02 -45.63 124.66 249.41 105.28 10 0 57 2462.0 -34.74 96.17  
 60.00 9 27 37 3397.16 -39.30 120.73 251.32 99.77 10 24 14 2397.2 -31.23 92.83  
 70.00 10 2 35 3294.29 -33.75 113.33 252.24 95.56 10 57 29 2294.3 -28.00 86.13  
 80.00 10 54 43 3130.94 -29.74 101.28 252.59 92.76 11 46 54 2130.9 -25.59 74.63  
 90.00 12 8 57 2891.35 -26.23 83.74 252.66 91.74 12 57 8 1891.4 -24.67 57.29  
 100.00 13 37 34 2605.41 -29.74 62.65 252.59 92.76 14 21 0 1605.4 -25.59 36.00  
 110.00 15 2 1 2341.11 -33.75 42.24 252.24 95.56 15 41 2 1341.1 -28.00 15.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3334 TRA -.5869 TC3 .6516 BAU .3211 SGT 1024.4 SGR 913.5 SG3 805.1 ST 21.8 SR 28.7 S8 15.0  
 RDE -.4999 RRA .0836 RC3 -.7045 FAU .25948 RRT -.3303 RRF .6731 RTF -.4649 CRT .8498 CRS .6638 CST .2280  
 FDE .5581 FRA -2.0368 FC3 -8.9761 BSP 1618 SGB 1372.5 R23 -.2872 R13 .6608 LSA 35.8 MSA 15.1 SSA 3.6  
 BDE .6009 BRA .5929 BC3 .9597 FSP 1298 SG1 1126.6 S22 784.0 THA 144.59 EL1 34.7 EL2 9.5 ALF 54.12

LAUNCH DATE AUG 26 1973

FLIGHT TIME 158.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC

DISTANCE 365.170

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.097 GAL 5.44 AZL 88.85 MCA 112.01 SMA 201.00 ECC .26432 INC 1.1520 V1 29.471  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.877 GAP 12.33 AZP 90.43 TAL 26.44 TAP 138.46 RCA 147.88 APO 254.13 V2 23.593  
 RC 168.537 GL 7.64 GP -12.34 ZAL 45.14 ZAP 139.30 ETS 196.10 ZAE 166.02 ETE 267.24 ZAC 70.83 ETC 283.00 LVI -4.53

PLANETOCENTRIC CONIC

C3 24.880 VHL 4.988 DLA 13.82 RAL 12.89 RAD 6644.9 VEL 12.035 PTH 7.02 VHP 3.390 DPA 4.35 RAP 46.09 ECC 1.4095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 33 3464.16 -45.66 124.86 249.18 105.14 9 59 17 2464.2 -34.83 96.31  
 60.00 9 25 41 3399.89 -39.33 120.96 251.07 99.62 10 22 21 2399.9 -31.32 93.02  
 70.00 10 0 23 3297.78 -33.77 113.60 251.98 95.40 10 55 21 2297.8 -28.08 86.37  
 80.00 10 52 16 3135.24 -29.76 101.60 252.31 92.59 11 44 31 2135.2 -25.67 74.92  
 90.00 12 6 23 2896.03 -28.24 84.08 252.37 91.57 12 54 39 1896.0 -24.75 57.61  
 100.00 13 35 8 2609.71 -29.76 62.97 252.31 92.59 14 18 37 1609.7 -25.67 36.29  
 110.00 14 59 49 2344.60 -33.77 42.51 251.98 95.40 15 38 54 1344.6 -28.08 15.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3355 TRA -.5924 TC3 .6204 BAU .3220 SGT 1011.3 SGR 936.8 SG3 843.7 ST 22.0 SR 28.4 S8 15.7  
 RDE -.4928 RRA .0727 RC3 -.7432 FAU .27079 RRT -.3177 RRF .6951 RTF -.4349 CRT .8521 CRS .6670 CST .2349  
 FDE .6015 FRA -2.1593 FC3 -9.4228 BSP 1615 SGB 1378.5 R23 -.2992 R13 .6668 LSA 35.7 MSA 15.5 SSA 3.6  
 BDE .5962 BRA .5968 BC3 .9681 FSP 1367 SG1 1122.4 S22 800.3 THA 141.78 EL1 34.6 EL2 9.4 ALF 53.42

LAUNCH DATE AUG 26 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC

DISTANCE 368.923

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.077 GAL 5.43 AZL 88.81 MCA 113.01 SMA 200.59 ECC .26280 INC 1.1895 V1 29.471  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.804 GAP 12.03 AZP 90.47 TAL 26.55 TAP 139.58 RCA 147.86 APO 253.33 V2 23.554  
 RC 171.472 GL 7.90 GP -12.69 ZAL 45.04 ZAP 136.89 ETS 195.80 ZAE 165.51 ETE 261.75 ZAC 70.57 ETC 283.07 LVI -4.32

PLANETOCENTRIC CONIC

C3 24.742 VHL 4.974 DLA 14.00 RAL 12.65 RAD 6644.9 VEL 12.030 PTH 7.02 VHP 3.315 DPA 3.89 RAP 45.82 ECC 1.4072  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 59 51 3486.58 -45.71 125.07 248.99 104.98 9 57 37 2486.6 -34.92 96.46  
 60.00 9 23 46 3402.91 -39.36 121.21 250.85 99.45 10 20 29 2402.9 -31.41 93.22  
 70.00 9 58 11 3301.61 -33.80 113.89 251.74 95.23 10 53 13 2301.6 -28.17 86.63  
 80.00 10 49 47 3139.92 -29.77 101.95 252.06 92.41 11 42 7 2139.9 -25.76 75.24  
 90.00 12 3 47 2901.13 -28.25 84.46 252.12 91.38 12 52 8 1901.1 -24.83 57.96  
 100.00 13 32 39 2614.39 -29.77 63.32 252.08 92.41 14 16 14 1614.4 -25.76 36.61  
 110.00 14 57 37 2348.43 -33.80 42.81 251.74 95.23 15 36 46 1348.4 -28.17 15.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3373 TRA -.5990 TC3 .5851 BAU .3234 SGT 997.7 SGR 961.8 SG3 883.2 ST 22.2 SR 28.0 S8 16.4  
 RDE -.4884 RRA .0613 RC3 -.7833 FAU .28230 RRT -.3002 RRF .7162 RTF -.4402 CRT .8540 CRS .6697 CST .2408  
 FDE .6493 FRA -2.2851 FC3 -9.8779 BSP 1613 SGB 1385.8 R23 -.3067 R13 .6757 LSA 35.7 MSA 16.0 SSA 3.5  
 BDE .5911 BRA .6021 BC3 .9777 FSP 1437 SG1 1118.2 S22 816.6 THA 138.47 EL1 34.5 EL2 9.4 ALF 52.70

LAUNCH DATE AUG 26 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC

DISTANCE 372.681

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 33.058 GAL 5.43 AZL 88.77 MCA 114.00 SMA 200.21 ECC .26153 INC 1.2286 V1 29.471  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.735 GAP 11.74 AZP 90.50 TAL 26.65 TAP 140.65 RCA 147.85 APO 252.57 V2 23.517  
 RC 174.413 GL 8.16 GP -13.04 ZAL 44.95 ZAP 135.45 ETS 195.50 ZAE 164.88 ETE 256.52 ZAC 70.30 ETC 283.15 LVI -4.10

PLANETOCENTRIC CONIC

C3 24.612 VHL 4.961 DLA 14.20 RAL 12.43 RAD 6644.8 VEL 12.024 PTH 7.01 VHP 3.243 DPA 3.42 RAP 45.53 ECC 1.4050  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 58 10 3469.25 -45.75 125.31 248.82 104.80 9 55 39 2469.2 -35.02 96.64  
 60.00 9 21 50 3406.23 -39.40 121.48 250.66 99.27 10 18 37 2406.2 -31.51 93.44  
 70.00 9 55 58 3305.78 -33.82 114.21 251.53 95.04 10 51 4 2305.8 -28.27 86.91  
 80.00 10 47 17 3144.99 -29.78 102.32 251.83 92.21 11 39 42 2145.0 -25.85 75.59  
 90.00 12 1 8 2906.63 -28.26 84.86 251.88 91.18 12 49 35 1906.6 -24.92 58.34  
 100.00 13 30 9 2619.46 -29.78 63.69 251.83 92.21 14 13 49 1619.5 -25.85 36.96  
 110.00 14 55 25 2352.60 -33.82 43.13 251.53 95.04 15 34 37 1352.6 -28.27 15.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3385 TRA -.6066 TC3 .5460 BAU .3256 SGT 984.2 SGR 989.0 SG3 923.6 ST 22.4 SR 27.6 S8 17.1  
 RDE -.4778 RRA .0495 RC3 -.8251 FAU .29410 RRT -.2778 RRF .7367 RTF -.3611 CRT .8555 CRS .6715 CST .2448  
 FDE .6988 FRA -2.4134 FC3 -10.3450 BSP 1614 SGB 1395.3 R23 -.3067 R13 .6893 LSA 35.7 MSA 16.4 SSA 3.8  
 BDE .5856 BRA .6087 BC3 .9894 FSP 1510 SG1 1115.3 S22 838.4 THA 134.50 EL1 34.3 EL2 9.3 ALF 51.99

LAUNCH DATE AUG 26 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC										DISTANCE 376.443										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	33.040	GAL	5.43	AZL	88.74	HCA	114.99	SMA	199.86	ECC	.26028	INC	1.2642	V1	29.471	RP	234.17	LAP	1.15	LOP	87.61	VP	21.667	GAP	11.43	AZP	90.53	TAL	26.73	TAP	141.72	RCA	147.85	APO	251.88	V2	23.478	RC	177.360	GL	8.43	GP	-13.41	ZAL	44.88	ZAP	133.99	ETS	195.20	ZAE	164.11	ETE	251.64	ZAC	70.03	ETC	283.23	LVI	-3.88
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.489	VHL	4.949	DLA	14.40	RAL	12.21	RAD	6644.8	VEL	12.019	PTH	7.01	VHP	3.175	DPA	2.93	RAP	45.22	ECC	1.4030	SGT	971.5	SGR	1017.7	SG3	964.5	ST	22.6	SR	27.2	SS	17.9	CR7	.8570	CR8	.6748	CS7	.2503																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR7	-.2483	RRF	.7560	RTF	-.3158	CR8	.8570	CR9	.6748	CS7	.2503	LSA	35.7	MSA	16.9	SSA	3.5																						
50.00	8	56	30	3472.18	-45.80	125.58	248.68	104.60	9	54	22	2472.2	-35.14	96.82	SG8	1406.9	R23	-.2968	R13	.7077	EL1	34.1	EL2	9.3	ALF	51.18																																							
60.00	9	19	55	3409.84	-39.44	121.78	250.49	99.07	10	16	45	2409.8	-31.62	93.68	SG1	1113.3	SG2	860.2	THA	129.69																																													
70.00	9	53	44	3310.29	-33.85	114.56	251.34	94.84	10	48	55	2310.3	-28.38	87.22																																																			
80.00	10	44	45	3150.45	-29.80	102.73	251.62	92.00	11	37	16	2150.8	-25.95	75.97																																																			
90.00	11	58	28	2912.56	-28.26	85.29	251.67	90.97	12	47	0	1912.6	-25.02	58.75																																																			
100.00	13	27	37	2624.95	-29.80	64.10	251.62	92.00	14	11	22	1624.9	-25.95	37.33																																																			
110.00	14	53	11	2357.11	-33.85	43.48	251.34	94.84	15	32	28	1357.1	-28.38	16.14																																																			

LAUNCH DATE AUG 26 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC										DISTANCE 380.210										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	33.024	GAL	5.42	AZL	88.70	HCA	115.98	SMA	199.53	ECC	.25908	INC	1.3022	V1	29.471	RP	234.53	LAP	1.17	LOP	88.60	VP	21.802	GAP	11.17	AZP	90.57	TAL	26.80	TAP	142.78	RCA	147.84	APO	251.23	V2	23.442	RC	180.313	GL	8.71	GP	-13.78	ZAL	44.82	ZAP	132.51	ETS	194.89	ZAE	163.22	ETE	247.11	ZAC	69.76	ETC	283.32	LVI	-3.66
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.373	VHL	4.937	DLA	14.61	RAL	12.01	RAD	6644.7	VEL	12.015	PTH	7.01	VHP	3.110	DPA	2.42	RAP	44.89	ECC	1.4011	SGT	957.0	SGR	1050.1	SG3	1007.9	ST	22.5	SR	26.8	SS	18.8	CR7	.8567	CR8	.6701	CS7	.2429																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR7	-.2230	RRF	.7751	RTF	-.2743	CR8	.8567	CR9	.6701	CS7	.2429	LSA	35.5	MSA	17.4	SSA	3.5																						
50.00	8	54	50	3475.35	-45.86	125.86	248.56	104.38	9	52	46	2475.4	-35.26	97.03	SG8	1420.7	R23	-.2661	R13	.7355	EL1	33.6	EL2	9.2	ALF	50.85																																							
60.00	9	17	59	3413.73	-39.48	122.10	250.34	98.85	10	14	53	2413.7	-31.74	93.95	SG1	1118.9	SG2	875.5	THA	123.68																																													
70.00	9	51	29	3315.13	-33.88	114.94	251.17	94.82	10	46	45	2315.1	-28.49	87.55																																																			
80.00	10	42	11	3156.30	-29.81	103.16	251.43	91.77	11	34	47	2156.3	-26.05	76.37																																																			
90.00	11	55	44	2918.89	-28.27	85.75	251.47	90.73	12	44	23	1918.9	-25.12	59.19																																																			
100.00	13	25	3	2630.77	-29.81	64.53	251.43	91.77	14	8	54	1630.8	-26.05	37.74																																																			
110.00	14	50	56	2361.95	-33.88	43.86	251.17	94.62	15	30	18	1361.9	-28.49	16.47																																																			

LAUNCH DATE AUG 26 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC										DISTANCE 383.981										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	33.009	GAL	5.41	AZL	88.66	HCA	116.96	SMA	199.23	ECC	.25797	INC	1.3408	V1	29.471	RP	234.89	LAP	1.20	LOP	89.59	VP	21.538	GAP	10.89	AZP	90.61	TAL	26.86	TAP	143.82	RCA	147.84	APO	250.63	V2	23.405	RC	183.270	GL	8.98	GP	-14.16	ZAL	44.78	ZAP	131.01	ETS	194.57	ZAE	162.23	ETE	242.98	ZAC	69.49	ETC	283.40	LVI	-3.43
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.263	VHL	4.926	DLA	14.83	RAL	11.82	RAD	6644.7	VEL	12.010	PTH	7.00	VHP	3.048	DPA	1.91	RAP	44.54	ECC	1.3993	SGT	950.2	SGR	1081.3	SG3	1046.3	ST	23.0	SR	26.3	SS	19.8	CR7	.8586	CR8	.6789	CS7	.2566																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR7	-.1715	RRF	.7918	RTF	-.2295	CR8	.8586	CR9	.6789	CS7	.2566	LSA	35.6	MSA	17.9	SSA	3.5																						
50.00	8	53	11	3478.79	-45.92	126.18	248.47	104.15	9	51	10	2478.8	-35.39	97.25	SG8	1439.5	R23	-.2253	R13	.7628	EL1	33.7	EL2	9.2	ALF	48.85																																							
60.00	9	16	3	3417.92	-39.52	122.45	250.22	98.62	10	13	1	2417.9	-31.86	94.23	SG1	1121.1	SG2	902.9	THA	116.47																																													
70.00	9	49	13	3320.32	-33.91	118.34	251.02	94.38	10	44	34	2320.3	-28.61	87.91																																																			
80.00	10	39	34	3162.56	-29.82	103.63	251.27	91.53	11	32	17	2162.6	-26.16	76.80																																																			
90.00	11	52	58	2925.67	-28.28	86.25	251.30	90.49	12	41	43	1925.7	-25.23	59.65																																																			
100.00	13	22	26	2637.03	-29.82	65.00	251.27	91.53	14	6	23	1637.0	-26.16	38.17																																																			
110.00	14	48	40	2367.14	-33.91	44.26	251.02	94.38	15	26	7	1367.1	-28.61	16.83																																																			

LAUNCH DATE AUG 26 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC										DISTANCE 387.785										EARTH TO MARS																																													
RL	151.18	LAL	.00	LOL	332.62	VL	32.985	GAL	5.40	AZL	88.62	HCA	117.94	SMA	198.88	ECC	.25694	INC	1.3800	V1	29.471	RP	235.24	LAP	1.22	LOP	90.57	VP	21.477	GAP	10.61	AZP	90.65	TAL	26.91	TAP	144.85	RCA	147.84	APO	250.07	V2	23.369	RC	186.232	GL	9.26	GP	-14.54	ZAL	44.78	ZAP	129.50	ETS	194.25	ZAE	161.14	ETE	239.17	ZAC	69.21	ETC	283.40	LVI	-3.21
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.158	VHL	4.915	DLA	15.07	RAL	11.64	RAD	6644.6	VEL	12.006	PTH	7.00	VHP	2.990	DPA	1.57	RAP	44.18	ECC	1.3978	SGT	945.0	SGR	1115.3	SG3	1090.1	ST	23.2	SR	25.8	SS	20.3	CR7	.8594	CR8	.6838	CS7	.2635																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR7	-.1196	RRF	.8079	RTF	-.1447	CR8	.8594	CR9	.6838	CS7	.2635	LSA	35.6	MSA	18.4	SSA	3.4																						
50.00	8	51	33	3482.48	-45.98	126.51	248.41	103.90	9	49	35	2482.5	-35.53	97.49	SG8	1461.9	R23	-.1582	R13	.7938	EL1	33.5	EL2	9.2	ALF	48.50																																							
60.00	9	14	7	3422.40	-39.57	122.82	250.13	98.37	10	11	9	2422.4	-32.00	94.54	SG1	1133.4	SG2	923.3	THA	107.85																																													
70.00	9	46	55	3325.85	-33.93	115.77	250.90	94.13	10	42	21	2325.8	-28.73	88.29																																																			
80.00	10	36	55	3169.21	-29.83	104.12	251.13	91.27	11	29	44	2169.2	-26.28	77.26																																																			
90.00	11	50	8	2932.88	-28.28	86.78	251.15	90.22	12	39	1	1932.9	-25.34	60.15																																																			
100.00	13	19	46	2643.68	-29.83	65.49	251.13	91.27	14	3	50	1643.7	-26.28	38.63																																																			
110.00	14	46	22	2372.68	-33.93	44.69	250.90	94.13	15	25	54	1372.7	-28.73	17.21																																																			



LAUNCH DATE AUG 26 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

DISTANCE 391.932

EARTH TO MARS

RL 131.18 LAL .00 LOL 332.62 VL 32.981 GAL 5.39 AZL 88.58 HCA 118.92 SMA 198.70 ECC .25597 INC 1.4198 V1 29.471
RP 235.99 LAP 1.24 LOP 91.55 VP 21.418 GAP 10.33 AZP 90.69 TAL 26.94 TAP 145.86 RCA 147.84 APO 249.56 V2 23.332
RC 189.197 GL 9.55 GP -14.94 ZAL 44.76 ZAP 127.97 ETS 193.91 ZAE 159.96 ETE 235.72 ZAC 66.94 ETC 283.58 LVI -2.98

PLANETOCENTRIC CONIC

C3 24.059 VHL 4.905 DLA 15.31 RAL 11.47 RAD 6644.6 VEL 12.002 PTH 7.00 VHP 2.935 DPA .83 RAP 43.81 ECC 1.3860
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 49 54 3486.42 -46.04 128.87 248.37 103.63 9 48 1 2486.4 -35.68 97.75
60.00 9 12 10 3427.17 -39.61 123.22 250.05 98.10 10 9 17 2427.2 -32.14 94.86
70.00 9 44 35 3331.71 -33.96 116.23 250.79 93.86 10 40 7 2331.7 -28.86 88.70
80.00 10 34 12 3176.26 -29.84 104.65 251.00 90.99 11 27 8 2176.3 -26.40 77.75
90.00 11 47 14 2940.51 -26.28 87.34 251.01 89.94 12 36 15 1940.5 -25.45 60.68
100.00 13 17 4 2650.74 -29.84 66.01 251.00 90.99 14 1 15 1650.7 -26.40 39.12
110.00 14 44 2 2378.53 -33.96 45.14 250.79 93.86 15 23 40 1378.5 -28.86 17.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3433 TRA -.6661 TC3 .2025 BAU .3513 SGT 942.5 SGR 1151.6 SG3 1132.3 ST 23.4 SR 25.3 SS 21.2
RDE -.4320 RRA -.0166 RC3-1.0350 FAU .35434 RRT -.0629 RRF .8231 RTF -.0758 CRT .8594 CRS .6857 CST .2654
FDE 1.0143 FRA-3.0760 FC-12.7504 BSP 1723 SGB 1488.1 R23 -.0769 R13 .8199 LSA 35.6 MSA 18.9 SSA 3.4
BDE .5518 BRA .6663 BC3 1.0921 FSP 1893 SGI 1156.1 SG2 937.0 THA 98.66 EL1 33.2 EL2 9.1 ALF 47.54

LAUNCH DATE AUG 26 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

DISTANCE 395.313

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.989 GAL 5.38 AZL 88.54 HCA 119.90 SMA 198.46 ECC .25507 INC 1.4601 V1 29.471
RP 235.94 LAP 1.27 LOP 92.52 VP 21.360 GAP 10.05 AZP 90.73 TAL 26.97 TAP 146.86 RCA 147.84 APO 249.08 V2 23.297
RC 192.165 GL 9.84 GP -15.33 ZAL 44.77 ZAP 126.42 ETS 193.57 ZAE 158.71 ETE 232.59 ZAC 68.66 ETC 283.67 LVI -2.78

PLANETOCENTRIC CONIC

C3 23.985 VHL 4.895 DLA 15.56 RAL 11.31 RAD 6644.6 VEL 11.998 PTH 6.99 VHP 2.883 DPA .27 RAP 43.41 ECC 1.3844
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 48 15 3490.61 -46.11 127.25 248.36 103.34 9 46 26 2490.6 -35.84 98.02
60.00 9 10 11 3432.22 -39.66 123.64 250.00 97.82 10 7 24 2432.2 -32.29 95.21
70.00 9 42 14 3337.93 -33.99 116.71 250.71 93.57 10 37 52 2337.9 -29.00 89.13
80.00 10 31 26 3183.73 -29.85 105.20 250.89 90.70 11 24 30 2183.7 -26.53 78.27
90.00 11 44 17 2948.60 -26.28 87.93 250.90 89.65 12 33 25 1948.6 -25.57 61.24
100.00 13 14 18 2658.20 -29.85 66.57 250.89 90.70 13 58 36 1658.2 -26.53 39.64
110.00 14 41 40 2384.74 -33.99 45.63 250.71 93.57 15 21 25 1384.7 -29.00 18.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3434 TRA -.6823 TC3 .2161 BAU .3608 SGT 945.2 SGR 1189.7 SG3 1174.6 ST 23.6 SR 24.7 SS 22.1
RDE -.4212 RRA -.0310 RC3-1.1052 FAU .36847 RRT .0004 RRF .8373 RTF -.0018 CRT .8594 CRS .6882 CST .2670
FDE 1.0906 FRA-3.2085 FC-13.2388 BSP 1774 SGB 1519.5 R23 .0026 R13 .8373 LSA 35.6 MSA 19.5 SSA 3.4
BDE .5435 BRA .6830 BC3 1.1261 FSP 1970 SGI 1189.7 SG2 945.2 THA 89.95 EL1 33.0 EL2 9.1 ALF 46.49

LAUNCH DATE AUG 26 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

DISTANCE 399.098

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.998 GAL 5.37 AZL 88.50 HCA 120.87 SMA 198.25 ECC .25422 INC 1.5012 V1 29.471
RP 236.29 LAP 1.29 LOP 93.49 VP 21.304 GAP 9.78 AZP 90.77 TAL 26.98 TAP 147.85 RCA 147.86 APO 248.65 V2 23.261
RC 195.134 GL 10.13 GP -15.74 ZAL 44.79 ZAP 124.86 ETS 193.22 ZAE 157.38 ETE 229.74 ZAC 68.38 ETC 283.77 LVI -2.52

PLANETOCENTRIC CONIC

C3 23.876 VHL 4.886 DLA 15.82 RAL 11.17 RAD 6644.6 VEL 11.994 PTH 6.99 VHP 2.834 DPA -.30 RAP 43.01 ECC 1.3929
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 46 37 3495.05 -46.18 127.66 248.37 103.03 9 44 52 2495.1 -36.01 98.32
60.00 9 8 12 3437.57 -39.71 124.09 249.97 97.52 10 5 30 2437.6 -32.44 95.57
70.00 9 39 49 3344.49 -34.02 117.22 250.65 93.27 10 35 34 2344.5 -29.14 89.59
80.00 10 28 36 3191.62 -29.86 103.79 250.80 90.39 11 21 48 2191.6 -26.66 78.82
90.00 11 41 15 2957.14 -26.27 88.55 250.80 89.33 12 30 32 1957.1 -25.70 61.84
100.00 13 11 28 2666.09 -29.86 67.15 250.80 90.39 13 55 54 1666.1 -26.66 40.19
110.00 14 39 18 2391.31 -34.02 46.14 250.65 93.27 15 19 7 1391.3 -29.14 18.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3418 TRA -.6987 TC3 .1470 BAU .3722 SGT 952.0 SGR 1230.0 SG3 1217.0 ST 23.8 SR 24.1 SS 23.0
RDE -.4103 RRA -.0461 RC3-1.1589 FAU .37854 RRT .0668 RRF .8506 RTF .543 CRT .8587 CRS .6878 CST .2658
FDE 1.1652 FRA-3.3437 FC-13.7258 BSP 1832 SGB 1553.4 R23 .0651 R13 .8483 LSA 35.5 MSA 20.0 SSA 3.3
BDE .5340 BRA .7002 BC3 1.1662 FSP 2044 SGI 1234.0 SG2 946.8 THA 82.77 EL1 32.7 EL2 9.0 ALF 45.51

LAUNCH DATE AUG 26 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 402.881

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.948 GAL 5.36 AZL 88.46 HCA 121.84 SMA 198.05 ECC .25344 INC 1.5430 V1 29.471
RP 236.63 LAP 1.31 LOP 94.46 VP 21.250 GAP 9.51 AZP 90.81 TAL 26.98 TAP 148.82 RCA 147.86 APO 248.24 V2 23.226
RC 198.104 GL 10.43 GP -16.14 ZAL 44.83 ZAP 123.29 ETS 192.86 ZAE 155.98 ETE 227.14 ZAC 68.11 ETC 283.86 LVI -2.28

PLANETOCENTRIC CONIC

C3 23.792 VHL 4.878 DLA 16.09 RAL 11.03 RAD 6644.5 VEL 11.990 PTH 6.99 VHP 2.788 DPA -.88 RAP 42.59 ECC 1.3916
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 57 3499.74 -46.25 128.09 248.41 102.71 9 43 17 2499.7 -36.18 98.63
60.00 9 6 11 3443.20 -39.76 124.56 249.96 97.21 10 3 35 2443.2 -32.61 95.96
70.00 9 37 23 3351.40 -34.04 117.76 250.60 92.96 10 33 14 2351.4 -29.29 90.07
80.00 10 25 43 3199.92 -29.86 106.40 250.73 90.07 11 19 3 2199.9 -26.79 79.40
90.00 11 38 9 2966.14 -26.26 89.21 250.71 89.00 12 27 35 1966.1 -25.83 62.46
100.00 13 8 35 2674.39 -29.86 67.77 250.73 90.07 13 53 9 1674.4 -26.79 40.77
110.00 14 36 49 2398.22 -34.04 46.68 250.60 92.96 15 16 47 1398.2 -29.29 18.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3391 TRA -.7123 TC3 .0809 BAU .3864 SGT 958.9 SGR 1274.8 SG3 1262.0 ST 23.6 SR 23.6 SS 23.7
RDE -.4003 RRA -.0629 RC3-1.2122 FAU .39138 RRT .1298 RRF .8636 RTF .1469 CRT .8565 CRS .6792 CST .2496
FDE 1.2250 FRA-3.4954 FC-14.2414 BSP 1885 SGB 1595.2 R23 .0989 R13 .8586 LSA 35.2 MSA 20.6 SSA 3.3
BDE .5220 BRA .7150 BC3 1.2149 FSP 2095 SGI 1288.2 SG2 941.0 THA 77.90 EL1 32.2 EL2 8.9 ALF 44.98

LAUNCH DATE AUG 26 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 22 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 32.939 GAL 5.34 AZL 88.41 MCA 122.80 SMA 197.87 ECC .25271 INC 1.5885 V1 20.471  
 RP 236.98 LAP 1.33 LOP 95.43 VP 21.198 GAP 9.24 AZP 90.86 TAL 26.97 TAP 149.77 RCA 147.87 APO 247.87 V2 23.191  
 RC 201.073 GL 10.74 GP -16.56 ZAL 44.89 ZAP 121.71 ETS 192.49 ZAE 134.54 ETE 224.78 ZAC 67.63 ETC 283.96 LVI -2.04

PLANETOCENTRIC CONIC: C3 23.711 VHL 4.869 DLA 16.37 RAL 10.90 RAD 6644.5 VEL 11.987 PTH 6.98 VHP 2.745 DPA -1.47 RAP 42.16 ECC 1.3902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 17 3504.71 -46.32 128.55 248.47 102.36 9 41 42 2504.7 -36.37 98.96  
 60.00 9 4 9 3449.16 -39.81 125.06 249.98 98.87 10 1 38 2449.2 -32.78 96.37  
 70.00 9 34 53 3358.70 -34.07 118.33 250.57 92.62 10 30 52 2358.7 -29.45 90.58  
 80.00 10 22 45 3208.70 -29.86 107.06 250.67 89.73 11 16 14 2208.7 -26.93 80.01  
 90.00 11 34 57 2975.66 -28.25 89.91 250.65 86.66 12 24 32 1975.7 -25.96 83.13  
 100.00 13 5 37 2683.18 -29.86 68.42 250.67 89.73 13 50 20 1683.2 -26.93 41.38  
 110.00 14 34 19 2405.52 -34.07 47.24 250.57 92.62 15 14 25 1405.5 -29.45 19.50

Differential Corrections: TDE -.3406 TRA -.7397 TC3 -.0114 BAU .4001 SGT 991.8 SGR 1313.6 SCS 1208.5 ST 24.2 SR 22.8 SS 24.9  
 RDE -.3856 RRA -.0763 RC3-1.2622 FAU .40162 RRT .2152 RRF .8738 RTF .2365 CRT .8576 CRS .6913 CST .2674  
 FDE 1.3411 FRA-3.5948 FC-14.6642 BSP 2006 SGB 1846.0 R23 .1512 R13 .8620 LSA 35.6 MSA 21.2 SSA 3.3  
 BDE .5145 BRA .7436 BC3 1.2622 FSP 2202 SG1 1348.9 SG2 943.2 THA 71.46 EL1 32.1 EL2 8.9 ALF 42.99

LAUNCH DATE AUG 26 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 24 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 32.931 GAL 5.33 AZL 88.37 MCA 123.77 SMA 197.71 ECC .25203 INC 1.6289 V1 29.471  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.147 GAP 8.98 AZP 90.91 TAL 26.95 TAP 150.71 RCA 147.88 APO 247.53 V2 23.157  
 RC 204.040 GL 11.05 GP -16.97 ZAL 44.96 ZAP 120.12 ETS 192.10 ZAE 153.05 ETE 222.61 ZAC 67.55 ETC 284.06 LVI -1.80

PLANETOCENTRIC CONIC: C3 23.634 VHL 4.861 DLA 16.86 RAL 10.78 RAD 6644.4 VEL 11.984 PTH 6.98 VHP 2.705 DPA -2.08 RAP 41.72 ECC 1.3890  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 36 3509.92 -46.40 129.03 248.55 102.00 9 40 6 2509.9 -36.56 99.31  
 60.00 9 2 5 3455.41 -39.86 125.58 250.01 98.32 9 59 40 2455.4 -32.96 96.81  
 70.00 9 32 20 3366.36 -34.09 118.92 250.56 92.27 10 28 26 2366.4 -29.61 91.12  
 80.00 10 19 42 3217.92 -29.85 107.74 250.63 89.37 11 13 20 2217.9 -27.08 80.66  
 90.00 11 31 39 2985.66 -28.23 90.64 250.60 86.29 12 21 25 1985.7 -26.09 63.83  
 100.00 13 2 34 2692.40 -29.85 69.11 250.63 89.37 13 47 26 1692.4 -27.08 42.03  
 110.00 14 31 46 2413.18 -34.09 47.84 250.56 92.27 15 12 0 1413.2 -29.61 20.04

Differential Corrections: TDE -.3384 TRA -.7618 TC3 -.0961 BAU .4172 SGT 1022.6 SGR 1358.3 SCS 1338.7 ST 24.4 SR 22.1 SS 25.9  
 RDE -.3725 RRA -.0920 RC3-1.3189 FAU .41294 RRT .2885 RRF .8841 RTF .3147 CRT .8567 CRS .6908 CST .2844  
 FDE 1.4326 FRA-3.7190 FC-15.1261 BSP 2109 SGB 1700.2 R23 .1739 R13 .8691 LSA 35.7 MSA 21.6 SSA 3.8  
 BDE .5033 BRA .7672 BC3 1.3204 FSP 2275 SG1 1418.2 SG2 937.7 THA 67.46 EL1 31.7 EL2 8.6 ALF 41.70

LAUNCH DATE AUG 26 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 26 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 32.923 GAL 5.31 AZL 88.33 MCA 124.73 SMA 197.58 ECC .25140 INC 1.6731 V1 29.471  
 RP 237.65 LAP 1.38 LOP 97.36 VP 21.098 GAP 8.72 AZP 90.95 TAL 26.92 TAP 151.64 RCA 147.89 APO 247.22 V2 23.123  
 RC 207.005 GL 11.37 GP -17.39 ZAL 45.04 ZAP 118.52 ETS 191.70 ZAE 151.51 ETE 220.62 ZAC 67.27 ETC 284.16 LVI -1.56

PLANETOCENTRIC CONIC: C3 23.562 VHL 4.854 DLA 16.98 RAL 10.68 RAD 6644.4 VEL 11.981 PTH 6.98 VHP 2.667 DPA -2.69 RAP 41.28 ECC 1.3878  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 55 3515.40 -46.47 129.53 248.65 101.62 9 38 30 2515.4 -36.76 99.67  
 60.00 8 59 59 3461.98 -39.91 126.13 250.06 98.19 9 57 41 2462.0 -33.14 97.26  
 70.00 9 29 44 3374.40 -34.11 119.55 250.57 91.90 10 25 58 2374.4 -29.78 91.68  
 80.00 10 16 34 3227.81 -29.84 108.48 250.61 88.99 11 10 22 2227.6 -27.22 81.34  
 90.00 11 28 16 2996.19 -28.21 91.40 250.56 87.91 12 18 12 1996.2 -26.23 64.57  
 100.00 12 59 26 2702.09 -29.84 69.83 250.61 88.99 13 44 28 1702.1 -27.22 42.71  
 110.00 14 29 10 2421.22 -34.11 48.47 250.57 91.90 15 9 31 1421.2 -29.78 20.60

Differential Corrections: TDE -.3356 TRA -.7850 TC3 -.1853 BAU .4381 SGT 1062.0 SGR 1404.0 SCS 1377.6 ST 24.6 SR 21.4 SS 27.0  
 RDE -.3586 RRA -.1240 RC3-1.3721 FAU .42380 RRT .3587 RRF .8938 RTF .3584 CRT .8555 CRS .6891 CST .2803  
 FDE 1.5286 FRA-3.8376 FC-15.5719 BSP 2228 SGB 1780.4 R23 .1893 R13 .8763 LSA 35.7 MSA 22.4 SSA 3.2  
 BDE .4912 BRA .7924 BC3 1.3645 FSP 2348 SG1 1493.9 SG2 931.3 THA 64.09 EL1 31.4 EL2 8.7 ALF 40.33

LAUNCH DATE AUG 26 1973

FLIGHT TIME 186.00

ARRIVAL DATE FEB 28 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 32.916 GAL 5.29 AZL 88.28 MCA 125.68 SMA 197.42 ECC .25081 INC 1.7182 V1 29.471  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.051 GAP 8.46 AZP 91.00 TAL 26.88 TAP 152.56 RCA 147.91 APO 246.94 V2 23.090  
 RC 209.985 GL 11.70 GP -17.82 ZAL 45.14 ZAP 116.92 ETS 191.29 ZAE 149.94 ETE 218.78 ZAC 66.99 ETC 284.28 LVI -1.31

PLANETOCENTRIC CONIC: C3 23.493 VHL 4.847 DLA 17.27 RAL 10.58 RAD 6644.4 VEL 11.979 PTH 6.98 VHP 2.633 DPA -3.31 RAP 40.82 ECC 1.3866  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 12 3521.15 -46.55 130.07 248.78 101.21 9 36 53 2521.2 -36.97 100.06  
 60.00 8 57 50 3468.86 -39.96 126.71 250.13 95.76 9 55 39 2468.9 -33.34 97.75  
 70.00 9 27 3 3382.84 -34.12 120.21 250.59 91.51 10 23 26 2382.8 -29.95 92.28  
 80.00 10 13 20 3237.80 -29.83 109.22 250.60 88.59 11 7 18 2237.8 -27.37 82.08  
 90.00 11 24 45 3007.26 -28.18 92.21 250.53 87.50 12 14 53 2007.3 -26.37 65.35  
 100.00 12 58 12 2712.27 -29.83 70.59 250.60 88.59 13 41 24 1712.3 -27.37 43.43  
 110.00 14 26 30 2429.66 -34.12 49.13 250.59 91.51 15 6 59 1429.7 -29.95 21.20

Differential Corrections: TDE -.3319 TRA -.8097 TC3 -.2787 BAU .4570 SGT 1109.9 SGR 1451.1 SCS 1415.2 ST 24.7 SR 20.6 SS 28.0  
 RDE -.3443 RRA -.1240 RC3-1.4280 FAU .43426 RRT .4270 RRF .9022 RTF .4589 CRT .8543 CRS .6858 CST .2538  
 FDE 1.6259 FRA-3.9522 FC-16.0029 BSP 2361 SGB 1826.8 R23 .1992 R13 .8837 LSA 35.8 MSA 23.0 SSA 3.1  
 BDE .4783 BRA .8192 BC3 1.4550 FSP 2418 SG1 1575.9 SG2 924.1 THA 61.22 EL1 31.0 EL2 8.5 ALF 38.92

LAUNCH DATE AUG 26 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 191.18 LAL .00 LOL 332.62 VL 32.910 GAL 5.27 AZL 88.24 HCA 126.84 SMA 197.30 ECC .23027 INC 1.7643 V1 29.471
RP 238.30 LAP 1.42 LOP 99.27 VP 21.005 GAP 8.20 AZP 91.03 TAL 26.83 TAP 153.47 RCA 147.93 APO 246.68 V2 23.056
RC 212.919 GL 12.03 GP -18.24 ZAL 45.25 ZAP 115.32 ETS 190.87 ZAE 146.33 ETE 217.08 ZAC 66.72 ETC 284.36 LVI -1.06

PLANETOCENTRIC CONIC

C3 23.428 VHL 4.840 DLA 17.59 RAL 10.46 RAD 6644.3 VEL 11.975 PTH 6.97 VHP 2.601 DPA -3.93 RAP 40.36 ECC 1.3856
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 36 27 3527.18 -46.63 130.63 248.93 100.79 9 35 14 2527.2 -37.19 100.47
60.00 8 55 39 3476.07 -40.00 127.32 250.22 95.35 9 53 35 2476.1 -33.53 98.25
70.00 9 24 19 3391.68 -34.14 120.90 250.63 91.10 10 20 50 2391.7 -30.12 92.91
80.00 10 10 0 3248.49 -29.81 110.01 250.60 88.17 11 4 9 2248.5 -27.53 82.82
90.00 11 21 8 3018.90 -26.14 93.08 250.52 87.08 12 11 27 2018.9 -26.52 66.17
100.00 12 52 52 2722.96 -29.81 71.38 250.60 86.17 13 38 15 1723.0 -27.53 14.19
110.00 14 23 45 2438.90 -34.14 49.82 250.63 91.10 15 4 23 1438.5 -30.12 21.83

DIFFERENTIAL CORRECTIONS

TDE -.3273 TRA -.8356 TC3 -.3761 BAU .4798
RDE -.3292 RRA -.1406 RC3-1.4849 FAU .44437
FDE 1.7273 FRA-4.0643 FC-16.4203 BSP 2504
BDE .4642 BRA .8473 BC3 1.5318 FSP 2483

MID-COURSE EXECUTION ACCURACY

SGT 1165.9 SGR 1499.6 SG3 1451.8
RRT .4893 RRF .9102 RTF .5223
SGB 1899.5 R23 .2050 R13 .8912
SG1 1663.8 SG2 916.4 THA 58.73

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 19.8 SS 29.1
CRT .8531 CRS .6806 CST .2452
LSA 35.9 MSA 23.6 SSA 3.1
EL1 30.6 EL2 8.4 ALF 37.44

LAUNCH DATE AUG 26 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.904 GAL 5.25 AZL 88.19 HCA 127.59 SMA 197.20 ECC .24976 INC 1.8114 V1 29.471
RP 238.63 LAP 1.44 LOP 100.22 VP 20.960 GAP 7.94 AZP 91.11 TAL 26.77 TAP 154.36 RCA 147.94 APO 246.45 V2 23.024
RC 215.866 GL 12.37 GP -18.67 ZAL 45.37 ZAP 113.71 ETS 190.44 ZAE 146.70 ETE 215.50 ZAC 66.44 ETC 284.45 LVI -.80

PLANETOCENTRIC CONIC

C3 23.368 VHL 4.834 DLA 17.93 RAL 10.37 RAD 6644.3 VEL 11.973 PTH 6.97 VHP 2.571 DPA -4.56 RAP 39.90 ECC 1.3846
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 34 41 3533.48 -46.71 131.22 249.10 100.34 9 33 34 2533.5 -37.42 100.90
60.00 8 53 25 3483.61 -40.05 127.95 250.33 94.92 9 51 28 2483.6 -33.74 98.79
70.00 9 21 29 3400.95 -34.15 121.62 250.69 90.67 10 18 10 2400.9 -30.31 93.57
80.00 10 6 33 3259.71 -29.78 110.84 250.62 87.74 11 0 53 2259.7 -27.69 83.62
90.00 11 17 22 3031.13 -26.10 93.95 250.52 86.63 12 7 53 2031.1 -26.66 67.04
100.00 12 49 25 2734.18 -29.78 72.21 250.62 87.74 13 34 59 1734.2 -27.69 44.98
110.00 14 20 56 2447.77 -34.15 50.54 250.69 90.67 15 1 43 1447.8 -30.31 22.49

DIFFERENTIAL CORRECTIONS

TDE -.3211 TRA -.8622 TC3 -.4765 BAU .5045
RDE -.3139 RRA -.1575 RC3-1.5429 FAU .45415
FDE 1.8257 FRA-4.1734 FC-16.8255 BSP 2661
BDE .4490 BRA .8764 BC3 1.6148 FSP 2542

MID-COURSE EXECUTION ACCURACY

SGT 1229.1 SGR 1549.8 SG3 1487.3
RRT .5457 RRF .9176 RTF .5792
SGB 1978.0 R23 .2074 R13 .8987
SG1 1757.1 SG2 908.5 THA 56.60

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 19.0 SS 30.1
CRT .8518 CRS .6722 CST .2323
LSA 36.0 MSA 24.2 SSA 3.1
EL1 30.2 EL2 8.2 ALF 35.98

LAUNCH DATE AUG 26 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.899 GAL 5.23 AZL 88.14 HCA 128.54 SMA 197.10 ECC .24930 INC 1.8596 V1 29.471
RP 238.95 LAP 1.45 LOP 101.17 VP 20.917 GAP 7.69 AZP 91.16 TAL 26.70 TAP 155.24 RCA 147.97 APO 246.24 V2 22.991
RC 218.810 GL 12.72 GP -19.10 ZAL 45.51 ZAP 112.11 ETS 189.99 ZAE 145.04 ETE 214.03 ZAC 66.16 ETC 284.55 LVI -.55

PLANETOCENTRIC CONIC

C3 23.311 VHL 4.828 DLA 18.27 RAL 10.28 RAD 6644.3 VEL 11.971 PTH 6.97 VHP 2.545 DPA -5.20 RAP 39.44 ECC 1.3836
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 53 3540.07 -46.78 131.83 249.29 99.87 9 31 53 2540.1 -37.65 101.38
60.00 8 51 7 3491.50 -40.09 128.62 250.45 94.47 9 49 19 2491.5 -33.95 99.35
70.00 9 18 35 3410.64 -34.15 122.38 250.76 90.23 10 15 26 2410.6 -30.49 94.26
80.00 10 2 59 3271.48 -29.74 111.72 250.64 87.28 10 57 30 2271.5 -27.84 84.43
90.00 11 13 27 3043.99 -26.04 94.89 250.53 86.17 12 4 11 2044.0 -26.81 67.95
100.00 12 45 51 2745.95 -29.74 73.09 250.64 87.28 13 31 37 1746.0 -27.84 45.82
110.00 14 18 1 2457.46 -34.15 51.30 250.76 90.23 14 58 59 1457.5 -30.49 23.18

DIFFERENTIAL CORRECTIONS

TDE -.3127 TRA -.8886 TC3 -.5785 BAU .5310
RDE -.2988 RRA -.1754 RC3-1.6028 FAU .46377
FDE 1.9177 FRA-4.2866 FC-17.2239 BSP 2827
BDE .4324 BRA .9057 BC3 1.7037 FSP 2584

MID-COURSE EXECUTION ACCURACY

SGT 1297.3 SGR 1602.5 SG3 1522.4
RRT .5961 RRF .9244 RTF .6197
SGB 2061.8 R23 .2063 R13 .9064
SG1 1855.1 SG2 899.7 THA 54.83

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 18.2 SS 31.1
CRT .8503 CRS .6588 CST .2128
LSA 36.0 MSA 24.7 SSA 3.0
EL1 29.8 EL2 8.0 ALF 34.62

LAUNCH DATE AUG 26 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.895 GAL 5.21 AZL 88.09 HCA 129.49 SMA 197.02 ECC .24887 INC 1.9090 V1 29.471
RP 239.26 LAP 1.47 LOP 102.12 VP 20.875 GAP 7.43 AZP 91.21 TAL 26.62 TAP 156.11 RCA 147.99 APO 246.03 V2 22.960
RC 221.744 GL 13.08 GP -19.54 ZAL 45.66 ZAP 110.51 ETS 189.53 ZAE 143.37 ETE 212.65 ZAC 65.89 ETC 284.65 LVI -.28

PLANETOCENTRIC CONIC

C3 23.257 VHL 4.823 DLA 18.83 RAL 10.20 RAD 6644.3 VEL 11.968 PTH 6.97 VHP 2.520 DPA -5.84 RAP 38.98 ECC 1.3827
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 31 2 3546.97 -46.86 132.48 249.51 99.38 9 30 9 2547.0 -37.90 101.84
60.00 8 48 46 3499.76 -40.14 129.32 250.60 94.00 9 47 6 2499.8 -34.17 99.94
70.00 9 15 35 3420.81 -34.15 123.17 250.84 89.76 10 12 36 2420.8 -30.68 94.99
80.00 9 59 16 3283.87 -29.70 112.64 250.68 86.80 10 54 0 2283.9 -28.01 85.34
90.00 11 9 23 3057.54 -27.97 95.88 250.55 85.68 12 0 21 2057.5 -26.95 68.92
100.00 12 42 8 2758.34 -29.70 74.00 250.68 86.80 13 28 7 1758.3 -28.01 46.71
110.00 14 15 1 2467.63 -34.15 52.09 250.84 89.76 14 56 9 1467.6 -30.68 23.91

DIFFERENTIAL CORRECTIONS

TDE -.3092 TRA -.9224 TC3 -.6949 BAU .5586
RDE -.2790 RRA -.1901 RC3-1.6568 FAU .47096
FDE 2.0554 FRA-4.3533 FC-17.5317 BSP 3012
BDE .4164 BRA .9418 BC3 1.7966 FSP 2668

MID-COURSE EXECUTION ACCURACY

SGT 1386.2 SGR 1649.3 SG3 1549.6
RRT .6423 RRF .9301 RTF .6736
SGB 2154.5 R23 .2121 R13 .9110
SG1 1960.3 SG2 894.0 THA 52.61

ORBIT DETERMINATION ACCURACY

ST 25.3 SR 17.1 SS 32.5
CRT .8519 CRS .6538 CST .2112
LSA 36.6 MSA 25.3 SSA 2.9
EL1 29.6 EL2 7.7 ALF 32.43

LAUNCH DATE AUG 26 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

DISTANCE 437.007

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.891 GAL 5.19 AZL 88.04 HCA 130.44 SMA 196.95 ECC .24847 INC 1.9598 V1 29.471
RP 239.57 LAP 1.49 LOP 103.07 VP 20.835 GAP 7.18 AZP 91.27 TAL 26.53 TAP 156.97 RCA 148.01 APO 248.99 VE 22.028
RC 224.672 GL 13.45 GP -19.97 ZAL 45.83 ZAP 108.91 ETS 189.08 ZAE 141.68 EYE 211.34 ZAC 65.81 ETC 284.74 LVI -.01

PLANETOCENTRIC CONIC

C3 23.207 VHL 4.817 DLA 19.00 RAL 10.13 RAD 6644.2 VEL 11.968 PTH 6.97 VHP 2.499 DPA -6.49 RAP 38.81 ECC 1.3819
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 29 9 3554.17 -46.94 133.18 249.75 98.86 9 28 24 2554.2 -38.15 102.34
60.00 8 46 21 3508.38 -40.17 130.05 250.76 93.50 9 44 50 2508.4 -34.40 100.56
70.00 9 12 29 3431.45 -34.15 124.00 250.94 89.27 10 9 40 2431.5 -30.88 95.76
80.00 9 55 25 3296.87 -29.65 113.60 250.73 86.29 10 50 22 2296.9 -28.17 86.27
90.00 11 5 8 3071.80 -27.90 96.91 250.58 85.17 11 56 20 2071.8 -27.10 69.93
100.00 12 38 17 2771.34 -29.65 74.97 250.73 86.29 13 24 28 1771.3 -28.17 47.64
110.00 14 11 55 2478.27 -34.15 52.92 250.94 89.27 14 53 14 1478.3 -30.88 24.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3010 TRA -.9537 TC3 -.8084 BAU .5881 SGT 1474.4 SGR 1700.7 SG3 1578.1 ST 25.4 SR 16.2 SS 33.6
RDE -.2609 RRA -.2070 RC3-1.7144 FAU .47852 RRT .6819 RRF .9356 RTF .7118 CRT .8530 CRS .6377 CST .1946
FDE 2.1677 FRA-4.4379 FC-17.8311 BSP 3202 SGB 2250.8 R23 .2120 R13 .9168 LSA 37.0 MSA 25.8 SSA 2.9
BDE .3983 BRA .9759 BC3 1.8954 FSP 2721 SGI 2068.9 SG2 886.5 THA 50.93 EL1 29.2 EL2 7.3 ALF 30.67

LAUNCH DATE AUG 26 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

DISTANCE 440.802

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.888 GAL 5.16 AZL 87.99 HCA 131.38 SMA 196.89 ECC .24811 INC 2.0115 V1 29.471
RP 239.88 LAP 1.51 LOP 104.01 VP 20.793 GAP 6.93 AZP 91.33 TAL 26.44 TAP 157.81 RCA 148.04 APO 245.74 V2 22.897
RC 227.591 GL 13.82 GP -20.41 ZAL 46.01 ZAP 107.33 ETS 188.56 ZAE 139.98 EYE 210.12 ZAC 65.33 ETC 284.84 LVI .26

PLANETOCENTRIC CONIC

C3 23.161 VHL 4.813 DLA 19.38 RAL 10.05 RAD 6644.2 VEL 11.964 PTH 6.96 VHP 2.479 DPA -7.13 RAP 38.06 ECC 1.3812
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 27 14 3561.69 -47.02 133.87 250.00 98.32 9 26 35 2561.7 -38.41 102.87
60.00 8 43 52 3517.39 -40.21 130.81 250.93 92.98 9 42 29 2517.4 -34.63 101.21
70.00 9 9 16 3442.59 -34.13 124.87 251.05 88.75 10 6 39 2442.6 -31.08 96.57
80.00 9 51 24 3310.53 -29.58 114.61 250.79 85.77 10 46 34 2310.5 -28.33 87.25
90.00 11 0 42 3086.81 -27.81 98.00 250.62 84.63 11 52 9 2086.8 -27.24 71.01
100.00 12 34 16 2785.00 -29.58 75.98 250.79 85.77 13 20 41 1785.0 -28.33 48.62
110.00 14 8 43 2489.40 -34.13 53.79 251.05 88.75 14 50 12 1489.4 -31.08 25.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2916 TRA -.9861 TC3 -.9251 BAU .6189 SGT 1569.1 SGR 1752.5 SG3 1604.4 ST 25.5 SR 15.2 SS 34.9
RDE -.2417 RRA -.2238 RC3-1.7719 FAU .48540 RRT .7163 RRF .9406 RTF .7445 CRT .8554 CRS .6174 CST .1763
FDE 2.2858 FRA-4.5119 FC-18.1437 BSP 3404 SGB 2352.3 R23 .2114 R13 .9221 LSA 37.4 MSA 26.2 SSA 2.8
BDE .3787 BRA 1.0111 BC3 1.9989 FSP 2772 SGI 2181.7 SG2 879.5 THA 49.39 EL1 28.9 EL2 7.0 ALF 28.84

LAUNCH DATE AUG 26 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

DISTANCE 444.397

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.886 GAL 5.14 AZL 87.94 HCA 132.32 SMA 196.84 ECC .24778 INC 2.0648 V1 29.471
RP 240.18 LAP 1.53 LOP 104.95 VP 20.758 GAP 6.69 AZP 91.39 TAL 26.33 TAP 158.65 RCA 148.07 APO 245.61 VE 22.866
RC 230.502 GL 14.21 GP -20.85 ZAL 46.20 ZAP 105.75 ETS 188.06 ZAE 138.27 EYE 208.95 ZAC 65.05 ETC 284.93 LVI .54

PLANETOCENTRIC CONIC

C3 23.119 VHL 4.808 DLA 19.77 RAL 9.99 RAD 6644.2 VEL 11.963 PTH 6.96 VHP 2.462 DPA -7.78 RAP 37.60 ECC 1.3805
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 25 15 3569.54 -47.09 134.61 250.29 97.75 9 24 45 2569.5 -38.68 103.42
60.00 8 41 18 3526.81 -40.24 131.61 251.13 92.44 9 40 5 2526.8 -34.87 101.89
70.00 9 5 56 3454.25 -34.11 125.78 251.17 88.21 10 3 30 2454.2 -31.28 97.42
80.00 9 47 12 3324.89 -29.51 115.67 250.86 85.21 10 42 37 2324.9 -28.49 88.29
90.00 10 56 3 3102.65 -27.70 99.15 250.67 84.06 11 47 45 2102.6 -27.39 72.14
100.00 12 30 4 2799.37 -29.51 77.04 250.86 85.21 13 16 43 1799.4 -28.49 49.66
110.00 14 5 23 2501.07 -34.11 54.70 251.17 88.21 14 47 4 1501.1 -31.28 26.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2809 TRA -1.0195 TC3-1.0490 BAU .8511 SGT 1689.8 SGR 1804.6 SG3 1628.0 ST 25.6 SR 14.2 SS 36.1
RDE -.2220 RRA -.2402 RC3-1.8292 FAU .49150 RRT .7482 RRF .9432 RTF .726 CRT .8593 CRS .5907 CST .1544
FDE 2.4017 FRA-4.5774 FC-18.4048 BSP 3614 SGB 2458.7 R23 .2103 R13 .9270 LSA 38.0 MSA 26.6 SSA 2.8
BDE .3580 BRA 1.0474 BC3 2.1066 FSP 2817 SGI 2298.6 SG2 872.7 THA 47.97 EL1 28.6 EL2 6.5 ALF 27.03

LAUNCH DATE AUG 26 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC

DISTANCE 448.393

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.884 GAL 5.11 AZL 87.88 HCA 133.26 SMA 196.80 ECC .24748 INC 2.1195 V1 29.471
RP 240.48 LAP 1.54 LOP 105.89 VP 20.721 GAP 6.44 AZP 91.45 TAL 26.22 TAP 159.48 RCA 148.10 APO 245.50 V2 22.836
RC 233.405 GL 14.80 GP -21.29 ZAL 46.40 ZAP 104.19 ETS 187.55 ZAE 136.56 EYE 207.84 ZAC 64.77 ETC 285.02 LVI .82

PLANETOCENTRIC CONIC

C3 23.082 VHL 4.804 DLA 20.18 RAL 9.92 RAD 6644.2 VEL 11.961 PTH 6.96 VHP 2.447 DPA -8.43 RAP 37.16 ECC 1.3799
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 23 13 3577.73 -47.16 135.39 250.59 97.15 9 22 50 2577.7 -38.96 104.01
60.00 8 38 38 3536.64 -40.26 132.45 251.34 91.88 9 37 35 2536.6 -35.11 102.81
70.00 9 2 28 3466.46 -34.08 126.74 251.31 87.65 10 0 15 2466.5 -31.48 98.31
80.00 9 42 48 3340.01 -29.42 116.78 250.94 84.64 10 38 28 2340.0 -28.68 89.38
90.00 10 51 9 3119.37 -27.58 100.35 250.72 83.47 11 43 9 2119.4 -27.53 73.35
100.00 12 25 40 2814.49 -29.42 78.15 250.94 84.64 13 12 35 1814.5 -28.68 50.75
110.00 14 1 55 2513.28 -34.08 55.65 251.31 87.65 14 43 48 1513.3 -31.48 27.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2688 TRA -1.0538 TC3-1.1672 BAU .6846 SGT 1775.7 SGR 1857.6 SG3 1649.6 ST 25.7 SR 13.3 SS 37.3
RDE -.2015 RRA -.2571 RC3-1.8866 FAU .49696 RRT .7723 RRF .9494 RTF .7968 CRT .8658 CRS .5552 CST .1291
FDE 2.5188 FRA-4.6389 FC-18.6397 BSP 3830 SGB 2569.8 R23 .2088 R13 .9315 LSA 38.6 MSA 27.0 SSA 2.7
BDE .3359 BRA 1.0847 BC3 2.2185 FSP 2853 SGI 2419.5 SG2 866.0 THA 46.67 EL1 28.3 EL2 6.0 ALF 25.25

LAUNCH DATE AUG 26 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC

DISTANCE 452.188

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.82 VL 32.888 GAL 5.09 AZL 87.82 HCA 134.19 SMA 196.77 ECC .24721 INC 2.1789 V1 29.471  
 RP 240.79 LAP 1.56 LOP 106.83 VP 20.686 GAP 6.20 AZP 91.52 TAL 26.10 TAP 160.30 RCA 148.13 APO 245.41 V2 22.807  
 RC 236.297 GL 19.01 GP -21.73 ZAL 46.82 ZAP 102.84 ETS 187.02 ZAE 134.85 ETE 206.78 ZAC 64.49 ETC 285.11 LVI 1.11

PLANETOCENTRIC CONIC

C3 23.048 VHL 4.801 DLA 20.60 RAL 9.86 RAD 6644.2 VEL 11.960 PTH 6.96 VHP 2.435 DPA -9.08 RAP 36.72 ECC 1.3793  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 7 3586.28 -47.23 136.21 250.91 96.33 9 20 53 2586.3 -39.25 104.63  
 60.00 8 35 53 3546.92 -40.28 133.32 251.57 91.28 9 35 0 2546.9 -35.36 103.37  
 70.00 8 58 52 3479.27 -34.04 127.73 251.45 87.06 9 56 51 2479.3 -31.69 99.25  
 80.00 9 38 12 3355.95 -29.31 117.96 251.02 84.03 10 34 8 2355.9 -28.62 90.54  
 90.00 10 46 0 3137.05 -27.43 101.63 250.78 82.85 11 38 17 2137.1 -27.66 74.62  
 100.00 12 21 4 2830.42 -29.31 79.32 251.02 84.03 13 8 14 1830.4 -28.82 51.91  
 110.00 13 58 18 2526.08 -34.04 56.65 251.45 87.06 14 40 24 1526.1 -31.69 28.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2590 TRA-1.0886 TC3-1.2915 BAU .7192 SGT 1885.9 SGR 1911.3 SG3 1669.0 ST 25.9 SR 12.3 SS 38.5  
 RDE -.1805 RRA -.2744 RC3-1.9440 FAU .50173 RRT .7951 RRF .9532 RTF .8178 CRT .8750 CRS .5086 CST .0994  
 FDE 2.6322 FRA-4.6949 FC-18.8459 BSP 4053 SGB 2685.1 R23 .2088 R13 .9358 LSA 39.4 MSA 27.3 SBA 2.7  
 BDE .3124 BRA 1.1228 BC3 2.3339 FSP 2880 SGT 2543.8 SG2 859.4 THA 45.48 EL1 28.1 EL2 5.5 ALF 23.56

LAUNCH DATE AUG 26 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC

DISTANCE 455.984

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.82 VL 32.888 GAL 5.06 AZL 87.77 HCA 135.12 SMA 196.74 ECC .24696 INC 2.2339 V1 29.471  
 RP 241.07 LAP 1.56 LOP 107.76 VP 20.652 GAP 5.96 AZP 91.58 TAL 25.98 TAP 161.10 RCA 148.16 APO 245.33 V2 22.777  
 RC 239.179 GL 19.43 GP -22.17 ZAL 46.84 ZAP 101.11 ETS 186.48 ZAE 133.14 ETE 205.78 ZAC 64.20 ETC 285.20 LVI 1.41

PLANETOCENTRIC CONIC

C3 23.020 VHL 4.798 DLA 21.03 RAL 9.80 RAD 6644.2 VEL 11.959 PTH 6.96 VHP 2.424 DPA -9.73 RAP 36.29 ECC 1.3789  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 56 3595.19 -47.30 137.06 251.25 95.87 9 18 51 2595.2 -39.55 106.27  
 60.00 8 33 2 3557.65 -40.30 134.24 251.81 90.66 9 32 20 2557.6 -35.62 104.17  
 70.00 8 55 6 3492.88 -33.99 128.78 251.61 86.45 9 53 18 2492.7 -31.90 100.24  
 80.00 9 33 21 3372.74 -29.18 119.19 251.11 83.39 10 29 33 2372.7 -28.97 91.76  
 90.00 10 40 33 3155.78 -27.27 102.97 250.83 82.19 11 33 9 2155.8 -27.79 75.98  
 100.00 12 16 13 2847.21 -29.18 80.56 251.11 83.39 13 3 40 1847.2 -28.97 53.13  
 110.00 13 54 32 2539.50 -33.99 57.70 251.61 86.45 14 36 51 1539.5 -31.90 29.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2375 TRA-1.1220 TC3-1.4136 BAU .7551 SGT 1995.4 SGR 1970.4 SG3 1689.9 ST 25.9 SR 11.5 SS 39.4  
 RDE -.1615 RRA -.2942 RC3-2.0055 FAU .50699 RRT .8154 RRF .9570 RTF .8369 CRT .8851 CRS .4456 CST .0562  
 FDE 2.7172 FRA-4.7709 FC-19.0667 BSP 4274 SGB 2804.2 R23 .2019 R13 .9406 LSA 39.9 MSA 27.5 SBA 2.6  
 BDE .2672 BRA 1.1600 BC3 2.4536 FSP 2872 SGT 2671.7 SG2 852.0 THA 44.56 EL1 27.9 EL2 5.0 ALF 22.31

LAUNCH DATE AUG 26 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

DISTANCE 459.778

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.82 VL 32.888 GAL 5.03 AZL 87.71 HCA 136.08 SMA 196.73 ECC .24674 INC 2.2937 V1 29.471  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.619 GAP 5.72 AZP 91.63 TAL 25.84 TAP 161.90 RCA 148.19 APO 245.27 V2 22.749  
 RC 242.049 GL 15.86 GP -22.61 ZAL 47.09 ZAP 99.60 ETS 185.93 ZAE 131.43 ETE 204.79 ZAC 63.91 ETC 285.29 LVI 1.71

PLANETOCENTRIC CONIC

C3 22.995 VHL 4.795 DLA 21.48 RAL 9.74 RAD 6644.1 VEL 11.957 PTH 6.96 VHP 2.416 DPA -10.30 RAP 35.89 ECC 1.3784  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 41 3604.51 -47.36 137.95 251.82 95.19 9 16 46 2604.5 -39.85 105.96  
 60.00 8 30 4 3568.89 -40.30 135.19 252.07 90.02 9 29 33 2568.9 -35.88 103.01  
 70.00 8 51 9 3506.80 -33.93 129.87 251.78 85.80 9 49 36 2506.8 -32.11 101.29  
 80.00 9 28 13 3390.54 -29.04 120.49 251.20 82.72 10 24 44 2390.5 -29.12 93.07  
 90.00 10 34 48 3175.72 -27.07 104.40 250.89 81.50 11 27 41 2175.7 -27.91 77.42  
 100.00 12 11 5 2865.02 -29.04 81.86 251.20 82.72 12 58 50 1865.0 -29.12 54.43  
 110.00 13 50 35 2553.61 -33.93 58.79 251.78 85.80 14 33 9 1553.6 -32.11 30.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2248 TRA-1.1628 TC3-1.5498 BAU .7911 SGT 2123.9 SGR 2015.4 SG3 1696.8 ST 26.2 SR 10.4 SS 41.1  
 RDE -.1343 RRA -.3089 RC3-2.0541 FAU .50784 RRT .8316 RRF .9599 RTF .5404 CRT .9057 CRS .3697 CST .0378  
 FDE 2.8797 FRA-4.7615 FC-19.1231 BSP 4524 SGB 2927.9 R23 .2052 R13 .9424 LSA 41.3 MSA 27.7 SBA 2.5  
 BDE .2619 BRA 1.2026 BC3 2.5732 FSP 2943 SGT 2802.3 SG2 848.4 THA 43.20 EL1 27.9 EL2 4.1 ALF 20.22

LAUNCH DATE AUG 26 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

DISTANCE 463.572

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.82 VL 32.888 GAL 5.00 AZL 87.64 HCA 136.98 SMA 196.72 ECC .24654 INC 2.3554 V1 29.471  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.587 GAP 5.48 AZP 91.72 TAL 25.70 TAP 162.69 RCA 148.22 APO 245.22 V2 22.720  
 RC 244.907 GL 16.31 GP -23.06 ZAL 47.34 ZAP 98.11 ETS 185.36 ZAE 129.74 ETE 203.85 ZAC 63.62 ETC 285.37 LVI 2.03

PLANETOCENTRIC CONIC

C3 22.977 VHL 4.793 DLA 21.95 RAL 9.69 RAD 6644.1 VEL 11.957 PTH 6.96 VHP 2.410 DPA -11.02 RAP 35.49 ECC 1.3781  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 21 3614.23 -47.42 138.88 252.01 94.47 9 14 36 2614.2 -40.17 106.68  
 60.00 8 26 58 3580.63 -40.30 136.19 252.34 89.34 9 26 39 2580.6 -36.15 105.89  
 70.00 8 47 1 3521.60 -33.85 131.02 251.95 85.13 9 45 42 2521.6 -32.32 102.39  
 80.00 9 22 48 3409.37 -28.87 121.86 251.29 82.02 10 19 37 2409.4 -29.27 94.45  
 90.00 10 28 36 3196.94 -26.85 105.91 250.95 80.78 11 21 53 2196.9 -28.02 78.97  
 100.00 12 5 40 2883.84 -28.87 83.23 251.29 82.02 12 53 44 1883.8 -29.27 55.81  
 110.00 13 46 27 2568.42 -33.85 59.94 251.95 85.13 14 29 15 1568.4 -32.32 31.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2089 TRA-1.2006 TC3-1.6806 BAU .8283 SGT 2247.4 SGR 2068.4 SG3 1706.9 ST 26.4 SR 9.6 SS 42.4  
 RDE -.1102 RRA -.3235 RC3-2.1088 FAU .51002 RRT .8465 RRF .9628 RTF .8635 CRT .9250 CRS .2657 CST .0002  
 FDE 2.9985 FRA-4.7868 FC-19.2171 BSP 4767 SGB 3054.3 R23 .2039 R13 .9454 LSA 42.5 MSA 27.9 SBA 2.5  
 BDE .2344 BRA 1.2434 BC3 2.6966 FSP 2959 SGT 2935.7 SG2 843.1 THA 42.20 EL1 27.9 EL2 3.4 ALF 18.84

LAUNCH DATE		AUG 26 1973		FLIGHT TIME		212.00		ARRIVAL DATE		MAR 26 1974															
HELIOCENTRIC CONIC						DISTANCE 467.366			EARTH TO MARS																
RL	151.18	LAL	.00	LOL	332.62	VL	32.800	GAL	4.97	AZL	87.58	HCA	137.81	SMA	196.72	ECC	.24636	INC	2.4191	V1	29.471				
RP	241.92	LAP	1.62	LOP	110.55	VP	20.556	GAP	5.24	AZP	91.80	TAL	25.56	TAP	163.47	RCA	148.26	APO	245.19	V2	22.692				
RC	247.75	GL	16.77	GP	-23.51	ZAL	47.81	ZAP	96.64	ETS	184.79	ZAE	128.03	ETE	202.94	ZAC	63.32	ETC	285.45	LVI	2.35				
PLANETOCENTRIC CONIC																									
C3	22.963	VHL	4.792	DLA	22.43	RAL	9.63	RAD	6644.1	VEL	11.956	PTH	6.96	VHP	2.406	DPA	-11.67	RAP	35.11	ECC	1.3770				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	11	56	3624.39	-47.47		139.86		252.42		93.72		9	12	20	2624.4		-40.49						107.44
60.00		8	23	44	3592.93	-40.28		137.24		252.63		88.63		9	23	37	2592.9		-36.42						106.62
70.00		8	42	40	3537.18	-33.75		132.23		252.13		84.42		9	41	37	2537.2		-32.53						103.56
80.00		9	17	3	3429.36	-26.67		123.32		251.39		81.28		10	14	12	2429.4		-29.41						95.92
90.00		10	22	0	3219.63	-26.59		107.52		251.00		80.01		11	15	40	2219.6		-26.12						80.62
100.00		11	59	54	2903.83	-26.67		84.68		251.39		81.28		12	48	18	1903.8		-29.41						57.28
110.00		13	42	6	2584.00	-33.75		61.15		252.13		84.42		14	25	10	1584.0		-32.53						32.48
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY													
TDE	-1.1875	TRA	-1.2393	TC3	-1.8133	BAU	.8664	SGT	2374.9	SGR	2121.2	SG3	1714.3	ST	26.7	SR	8.9	SS	43.7						
RDE	-0.0850	RAA	-3.3400	RC3	-2.1626	FAU	.51122	RRT	.8595	RRF	.9655	RTF	.8748	CRT	.9440	CRS	.1321	CST	-.0398						
FDE	3.1190	FRA	-4.8024	FC	-19.2733	BSP	5012	SGB	3184.3	R23	.2029	R13	.9481	LSA	43.7	MSA	27.9	SSA	2.4						
BDE	.2058	BRA	1.2651	BC3	2.8222	FSP	2972	SG1	3072.0	SG2	838.3	THA	41.25	EL1	28.0	EL2	2.8	ALF	17.65						

LAUNCH DATE		AUG 26 1973		FLIGHT TIME		214.00		ARRIVAL DATE		MAR 26 1974															
HELIOCENTRIC CONIC						DISTANCE 471.160			EARTH TO MARS																
RL	151.18	LAL	.00	LOL	332.62	VL	32.800	GAL	4.94	AZL	87.51	HCA	138.83	SMA	196.73	ECC	.24621	INC	2.4850	V1	29.471				
RP	242.19	LAP	1.64	LOP	111.48	VP	20.527	GAP	5.01	AZP	91.87	TAL	25.40	TAP	164.24	RCA	148.29	APO	245.17	V2	22.665				
RC	250.580	GL	17.24	GP	-23.96	ZAL	47.89	ZAP	95.19	ETS	184.20	ZAE	126.37	ETE	202.07	ZAC	63.02	ETC	285.54	LVI	2.68				
PLANETOCENTRIC CONIC																									
C3	22.956	VHL	4.791	DLA	22.92	RAL	9.57	RAD	6644.1	VEL	11.956	PTH	6.96	VHP	2.403	DPA	-12.31	RAP	34.74	ECC	1.3770				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	9	24	3635.00	-47.51		140.88		252.96		92.94		9	9	59	2635.0		-40.82						108.24
60.00		8	20	21	3605.80	-40.25		138.33		252.93		87.89		9	20	27	2605.8		-36.69						107.80
70.00		8	38	5	3553.59	-33.63		133.50		252.32		83.68		9	37	18	2553.6		-32.73						104.79
80.00		9	10	54	3450.64	-28.44		124.86		251.48		80.50		10	8	25	2450.6		-29.53						97.48
90.00		10	14	54	3243.98	-26.30		109.24		251.04		79.20		11	8	58	2244.0		-28.20						82.39
100.00		11	53	46	2925.12	-28.44		86.22		251.48		80.50		12	42	31	1925.1		-29.53						58.85
110.00		13	37	31	2600.41	-33.63		62.41		252.32		83.68		14	20	52	1600.4		-32.73						33.71
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY													
TDE	-1.1660	TRA	-1.2782	TC3	-1.9461	BAU	.9050	SGT	2504.3	SGR	2174.2	SG3	1719.0	ST	26.9	SR	8.4	SS	45.0						
RDE	-0.0593	RAA	-3.3566	RC3	-2.2158	FAU	.51163	RRT	.8709	RRF	.9680	RTF	.8847	CRT	.9561	CRS	-.0295	CST	-.0841						
FDE	3.2342	FRA	-4.8115	FC	-19.2951	BSP	5265	SGB	3316.4	R23	.2017	R13	.9506	LSA	45.1	MSA	28.0	SSA	2.3						
BDE	.1763	BRA	1.3270	BC3	2.9489	FSP	2977	SG1	3209.9	SG2	833.7	THA	40.37	EL1	28.1	EL2	2.4	ALF	16.76						

LAUNCH DATE		AUG 26 1973		FLIGHT TIME		216.00		ARRIVAL DATE		MAR 30 1974															
HELIOCENTRIC CONIC						DISTANCE 474.953			EARTH TO MARS																
RL	151.18	LAL	.00	LOL	332.62	VL	32.800	GAL	4.91	AZL	87.45	HCA	139.76	SMA	196.78	ECC	.24608	INC	2.5532	V1	29.471				
RP	242.46	LAP	1.65	LOP	112.40	VP	20.498	GAP	4.78	AZP	91.95	TAL	25.24	TAP	165.00	RCA	148.33	APO	245.16	V2	22.638				
RC	253.394	GL	17.73	GP	-24.42	ZAL	48.19	ZAP	93.78	ETS	183.60	ZAE	124.71	ETE	201.21	ZAC	62.70	ETC	285.62	LVI	3.02				
PLANETOCENTRIC CONIC																									
C3	22.954	VHL	4.791	DLA	23.44	RAL	9.51	RAD	6644.1	VEL	11.956	PTH	6.96	VHP	2.403	DPA	-12.95	RAP	34.40	ECC	1.3770				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	6	45	3648.09	-47.54		141.95		253.31		92.11		9	7	31	2648.1		-41.16						109.09
60.00		8	16	49	3619.30	-40.21		139.48		253.24		87.11		9	17	8	2619.3		-36.97						108.84
70.00		8	33	14	3570.90	-33.50		134.83		252.31		82.90		9	32	45	2570.9		-32.94						106.10
80.00		9	4	20	3473.38	-28.17		126.49		251.56		79.68		10	2	13	2473.4		-29.65						99.16
90.00		10	7	14	3270.28	-25.95		111.09		251.07		78.34		11	1	44	2270.3		-28.25						84.32
100.00		11	47	11	2947.85	-28.17		87.86		251.56		79.68		12	38	19	1947.9		-29.65						60.53
110.00		13	32	41	2617.72	-33.50		63.75		252.31		82.90		14	16	18	1617.7		-32.94						33.02
DIFFERENTIAL CORRECTIONS						MID-COURSE EXECUTION ACCURACY						ORBIT DETERMINATION ACCURACY													
TDE	-1.1431	TRA	-1.3182	TC3	-2.0802	BAU	.9442	SGT	2637.2	SGR	2226.4	SG3	1720.3	ST	27.3	SR	8.2	SS	46.3						
RDE	-0.0323	RAA	-3.3729	RC3	-2.2671	FAU	.51104	RRT	.8808	RRF	.9703	RTF	.8331	CRT	.9541	CRS	-.2123	CST	-.1299						
FDE	3.3508	FRA	-4.8090	FC	-19.2739	BSP	5320	SGB	3451.3	R23	.2011	R13	.9527	LSA	46.6	MSA	28.0	SSA	2.3						
BDE	.1467	BRA	1.3700	BC3	3.0768	FSP	2980	SG1	3350.1	SG2	829.7	THA	39.53	EL1	28.4	EL2	2.4	ALF	16.12						

LAUNCH DATE		AUG 26 1973		FLIGHT TIME		218.00		ARRIVAL DATE		APR 1 1974															
HELIOCENTRIC CONIC						DISTANCE 478.745			EARTH TO MARS																
RL	151.18	LAL	.00	LOL	332.62	VL	32.800	GAL	4.87	AZL	87.38	HCA	140.68	SMA	196.77	ECC	.24596	INC	2.6239	V1	29.471				
RP	242.73	LAP	1.66	LOP	113.32	VP	20.471	GAP	4.54	AZP	92.03	TAL	25.08	TAP	165.75	RCA	148.37	APO	245.16	V2	22.612				
RC	258.191	GL	18.24	GP	-24.88	ZAL	48.49	ZAP	92.39	ETS	182.99	ZAE	123.06	ETE	200.38	ZAC	62.38	ETC	285.70	LVI	3.37				
PLANETOCENTRIC CONIC																									
C3	22.960	VHL	4.792	DLA	23.97	RAL	9.45	RAD	6644.1	VEL	11.956	PTH	6.96	VHP	2.405	DPA	-13.59	RAP	34.07	ECC	1.3770				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	3	59	3657.68	-47.58		143.08		253.79		91.25		9	4	57	2657.7		-41.50						109.98

LAUNCH DATE AUG 26 1973 FLIGHT TIME 220.00 ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC										DISTANCE 482.537										EARTH TO MARS																																																																																																																																																						
RL	131.18	LAL	.00	LOL	332.62	VL	32.883	GAL	4.84	AZL	87.30	HCA	141.60	SMA	196.78	ECC	.24587	INC	2.6973	V1	29.471	RP	242.99	LAP	1.68	LOP	114.24	VP	20.444	GAP	4.31	AZP	92.11	TAL	24.91	TAP	166.50	RCA	148.41	APO	245.18	V2	22.586	RC	258.972	GL	18.77	GP	-25.35	ZAL	48.81	ZAP	91.03	ETS	182.37	ZAE	121.43	ETE	199.58	ZAC	62.05	ETC	283.78	LVI	3.73																																																																																																									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																						
C3	22.973	VHL	4.793	DLA	24.92	RAL	9.39	RAD	6644.1	VEL	11.957	PTH	6.96	VMP	2.409	DPA	-14.22	RAP	33.77	ECC	1.3781	SGT	2908.5	SGR	2330.6	SG3	1714.5	ST	28.3	SR	6.8	SS	49.0	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8967	CR3	-.5621	C8T	-.2290	50.00	8	1	5	3689.83	-47.58	144.25	254.28	90.34	9	2	15	2669.8	-41.86	110.93	60.00	8	9	9	3648.33	-40.09	141.94	253.90	85.45	9	9	58	2648.3	-37.54	111.10	70.00	8	22	39	3608.56	-33.14	137.71	252.89	81.23	9	22	48	2608.6	-33.33	108.97	80.00	8	49	35	3524.08	-27.50	130.11	251.69	77.89	9	48	19	2524.1	-29.81	102.92	90.00	9	49	38	3330.15	-25.08	115.25	251.07	76.44	10	45	8	2330.2	-26.27	88.69	100.00	11	32	26	2998.55	-27.50	91.48	251.69	77.89	12	22	25	1998.5	-29.81	64.29	110.00	13	22	5	2655.38	-33.14	66.63	252.89	81.23	14	6	21	1655.4	-33.33	37.89
TDE	-.0911	TRA	-1.3993	TC3	-2.3482	BAU	1.0239	SGT	2908.5	SGR	2330.6	SG3	1714.5	ST	28.3	SR	6.8	SS	49.0	RDE	.0250	RRA	-.4056	RC3	-2.3666	FAU	.50740	RRT	.8974	RRF	.9743	RTF	.9070	CR	.8967	CR3	-.5621	C8T	-.2290	FDE	3.5793	FRA	-4.7816	FC	-19.1214	BSP	6042	SG8	3727.0	R23	.2000	R13	.9564	LSA	49.9	MSA	28.0	SSA	2.1	BDE	.0945	BRA	1.4568	BC3	3.3339	FSP	2969	SG1	3635.1	SG2	822.6	THA	38.01	EL1	29.4	EL2	3.8	ALF	15.86																																																																																											

LAUNCH DATE AUG 26 1973 FLIGHT TIME 222.00 ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC										DISTANCE 486.328										EARTH TO MARS																																																																																																																																																						
RL	131.18	LAL	.00	LOL	332.62	VL	32.885	GAL	4.80	AZL	87.23	HCA	142.51	SMA	196.83	ECC	.24579	INC	2.7735	V1	29.471	RP	243.24	LAP	1.69	LOP	115.16	VP	20.419	GAP	4.08	AZP	92.20	TAL	24.73	TAP	167.24	RCA	148.45	APO	245.20	V2	22.586	RC	261.736	GL	19.31	GP	-25.82	ZAL	49.15	ZAP	89.70	ETS	181.74	ZAE	119.82	ETE	198.78	ZAC	61.72	ETC	285.86	LVI	4.10																																																																																																									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																						
C3	22.994	VHL	4.795	DLA	25.09	RAL	9.32	RAD	6644.1	VEL	11.957	PTH	6.96	VMP	2.414	DPA	-14.86	RAP	33.49	ECC	1.3784	SGT	3046.6	SGR	2382.1	SG3	1707.1	ST	29.0	SR	9.6	SS	50.4	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8528	CR3	-.6942	C8T	-.2804	50.00	7	58	2	3682.54	-47.57	145.48	254.80	89.40	8	59	25	2682.5	-42.22	111.94	60.00	8	5	0	3663.97	-39.99	143.26	254.25	84.55	9	6	4	2664.0	-37.02	112.33	70.00	8	16	50	3629.13	-32.92	139.27	253.08	80.33	9	17	19	2629.1	-33.51	110.55	80.00	8	41	13	3552.62	-27.08	132.12	251.73	76.91	9	40	25	2552.6	-29.85	105.04	90.00	9	39	20	3364.87	-24.48	117.62	251.01	75.38	10	35	25	2364.9	-28.21	91.23	100.00	11	24	4	3027.09	-27.08	93.49	251.73	76.91	12	14	31	2027.1	-29.85	66.41	110.00	13	16	16	2675.94	-32.92	68.19	253.08	80.33	14	0	52	1675.9	-33.51	39.47
TDE	-.0621	TRA	-1.4407	TC3	-2.4815	BAU	1.0643	SGT	3046.6	SGR	2382.1	SG3	1707.1	ST	29.0	SR	9.6	SS	50.4	RDE	.0557	RRA	-.4217	RC3	-2.4142	FAU	.50429	RRT	.8974	RRF	.9761	RTF	.9125	CR	.8528	CR3	-.6942	C8T	-.2804	FDE	3.6939	FRA	-4.7539	FC	-18.9868	BSP	6309	SG8	3867.3	R23	.2000	R13	.9580	LSA	51.8	MSA	27.9	SSA	2.0	BDE	.0834	BRA	1.5011	BC3	3.4621	FSP	2959	SG1	3779.4	SG2	819.9	THA	37.32	EL1	30.1	EL2	4.8	ALF	16.26																																																																																											

LAUNCH DATE AUG 26 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC										DISTANCE 490.118										EARTH TO MARS																																																																																																																																																						
RL	131.18	LAL	.00	LOL	332.62	VL	32.887	GAL	4.77	AZL	87.15	HCA	143.43	SMA	196.86	ECC	.24573	INC	2.8328	V1	29.471	RP	243.30	LAP	1.70	LOP	116.08	VP	20.394	GAP	3.86	AZP	92.29	TAL	24.54	TAP	167.97	RCA	148.49	APO	245.24	V2	22.535	RC	264.463	GL	19.87	GP	-26.31	ZAL	49.50	ZAP	88.40	ETS	181.09	ZAE	118.23	ETE	198.02	ZAC	61.36	ETC	285.94	LVI	4.49																																																																																																									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																						
C3	23.024	VHL	4.798	DLA	25.88	RAL	9.24	RAD	6644.2	VEL	11.959	PTH	6.96	VMP	2.421	DPA	-15.49	RAP	33.24	ECC	1.3789	SGT	3186.5	SGR	2434.1	SG3	1697.2	ST	29.8	SR	10.7	SS	51.7	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8143	CR3	-.7884	C8T	-.3327	50.00	7	54	49	3695.87	-47.56	146.77	255.34	88.40	8	56	25	2695.0	-42.59	113.01	60.00	8	0	37	3680.44	-39.88	144.64	254.60	83.62	9	1	57	2680.4	-38.11	113.64	70.00	8	10	36	3651.02	-32.66	140.93	253.26	79.39	9	11	27	2651.0	-33.68	112.23	80.00	8	32	0	3583.85	-26.58	134.31	251.73	75.87	9	31	44	2583.8	-29.85	107.36	90.00	9	27	40	3404.00	-23.78	120.28	250.91	74.23	10	24	24	2404.0	-28.07	94.08	100.00	11	14	52	3058.32	-26.58	95.68	251.73	75.87	12	5	50	2058.3	-29.85	68.73	110.00	13	10	2	2697.84	-32.66	69.84	253.26	79.39	13	55	0	1697.8	-33.68	41.15
TDE	-.0312	TRA	-1.4828	TC3	-2.6142	BAU	1.1031	SGT	3186.5	SGR	2434.1	SG3	1697.2	ST	29.8	SR	10.7	SS	51.7	RDE	.0870	RRA	-.4388	RC3	-2.4607	FAU	.50046	RRT	.9104	RRF	.9778	RTF	.9175	CR	.8143	CR3	-.7884	C8T	-.3327	FDE	3.8003	FRA	-4.7239	FC	-18.8180	BSP	6571	SG8	4009.8	R23	.1998	R13	.8594	LSA	53.8	MSA	27.8	SSA	2.0	BDE	.0924	BRA	1.5481	BC3	3.5901	FSP	2938	SG1	3925.6	SG2	817.3	THA	38.67	EL1	31.1	EL2	6.0	ALF	17.03																																																																																											

LAUNCH DATE AUG 26 1973 FLIGHT TIME 226.00 ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC										DISTANCE 493.907										EARTH TO MARS																																																																																																																																																						
RL	131.18	LAL	.00	LOL	332.62	VL	32.889	GAL	4.73	AZL	87.06	HCA	144.34	SMA	196.91	ECC	.24589	INC	2.9354	V1	29.471	RP	243.74	LAP	1.71	LOP	116.99	VP	20.371	GAP	3.63	AZP	92.39	TAL	24.36	TAP	168.69	RCA	148.53	APO	245.28	V2	22.511	RC	267.212	GL	20.48	GP	-26.80	ZAL	49.88	ZAP	87.14	ETS	180.44	ZAE	116.67	ETE	197.26	ZAC	61.00	ETC	286.02	LVI	4.89																																																																																																									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																						
C3	23.063	VHL	4.802	DLA	26.29	RAL	9.18	RAD	6644.2	VEL	11.960	PTH	6.96	VMP	2.431	DPA	-16.12	RAP	33.02	ECC	1.3798	SGT	3327.0	SGR	2486.1	SG3	1684.7	ST	30.7	SR	12.1	SS	53.0	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.7852	CR3	-.8537	C8T	-.3847	50.00	7	51	28	3709.86	-47.52	148.12	255.90	87.36	8	53	15	2709.9	-42.96	114.14	60.00	7	55	57	3697.80	-39.74	146.10	254.96	82.64	8	57	35	2697.8	-38.39	115.02	70.00	8	3	53	3674.41	-32.35	142.88	253.44	78.39	9	5	8	2674.4	-33.83	114.04	80.00	8	21	44	3618.39	-25.98	136.70	251.69	74.74	9	22	2	2618.4	-29.80	109.93	90.00	9	14	6	3449.23	-22.91	123.31	250.72	72.96	10	11	35	2449.2	-27.84	97.37	100.00	11	4	36	3092.86	-25.98	98.07	251.69	74.74	11	56	8	2092.9	-29.80	71.30	110.00	13	3	20	2721.23	-32.35	71.60	253.44	78.39	13	48	41	1721.2	-33.83	42.96
TDE	.0020	TRA	-1.5247	TC3	-2.7453	BAU	1.1481	SGT	3327.0	SGR	2486.1	SG3	1684.7	ST	30.7	SR	12.1	SS	53.0	RDE	-.1195	RRA	-.4530	RC3	-2.5060	FAU	.49589	RRT	.9159	RRF	.9793	RTF	.9218	CR	.7852	CR3	-.8537	C8T	-.3847	FDE	3.9035	FRA	-4.6844	FC	-18.6144	BSP	6641	SG8	4153.3	R23	.1999	R13	.9807	LSA	55.9	MSA	27.7	SSA	1.9	BDE	.1196	BRA	1.5911	BC3	3.7171	FSP	2918	SG1	4072.5	SG2	815.3	THA	38.08	EL1	32.2	EL2	7.1	ALF	18.12																																																																																											

LAUNCH DATE AUG 26 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.892 GAL 4.70 AZL 86.98 HCA 145.25 SMA 196.95 ECC .24566 INC 3.0216 V1 29.471
RP 243.98 LAP 1.72 LOP 117.90 VP 20.349 GAP 3.41 AZP 92.48 TAL 24.16 TAP 169.41 RCA 146.57 APO 245.34 V2 22.487
RC 269.924 GL 21.07 GP -27.30 ZAL 50.24 ZAP 85.91 ETS 179.77 ZAE 115.12 ETE 196.52 ZAC 60.62 ETC 266.11 LVI 5.31

PLANETOCENTRIC CONIC

C3 23.113 VHL 4.808 DLA 26.92 RAL 9.08 RAD 6644.2 VEL 11.962 PTH 6.96 VHP 2.442 DPA -16.76 RAP 32.82 ECC 1.3804
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 30 3724.56 -47.47 149.54 256.48 86.27 8 49 54 2724.6 -43.35 115.35
60.00 7 50 59 3716.14 -39.57 147.63 255.32 81.62 8 52 55 2718.1 -38.67 116.50
70.00 7 56 38 3699.50 -31.99 144.55 253.59 77.34 8 58 18 2699.5 -33.96 115.99
80.00 8 10 6 3657.19 -25.26 139.36 251.60 73.53 9 11 3 2657.2 -29.68 112.81
90.00 8 57 35 3503.76 -21.78 126.90 250.40 71.50 9 55 59 2503.8 -27.44 101.31
100.00 10 52 58 3131.66 -25.26 100.73 251.60 73.53 11 45 10 2131.7 -29.68 74.17
110.00 12 56 4 2746.32 -31.99 73.47 253.59 77.34 13 41 51 1746.3 -33.96 44.91

DIFFERENTIAL CORRECTIONS

TDE .0379 TRA-1.5671 TC3-2.8746 BAU 1.1874 SGT 3468.3 SGR 2538.4 SG3 1669.7 ST 31.8 SR 13.7 SS 54.3
RDE .1538 RRA -.4720 RC3-2.5501 FAU .49061 RRT .9208 RRF .9808 RTF .9257 CRT .7670 CRS -.8985 CST -.4365
FDE 4.0062 FRA-4.6399 FC-18.3765 BSP 7110 SGB 4298.0 R23 .2000 R13 .9619 LSA 58.2 HSA 27.6 SSA 1.0
BDE .1584 BRA 1.6366 BC3 3.8427 FSP 2887 SG1 4220.3 SG2 813.6 THA 35.50 EL1 33.6 EL2 8.3 ALF 19.51

LAUNCH DATE AUG 26 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.894 GAL 4.66 AZL 86.89 HCA 146.16 SMA 197.01 ECC .24564 INC 3.1117 V1 29.471
RP 244.22 LAP 1.73 LOP 118.81 VP 20.327 GAP 3.18 AZP 92.59 TAL 23.96 TAP 170.12 RCA 146.61 APO 245.40 V2 22.464
RC 272.618 GL 21.70 GP -27.81 ZAL 50.63 ZAP 84.72 ETS 179.09 ZAE 113.61 ETE 195.79 ZAC 60.22 ETC 266.19 LVI 5.75

PLANETOCENTRIC CONIC

C3 23.175 VHL 4.814 DLA 27.58 RAL 8.98 RAD 6644.2 VEL 11.965 PTH 6.96 VHP 2.455 DPA -17.39 RAP 32.65 ECC 1.3814
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 44 1 3740.02 -47.39 151.02 257.07 85.13 8 46 21 2740.0 -43.73 116.63
60.00 7 45 41 3735.56 -39.36 149.24 255.68 80.54 8 47 57 2735.6 -38.94 118.08
70.00 7 48 45 3726.55 -31.37 146.54 253.72 76.23 8 50 51 2726.5 -34.07 118.09
80.00 7 56 37 3701.79 -24.36 142.37 251.42 72.18 8 58 19 2701.8 -29.45 116.10
90.00 8 35 36 3575.75 -20.15 131.55 249.84 69.73 9 35 12 2575.7 -26.72 106.45
100.00 10 39 29 3176.26 -24.36 103.74 251.42 72.18 11 32 26 2176.3 -29.45 77.47
110.00 12 48 11 2773.36 -31.37 75.46 253.72 76.23 13 34 24 1773.4 -34.07 47.01

DIFFERENTIAL CORRECTIONS

TDE .0758 TRA-1.6100 TC3-3.0020 BAU 1.2289 SGT 3610.4 SGR 2580.7 SG3 1651.9 ST 33.0 SR 15.4 SS 55.8
RDE .1891 RRA -.4890 RC3-2.5924 FAU .48456 RRT .9252 RRF .9821 RTF .9290 CRT .7588 CRS -.9285 CST -.4860
FDE 4.1033 FRA-4.5880 FC-18.1016 BSP 7379 SGB 4443.8 R23 .2004 R13 .9629 LSA 60.5 HSA 27.5 SSA 1.0
BDE .2038 BRA 1.6826 BC3 3.9664 FSP 2854 SG1 4368.9 SG2 812.5 THA 34.97 EL1 35.2 EL2 9.4 ALF 21.09

LAUNCH DATE AUG 26 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.897 GAL 4.62 AZL 86.79 HCA 147.06 SMA 197.06 ECC .24564 INC 3.2059 V1 29.471
RP 244.45 LAP 1.74 LOP 119.72 VP 20.307 GAP 2.96 AZP 92.69 TAL 23.78 TAP 170.82 RCA 148.86 APO 245.47 V2 22.441
RC 275.292 GL 22.35 GP -28.33 ZAL 51.04 ZAP 83.57 ETS 178.40 ZAE 112.11 ETE 195.07 ZAC 59.81 ETC 266.28 LVI 6.20

PLANETOCENTRIC CONIC

C3 23.249 VHL 4.822 DLA 28.26 RAL 8.88 RAD 6644.3 VEL 11.968 PTH 6.97 VHP 2.470 DPA -18.03 RAP 32.51 ECC 1.3828
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 39 57 3756.29 -47.28 152.58 257.68 83.94 8 42 34 2756.3 -44.12 118.01
60.00 7 40 0 3756.16 -39.12 150.93 256.04 79.41 8 42 36 2756.2 -39.20 119.77
70.00 7 40 6 3755.88 -31.07 148.69 253.82 75.03 8 42 42 2755.9 -34.13 120.38
80.00 7 40 22 3755.03 -23.21 145.90 251.10 70.67 8 42 57 2755.0 -29.06 120.01
90.00 7 49 20 3725.99 -16.34 140.92 248.24 66.59 8 51 26 2726.0 -24.59 116.93
100.00 10 23 14 3229.50 -23.21 107.27 251.10 70.67 11 17 4 2229.5 -29.06 81.38
110.00 12 39 32 2802.70 -31.07 77.60 253.82 75.03 13 26 15 1802.7 -34.13 49.30

DIFFERENTIAL CORRECTIONS

TDE .1167 TRA-1.6330 TC3-3.1261 BAU 1.2703 SGT 3752.4 SGR 2642.5 SG3 1631.2 ST 34.5 SR 17.3 SS 57.0
RDE .2263 RRA -.5061 RC3-2.6325 FAU .47767 RRT .9291 RRF .9833 RTF .520 CRT .7587 CRS -.9492 CST -.5337
FDE 4.1986 FRA-4.5282 FC-17.7870 BSP 7658 SGB 4589.5 R23 .2009 R13 .9638 LSA 63.1 HSA 27.4 SSA 1.7
BDE .2546 BRA 1.7287 BC3 4.0869 FSP 2821 SG1 4517.1 SG2 811.8 THA 34.47 EL1 37.1 EL2 10.5 ALF 22.80

LAUNCH DATE AUG 26 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.900 GAL 4.58 AZL 86.70 HCA 147.97 SMA 197.12 ECC .24566 INC 3.3047 V1 29.471
RP 244.68 LAP 1.75 LOP 120.63 VP 20.287 GAP 2.74 AZP 92.80 TAL 23.55 TAP 171.52 RCA 148.70 APO 245.55 V2 22.418
RC 277.948 GL 23.04 GP -28.87 ZAL 51.46 ZAP 82.45 ETS 177.70 ZAE 110.65 ETE 194.37 ZAC 59.38 ETC 266.37 LVI 6.67

PLANETOCENTRIC CONIC

C3 23.338 VHL 4.831 DLA 28.97 RAL 8.78 RAD 6644.3 VEL 11.972 PTH 6.97 VHP 2.486 DPA -18.68 RAP 32.40 ECC 1.3841
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 33 37 3773.48 -47.14 154.22 258.30 82.68 8 38 31 2773.5 -44.51 119.47
60.00 7 33 54 3776.07 -38.83 152.72 256.39 78.23 8 36 52 2778.1 -39.45 121.58
70.00 7 30 33 3787.95 -30.49 151.00 253.87 73.80 8 33 41 2787.9 -34.15 122.89
80.00 7 19 12 3823.66 -21.58 150.35 250.53 68.86 8 22 56 2823.7 -28.37 124.99
83.45 6 45 9 3933.12 -15.83 155.87 247.97 65.42 7 50 43 2933.1 -24.60 132.12
100.00 10 2 4 3298.13 -21.59 111.72 250.53 68.86 10 57 2 2298.1 -28.37 86.36
110.00 12 29 59 2834.77 -30.49 79.92 253.87 73.80 13 17 14 1834.8 -34.15 51.80

DIFFERENTIAL CORRECTIONS

TDE .1998 TRA-1.6967 TC3-3.2479 BAU 1.3123 SGT 3895.4 SGR 2696.1 SG3 1608.8 ST 36.1 SR 19.4 SS 58.3
RDE .2649 RRA -.5242 RC3-2.6721 FAU .47035 RRT .9327 RRF .9845 RTF .9347 CRT .7630 CRS -.9631 CST -.5787
FDE 4.2877 FRA-4.4685 FC-17.4477 BSP 7923 SGB 4737.4 R23 .2014 R13 .9647 LSA 65.8 HSA 27.3 SSA 1.6
BDE .3094 BRA 1.7759 BC3 4.2059 FSP 2776 SG1 4667.4 SG2 811.4 THA 34.01 EL1 39.3 EL2 11.5 ALF 24.55



LAUNCH DATE AUG 26 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

RL 191.18 LAL .00 LOL 332.62 VL 32.904 GAL 4.54 AZL 86.59 HCA 148.87 SMA 197.19 ECC .24568 INC 3.4083 V1 29.471
RP 244.90 LAP 1.76 LOP 121.53 VP 20.288 GAP 2.52 AZP 92.92 TAL 23.34 TAP 172.21 RCA 148.74 APO 245.83 V2 22.397
RC 280.584 GL 23.75 GP -29.43 ZAL 51.91 ZAP 81.38 ETS 178.99 ZAE 109.21 ETE 193.67 ZAC 58.93 ETC 286.48 LVI 7.16

PLANETOCENTRIC CONIC

C3 23.443 VHL 4.842 DLA 29.70 RAL 8.62 RAD 8644.3 VEL 11.978 PTH 6.97 VHP 2.505 DPA -19.31 RAP 32.33 ECC 1.3858
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 30 59 3791.59 -46.97 155.94 258.94 81.37 8 34 11 2791.6 -44.90 121.05
60.00 7 27 18 3801.44 -38.49 154.62 256.73 76.99 8 30 39 2801.4 -39.68 123.53
70.00 7 19 52 3823.37 -29.79 153.52 253.86 72.46 8 23 35 2823.4 -34.11 125.65
80.00 6 43 7 3939.37 -18.58 157.62 249.24 66.20 7 48 46 2939.4 -26.77 133.21
80.52 6 21 30 4008.48 -16.17 161.60 248.09 64.74 7 28 19 3008.5 -25.19 137.87
100.00 9 25 59 3413.84 -18.58 118.99 249.24 66.20 10 22 53 2413.8 -26.77 94.58
110.00 12 19 18 2870.19 -29.79 82.44 253.86 72.46 13 7 8 1870.2 -34.11 54.57

DIFFERENTIAL CORRECTIONS

TDE .2055 TRA-1.7409 TC3-3.3861 BAU 1.3543
RDE .3051 RRA -.5427 RC3-2.7095 FAU .46227
FDE 4.3709 FRA-4.4024 FC-17.0717 BSP 8189
BDE .3678 BRA 1.8235 BC3 4.3212 FSP .2728

MID-COURSE EXECUTION ACCURACY

SGT 4038.4 SGR 2749.8 SG3 1503.8
RRR .9360 RRF .9855 RTF .9371
SGB 4865.7 R23 .2020 R13 .9655
SG1 4817.9 SG2 811.5 THA 33.59

ORBIT DETERMINATION ACCURACY

ST 37.9 SR 21.5 SS 59.5
CRT .7752 CRS -.9728 CST -.6204
LSA 68.6 MSA 27.2 S5A 1.5
EL1 41.8 EL2 12.3 ALF 26.23

LAUNCH DATE AUG 26 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.907 GAL 4.50 AZL 86.48 HCA 149.77 SMA 197.26 ECC .24572 INC 3.5174 V1 29.471
RP 245.11 LAP 1.77 LOP 122.44 VP 20.251 GAP 2.30 AZP 93.04 TAL 23.12 TAP 172.89 RCA 148.79 APO 245.73 V2 22.375
RC 283.198 GL 24.50 GP -30.00 ZAL 52.37 ZAP 80.34 ETS 176.26 ZAE 107.80 ETE 192.98 ZAC 58.45 ETC 286.56 LVI 7.68

PLANETOCENTRIC CONIC

C3 23.565 VHL 4.854 DLA 30.48 RAL 8.48 RAD 8644.4 VEL 11.981 PTH 6.98 VHP 2.526 DPA -19.96 RAP 32.29 ECC 1.3878
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 26 1 3810.77 -46.76 157.74 259.57 79.99 8 29 32 2810.8 -45.28 122.73
60.00 7 20 8 3826.46 -38.08 156.62 257.04 75.68 8 23 54 2826.5 -39.89 125.62
70.00 7 7 44 3863.07 -28.94 156.30 253.77 71.02 8 12 7 2863.1 -33.98 128.74
78.17 6 3 12 4066.20 -16.52 166.08 248.21 64.03 7 10 58 3066.2 -25.79 142.37
78.17 6 3 12 4066.20 -16.52 166.08 248.21 64.03 7 10 58 3066.2 -25.79 142.37
78.17 6 3 12 4066.20 -16.52 166.08 248.21 64.03 7 10 58 3066.2 -25.79 142.37
110.00 12 7 11 2909.89 -28.94 85.22 253.77 71.02 12 55 41 1909.9 -33.98 57.66

DIFFERENTIAL CORRECTIONS

TDE .2547 TRA-1.7847 TC3-3.4790 BAU 1.3960
RDE .3473 RRA -.5614 RC3-2.7446 FAU .45348
FDE 4.4507 FRA-4.3288 FC-16.6599 BSP 8474
BDE .4307 BRA 1.8709 BC3 4.4313 FSP 2682

MID-COURSE EXECUTION ACCURACY

SGT 4179.9 SGR 2803.5 SG3 1556.0
RRR .9389 RRF .9865 RTF .9391
SGB 5033.0 R23 .2028 R13 .9662
SG1 4967.1 SG2 812.0 THA 33.20

ORBIT DETERMINATION ACCURACY

ST 39.9 SR 23.9 SS 60.8
CRT .7882 CRS -.9798 CST -.6593
LSA 71.6 MSA 27.0 S5A 1.5
EL1 44.6 EL2 13.1 ALF 27.83

LAUNCH DATE AUG 26 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.911 GAL 4.46 AZL 86.37 HCA 150.67 SMA 197.33 ECC .24577 INC 3.6322 V1 29.471
RP 245.32 LAP 1.78 LOP 123.34 VP 20.234 GAP 2.08 AZP 93.17 TAL 22.90 TAP 173.57 RCA 148.83 APO 245.83 V2 22.354
RC 285.791 GL 25.27 GP -30.59 ZAL 52.84 ZAP 79.35 ETS 175.52 ZAE 106.42 ETE 192.29 ZAC 57.95 ETC 286.67 LVI 8.22

PLANETOCENTRIC CONIC

C3 23.707 VHL 4.869 DLA 31.26 RAL 8.31 RAD 8644.4 VEL 11.987 PTH 6.98 VHP 2.549 DPA -20.61 RAP 32.28 ECC 1.3902
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 20 39 3831.11 -46.50 159.64 260.21 78.55 8 24 31 2831.1 -43.66 124.95
60.00 7 12 19 3853.35 -37.61 158.75 257.32 74.31 8 18 33 2853.3 -40.08 127.89
70.00 6 53 40 3908.50 -27.89 159.42 253.55 69.44 7 58 48 2908.5 -33.72 132.26
76.09 5 47 36 4114.88 -18.88 169.92 248.35 63.29 6 56 11 3114.9 -26.41 146.24
76.09 5 47 36 4114.88 -18.88 169.92 248.35 63.29 6 56 11 3114.9 -26.41 146.24
76.09 5 47 36 4114.88 -18.88 169.92 248.35 63.29 6 56 11 3114.9 -26.41 146.24
110.00 11 53 6 2955.32 -27.89 88.34 253.55 69.44 12 42 21 1955.3 -33.72 61.18

DIFFERENTIAL CORRECTIONS

TDE .3062 TRA-1.8302 TC3-3.5888 BAU 1.4385
RDE .3915 RRA -.5814 RC3-2.7784 FAU .44419
FDE 4.5240 FRA-4.2553 FC-16.2209 BSP 8740
BDE .4970 BRA 1.9203 BC3 4.5386 FSP 2628

MID-COURSE EXECUTION ACCURACY

SGT 4323.2 SGR 2858.9 SG3 1826.3
RRR .9418 RRF .9875 RTF .5410
SGB 5183.0 R23 .2036 R13 .9668
SG1 5118.8 SG2 813.1 THA 32.84

ORBIT DETERMINATION ACCURACY

ST 42.2 SR 26.3 SS 62.0
CRT .8023 CRS -.9847 CST -.6943
LSA 74.7 MSA 26.9 S5A 1.4
EL1 47.7 EL2 13.9 ALF 29.27

LAUNCH DATE AUG 26 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.915 GAL 4.42 AZL 86.25 HCA 151.57 SMA 197.41 ECC .24583 INC 3.7536 V1 29.471
RP 245.53 LAP 1.79 LOP 124.24 VP 20.218 GAP 1.87 AZP 93.30 TAL 22.67 TAP 174.25 RCA 148.88 APO 245.93 V2 22.334
RC 288.361 GL 26.09 GP -31.20 ZAL 53.34 ZAP 78.40 ETS 174.77 ZAE 105.08 ETE 191.61 ZAC 57.42 ETC 286.78 LVI 8.78

PLANETOCENTRIC CONIC

C3 23.871 VHL 4.886 DLA 32.09 RAL 8.12 RAD 8644.5 VEL 11.994 PTH 6.99 VHP 2.574 DPA -21.27 RAP 32.31 ECC 1.3929
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 14 52 3832.71 -46.19 161.63 260.84 77.05 8 19 5 2852.7 -46.03 126.50
60.00 7 3 45 3882.40 -37.05 161.01 257.56 72.86 8 8 27 2882.4 -40.20 130.35
70.00 6 36 44 3962.35 -26.55 163.03 253.14 67.69 7 42 46 2962.3 -33.28 136.40
74.17 5 33 41 4157.82 -17.24 173.36 248.49 62.51 6 42 59 3157.8 -27.06 149.72
74.17 5 33 41 4157.82 -17.24 173.36 248.49 62.51 6 42 59 3157.8 -27.06 149.72
74.17 5 33 41 4157.82 -17.24 173.36 248.49 62.51 6 42 59 3157.8 -27.06 149.72
110.00 11 36 10 3009.17 -26.55 91.95 253.14 67.69 12 26 19 2009.2 -33.28 65.32

DIFFERENTIAL CORRECTIONS

TDE .3614 TRA-1.8751 TC3-3.6915 BAU 1.4804
RDE .4380 RRA -.6016 RC3-2.8093 FAU .43417
FDE 4.5921 FRA-4.1740 FC-15.7458 BSP 9019
BDE .5679 BRA 1.9692 BC3 4.6389 FSP 2572

MID-COURSE EXECUTION ACCURACY

SGT 4464.0 SGR 2914.3 SG3 1494.3
RRR .9440 RRF .9883 RTF .9427
SGB 5331.0 R23 .2045 R13 .9674
SG1 5268.4 SG2 814.6 THA 32.52

ORBIT DETERMINATION ACCURACY

ST 44.7 SR 28.9 SS 63.1
CRT .8171 CRS -.9883 CST -.7263
LSA 78.1 MSA 26.8 S5A 1.3
EL1 51.1 EL2 14.5 ALF 30.58

LAUNCH DATE AUG 26 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 527.868

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.919 GAL 4.37 AZL 86.12 HCA 152.47 SMA 197.48 ECC .24591 INC 3.8819 V1 29.471
RP 245.73 LAP 1.79 LOP 125.14 VP 20.202 GAP 1.65 AZP 93.44 TAL 22.44 TAP 174.91 RCA 148.92 APO 246.05 V2 22.314
RC 290.907 GL 26.94 GP -31.84 ZAL 53.86 ZAP 77.50 ETS 174.01 ZAE 103.76 ETE 190.93 ZAC 56.87 ETC 286.89 LVI 9.38

PLANETOCENTRIC CONIC

C3 24.061 VHL 4.905 DLA 32.95 RAL 7.91 RAD 8644.6 VEL 12.002 PTH 7.00 VHP 2.602 DPA -21.95 RAP 32.39 ECC 1.3960
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 8 36 3875.72 -45.82 163.73 261.46 75.47 8 13 12 2875.7 -46.37 128.61
60.00 6 54 16 3913.97 -36.39 163.43 257.74 71.33 7 59 30 2914.0 -40.28 133.03
70.00 6 14 54 4030.64 -24.71 167.48 252.40 65.64 7 22 5 3030.6 -32.50 141.58
72.35 5 20 54 4196.87 -17.60 176.55 248.63 61.69 6 30 51 3196.9 -27.71 152.95
72.35 5 20 54 4196.87 -17.60 176.55 248.63 61.69 6 30 51 3196.9 -27.71 152.95
72.35 5 20 54 4196.87 -17.60 176.55 248.63 61.69 6 30 51 3196.9 -27.71 152.95
110.00 11 14 20 3077.46 -24.71 96.40 252.40 65.64 12 5 38 2077.5 -32.50 70.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4195 TRA-1.9213 TC3-3.7893 BAU 1.5229 SGT 4605.5 SGR 2971.6 SG3 1460.2 ST 47.3 SR 31.6 SS 64.3
RDE .4870 RRA -.6233 RC3-2.8384 FAU .42366 RRT .9463 RRF .9891 RTF .9441 CRT .8316 CRS -.9909 CST -.7548
FDE 4.6540 FRA-4.0921 FC-15.2437 BSP 9289 SGB 5481.0 R23 .2055 R13 .9679 LSA 81.6 MSA 26.7 SSA 1.3
BDE .6428 BRA 2.0198 BC3 4.7345 FSP 2510 SGI 5419.8 SG2 816.6 THA 32.23 EL1 54.8 EL2 15.1 ALF 31.69

LAUNCH DATE AUG 26 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 531.745

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.923 GAL 4.33 AZL 85.98 HCA 153.36 SMA 197.57 ECC .24599 INC 4.0178 V1 29.471
RP 245.93 LAP 1.80 LOP 126.04 VP 20.188 GAP 1.44 AZP 93.59 TAL 22.21 TAP 175.57 RCA 148.97 APO 246.17 V2 22.295
RC 293.430 GL 27.83 GP -32.50 ZAL 54.39 ZAP 76.64 ETS 173.23 ZAE 102.48 ETE 190.26 ZAC 56.28 ETC 287.02 LVI 10.00

PLANETOCENTRIC CONIC

C3 24.279 VHL 4.927 DLA 33.84 RAL 7.67 RAD 8644.7 VEL 12.011 PTH 7.00 VHP 2.632 DPA -22.63 RAP 32.50 ECC 1.3996
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 1 46 3900.29 -45.38 165.93 262.05 73.82 8 6 46 2900.3 -46.70 130.90
60.00 6 43 42 3948.57 -35.60 166.03 257.83 69.72 7 49 30 2948.6 -40.30 135.97
70.00 5 40 14 4137.31 -21.55 174.15 250.82 62.84 6 49 11 3137.3 -30.82 149.43
70.59 5 8 56 4232.92 -17.96 179.55 248.78 60.82 6 19 29 3232.9 -28.39 156.01
70.59 5 8 56 4232.92 -17.96 179.55 248.78 60.82 6 19 29 3232.9 -28.39 156.01
70.59 5 8 56 4232.92 -17.96 179.55 248.78 60.82 6 19 29 3232.9 -28.39 156.01
110.00 10 39 40 3184.13 -21.55 103.07 250.82 62.84 11 32 44 2184.1 -30.82 76.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4803 TRA-1.9684 TC3-3.8806 BAU 1.5656 SGT 4746.7 SGR 3029.8 SG3 1423.8 ST 50.2 SR 34.4 SS 65.3
RDE .5384 RRA -.6460 RC3-2.8647 FAU .41252 RRT .9483 RRF .9899 RTF .9454 CRT .8453 CRS -.9928 CST -.7799
FDE 4.7078 FRA-4.0058 FC-14.7099 BSP 9562 SGB 5631.3 R23 .2086 R13 .9683 LSA 85.2 MSA 26.6 SSA 1.2
BDE .7215 BRA 2.0717 BC3 4.8235 FSP 2447 SGI 5571.4 SG2 819.2 THA 31.96 EL1 58.8 EL2 15.7 ALF 32.67

LAUNCH DATE AUG 26 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 535.523

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.928 GAL 4.29 AZL 85.84 HCA 154.28 SMA 197.65 ECC .24608 INC 4.1623 V1 29.471
RP 246.12 LAP 1.81 LOP 126.93 VP 20.175 GAP 1.23 AZP 93.73 TAL 21.97 TAP 176.23 RCA 149.01 APO 246.29 V2 22.278
RC 295.928 GL 28.77 GP -33.19 ZAL 54.95 ZAP 75.83 ETS 172.44 ZAE 101.22 ETE 189.59 ZAC 55.88 ETC 287.15 LVI 10.66

PLANETOCENTRIC CONIC

C3 24.529 VHL 4.953 DLA 34.78 RAL 7.40 RAD 8644.8 VEL 12.021 PTH 7.01 VHP 2.689 DPA -23.33 RAP 32.65 ECC 1.4037
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 54 10 3926.60 -44.85 168.25 262.61 72.10 7 59 44 2926.6 -46.99 133.37
60.00 6 31 45 3986.87 -34.66 168.85 257.81 68.01 7 38 12 2986.9 -40.21 139.23
68.86 4 57 35 4266.70 -18.32 182.41 248.94 59.91 6 8 41 3266.7 -29.08 158.93
68.86 4 57 35 4266.70 -18.32 182.41 248.94 59.91 6 8 41 3266.7 -29.08 158.93
68.86 4 57 35 4266.70 -18.32 182.41 248.94 59.91 6 8 41 3266.7 -29.08 158.93
68.86 4 57 35 4266.70 -18.32 182.41 248.94 59.91 6 8 41 3266.7 -29.08 158.93
68.86 4 57 35 4266.70 -18.32 182.41 248.94 59.91 6 8 41 3266.7 -29.08 158.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5451 TRA-2.0182 TC3-3.9842 BAU 1.6085 SGT 4886.8 SGR 3090.1 SG3 1385.5 ST 53.3 SR 37.3 SS 66.3
RDE .5924 RRA -.6706 RC3-2.8887 FAU .40091 RRT .9503 RRF .9906 RTF .5.66 CRT .8587 CRS -.9942 CST -.8025
FDE 4.7522 FRA-3.9197 FC-14.1501 BSP 9828 SGB 5781.8 R23 .2075 R13 .9688 LSA 89.1 MSA 26.4 SSA 1.1
BDE .8090 BRA 2.1248 BC3 4.9050 FSP 2376 SGI 5723.1 SG2 821.7 THA 31.73 EL1 63.0 EL2 16.2 ALF 33.51

LAUNCH DATE AUG 26 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 539.299

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.932 GAL 4.24 AZL 85.68 HCA 155.15 SMA 197.74 ECC .24618 INC 4.3163 V1 29.471
RP 246.30 LAP 1.81 LOP 127.83 VP 20.162 GAP 1.02 AZP 93.92 TAL 21.73 TAP 178.88 RCA 149.06 APO 246.42 V2 22.258
RC 298.401 GL 29.75 GP -33.91 ZAL 55.54 ZAP 75.07 ETS 171.63 ZAE 100.01 ETE 188.92 ZAC 55.00 ETC 287.30 LVI 11.33

PLANETOCENTRIC CONIC

C3 24.815 VHL 4.981 DLA 35.75 RAL 7.09 RAD 8644.9 VEL 12.033 PTH 7.02 VHP 2.701 DPA -24.05 RAP 32.84 ECC 1.4084
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 48 5 3954.90 -44.23 170.69 263.11 70.31 7 52 0 2954.9 -47.24 136.06
60.00 6 18 3 4029.90 -33.52 171.93 257.63 66.18 7 25 12 3029.9 -40.00 142.87
67.15 4 46 40 4298.68 -18.69 185.17 249.09 58.95 5 58 19 3298.7 -29.79 161.77
67.15 4 46 40 4298.68 -18.69 185.17 249.09 58.95 5 58 19 3298.7 -29.79 161.77
67.15 4 46 40 4298.68 -18.69 185.17 249.09 58.95 5 58 19 3298.7 -29.79 161.77
67.15 4 46 40 4298.68 -18.69 185.17 249.09 58.95 5 58 19 3298.7 -29.79 161.77
67.15 4 46 40 4298.68 -18.69 185.17 249.09 58.95 5 58 19 3298.7 -29.79 161.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6139 TRA-2.0639 TC3-4.0383 BAU 1.6510 SGT 5024.2 SGR 3150.7 SG3 1344.5 ST 56.6 SR 40.4 SS 67.2
RDE .6501 RRA -.6957 RC3-2.9083 FAU .38857 RRT .9520 RRF .9912 RTF .9441 CRT .8710 CRS -.9953 CST -.8226
FDE 4.7913 FRA-3.8248 FC-13.5560 BSP 10112 SGB 5930.4 R23 .2086 R13 .9691 LSA 93.1 MSA 26.3 SSA 1.1
BDE .8941 BRA 2.1780 BC3 4.9766 FSP 2308 SGI 5872.7 SG2 825.0 THA 31.53 EL1 67.6 EL2 16.7 ALF 34.24

LAUNCH DATE AUG 26 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.937 GAL 4.20 AZL 85.52 HCA 156.04 SMA 197.83 ECC .24630 INC 4.4607 V1 29.471
RP 246.48 LAP 1.82 LOP 129.72 VP 20.130 GAP .81 AZP 94.10 TAL 21.49 TAP 177.93 RCA 149.10 APO 246.58 V2 22.241
RC 300.890 GL 30.78 GP -34.67 ZAL 56.14 ZAP 74.36 ETS 170.81 ZAE 98.83 ETE 188.25 ZAC 54.31 ETC 287.46 LVI 12.07

PLANETOCENTRIC CONIC

C3 25.144 VHL 5.014 DLA 36.77 RAL 6.75 RAD 8648.1 VEL 12.046 PTH 7.03 VHP 2.741 DPA -24.78 RAP 33.08 ECC 1.4138
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 37 0 3885.45 -43.50 173.28 263.53 68.44 7 43 25 2985.5 -47.44 138.99
60.00 6 1 97 4079.30 -32.11 175.35 257.23 64.21 7 9 56 3079.3 -39.61 147.01
65.45 4 36 5 4329.23 -19.04 187.85 249.25 57.93 5 48 14 3329.2 -30.52 164.54
65.45 4 36 5 4329.23 -19.04 187.85 249.25 57.93 5 48 14 3329.2 -30.52 164.54
65.45 4 36 5 4329.23 -19.04 187.85 249.25 57.93 5 48 14 3329.2 -30.52 164.54
65.45 4 36 5 4329.23 -19.04 187.85 249.25 57.93 5 48 14 3329.2 -30.52 164.54

DIFFERENTIAL CORRECTIONS

TDE .6881 TRA-2.1134 TC3-4.1042 BAU 1.8942
RDE .7111 RRA -.7233 RC3-2.9255 FAU .37582
FDE 4.8205 FRA-3.7305 FC-12.9400 BSP 10380
BDE .9881 BRA 2.2337 BC3 5.0401 F8P 2231

MID-COURSE EXECUTION ACCURACY

SGT 5161.7 SGR 3214.4 SG3 1301.9
RRT .9537 RRF .9918 RTF .9485
SGB 800.8 R23 .2097 R13 .9694
SG1 6024.1 SG2 828.7 THA 31.37

ORBIT DETERMINATION ACCURACY

ST 60.2 SR 43.7 SS 68.0
CRT .8823 CRS -.9961 CST -.0401
LSA 97.3 MSA 26.2 SSA 1.0
EL1 72.4 EL2 17.1 ALF 34.88

LAUNCH DATE AUG 26 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.942 GAL 4.15 AZL 85.34 HCA 156.93 SMA 197.92 ECC .24642 INC 4.6567 V1 29.471
RP 246.65 LAP 1.82 LOP 129.61 VP 20.139 GAP .60 AZP 94.29 TAL 21.25 TAP 178.17 RCA 149.15 APO 246.69 V2 22.224
RC 303.274 GL 31.87 GP -35.46 ZAL 56.78 ZAP 73.70 ETS 169.97 ZAE 97.69 ETE 187.37 ZAC 53.57 ETC 287.63 LVI 12.84

PLANETOCENTRIC CONIC

C3 25.522 VHL 5.052 DLA 37.83 RAL 6.35 RAD 6645.2 VEL 12.062 PTH 7.05 VHP 2.783 DPA -25.54 RAP 33.36 ECC 1.4200
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 26 53 4018.59 -42.63 175.97 263.85 66.49 7 33 51 3018.6 -47.55 142.18
60.00 5 42 19 4138.10 -30.30 179.28 256.48 62.05 6 51 17 3138.1 -38.93 151.86
63.75 4 25 43 4358.65 -19.39 190.49 249.41 56.86 5 38 22 3358.7 -31.26 167.29
63.75 4 25 43 4358.65 -19.39 190.49 249.41 56.86 5 38 22 3358.7 -31.26 167.29
63.75 4 25 43 4358.65 -19.39 190.49 249.41 56.86 5 38 22 3358.7 -31.26 167.29
63.75 4 25 43 4358.65 -19.39 190.49 249.41 56.86 5 38 22 3358.7 -31.26 167.29

DIFFERENTIAL CORRECTIONS

TDE .7540 TRA-2.1706 TC3-4.1690 BAU 1.7443
RDE .7629 RRA -.7657 RC3-2.9587 FAU .36538
FDE 4.7782 FRA-3.6954 FC-12.3942 BSP 10499
BDE 1.0727 BRA 2.3017 BC3 5.1122 F8P 2090

MID-COURSE EXECUTION ACCURACY

SGT 5309.4 SGR 3300.7 SG3 1265.0
RRT .9563 RRF .9925 RTF .9510
SGB 8251.7 R23 .2060 R13 .9709
SG1 6196.9 SG2 826.5 THA 31.35

ORBIT DETERMINATION ACCURACY

ST 63.7 SR 46.5 SS 68.1
CRT .8945 CRS -.9965 CST -.8560
LSA 100.9 MSA 25.9 SSA .9
EL1 77.0 EL2 17.2 ALF 35.18

LAUNCH DATE AUG 26 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.947 GAL 4.11 AZL 85.15 HCA 157.82 SMA 198.02 ECC .24655 INC 4.8458 V1 29.471
RP 246.82 LAP 1.83 LOP 130.50 VP 20.129 GAP .39 AZP 94.49 TAL 20.99 TAP 178.81 RCA 149.20 APO 246.84 V2 22.207
RC 305.673 GL 33.02 GP -36.29 ZAL 57.44 ZAP 73.11 ETS 169.12 ZAE 96.59 ETE 186.90 ZAC 52.80 ETC 287.82 LVI 13.65

PLANETOCENTRIC CONIC

C3 25.955 VHL 5.095 DLA 38.95 RAL 5.90 RAD 8645.4 VEL 12.080 PTH 7.06 VHP 2.830 DPA -26.31 RAP 33.70 ECC 1.4272
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 15 31 4054.84 -41.61 178.85 264.03 64.46 7 23 6 3054.8 -47.57 145.69
60.00 5 16 23 4213.78 -27.79 184.11 255.13 59.55 6 26 37 3213.8 -37.73 157.93
62.03 4 15 30 4387.12 -19.74 193.08 249.56 55.72 5 28 37 3387.1 -32.01 170.02
62.03 4 15 30 4387.12 -19.74 193.08 249.56 55.72 5 28 37 3387.1 -32.01 170.02
62.03 4 15 30 4387.12 -19.74 193.08 249.56 55.72 5 28 37 3387.1 -32.01 170.02
62.03 4 15 30 4387.12 -19.74 193.08 249.56 55.72 5 28 37 3387.1 -32.01 170.02

DIFFERENTIAL CORRECTIONS

TDE .8344 TRA-2.2223 TC3-4.2124 BAU 1.7872
RDE .8341 RRA -.7957 RC3-2.9637 FAU .33090
FDE 4.7994 FRA-3.5825 FC-11.7041 BSP 10798
BDE 1.1798 BRA 2.3604 BC3 5.1505 F8P 2024

MID-COURSE EXECUTION ACCURACY

SGT 5443.3 SGR 3364.9 SG3 1216.3
RRT .9576 RRF .9920 RTF .9513
SGB 8399.4 R23 .2082 R13 .9708
SG1 6345.1 SG2 832.1 THA 31.22

ORBIT DETERMINATION ACCURACY

ST 67.6 SR 50.2 SS 68.8
CRT .9029 CRS -.9970 CST -.8689
LSA 105.6 MSA 25.9 SSA .9
EL1 82.3 EL2 17.7 ALF 35.75

LAUNCH DATE AUG 26 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 332.62 VL 32.952 GAL 4.06 AZL 84.95 HCA 158.70 SMA 198.12 ECC .24669 INC 5.0496 V1 29.471
RP 246.98 LAP 1.83 LOP 131.39 VP 20.120 GAP .18 AZP 94.71 TAL 20.74 TAP 179.44 RCA 149.24 APO 246.99 V2 22.191
RC 308.047 GL 34.23 GP -37.16 ZAL 58.13 ZAP 72.57 ETS 168.28 ZAE 95.53 ETE 186.23 ZAC 51.97 ETC 288.02 LVI 14.30

PLANETOCENTRIC CONIC

C3 26.454 VHL 5.143 DLA 40.11 RAL 5.38 RAD 8645.6 VEL 12.100 PTH 7.08 VHP 2.881 DPA -27.11 RAP 34.09 ECC 1.4334
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 2 37 4094.78 -40.39 181.90 264.01 62.34 7 10 52 3094.8 -47.45 149.54
60.00 4 30 41 4343.58 -23.06 191.84 251.94 55.99 5 43 4 3343.6 -34.93 167.80
60.28 4 5 19 4414.91 -20.06 195.66 249.71 54.51 5 18 54 3414.9 -32.78 172.76
60.28 4 5 19 4414.91 -20.06 195.66 249.71 54.51 5 18 54 3414.9 -32.78 172.76
60.28 4 5 19 4414.91 -20.06 195.66 249.71 54.51 5 18 54 3414.9 -32.78 172.76
60.28 4 5 19 4414.91 -20.06 195.66 249.71 54.51 5 18 54 3414.9 -32.78 172.76

DIFFERENTIAL CORRECTIONS

TDE .9181 TRA-2.2751 TC3-4.2426 BAU 1.8302
RDE .9096 RRA -.8280 RC3-2.9632 FAU .33585
FDE 4.8059 FRA-3.4657 FC-10.9911 BSP 11105
BDE 1.2924 BRA 2.4210 BC3 5.1750 F8P 1954

MID-COURSE EXECUTION ACCURACY

SGT 5574.3 SGR 3431.0 SG3 1165.5
RRT .9587 RRF .9933 RTF .9515
SGB 6545.6 R23 .2106 R13 .9708
SG1 6491.7 SG2 838.3 THA 31.12

ORBIT DETERMINATION ACCURACY

ST 71.6 SR 54.0 SS 69.4
CRT .9104 CRS -.9975 CST -.8800
LSA 110.4 MSA 25.9 SSA .8
EL1 87.8 EL2 18.2 ALF 36.27

LAUNCH DATE AUG 26 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 558.162

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.957 GAL 4.01 AZL 84.73 HCA 199.59 SMA 198.22 ECC .24683 INC 5.2699 V1 29.471
RP 247.14 LAP 1.84 LOP 132.28 VP 20.111 GAP -.02 AZP 94.94 TAL 20.49 TAP 180.07 RCA 149.29 APO 247.14 VE 22.176
RC 310.395 GL 35.51 GP -38.08 ZAL 58.86 ZAP 72.09 ET8 187.39 ZAE 94.51 ETE 185.65 ZAC 31.09 ETC 288.25 LVI 18.41

PLANETOCENTRIC CONIC

C3 27.029 VHL 5.199 DLA 41.32 RAL 4.80 RAD 6645.8 VEL 12.124 PTH 7.10 VHP 2.938 DPA -27.94 RAP 34.54 ECC 1.4448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 47 46 4139.30 -38.93 185.17 263.74 60.14 6 86 46 3139.3 -47.16 183.81
58.52 3 55 7 4442.23 -20.37 198.24 249.83 53.23 5 9 9 3442.2 -33.54 175.52
58.52 3 55 7 4442.23 -20.37 198.24 249.83 53.23 5 9 9 3442.2 -33.54 175.52
58.52 3 55 7 4442.23 -20.37 198.24 249.83 53.23 5 9 9 3442.2 -33.54 175.52
58.52 3 55 7 4442.23 -20.37 198.24 249.83 53.23 5 9 9 3442.2 -33.54 175.52
58.52 3 55 7 4442.23 -20.37 198.24 249.83 53.23 5 9 9 3442.2 -33.54 175.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0045 TRA-2.3309 TC3-4.2813 BAU 1.8748 SGT 5706.0 SGR 3502.9 SG3 1113.7 ST 75.8 SR 57.9 SS 69.7
RDE .9891 RRA -.8649 RC3-2.9599 FAU .32063 RRT .9598 RRF .9937 RTF .9517 CRT .9171 CR8 -.9978 CST -.8894
FDE 4.7935 FRA-3.3529 FC3-10.2699 BSP 11395 SGB 6695.4 R23 .2125 R13 .9707 LSA 115.2 MSA 26.0 SSA .8
BDE 1.4097 BRA 2.4682 BC3 5.1884 FSP 1876 SG1 6641.9 SG2 844.6 THA 31.07 EL1 93.5 EL2 18.7 ALF 36.74

LAUNCH DATE AUG 26 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 561.934

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.962 GAL 3.97 AZL 84.49 HCA 160.47 SMA 198.32 ECC .24699 INC 5.5089 V1 29.471
RP 247.29 LAP 1.84 LOP 133.17 VP 20.103 GAP -.23 AZP 95.19 TAL 20.23 TAP 180.70 RCA 149.34 APO 247.30 VE 22.161
RC 312.717 GL 36.86 GP -39.05 ZAL 59.61 ZAP 71.68 ET8 166.51 ZAE 93.54 ETE 184.07 ZAC 50.16 ETC 288.50 LVI 16.37

PLANETOCENTRIC CONIC

C3 27.694 VHL 5.263 DLA 42.59 RAL 4.12 RAD 6646.1 VEL 12.151 PTH 7.12 VHP 2.999 DPA -28.80 RAP 35.04 ECC 1.4558
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 30 22 4189.78 -37.16 188.70 263.12 57.83 6 40 11 3189.8 -46.62 158.56
56.71 3 44 49 4469.11 -20.65 200.81 249.94 51.88 4 59 18 3469.1 -34.31 178.33
56.71 3 44 49 4469.11 -20.65 200.81 249.94 51.88 4 59 18 3469.1 -34.31 178.33
56.71 3 44 49 4469.11 -20.65 200.81 249.94 51.88 4 59 18 3469.1 -34.31 178.33
56.71 3 44 49 4469.11 -20.65 200.81 249.94 51.88 4 59 18 3469.1 -34.31 178.33
56.71 3 44 49 4469.11 -20.65 200.81 249.94 51.88 4 59 18 3469.1 -34.31 178.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0945 TRA-2.3879 TC3-4.2629 BAU 1.9192 SGT 5832.9 SGR 3576.7 SG3 1059.4 ST 80.0 SR 62.0 SS 69.9
RDE 1.0739 RRA -.9050 RC3-2.9490 FAU .30476 RRT .9609 RRF .9940 RTF .9517 CRT .9231 CR8 -.9980 CST -.8876
FDE 4.7646 FRA-3.2355 FC3-9.5289 BSP 11696 SGB 6842.2 R23 .2146 R13 .9706 LSA 120.2 MSA 26.0 SSA .7
BDE 1.5333 BRA 2.5537 BC3 5.1836 FSP 1793 SG1 6789.0 SG2 851.0 THA 31.05 EL1 99.4 EL2 19.2 ALF 37.19

LAUNCH DATE AUG 26 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

DISTANCE 565.701

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.967 GAL 3.92 AZL 84.23 HCA 161.35 SMA 198.42 ECC .24715 INC 5.7693 V1 29.471
RP 247.44 LAP 1.84 LOP 134.06 VP 20.096 GAP -.43 AZP 95.47 TAL 19.97 TAP 181.32 RCA 149.38 APO 247.46 VE 22.147
RC 315.013 GL 38.29 GP -40.06 ZAL 60.41 ZAP 71.33 ET8 165.61 ZAE 92.61 ETE 184.19 ZAC 49.18 ETC 288.78 LVI 17.38

PLANETOCENTRIC CONIC

C3 28.466 VHL 5.335 DLA 43.92 RAL 3.35 RAD 6646.4 VEL 12.182 PTH 7.14 VHP 3.068 DPA -29.89 RAP 35.61 ECC 1.4685
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 9 19 4248.59 -34.96 192.59 261.98 55.40 6 20 7 3248.6 -45.72 163.96
54.88 3 34 19 4495.87 -20.89 203.41 250.02 50.44 4 49 15 3495.9 -35.07 181.20
54.88 3 34 19 4495.87 -20.89 203.41 250.02 50.44 4 49 15 3495.9 -35.07 181.20
54.88 3 34 19 4495.87 -20.89 203.41 250.02 50.44 4 49 15 3495.9 -35.07 181.20
54.88 3 34 19 4495.87 -20.89 203.41 250.02 50.44 4 49 15 3495.9 -35.07 181.20
54.88 3 34 19 4495.87 -20.89 203.41 250.02 50.44 4 49 15 3495.9 -35.07 181.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1855 TRA-2.4489 TC3-4.2502 BAU 1.9653 SGT 5959.9 SGR 3856.1 SG3 1003.8 ST 84.2 SR 66.2 SS 69.7
RDE 1.1637 RRA -.9507 RC3-2.9332 FAU .28858 RRT .9620 RRF .9943 RTF .9517 CRT .9281 CR8 -.9981 CST -.8041
FDE 4.7149 FRA-3.1191 FC3-8.7785 BSP 11978 SGB 6992.0 R23 .2186 R13 .9705 LSA 125.1 MSA 26.1 SSA .7
BDE 1.6612 BRA 2.6270 BC3 5.1640 FSP 1703 SG1 6939.1 SG2 857.8 THA 31.07 EL1 105.3 EL2 19.7 ALF 37.64

LAUNCH DATE AUG 26 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

DISTANCE 569.487

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.973 GAL 3.87 AZL 83.85 HCA 162.23 SMA 198.53 ECC .24732 INC 6.0542 V1 29.471
RP 247.58 LAP 1.84 LOP 134.94 VP 20.090 GAP -.84 AZP 95.77 TAL 19.70 TAP 181.93 RCA 149.43 APO 247.63 VE 22.133
RC 317.282 GL 39.81 GP -41.14 ZAL 61.24 ZAP 71.06 ET8 164.72 ZAE 91.74 ETE 183.81 ZAC 48.13 ETC 289.09 LVI 18.48

PLANETOCENTRIC CONIC

C3 29.368 VHL 5.419 DLA 45.31 RAL 2.46 RAD 6646.8 VEL 12.219 PTH 7.17 VHP 3.144 DPA -30.61 RAP 36.25 ECC 1.4833
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 42 27 4320.74 -32.07 197.06 260.02 52.76 5 54 28 3320.7 -44.26 170.29
52.99 3 23 32 4522.56 -21.08 206.03 250.05 48.91 4 38 55 3522.6 -35.82 184.15
52.99 3 23 32 4522.56 -21.08 206.03 250.05 48.91 4 38 55 3522.6 -35.82 184.15
52.99 3 23 32 4522.56 -21.08 206.03 250.05 48.91 4 38 55 3522.6 -35.82 184.15
52.99 3 23 32 4522.56 -21.08 206.03 250.05 48.91 4 38 55 3522.6 -35.82 184.15
52.99 3 23 32 4522.56 -21.08 206.03 250.05 48.91 4 38 55 3522.6 -35.82 184.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2768 TRA-2.5143 TC3-4.2209 BAU 2.0132 SGT 6086.0 SGR 3742.1 SG3 946.7 ST 88.4 SR 70.4 SS 69.2
RDE 1.2581 RRA -.10037 RC3-2.9114 FAU .27210 RRT .9631 RRF .9945 RTF .9518 CRT .9324 CR8 -.9982 CST -.9094
FDE 4.6399 FRA-3.0059 FC3-8.0212 BSP 12240 SGB 7144.4 R23 .2182 R13 .9705 LSA 129.9 MSA 26.2 SSA .8
BDE 1.7925 BRA 2.7073 BC3 5.1276 FSP 1604 SG1 7092.0 SG2 863.8 THA 31.15 EL1 111.2 EL2 20.2 ALF 38.08

LAUNCH DATE AUG 26 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

DISTANCE 573.232

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.978 GAL 3.02 AZL 83.63 HCA 163.11 SMA 198.63 ECC .24750 INC 6.3676 V1 29.471
RP 247.71 LAP 1.85 LOP 135.83 VP 20.084 GAP -.84 AZP 96.10 TAL 19.44 TAP 182.55 RCA 149.47 APO 247.80 V2 22.120
RC 319.582 GL 41.42 GP -42.27 ZAL 82.12 ZAP 70.87 ETS 163.82 ZAE 90.93 ETE 182.83 ZAC 47.02 ETC 289.44 LVI 19.58

PLANETOCENTRIC CONIC

C3 30.424 VHL 5.516 DLA 46.76 RAL 1.42 RAD 6647.2 VEL 12.262 PTH 7.21 VHP 3.229 DPA -31.57 RAP 36.96 ECC 1.5007
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 2 52 4422.63 -27.72 202.87 256.33 49.65 5 16 35 3422.6 -41.59 178.61
51.07 3 12 22 4549.40 -21.22 208.68 250.02 47.30 4 28 12 3549.4 -36.53 187.20
51.07 3 12 22 4549.40 -21.22 208.68 250.02 47.30 4 28 12 3549.4 -36.53 187.20
51.07 3 12 22 4549.40 -21.22 208.68 250.02 47.30 4 28 12 3549.4 -36.53 187.20
51.07 3 12 22 4549.40 -21.22 208.68 250.02 47.30 4 28 12 3549.4 -36.53 187.20
51.07 3 12 22 4549.40 -21.22 208.68 250.02 47.30 4 28 12 3549.4 -36.53 187.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3695 TRA-2.5812 TC3-4.1692 BAW 2.0605 SGT 8204.8 SGR 3829.1 SG3 886.8 ST 92.5 SR 74.8 SS 68.5
RDE 1.3606 RRA-1.0605 RC3-2.8778 FAU .25475 RRT .9641 RRF .9946 RTF .9515 CRT .9357 CRS -.9982 CST -.9133
FDE 4.5475 FRA-2.8805 FC3-7.2492 BSP 12543 SGB 7291.0 R23 .2207 R13 .9702 LSA 134.7 MSA 26.5 SSA .6
BDE 1.9304 BRA 2.7906 BC3 5.0659 FSP 1508 SG1 7238.8 SG2 871.1 THA 31.26 EL1 117.1 EL2 20.8 ALF 38.57

LAUNCH DATE AUG 26 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

DISTANCE 576.995

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.984 GAL 3.77 AZL 83.29 HCA 163.99 SMA 198.74 ECC .24768 INC 6.7138 V1 29.471
RP 247.84 LAP 1.85 LOP 136.71 VP 20.079 GAP -1.04 AZP 96.46 TAL 19.17 TAP 183.16 RCA 149.52 APO 247.97 V2 22.107
RC 321.734 GL 43.14 GP -43.47 ZAL 63.04 ZAP 70.75 ETS 162.92 ZAE 90.17 ETE 182.16 ZAC 45.85 ETC 289.83 LVI 20.78

PLANETOCENTRIC CONIC

C3 31.669 VHL 5.628 DLA 48.27 RAL .21 RAD 6647.6 VEL 12.312 PTH 7.24 VHP 3.324 DPA -32.57 RAP 37.75 ECC 1.5212
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36
49.09 3 0 42 4576.55 -21.29 211.38 249.89 45.59 4 16 59 3576.6 -37.20 190.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4567 TRA-2.6550 TC3-4.0998 BAW 2.1112 SGT 6323.6 SGR 3926.0 SG3 826.0 ST 96.2 SR 79.2 SS 67.2
RDE 1.4668 RRA-1.1280 RC3-2.8385 FAU .23730 RRT .9653 RRF .9946 RTF .9513 CRT .9382 CRS -.9981 CST -.9157
FDE 4.4219 FRA-2.7596 FC3-6.4870 BSP 12811 SGB 7443.2 R23 .2226 R13 .9700 LSA 139.0 MSA 26.7 SSA .5
BDE 2.0672 BRA 2.8847 BC3 4.9865 FSP 1402 SG1 7391.3 SG2 877.4 THA 31.43 EL1 122.7 EL2 21.5 ALF 39.09

LAUNCH DATE AUG 26 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

DISTANCE 580.755

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.989 GAL 3.72 AZL 82.90 HCA 164.87 SMA 198.85 ECC .24787 INC 7.0987 V1 29.471
RP 247.97 LAP 1.85 LOP 137.59 VP 20.075 GAP -1.24 AZP 96.85 TAL 18.90 TAP 183.76 RCA 149.56 APO 248.14 V2 22.095
RC 323.917 GL 44.96 GP -44.73 ZAL 64.01 ZAP 70.73 ETS 162.03 ZAE 89.48 ETE 181.49 ZAC 44.60 ETC 290.27 LVI 22.05

PLANETOCENTRIC CONIC

C3 33.148 VHL 5.757 DLA 49.85 RAL 358.81 RAD 6648.2 VEL 12.372 PTH 7.29 VHP 3.432 DPA -33.61 RAP 38.63 ECC 1.5455
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64
47.07 2 48 23 4604.21 -21.27 214.11 249.65 43.78 4 5 7 3604.2 -37.81 193.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5385 TRA-2.7340 TC3-4.0081 BAW 2.1634 SGT 8437.7 SGR 4027.2 SG3 782.0 ST 99.5 SR 83.5 SS 65.6
RDE 1.5790 RRA-1.2034 RC3-2.7870 FAU .21917 RRT .9663 RRF .9946 RTF .507 CRT .9393 CRS -.9980 CST -.9161
FDE 4.2688 FRA-2.8290 FC3-5.7248 BSP 13084 SGB 7593.5 R23 .2256 R13 .9695 LSA 142.9 MSA 27.2 SSA .5
BDE 2.2032 BRA 2.9872 BC3 4.8818 FSP 1295 SG1 7541.8 SG2 885.2 THA 31.64 EL1 128.0 EL2 22.3 ALF 39.69

LAUNCH DATE AUG 26 1973

FLIGHT TIME 274.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC

DISTANCE 584.514

EARTH TO MARS

RL 151.18 LAL .00 LOL 332.62 VL 32.995 GAL 3.67 AZL 82.47 HCA 165.74 SMA 198.97 ECC .24807 INC 7.5292 V1 29.471
RP 248.09 LAP 1.85 LOP 138.47 VP 20.072 GAP -1.44 AZP 97.30 TAL 18.63 TAP 184.37 RCA 149.61 APO 248.32 V2 22.084
RC 326.069 GL 46.90 GP -46.06 ZAL 65.03 ZAP 70.79 ETS 161.17 ZAE 88.86 ETE 180.84 ZAC 43.28 ETC 290.77 LVI 23.40

PLANETOCENTRIC CONIC

C3 34.917 VHL 5.909 DLA 51.48 RAL 357.15 RAD 6648.9 VEL 12.443 PTH 7.34 VHP 3.555 DPA -34.68 RAP 39.60 ECC 1.5746
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05
45.00 2 35 14 4632.61 -21.13 216.88 249.25 41.88 3 52 27 3632.6 -38.33 197.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6046 TRA-2.8189 TC3-3.8928 BAW 2.2180 SGT 8546.1 SGR 4136.2 SG3 698.1 ST 102.1 SR 87.8 SS 63.5
RDE 1.6972 RRA-1.2898 RC3-2.7244 FAU .20059 RRT .9672 RRF .9944 RTF .9496 CRT .9390 CRS -.9978 CST -.9144
FDE 4.0858 FRA-2.4910 FC3-4.9736 BSP 13361 SGB 7743.3 R23 .2295 R13 .9687 LSA 146.3 MSA 27.8 SSA .4
BDE 2.3356 BRA 3.1000 BC3 4.7514 FSP 1185 SG1 7691.5 SG2 894.2 THA 31.91 EL1 132.6 EL2 23.2 ALF 40.39

LAUNCH DATE AUG 26 1973

FLIGHT TIME 276.00

ARRIVAL DATE MAY 29 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 33.001 GAL 3.62 AZL 81.99 HCA 166.81 SMA 199.08 ECC .24828 INC 0.0143 V1 29.471  
 RP 248.20 LAP 1.85 LOP 139.36 VP 20.070 GAP -1.64 AZP 97.80 TAL 18.35 TAP 184.97 RCA 149.65 APO 248.51 V2 22.073  
 RC 328.191 GL 48.97 GP -47.46 ZAL 66.10 ZAP 70.96 ETS 160.34 ZAE 88.32 ETE 180.21 ZAC 41.88 ETC 291.34 LVI 24.81

Planetocentric Conic: C3 37.054 VHL 6.087 DLA 53.17 RAL 355.19 RAD 6649.6 VEL 12.528 PTH 7.41 VHP 3.695 DPA -33.80 RAP 40.68 ECC 1.6098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60  
 42.90 2 21 5 4661.92 -20.86 219.69 248.63 39.90 3 38 47 3661.9 -38.73 200.60

Differential Corrections: TDE 1.6507 TRA-2.9125 TC3-3.7531 BAU 2.2761 SGT 6648.9 SGR 4256.3 SG3 632.2 ST 103.9 SR 91.7 SS 60.7  
 RDE 1.8157 RRA-1.3925 RC3-2.6507 FAU .18169 RRT .9682 RRF .9941 RTF .9484 CRT .9371 CR3 -.9974 CST -.9099  
 FDE 3.8616 FRA-2.3506 FC3-4.2450 BSP 13622 SGB 7894.6 R23 .2337 R13 .9679 LSA 148.5 MSA 28.6 SSA .4  
 BDE 2.4539 BRA 3.2283 BC3 4.5948 FSP 1068 SGI 7842.9 SG2 902.2 THA 32.27 EL1 136.4 EL2 24.4 ALF 41.18

LAUNCH DATE AUG 26 1973

FLIGHT TIME 278.00

ARRIVAL DATE MAY 31 1974

Heliocentric Conic: RL 151.18 LAL .00 LOL 332.62 VL 33.007 GAL 3.57 AZL 81.43 HCA 167.48 SMA 199.19 ECC .24849 INC 8.5650 V1 29.471  
 RP 248.30 LAP 1.85 LOP 140.24 VP 20.068 GAP -1.83 AZP 98.36 TAL 18.08 TAP 185.56 RCA 149.70 APO 248.69 V2 22.062  
 RC 330.283 GL 51.17 GP -48.94 ZAL 67.23 ZAP 71.23 ETS 159.55 ZAE 87.86 ETE 179.62 ZAC 40.40 ETC 291.98 LVI 26.31

Planetocentric Conic: C3 39.662 VHL 6.298 DLA 54.90 RAL 352.86 RAD 6650.5 VEL 12.631 PTH 7.48 VHP 3.837 DPA -36.95 RAP 41.88 ECC 1.6527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29  
 40.76 2 5 38 4692.42 -20.42 222.51 247.71 37.84 3 23 50 3692.4 -38.97 204.29

Differential Corrections: TDE 1.6583 TRA-3.0193 TC3-3.5927 BAU 2.3415 SGT 6751.2 SGR 4392.5 SG3 565.6 ST 104.3 SR 95.0 SS 57.2  
 RDE 1.9289 RRA-1.5159 RC3-2.5678 FAU .16266 RRT .9693 RRF .9935 RTF .9466 CRT .9322 CR3 -.9968 CST -.9005  
 FDE 3.5927 FRA-2.2051 FC3-3.5506 BSP 13807 SGB 8054.3 R23 .2390 R13 .9666 LSA 149.3 MSA 29.8 SSA .4  
 BDE 2.5437 BRA 3.3785 BC3 4.4160 FSP 943 SGI 8002.6 SG2 911.6 THA 32.71 EL1 136.6 EL2 25.8 ALF 42.13

LAUNCH DATE AUG 27 1973

FLIGHT TIME 100.00

ARRIVAL DATE DEC 5 1973

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 34.787 GAL 5.33 AZL 89.82 HCA 81.22 SMA 243.08 ECC .38785 INC .1771 V1 29.478  
 RP 222.09 LAP .18 LOP 54.80 VP 25.479 GAP 22.31 AZP 89.97 TAL 19.20 TAP 100.42 RCA 148.80 APO 337.36 V2 24.757  
 RC 93.523 GL .98 GP -5.66 ZAL 54.95 ZAP 169.80 ETS 215.69 ZAE 158.34 ETE 344.12 ZAC 77.03 ETC 282.37 LVI -10.33

PLANETOCENTRIC CONIC  
 C3 39.753 VHL 6.305 DLA 11.87 RAL 26.18 RAD 6650.6 VEL 12.634 PTH 7.48 VHP 7.564 DPA 11.29 RAP 45.82 ECC 1.6842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 58 9 3541.98 -46.81 132.01 271.84 99.73 10 57 11 2542.0 -37.72 101.49  
 60.00 10 24 40 3471.39 -39.97 126.92 273.11 95.61 11 22 31 2471.4 -33.41 97.92  
 70.00 11 2 9 3361.08 -34.07 118.51 273.63 92.51 11 59 10 2361.1 -29.50 90.75  
 80.00 11 56 46 3190.00 -29.85 105.67 273.76 90.46 12 49 56 2190.0 -26.63 78.71  
 90.00 13 12 8 2946.73 -28.28 87.79 273.76 89.71 14 1 15 1946.7 -25.55 61.11  
 100.00 14 39 38 2664.47 -29.83 67.03 273.76 90.46 15 24 2 1664.5 -26.63 40.07  
 110.00 16 1 36 2407.90 -34.07 47.43 273.63 92.51 16 41 43 1407.9 -29.50 19.66

DIFFERENTIAL CORRECTIONS  
 TDE -.2990 TRA -.7408 TC3 .4057 BAW .2229 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.6479 RRA .2366 RC3 -.1068 FAU .06759 SGT 899.2 SGR 842.7 SG3 160.9 ST 17.1 SR 29.6 S8 3.6  
 FDE .0982 FRA -.1303 FC3-1.4719 BSP 1143 RRT -.1039 RRF .1427 RTF -.5310 CRT .7230 CRS .8298 CST .4632  
 BDE .7136 BRA .7776 BC3 .4195 FSP 202 SGB 1105.3 R23 -.0323 R13 .5380 LSA 32.6 MSA 10.8 S8A 1.9  
 SG1 904.2 SG2 635.7 THA 171.56 EL1 32.5 EL2 10.8 ALF 64.35

LAUNCH DATE AUG 27 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 7 1973

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 34.665 GAL 5.35 AZL 89.79 HCA 82.32 SMA 239.39 ECC .37866 INC .1214 V1 29.478  
 RP 222.48 LAP .21 LOP 55.90 VP 25.272 GAP 21.90 AZP 89.97 TAL 19.61 TAP 101.93 RCA 148.74 APO 330.04 V2 24.715  
 RC 95.663 GL 1.18 GP -5.80 ZAL 54.31 ZAP 169.06 ETS 213.56 ZAE 158.35 ETE 343.56 ZAC 76.87 ETC 282.35 LVI -10.14

PLANETOCENTRIC CONIC  
 C3 38.515 VHL 6.206 DLA 11.83 RAL 25.46 RAD 6650.1 VEL 12.585 PTH 7.45 VHP 7.327 DPA 11.21 RAP 46.04 ECC 1.6339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 55 32 3533.22 -46.70 131.19 270.33 100.36 10 54 25 2533.2 -37.41 100.89  
 60.00 10 22 6 3462.52 -39.91 126.18 271.68 96.12 11 19 49 2462.5 -33.16 97.30  
 70.00 10 59 38 3352.06 -34.04 117.81 272.26 92.93 11 55 30 2352.1 -29.31 90.11  
 80.00 11 54 18 3180.82 -29.85 104.98 272.42 90.82 12 47 19 2180.8 -26.48 78.07  
 90.00 13 9 42 2937.48 -28.28 87.11 272.44 90.05 13 58 39 1937.5 -25.41 60.47  
 100.00 14 37 10 2655.29 -29.85 66.35 272.42 90.82 15 21 25 1655.3 -26.48 39.44  
 110.00 15 59 5 2398.87 -34.04 46.73 272.26 92.93 16 39 4 1398.9 -29.31 19.03

DIFFERENTIAL CORRECTIONS  
 TDE -.2993 TRA -.7305 TC3 .4317 BAW .2302 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.6422 RRA .2345 RC3 -.1164 FAU .07100 SGT 915.5 SGR 649.1 SG3 171.8 ST 17.3 SR 29.8 S8 3.8  
 FDE .1016 FRA -.1587 FC3-1.5959 BSP 1176 RRT -.1110 RRF .1530 RTF -.5405 CRT .7280 CRS .8164 CST .4252  
 BDE .7085 BRA .7672 BC3 .4471 FSP 219 SGB 1122.3 R23 -.0353 R13 .5474 LSA 32.9 MSA 10.9 S8A 2.0  
 SG1 921.1 SG2 641.2 THA 171.22 EL1 32.7 EL2 10.8 ALF 64.12

LAUNCH DATE AUG 27 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 34.551 GAL 5.37 AZL 89.75 HCA 83.41 SMA 236.03 ECC .37007 INC .2474 V1 29.478  
 RP 222.86 LAP .25 LOP 56.99 VP 25.074 GAP 21.49 AZP 89.97 TAL 20.02 TAP 103.43 RCA 148.68 APO 323.38 V2 24.673  
 RC 97.860 GL 1.39 GP -5.94 ZAL 53.88 ZAP 168.20 ETS 211.73 ZAE 158.41 ETE 342.93 ZAC 76.70 ETC 282.34 LVI -9.96

PLANETOCENTRIC CONIC  
 C3 37.383 VHL 6.114 DLA 11.80 RAL 24.78 RAD 6649.7 VEL 12.541 PTH 7.42 VHP 7.100 DPA 11.13 RAP 46.25 ECC 1.6152  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 52 57 3525.02 -46.60 130.43 268.88 100.94 10 51 42 2525.0 -37.11 100.32  
 60.00 10 19 33 3454.21 -39.85 125.48 270.31 96.59 11 17 7 2454.2 -32.92 96.72  
 70.00 10 57 8 3343.62 -34.01 117.15 270.94 93.31 11 52 52 2343.6 -29.12 89.93  
 80.00 11 51 50 3172.24 -29.84 104.35 271.13 91.15 12 44 43 2172.2 -26.33 77.47  
 90.00 13 7 16 2928.83 -28.28 86.48 271.16 90.37 13 56 4 1928.8 -25.27 59.87  
 100.00 14 34 42 2646.71 -29.84 65.71 271.13 91.15 15 18 49 1646.7 -26.33 38.84  
 110.00 15 56 35 2390.43 -34.01 46.07 270.94 93.31 16 36 25 1390.4 -29.12 18.44

DIFFERENTIAL CORRECTIONS  
 TDE -.2998 TRA -.7201 TC3 .4577 BAW .2374 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.6367 RRA .2322 RC3 -.1267 FAU .07459 SGT 931.3 SGR 655.3 SG3 183.4 ST 17.5 SR 30.0 S8 4.0  
 FDE .1053 FRA -.1899 FC3-1.7273 BSP 1209 RRT -.1186 RRF .1638 RTF -.5488 CRT .7331 CRS .8014 CST .3875  
 BDE .7037 BRA .7566 BC3 .4749 FSP 236 SGB 1138.7 R23 -.0382 R13 .5564 LSA 33.1 MSA 10.8 S8A 2.0  
 SG1 937.5 SG2 646.3 THA 170.85 EL1 33.0 EL2 10.8 ALF 63.91

LAUNCH DATE AUG 27 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 34.444 GAL 5.39 AZL 89.72 HCA 84.50 SMA 232.98 ECC .36202 INC .2819 V1 29.478  
 RP 223.25 LAP .28 LOP 58.08 VP 24.885 GAP 21.10 AZP 89.97 TAL 20.43 TAP 104.93 RCA 148.62 APO 317.30 V2 24.631  
 RC 100.104 GL 1.61 GP -6.09 ZAL 53.06 ZAP 167.31 ETS 210.14 ZAE 158.52 ETE 342.27 ZAC 76.52 ETC 282.33 LVI -9.77

PLANETOCENTRIC CONIC  
 C3 36.349 VHL 6.029 DLA 11.77 RAL 24.11 RAD 6649.4 VEL 12.500 PTH 7.39 VHP 6.881 DPA 11.03 RAP 46.44 ECC 1.5982  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 50 23 3517.36 -46.50 129.71 267.50 101.48 10 49 0 2517.4 -36.83 99.81  
 60.00 10 17 1 3446.46 -39.79 124.83 268.99 97.02 11 14 28 2446.5 -32.70 96.19  
 70.00 10 54 39 3335.75 -33.98 116.54 269.67 93.67 11 50 14 2335.8 -28.95 88.98  
 80.00 11 49 23 3164.26 -29.83 103.75 269.89 91.46 12 42 7 2164.3 -26.19 76.92  
 90.00 13 4 49 2920.80 -28.27 85.89 269.92 90.66 13 53 30 1920.8 -25.15 59.32  
 100.00 14 32 15 2638.73 -29.83 65.12 269.89 91.46 15 16 14 1638.7 -26.19 38.29  
 110.00 15 54 5 2382.57 -33.98 45.46 269.67 93.67 16 33 48 1382.6 -28.95 17.90

DIFFERENTIAL CORRECTIONS  
 TDE -.3000 TRA -.7098 TC3 .4833 BAW .2442 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.6319 RRA .2298 RC3 -.1375 FAU .07838 SGT 946.4 SGR 661.3 SG3 195.6 ST 17.6 SR 30.2 S8 4.2  
 FDE .1094 FRA -.2235 FC3-1.8667 BSP 1244 RRT -.1266 RRF .1753 RTF -.5564 CRT .7382 CRS .7854 CST .3517  
 BDE .6991 BRA .7461 BC3 .5025 FSP 256 SGB 1154.6 R23 -.0416 R13 .5648 LSA 33.4 MSA 11.0 S8A 2.1  
 SG1 953.4 SG2 651.2 THA 170.47 EL1 33.3 EL2 10.8 ALF 63.70

LAUNCH DATE AUG 27 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC

DISTANCE 274.650

EARTH TO MARS

RL 131.18 LAL .00 LOL 333.58 VL 34.343 GAL 5.41 AZL 89.68 HCA 89.59 SMA 230.15 ECC .39430 INC .3162 V1 29.478
RP 223.64 LAP .32 LOP 59.17 VP 24.703 GAP 20.70 AZP 89.98 TAL 20.83 TAP 106.42 RCA 148.56 APO 311.74 V2 24.590
RC 102.397 GL 1.02 GP -6.24 ZAL 52.46 ZAP 166.41 ETS 208.75 ZAE 158.68 ETE 341.54 ZAC 76.35 ETC 262.32 LVI -9.58

PLANETOCENTRIC CONIC

C3 35.402 VHL 5.950 DLA 11.75 RAL 23.45 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 6.671 DPA 10.93 RAP 46.62 ECC 1.5828
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 47 51 3510.23 -46.40 129.05 266.17 101.98 10 46 21 2510.2 -36.57 99.33
60.00 10 14 31 3439.26 -39.73 124.23 267.73 97.43 11 11 50 2439.3 -32.49 95.69
70.00 10 52 10 3328.46 -33.95 115.97 268.45 94.01 11 47 39 2328.5 -28.79 88.47
80.00 11 46 56 3156.87 -29.81 103.21 268.70 91.75 12 39 33 2156.9 -26.06 76.41
90.00 13 2 23 2913.37 -28.27 85.35 268.74 90.94 13 50 57 1913.4 -25.03 58.81
100.00 14 29 48 2631.35 -29.81 64.57 268.70 91.75 15 13 40 1631.3 -26.06 37.78
110.00 15 51 36 2375.28 -33.95 44.89 268.45 94.01 16 31 12 1375.3 -28.79 17.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3003 TRA -.6998 TC3 .5087 BAU .2509 SGT 961.2 SGR 667.3 SG3 208.6 ST 17.8 SR 30.4 SS 4.4
RDE -.6265 RRA .2272 RC3 -.1490 FAU .08240 RRT -.1351 RRF .1876 RTF -.5635 CRT .7432 CRS .7676 CST .3164
FDE -.1133 FRA -.2595 FC3-2.0150 B8P 1276 SGB 1170.1 R23 -.0452 R13 .5729 LSA 33.6 MSA 11.0 SSA 2.2
BDE .6948 BRA .7358 BC3 .5301 F8P 276 SG1 969.0 S62 655.8 THA 170.04 EL1 33.5 EL2 10.8 ALF 63.50

LAUNCH DATE AUG 27 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC

DISTANCE 277.888

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 34.248 GAL 5.43 AZL 89.65 HCA 86.67 SMA 227.57 ECC .34744 INC .3501 V1 29.478
RP 224.03 LAP .35 LOP 60.25 VP 24.528 GAP 20.31 AZP 89.98 TAL 21.23 TAP 107.90 RCA 148.50 APO 306.64 V2 24.548
RC 104.735 GL 2.03 GP -6.40 ZAL 51.87 ZAP 165.48 ETS 207.53 ZAE 158.89 ETE 340.73 ZAC 76.17 ETC 262.31 LVI -9.39

PLANETOCENTRIC CONIC

C3 34.535 VHL 5.877 DLA 11.73 RAL 22.81 RAD 6648.7 VEL 12.427 PTH 7.33 VHP 6.468 DPA 10.82 RAP 46.79 ECC 1.5884
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 45 20 3503.61 -46.30 128.44 264.90 102.44 10 43 44 2503.6 -36.33 98.88
60.00 10 12 2 3432.58 -39.67 123.67 266.52 97.80 11 9 14 2432.6 -32.30 95.23
70.00 10 49 42 3321.71 -33.91 115.45 267.28 94.32 11 45 4 2321.7 -28.64 88.01
80.00 11 44 30 3150.05 -29.80 102.70 267.55 92.02 12 37 0 2150.0 -25.94 75.94
90.00 12 59 57 2906.51 -28.26 84.85 267.60 91.19 13 48 24 1906.5 -24.92 58.34
100.00 14 27 22 2624.52 -29.80 64.07 267.55 92.02 15 11 6 1624.5 -25.94 37.31
110.00 15 49 9 2368.53 -33.91 44.37 267.28 94.32 16 28 37 1368.5 -28.64 16.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2927 TRA -.6814 TC3 .5432 BAU .2616 SGT 974.4 SGR 673.1 SG3 222.1 ST 17.6 SR 30.5 SS 4.6
RDE -.6215 RRA .2247 RC3 -.1809 FAU .08656 RRT -.1519 RRF .1997 RTF -.5834 CRT .7436 CRS .7573 CST .2894
FDE .1201 FRA -.2968 FC3-2.1699 B8P 1204 SGB 1184.3 R23 -.0366 R13 .5930 LSA 33.7 MSA 11.0 SSA 2.3
BDE .6870 BRA .7175 BC3 .3665 F8P 299 SG1 984.2 S62 658.6 THA 169.06 EL1 33.5 EL2 10.7 ALF 63.99

LAUNCH DATE AUG 27 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC

DISTANCE 281.180

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 34.158 GAL 5.45 AZL 89.62 HCA 87.75 SMA 225.20 ECC .34084 INC .3840 V1 29.478
RP 224.42 LAP .38 LOP 61.33 VP 24.361 GAP 19.93 AZP 89.98 TAL 21.63 TAP 109.37 RCA 148.44 APO 301.96 V2 24.506
RC 107.119 GL 2.25 GP -6.57 ZAL 51.30 ZAP 164.54 ETS 206.45 ZAE 159.14 ETE 339.84 ZAC 75.99 ETC 262.30 LVI -9.20

PLANETOCENTRIC CONIC

C3 33.740 VHL 5.809 DLA 11.72 RAL 22.18 RAD 6648.4 VEL 12.396 PTH 7.31 VHP 6.273 DPA 10.69 RAP 46.95 ECC 1.5553
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 42 52 3497.52 -46.21 127.88 263.70 102.86 10 41 10 2497.5 -36.10 98.48
60.00 10 9 34 3426.46 -39.61 123.16 265.37 98.14 11 6 41 2426.5 -32.12 94.81
70.00 10 47 16 3315.54 -33.88 114.97 266.17 94.60 11 42 32 2315.5 -28.50 87.58
80.00 11 42 5 3143.83 -29.78 102.24 266.46 92.26 12 34 28 2143.8 -25.83 75.51
90.00 12 57 33 2900.27 -28.25 84.39 266.51 91.42 13 45 33 1900.3 -24.82 57.91
100.00 14 24 56 2618.31 -29.78 63.61 266.46 92.26 15 8 35 1618.3 -25.83 36.80
110.00 15 46 42 2362.36 -33.88 43.89 266.17 94.60 16 26 5 1362.4 -26.50 16.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2962 TRA -.6747 TC3 .5639 BAU .2662 SGT 988.2 SGR 679.0 SG3 236.6 ST 17.8 SR 30.6 SS 4.9
RDE -.6170 RRA .2217 RC3 -.1758 FAU .09106 RRT -.1583 RRF .2136 RTF -.5443 CRT .7508 CRS .7366 CST .2567
FDE .1241 FRA -.3397 FC3-2.3366 B8P 1271 SGB 1198.9 R23 -.0454 R13 .5933 LSA 33.9 MSA 11.0 SSA 2.4
BDE .6844 BRA .7102 BC3 .5901 F8P 321 SG1 998.7 S62 663.3 THA 168.80 EL1 33.8 EL2 10.7 ALF 63.52

LAUNCH DATE AUG 27 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC

DISTANCE 284.818

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 34.074 GAL 5.47 AZL 89.58 HCA 88.82 SMA 223.02 ECC .33466 INC .4179 V1 29.478
RP 224.81 LAP .42 LOP 62.40 VP 24.200 GAP 19.55 AZP 89.99 TAL 22.02 TAP 110.84 RCA 148.39 APO 297.66 V2 24.484
RC 109.544 GL 2.47 GP -6.74 ZAL 51.30 ZAP 163.58 ETS 205.49 ZAE 159.43 ETE 338.87 ZAC 75.80 ETC 262.30 LVI -9.01

PLANETOCENTRIC CONIC

C3 33.010 VHL 5.745 DLA 11.71 RAL 21.58 RAD 6648.2 VEL 12.366 PTH 7.29 VHP 6.085 DPA 10.56 RAP 47.09 ECC 1.5433
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 40 27 3491.91 -46.13 127.37 262.55 103.25 10 38 38 2491.9 -35.89 98.11
60.00 10 7 9 3420.84 -39.55 122.69 264.27 98.46 11 4 10 2420.8 -31.95 94.43
70.00 10 44 51 3309.91 -33.85 114.53 265.10 94.85 11 40 1 2309.9 -28.37 87.20
80.00 11 39 40 3138.18 -29.76 101.82 265.41 92.48 12 31 50 2138.2 -25.73 75.12
90.00 12 55 8 2894.61 -28.24 83.98 265.47 91.62 13 43 23 1894.6 -24.72 57.52
100.00 14 22 32 2612.66 -29.76 63.19 265.41 92.48 15 6 4 1612.7 -25.73 36.49
110.00 15 44 17 2356.73 -33.85 43.45 265.10 94.85 16 23 34 1356.7 -28.37 16.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2987 TRA -.6870 TC3 .5849 BAU .2710 SGT 1001.0 SGR 684.8 SG3 252.0 ST 18.1 SR 30.7 SS 5.1
RDE -.6125 RRA .2185 RC3 -.1873 FAU .09580 RRT -.1662 RRF .2281 RTF -.5865 CRT .7572 CRS .7180 CST .2286
FDE .1291 FRA -.3853 FC3-2.5124 B8P 1324 SGB 1212.8 R23 -.0528 R13 .5990 LSA 34.2 MSA 11.1 SSA 2.5
BDE .6815 BRA .7019 BC3 .6142 F8P 346 SG1 1012.5 S62 667.6 THA 168.43 EL1 34.0 EL2 10.7 ALF 63.14



LAUNCH DATE AUG 27 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 21 1973

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.50 VL 33.994 GAL 5.49 AZL 89.55 HCA 89.89 SMA 221.01 ECC .32008 INC .4513 V1 29.478  
 RP 225.20 LAP .45 LOP 63.47 VP 24.045 GAP 19.17 AZP 90.00 TAL 22.40 TAP 112.29 RCA 148.33 APO 293.70 V2 24.422  
 RC 112.011 GL 2.69 GP -6.91 ZAL 30.22 ZAP 162.60 ETS 204.63 ZAE 159.77 ETE 337.80 ZAC 75.61 ETC 282.30 LVI -8.82

Planetary Centric Conic: C3 32.340 VHL 5.687 DLA 11.72 RAL 20.97 RAD 6647.9 VEL 12.339 PTH 7.27 VHP 5.905 DPA 10.41 RAP 47.22 ECC 1.5322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 38 3 3486.79 -46.05 126.90 261.47 103.80 10 36 10 2486.8 -35.69 97.77  
 60.00 10 4 45 3415.73 -39.50 122.27 263.23 98.74 11 1 41 2415.7 -31.80 94.08  
 70.00 10 42 27 3304.80 -33.82 114.14 264.08 95.09 11 37 32 2304.8 -28.25 86.85  
 80.00 11 37 16 3133.09 -29.75 101.44 264.41 92.68 12 29 29 2133.1 -25.63 74.77  
 90.00 12 52 44 2889.52 -28.23 83.61 264.48 91.81 13 40 53 1889.5 -24.64 57.17  
 100.00 14 20 8 2607.56 -29.75 62.81 264.41 92.68 15 3 35 1607.6 -25.63 36.14  
 110.00 15 41 53 2351.62 -33.82 43.06 264.08 95.09 16 21 5 1351.6 -28.25 15.76

Differential Corrections: TDE -.3008 TRA -.6591 TC3 .6057 BAU .2760  
 RDE -.6082 RRA .2152 RC3 -.2016 FAU .10078  
 FDE .1348 FRA -.4336 FC3-2.6980 BSP 1368  
 BDE .6785 BRA .6933 BC3 .6384 FSP 371

Mid-Course Execution Accuracy: SGT 1013.1 SGR 690.7 SG3 260.2  
 RRT -.1749 RRF .2433 RTF -.5892  
 SGB 1226.1 R23 -.0598 R13 .6032  
 SG1 1025.8 SG2 671.6 THA 167.99

Orbit Determination Accuracy: ST 18.3 SR 30.8 SS 5.4  
 CRT .7635 CRS .7008 CST .2044  
 LSA 34.4 MSA 11.2 SSA 2.5  
 EL1 34.2 EL2 10.6 ALF 62.80

LAUNCH DATE AUG 27 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 23 1973

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.50 VL 33.919 GAL 5.51 AZL 89.52 HCA 90.96 SMA 219.18 ECC .32345 INC .4847 V1 29.478  
 RP 225.39 LAP .48 LOP 64.54 VP 23.897 GAP 18.80 AZP 90.01 TAL 22.77 TAP 113.72 RCA 148.27 APO 290.04 V2 24.380  
 RC 114.516 GL 2.91 GP -7.10 ZAL 49.70 ZAP 161.61 ETS 203.85 ZAE 160.14 ETE 336.62 ZAC 75.42 ETC 282.30 LVI -8.63

Planetary Centric Conic: C3 31.723 VHL 5.632 DLA 11.72 RAL 20.39 RAD 6647.7 VEL 12.314 PTH 7.25 VHP 5.731 DPA 10.26 RAP 47.33 ECC 1.5221  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 35 42 3482.14 -45.97 126.48 260.43 103.92 10 33 44 2482.1 -35.52 97.47  
 60.00 10 2 23 3411.10 -39.45 121.88 262.23 99.00 10 59 15 2411.1 -31.66 93.77  
 70.00 10 40 4 3300.21 -33.79 113.78 263.11 95.29 11 35 5 2300.2 -28.14 86.53  
 80.00 11 34 52 3128.54 -29.73 101.10 263.45 92.85 12 27 1 2128.5 -25.55 74.46  
 90.00 12 50 20 2884.99 -28.22 83.28 263.53 91.97 13 38 25 1885.0 -24.56 56.86  
 100.00 14 17 44 2603.01 -29.73 62.47 263.45 92.85 15 1 7 1603.0 -25.55 35.83  
 110.00 15 39 31 2347.03 -33.79 42.70 263.11 95.29 16 18 38 1347.0 -28.14 15.45

Differential Corrections: TDE -.3025 TRA -.6510 TC3 .6255 BAU .2807  
 RDE -.6040 RRA .2116 RC3 -.2166 FAU .10602  
 FDE .1408 FRA -.4852 FC3-2.8934 BSP 1406  
 BDE .6755 BRA .6645 BC3 .6619 FSP 399

Mid-Course Execution Accuracy: SGT 1024.0 SGR 696.7 SG3 285.2  
 RRT -.1844 RRF .2593 RTF -.5915  
 SGB 1238.5 R23 -.0667 R13 .6073  
 SG1 1038.2 SG2 675.4 THA 167.48

Orbit Determination Accuracy: ST 18.5 SR 30.9 SS 5.7  
 CRT .7693 CRS .6839 CST .1818  
 LSA 34.6 MSA 11.2 SSA 2.6  
 EL1 34.4 EL2 10.6 ALF 62.49

LAUNCH DATE AUG 27 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 25 1973

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.50 VL 33.849 GAL 5.53 AZL 89.48 HCA 92.02 SMA 217.44 ECC .31837 INC .5180 V1 29.478  
 RP 225.98 LAP .52 LOP 65.60 VP 23.754 GAP 18.43 AZP 90.02 TAL 23.13 TAP 115.15 RCA 148.22 APO 286.67 V2 24.338  
 RC 117.057 GL 3.13 GP -7.29 ZAL 49.21 ZAP 160.59 ETS 203.14 ZAE 160.55 ETE 335.32 ZAC 75.23 ETC 282.30 LVI -8.43

Planetary Centric Conic: C3 31.196 VHL 5.582 DLA 11.74 RAL 19.82 RAD 6647.5 VEL 12.292 PTH 7.23 VHP 5.584 DPA 10.09 RAP 47.43 ECC 1.5127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 33 23 3477.93 -45.90 126.10 259.45 104.21 10 31 21 2477.9 -35.36 97.20  
 60.00 10 0 4 3406.95 -39.41 121.54 261.28 99.23 10 58 51 2406.9 -31.53 93.49  
 70.00 10 37 43 3296.13 -33.76 113.47 262.19 95.48 11 32 39 2296.1 -28.04 86.25  
 80.00 11 32 30 3124.52 -29.72 100.81 262.54 93.01 12 24 35 2124.5 -25.47 74.19  
 90.00 12 47 57 2881.00 -28.21 82.99 262.62 92.12 13 35 58 1881.0 -24.49 56.59  
 100.00 14 15 22 2598.99 -29.72 62.17 262.54 93.01 14 58 41 1599.0 -25.47 35.56  
 110.00 15 37 10 2342.94 -33.76 42.38 262.19 95.48 16 16 13 1342.9 -28.04 15.17

Differential Corrections: TDE -.3037 TRA -.6426 TC3 .6448 BAU .2855  
 RDE -.5999 RRA .2077 RC3 -.2324 FAU .11154  
 FDE .1478 FRA -.5404 FC3-3.0994 BSP 1435  
 BDE .6724 BRA .6754 BC3 .6854 FSP 428

Mid-Course Execution Accuracy: SGT 1034.0 SGR 702.8 SG3 303.2  
 RRT -.1948 RRF .2760 RTF -.542  
 SGB 1250.2 R23 -.0732 R13 .6119  
 SG1 1049.8 SG2 679.0 THA 166.90

Orbit Determination Accuracy: ST 18.6 SR 31.0 SS 6.0  
 CRT .7749 CRS .6690 CST .1630  
 LSA 34.7 MSA 11.3 SSA 2.7  
 EL1 34.6 EL2 10.5 ALF 62.23

LAUNCH DATE AUG 27 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 27 1973

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.50 VL 33.782 GAL 5.54 AZL 89.45 HCA 93.08 SMA 215.88 ECC .31360 INC .5512 V1 29.478  
 RP 226.37 LAP .55 LOP 66.66 VP 23.616 GAP 18.07 AZP 90.03 TAL 23.48 TAP 116.58 RCA 148.16 APO 283.55 V2 24.297  
 RC 119.633 GL 3.35 GP -7.48 ZAL 48.73 ZAP 159.56 ETS 202.50 ZAE 160.99 ETE 333.88 ZAC 75.03 ETC 282.31 LVI -8.24

Planetary Centric Conic: C3 30.633 VHL 5.535 DLA 11.76 RAL 19.28 RAD 6647.3 VEL 12.270 PTH 7.21 VHP 5.402 DPA 9.91 RAP 47.51 ECC 1.5041  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 7 3474.16 -45.84 125.76 258.53 104.46 10 29 2 2474.2 -35.21 96.95  
 60.00 9 57 46 3403.25 -39.37 121.23 260.39 99.43 10 54 29 2403.3 -31.42 93.24  
 70.00 10 35 24 3292.53 -33.74 113.19 261.31 95.64 11 30 16 2292.5 -27.96 86.01  
 80.00 11 30 8 3121.02 -29.71 100.55 261.68 93.15 12 22 9 2121.0 -25.40 73.95  
 90.00 12 45 35 2877.55 -28.20 82.73 261.76 92.25 13 33 32 1877.6 -24.43 56.35  
 100.00 14 13 0 2595.49 -29.71 61.91 261.68 93.15 14 56 16 1595.5 -25.40 35.32  
 110.00 15 34 50 2339.35 -33.74 42.11 261.31 95.64 16 13 49 1339.3 -27.96 14.93

Differential Corrections: TDE -.3050 TRA -.6345 TC3 .6627 BAU .2899  
 RDE -.5958 RRA .2036 RC3 -.2490 FAU .11734  
 FDE .1556 FRA -.5993 FC3-3.3163 BSP 1461  
 BDE .6693 BRA .6664 BC3 .7079 FSP 459

Mid-Course Execution Accuracy: SGT 1043.1 SGR 709.1 SG3 322.2  
 RRT -.2054 RRF .2935 RTF -.5961  
 SGB 1261.2 R23 -.0802 R13 .6160  
 SG1 1060.7 SG2 682.4 THA 166.28

Orbit Determination Accuracy: ST 18.8 SR 31.0 SS 6.4  
 CRT .7804 CRS .6553 CST .1469  
 LSA 34.9 MSA 11.4 SSA 2.8  
 EL1 34.7 EL2 10.5 ALF 61.95

LAUNCH DATE AUG 27 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC										DISTANCE 301.777										EARTH TO MARS																																													
RL	151.15	LAL	.00	LOL	333.58	VL	33.720	GAL	5.58	AZL	89.42	HCA	94.14	SMA	214.38	ECC	.30914	INC	.5844	V1	29.478	RP	226.76	LAP	.58	LOP	67.72	VP	23.484	GAP	17.71	AZP	90.04	TAL	23.82	TAP	117.96	RCA	148.11	APO	280.86	V2	24.255	RC	122.240	GL	3.58	GP	-7.69	ZAL	48.28	ZAP	158.51	ETS	201.91	ZAE	161.46	ETE	332.29	ZAC	74.83	ETC	282.32	LVI	-8.05
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.152	VHL	5.491	DLA	11.80	RAL	18.75	RAD	6647.1	VEL	12.251	PTH	7.20	VHP	5.247	DPA	9.71	RAP	47.57	ECC	1.4962	SGT	1051.0	SGR	715.5	SG3	342.1	ST	18.9	SR	31.0	SS	6.7	CRT	.7859	CRS	.6436	CST	.1345	LSA	35.0	MSA	11.5	SSA	2.9																				
LNCH	AZMTH	LNCH	TIME	L-1	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2163	RRF	.3118	RTF	-.5973	EL1	34.8	EL2	10.4	ALF	61.66																												
50.00	9	28	54	3470.82	-45.78	125.45	257.66	104.69	10	26	45	2470.8	-35.08	96.74	8GB	1271.5	R23	-.0877	R13	.6197	EL1	34.8	EL2	10.4	ALF	61.66																																							
60.00	9	55	30	3400.01	-39.33	120.97	259.54	99.61	10	52	10	2400.0	-31.32	93.02	SG1	1070.7	SG2	685.8	THA	165.62																																													
70.00	10	33	5	3289.42	-33.72	112.95	260.48	95.78	11	27	55	2289.4	-27.88	85.80																																																			
80.00	11	27	48	3118.04	-29.70	100.33	260.86	93.26	12	19	46	2118.0	-25.35	73.75																																																			
90.00	12	43	13	2874.63	-28.19	82.52	260.94	92.35	13	31	7	1874.6	-24.30	56.15																																																			
100.00	14	10	39	2592.51	-29.70	61.69	260.86	93.26	14	53	52	1592.5	-25.35	35.12																																																			
110.00	15	32	32	2336.23	-33.72	41.87	260.48	95.78	16	11	28	1336.2	-27.88	14.71																																																			

LAUNCH DATE AUG 27 1973

FLIGHT TIME 126.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC										DISTANCE 305.318										EARTH TO MARS																																													
RL	151.15	LAL	.00	LOL	333.58	VL	33.661	GAL	5.58	AZL	89.38	HCA	95.19	SMA	213.02	ECC	.30495	INC	.6176	V1	29.478	RP	227.15	LAP	.62	LOP	68.77	VP	23.356	GAP	17.36	AZP	90.06	TAL	24.15	TAP	119.34	RCA	148.06	APO	277.98	V2	24.214	RC	124.878	GL	3.80	GP	-7.90	ZAL	47.85	ZAP	157.44	ETS	201.37	ZAE	161.95	ETE	330.52	ZAC	74.83	ETC	282.34	LVI	-7.83
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.707	VHL	5.450	DLA	11.84	RAL	18.24	RAD	6648.9	VEL	12.233	PTH	7.18	VHP	5.098	DPA	9.51	RAP	47.62	ECC	1.4889	SGT	1058.1	SGR	722.4	SG3	363.0	ST	19.0	SR	31.1	SS	7.1	CRT	.7911	CRS	.6317	CST	.1223	LSA	35.1	MSA	11.6	SSA	3.0																				
LNCH	AZMTH	LNCH	TIME	L-1	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2278	RRF	.3310	RTF	-.5980	EL1	34.9	EL2	10.4	ALF	61.39																												
50.00	9	26	43	3467.89	-45.73	125.19	256.83	104.89	10	24	31	2467.9	-34.97	96.55	8GB	1281.2	R23	-.0956	R13	.6233	EL1	34.9	EL2	10.4	ALF	61.39																																							
60.00	9	53	17	3397.20	-39.30	120.73	258.74	99.76	10	49	54	2397.2	-31.23	92.84	SG1	1080.1	SG2	689.1	THA	164.89																																													
70.00	10	30	48	3286.77	-33.70	112.74	259.69	95.90	11	25	35	2286.8	-27.82	85.62																																																			
80.00	11	25	27	3115.55	-29.69	100.14	260.08	93.36	12	17	23	2115.6	-25.30	73.58																																																			
90.00	12	40	51	2872.22	-28.18	82.34	260.16	92.44	13	28	43	1872.2	-24.34	55.99																																																			
100.00	14	8	19	2590.02	-29.69	61.51	260.08	93.36	14	51	29	1590.0	-25.30	34.95																																																			
110.00	15	30	15	2333.58	-33.70	41.66	259.69	95.90	16	9	8	1333.6	-27.82	14.54																																																			

LAUNCH DATE AUG 27 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC										DISTANCE 308.883										EARTH TO MARS																																													
RL	151.15	LAL	.00	LOL	333.58	VL	33.606	GAL	5.59	AZL	89.35	HCA	96.24	SMA	211.75	ECC	.30103	INC	.6508	V1	29.478	RP	227.54	LAP	.65	LOP	69.82	VP	23.233	GAP	17.01	AZP	90.07	TAL	24.47	TAP	120.71	RCA	148.01	APO	275.49	V2	24.172	RC	127.544	GL	4.03	GP	-8.12	ZAL	47.43	ZAP	156.35	ETS	200.87	ZAE	162.46	ETE	328.55	ZAC	74.42	ETC	282.35	LVI	-7.68
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.298	VHL	5.413	DLA	11.88	RAL	17.75	RAD	6648.7	VEL	12.216	PTH	7.17	VHP	4.954	DPA	9.29	RAP	47.65	ECC	1.4821	SGT	1063.8	SGR	729.5	SG3	385.0	ST	19.2	SR	31.1	SS	7.5	CRT	.7963	CRS	.6233	CST	.1184	LSA	35.2	MSA	11.7	SSA	3.0																				
LNCH	AZMTH	LNCH	TIME	L-1	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2392	RRF	.3807	RTF	-.5777	EL1	35.0	EL2	10.3	ALF	61.08																												
50.00	9	24	35	3465.35	-45.68	124.98	256.08	105.06	10	22	20	2465.4	-34.87	96.39	8GB	1289.9	R23	-.1041	R13	.6263	EL1	35.0	EL2	10.3	ALF	61.08																																							
60.00	9	51	5	3394.82	-39.27	120.54	257.98	99.89	10	47	40	2394.8	-31.16	92.68	SG1	1088.3	SG2	692.4	THA	164.11																																													
70.00	10	28	33	3284.57	-33.69	112.57	258.95	96.00	11	23	17	2284.6	-27.77	85.47																																																			
80.00	11	23	8	3113.56	-29.68	99.99	259.34	93.43	12	15	2	2113.6	-25.26	73.44																																																			
90.00	12	38	30	2870.32	-28.18	82.21	259.43	92.51	13	26	20	1870.3	-24.31	55.86																																																			
100.00	14	6	0	2588.03	-29.68	61.36	259.34	93.43	14	49	8	1588.0	-25.26	34.81																																																			
110.00	15	27	59	2331.39	-33.69	41.49	258.95	96.00	16	6	51	1331.4	-27.77	14.39																																																			

LAUNCH DATE AUG 27 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC										DISTANCE 312.470										EARTH TO MARS																																													
RL	151.15	LAL	.00	LOL	333.58	VL	33.553	GAL	5.60	AZL	89.32	HCA	97.28	SMA	210.57	ECC	.29735	INC	.6840	V1	29.478	RP	227.93	LAP	.68	LOP	70.86	VP	23.115	GAP	16.86	AZP	90.09	TAL	24.78	TAP	122.08	RCA	147.96	APO	273.19	V2	24.131	RC	130.237	GL	4.25	GP	-8.34	ZAL	47.04	ZAP	155.24	ETS	200.42	ZAE	162.98	ETE	326.37	ZAC	74.21	ETC	282.37	LVI	-7.48
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.915	VHL	5.377	DLA	11.94	RAL	17.28	RAD	6648.6	VEL	12.201	PTH	7.16	VHP	4.816	DPA	9.05	RAP	47.66	ECC	1.4759	SGT	1068.0	SGR	737.1	SG3	408.1	ST	19.3	SR	31.0	SS	7.9	CRT	.8013	CRS	.6143	CST	.1081	LSA	35.3	MSA	11.9	SSA	3.1																				
LNCH	AZMTH	LNCH	TIME	L-1	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.2507	RRF	.3714	RTF	-.5966	EL1	35.1	EL2	10.2	ALF	60.79																												
50.00	9	22	29	3463.20	-45.65	124.77	255.33	105.20	10	20	12	2463.2	-34.79	98.25	8GB	1297.7	R23	-.1132	R13	.6290	EL1	35.1	EL2	10.2	ALF	60.79																																							
60.00	9	48	55	3392.84	-39.25	120.37	257.27	100.00	10	45	28	2392.8	-31.10	92.55	SG1	1095.5	SG2	695.7	THA	163.27																																													
70.00	10	26	19	3282.82	-33.67	112.44	258.25	96.08	11	21	3	2282.8	-27.73	85.35																																																			
80.00	11	20	49	3112.03	-29.67	99.88	258.64	93.49	12	12	41	2112.0	-25.23	73.34																																																			
90.00	12	36	9	2868.90	-28.17	82.10	258.73	92.56	13	23	58	1868.9	-24.28	55.76																																																			
100.00	14	3	41	2586.51	-29.67	61.25	258.64	93.49	14	46	48	1586.5	-25.23	34.71																																																			
110.00	15	25	45	2329.64	-33.67	41.36	258.25	96.08	16	4	34	1329.6	-27.73	14.27																																																			

LAUNCH DATE AUG 27 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.56 VL 33.804 GAL 5.62 AZL 89.28 HCA 98.32 SMA 209.48 ECC .29390 INC .7172 V1 29.478
RP 228.32 LAP .71 LOP 71.91 VP 23.000 GAP 16.32 AZP 90.10 TAL 25.07 TAP 123.39 RCA 147.91 APO 271.05 V2 24.090
RC 132.954 GL 4.48 GP -8.57 ZAL 46.88 ZAP 154.11 ETS 199.97 ZAE 163.51 ETE 323.93 ZAC 74.00 ETC 282.40 LVI -7.26

DISTANCE 316.077

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.563 VHL 5.344 DLA 12.00 RAL 16.83 RAD 6646.4 VEL 12.186 PTH 7.15 VHP 4.682 DPA 8.81 RAP 47.65 ECC 1.4701
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 20 26 3461.42 -45.61 124.61 254.65 105.32 10 18 7 2461.4 -34.72 96.13
60.00 9 46 47 3391.26 -39.23 120.24 256.60 100.09 10 43 19 2391.3 -31.05 92.44
70.00 10 24 5 3281.50 -33.66 112.34 257.58 96.14 11 18 47 2281.5 -27.69 85.26
80.00 11 18 31 3110.98 -29.67 99.80 257.98 93.53 12 10 22 2111.0 -25.21 73.27
90.00 12 33 49 2867.97 -28.17 82.03 258.07 92.59 13 21 37 1868.0 -24.27 55.70
100.00 14 1 23 2585.45 -29.67 61.17 257.98 93.53 14 44 28 1585.4 -25.21 34.63
110.00 15 23 32 2328.32 -33.66 41.26 257.58 96.14 16 2 20 1328.3 -27.69 14.18

DIFFERENTIAL CORRECTIONS

TDE -.3119 TRA -.6007 TC3 .7262 BAU .3071
RDE -.5755 RRA .1786 RC3 -.3455 FAU .15091
FDE .2089 FRA -.9484 FC3-4.5742 BSP 1551
BDE .6546 BRA .6266 BC3 .8042 FSP 644

MID-COURSE EXECUTION ACCURACY

SGT 1071.3 SGR 745.3 SG3 432.3
RRR -.2621 RRF .3926 RTF -.5943
SGB 1305.0 R23 -.1232 R13 .6311
SG1 1101.9 SG2 699.2 THA 162.38

ORBIT DETERMINATION ACCURACY

ST 19.5 SR 31.0 SS 8.3
CRT .8063 CRS .6080 CST .1046
LSA 35.4 MSA 12.0 SSA 3.2
EL1 35.2 EL2 10.1 ALF 60.46

LAUNCH DATE AUG 27 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 33.458 GAL 5.63 AZL 89.25 HCA 99.36 SMA 208.46 ECC .29066 INC .7504 V1 29.478
RP 228.70 LAP .74 LOP 72.94 VP 22.890 GAP 15.98 AZP 90.12 TAL 25.35 TAP 124.71 RCA 147.87 APO 269.06 V2 24.049
RC 135.894 GL 4.71 GP -8.81 ZAL 46.33 ZAP 152.96 ETS 199.56 ZAE 164.04 ETE 321.22 ZAC 73.78 ETC 282.42 LVI -7.07

DISTANCE 319.701

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.236 VHL 5.314 DLA 12.07 RAL 16.39 RAD 6646.3 VEL 12.173 PTH 7.14 VHP 4.554 DPA 8.54 RAP 47.62 ECC 1.4647
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 18 25 3460.00 -45.59 124.48 254.01 105.42 10 16 5 2460.0 -34.66 96.04
60.00 9 44 41 3390.06 -39.21 120.15 255.97 100.15 10 41 12 2390.1 -31.01 92.36
70.00 10 21 54 3280.59 -33.66 112.27 256.96 96.18 11 16 34 2280.6 -27.67 85.20
80.00 11 16 14 3110.38 -29.66 99.76 257.36 93.56 12 8 4 2110.4 -25.20 73.23
90.00 12 31 26 2867.51 -28.17 82.00 257.45 92.61 13 19 16 1867.5 -24.26 55.67
100.00 13 59 5 2584.85 -29.66 61.13 257.36 93.56 14 42 10 1584.8 -25.20 34.59
110.00 15 21 20 2327.41 -33.66 41.19 256.96 96.18 16 0 7 1327.4 -27.67 14.12

DIFFERENTIAL CORRECTIONS

TDE -.3135 TRA -.5956 TC3 .7325 BAU .3094
RDE -.5714 RRA .1725 RC3 -.3678 FAU .15859
FDE .2229 FRA -1.0305 FC3-4.8624 BSP 1561
BDE .6517 BRA .6200 BC3 .8196 FSP 687

MID-COURSE EXECUTION ACCURACY

SGT 1073.0 SGR 754.0 SG3 457.6
RRR -.2731 RRF .4146 RTF -.5908
SGB 1311.5 R23 -.1341 R13 .6327
SG1 1107.1 SG2 703.0 THA 161.42

ORBIT DETERMINATION ACCURACY

ST 19.6 SR 30.9 SS 8.8
CRT .8111 CRS .6018 CST .1016
LSA 35.5 MSA 12.2 SSA 3.2
EL1 35.2 EL2 10.1 ALF 60.12

LAUNCH DATE AUG 27 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 33.415 GAL 5.64 AZL 89.22 HCA 100.39 SMA 207.52 ECC .28763 INC .7838 V1 29.478
RP 229.09 LAP .77 LOP 73.98 VP 22.783 GAP 15.64 AZP 90.14 TAL 25.62 TAP 126.01 RCA 147.83 APO 267.21 V2 24.008
RC 138.457 GL 4.94 GP -9.06 ZAL 46.00 ZAP 151.79 ETS 199.17 ZAE 164.56 ETE 318.20 ZAC 73.56 ETC 282.46 LVI -6.87

DISTANCE 323.343

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.933 VHL 5.295 DLA 12.15 RAL 15.97 RAD 6646.2 VEL 12.161 PTH 7.13 VHP 4.431 DPA 8.27 RAP 47.56 ECC 1.4597
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 16 26 3458.92 -45.57 124.39 253.41 105.49 10 14 5 2458.9 -34.62 95.98
60.00 9 42 37 3389.24 -39.20 120.08 255.38 100.20 10 39 7 2389.2 -30.99 92.31
70.00 10 19 43 3280.10 -33.65 112.23 256.37 96.20 11 14 23 2280.1 -27.66 85.17
80.00 11 13 56 3110.22 -29.66 99.75 256.77 93.56 12 5 46 2110.2 -25.20 73.21
90.00 12 29 8 2867.52 -28.17 82.00 256.86 92.61 13 16 56 1867.5 -24.26 55.67
100.00 13 56 48 2584.69 -29.66 61.11 256.77 93.56 14 39 53 1584.7 -25.20 34.58
110.00 15 19 9 2326.92 -33.65 41.15 256.37 96.20 15 57 56 1326.9 -27.66 14.08

DIFFERENTIAL CORRECTIONS

TDE -.3131 TRA -.5912 TC3 .7364 BAU .3114
RDE -.5671 RRA .1661 RC3 -.3912 FAU .16664
FDE .2384 FRA -1.1165 FC3-5.1648 BSP 1571
BDE .6488 BRA .6141 BC3 .8338 FSP 732

MID-COURSE EXECUTION ACCURACY

SGT 1073.5 SGR 763.5 SG3 484.2
RRR -.2838 RRF .4372 RTF -.5061
SGB 1317.3 R23 -.1458 R13 .6341
SG1 1111.5 SG2 707.1 THA 160.38

ORBIT DETERMINATION ACCURACY

ST 19.7 SR 30.9 SS 9.2
CRT .8157 CRS .5970 CST .1003
LSA 35.5 MSA 12.4 SSA 3.3
EL1 35.3 EL2 10.0 ALF 59.76

LAUNCH DATE AUG 27 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 33.374 GAL 5.65 AZL 89.18 HCA 101.42 SMA 206.64 ECC .28478 INC .8173 V1 29.478
RP 229.48 LAP .80 LOP 75.01 VP 22.681 GAP 15.31 AZP 90.16 TAL 25.87 TAP 127.29 RCA 147.79 APO 265.49 V2 23.967
RC 141.241 GL 5.17 GP -9.32 ZAL 45.70 ZAP 150.60 ETS 198.80 ZAE 165.06 ETE 314.83 ZAC 73.33 ETC 282.49 LVI -6.87

DISTANCE 326.999

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.651 VHL 5.258 DLA 12.24 RAL 15.58 RAD 6646.1 VEL 12.149 PTH 7.12 VHP 4.313 DPA 7.98 RAP 47.51 ECC 1.4551
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 14 30 3458.18 -45.56 124.32 252.86 105.54 10 12 9 2458.2 -34.59 95.93
60.00 9 40 35 3388.78 -39.20 120.04 254.83 100.22 10 37 4 2388.8 -30.07 92.28
70.00 10 17 33 3280.00 -33.65 112.22 255.82 96.21 11 12 13 2280.0 -27.66 85.16
80.00 11 11 39 3110.50 -29.66 99.77 256.22 93.55 12 3 30 2110.5 -25.20 73.23
90.00 12 26 48 2867.97 -28.17 82.03 256.31 92.59 13 14 36 1868.0 -24.27 55.70
100.00 13 54 31 2584.97 -29.66 61.14 256.22 93.55 14 37 36 1585.0 -25.20 34.60
110.00 15 16 59 2326.82 -33.65 41.14 255.82 96.21 15 55 46 1326.8 -27.66 14.08

DIFFERENTIAL CORRECTIONS

TDE -.3168 TRA -.5875 TC3 .7374 BAU .3129
RDE -.5627 RRA .1593 RC3 -.4156 FAU .17497
FDE .2555 FRA -1.2065 FC3-5.4783 BSP 1578
BDE .6458 BRA .6087 BC3 .8464 FSP 780

MID-COURSE EXECUTION ACCURACY

SGT 1072.2 SGR 773.6 SG3 511.7
RRR -.2937 RRF .4602 RTF -.5799
SGB 1322.2 R23 -.1584 R13 .6349
SG1 1114.4 SG2 711.5 THA 159.26

ORBIT DETERMINATION ACCURACY

ST 19.9 SR 30.8 SS 9.7
CRT .8201 CRS .5935 CST .1006
LSA 35.6 MSA 12.6 SSA 3.3
EL1 35.3 EL2 9.9 ALF 59.38

LAUNCH DATE AUG 27 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC										DISTANCE 330.669										EARTH TO MARS																																																																																																																														
RL	151.15	LAL	.00	LOL	333.58	VL	33.336	GAL	5.66	AZL	89.13	HCA	102.45	SMA	205.82	ECC	.28212	INC	.8509	V1	29.478	RP	229.86	LAP	.83	LOP	76.04	VP	22.582	GAP	14.98	AZP	90.18	TAL	26.11	TAP	128.96	RCA	147.76	APO	263.89	V2	23.927	RC	144.048	GL	5.40	GP	-9.58	ZAL	45.41	ZAP	149.38	ETS	198.45	ZAE	165.53	ETE	311.10	ZAC	73.10	ETC	282.53	LVI	-6.47																																																																																	
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																														
C3	27.388	VHL	5.233	DLA	12.34	RAL	15.19	RAD	6646.0	VEL	12.136	PTH	7.11	VHP	4.199	DPA	7.67	RAP	47.42	ECC	1.4507	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																			
50.00	9	12	37	3457.77	-45.55	124.28	252.34	105.57	10	10	14	2457.8	-34.58	95.90	ST	20.1	SR	30.7	SS	10.2	60.00	9	38	34	3388.67	-39.20	120.03	254.31	100.23	10	35	3	2388.7	-30.97	92.27	CRT	.8245	CRS	.5918	CST	.1034	70.00	10	15	24	3280.29	-33.65	112.24	255.31	96.20	11	10	4	2280.3	-27.66	85.18	LSA	35.6	MSA	12.8	SSA	3.4	80.00	11	9	22	3111.20	-29.67	99.82	255.70	93.53	12	1	14	2111.2	-25.21	73.28	EL1	35.3	EL2	9.9	ALF	58.98	90.00	12	24	27	2868.97	-28.17	82.10	255.79	92.56	13	12	16	1868.9	-24.28	55.76							100.00	13	52	14	2585.87	-29.67	61.19	255.70	93.53	14	35	20	1585.7	-25.21	34.65							110.00	15	14	30	2327.11	-33.65	41.16	255.31	96.20	15	53	37	1327.1	-27.66	14.10						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC										DISTANCE 334.352										EARTH TO MARS																																																																																																																														
RL	151.15	LAL	.00	LOL	333.58	VL	33.300	GAL	5.66	AZL	89.12	HCA	103.48	SMA	205.08	ECC	.27961	INC	.8846	V1	29.478	RP	230.25	LAP	.86	LOP	77.06	VP	22.486	GAP	14.66	AZP	90.21	TAL	26.34	TAP	129.81	RCA	147.72	APO	262.39	V2	23.887	RC	148.870	GL	5.64	GP	-9.86	ZAL	45.15	ZAP	148.15	ETS	198.12	ZAE	165.95	ETE	306.98	ZAC	72.87	ETC	282.57	LVI	-6.27																																																																																	
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																														
C3	27.144	VHL	5.210	DLA	12.44	RAL	14.83	RAD	6645.9	VEL	12.128	PTH	7.10	VHP	4.089	DPA	7.35	RAP	47.32	ECC	1.4467	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																			
50.00	9	10	44	3457.65	-45.55	124.27	251.67	105.58	10	8	22	2457.7	-34.57	95.89	ST	19.6	SR	30.6	SS	10.6	60.00	9	36	35	3388.89	-39.20	120.05	253.83	100.22	10	33	3	2388.9	-30.98	92.28	CRT	.8245	CRS	.5795	CST	.0827	70.00	10	13	16	3280.94	-33.66	112.29	254.82	96.17	11	7	57	2280.9	-27.68	85.22	LSA	35.4	MSA	13.0	SSA	3.4	80.00	11	7	6	3112.29	-29.67	99.90	255.22	93.48	11	58	58	2112.3	-25.24	73.36	EL1	35.0	EL2	9.7	ALF	59.60	90.00	12	22	7	2870.17	-28.18	82.19	255.31	92.51	13	9	57	1870.2	-24.31	55.85							100.00	13	49	57	2586.76	-29.67	61.27	255.22	93.48	14	33	4	1586.8	-25.24	34.72							110.00	15	12	42	2327.76	-33.66	41.21	254.82	96.17	15	51	30	1327.8	-27.68	14.14						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC										DISTANCE 338.046										EARTH TO MARS																																																																																																																														
RL	151.15	LAL	.00	LOL	333.58	VL	33.266	GAL	5.67	AZL	89.08	HCA	104.50	SMA	204.35	ECC	.27727	INC	.9186	V1	29.478	RP	230.63	LAP	.89	LOP	78.08	VP	22.393	GAP	14.34	AZP	90.25	TAL	26.55	TAP	131.04	RCA	147.69	APO	261.01	V2	23.847	RC	149.713	GL	5.87	GP	-10.14	ZAL	44.90	ZAP	146.89	ETS	197.79	ZAE	166.32	ETE	302.46	ZAC	72.64	ETC	282.62	LVI	-6.07																																																																																	
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																														
C3	26.916	VHL	5.188	DLA	12.55	RAL	14.48	RAD	6645.8	VEL	12.119	PTH	7.09	VHP	3.984	DPA	7.02	RAP	47.19	ECC	1.4430	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																			
50.00	9	8	55	3457.86	-45.55	124.29	251.43	105.56	10	6	33	2457.9	-34.58	95.91	ST	20.0	SR	30.4	SS	11.2	60.00	9	34	37	3389.47	-39.21	120.10	253.39	100.19	10	31	6	2389.5	-31.00	92.32	CRT	.8300	CRS	.5804	CST	.0954	70.00	10	11	8	3281.99	-33.67	112.38	254.38	96.12	11	5	50	2282.0	-27.71	85.29	LSA	35.5	MSA	13.3	SSA	3.4	80.00	11	4	49	3113.83	-29.68	100.01	254.77	93.42	11	56	42	2113.8	-25.27	73.46	EL1	35.1	EL2	9.7	ALF	58.74	90.00	12	19	45	2871.94	-28.18	82.32	254.85	92.45	13	7	37	1871.9	-24.34	55.97							100.00	13	47	40	2588.50	-29.68	61.30	254.77	93.42	14	30	49	1588.3	-25.27	34.83							110.00	15	10	35	2328.81	-33.67	41.29	254.38	96.12	15	49	23	1328.8	-27.71	14.21						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC										DISTANCE 341.750										EARTH TO MARS																																																																																																																														
RL	151.15	LAL	.00	LOL	333.58	VL	33.234	GAL	5.68	AZL	89.05	HCA	105.51	SMA	203.69	ECC	.27507	INC	.9528	V1	29.478	RP	231.01	LAP	.92	LOP	79.10	VP	22.304	GAP	14.02	AZP	90.25	TAL	26.75	TAP	132.26	RCA	147.66	APO	259.72	V2	23.807	RC	152.572	GL	6.11	GP	-10.43	ZAL	44.68	ZAP	145.61	ETS	197.47	ZAE	166.60	ETE	297.56	ZAC	72.40	ETC	282.67	LVI	-5.87																																																																																	
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																														
C3	26.702	VHL	5.167	DLA	12.68	RAL	14.15	RAD	6645.7	VEL	12.110	PTH	7.08	VHP	3.883	DPA	6.67	RAP	47.04	ECC	1.4394	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																			
50.00	9	7	7	3458.37	-45.56	124.34	251.03	105.53	10	4	46	2458.4	-34.60	95.94	ST	20.3	SR	30.2	SS	11.7	60.00	9	32	40	3390.37	-39.22	120.17	252.98	100.14	10	29	11	2390.4	-31.02	92.38	CRT	.8347	CRS	.5848	CST	.1065	70.00	10	9	1	3283.40	-33.68	112.48	253.96	96.06	11	3	45	2283.4	-27.74	85.39	LSA	35.6	MSA	13.7	SSA	3.4	80.00	11	2	32	3115.77	-29.69	100.16	254.35	93.35	11	54	27	2115.8	-25.30	73.59	EL1	35.1	EL2	9.6	ALF	57.99	90.00	12	17	24	2874.13	-28.19	82.48	254.43	92.37	13	5	18	1874.1	-24.38	56.12							100.00	13	45	23	2590.24	-29.69	61.53	254.35	93.35	14	28	34	1590.2	-25.30	34.96							110.00	15	8	28	2330.22	-33.68	41.40	253.96	96.06	15	47	18	1330.2	-27.74	14.31						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 33.205 GAL 5.68 AZL 89.01 HCA 106.53 SMA 203.08 ECC .27301 INC .9871 V1 29.478  
 RP 231.39 LAP .95 LOP 80.11 VP 22.217 GAP 13.71 AZP 90.28 TAL 26.93 TAP 133.46 RCA 147.63 APO 258.92 V2 23.747  
 RC 159.447 GL 6.35 GP -10.72 ZAL 44.48 ZAP 144.31 ETS 197.17 ZAE 166.80 ETE 292.30 ZAC .72.16 ETC 292.72 LVI -5.67

DISTANCE 345.464 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.301 VHL 5.148 DLA 12.81 RAL 13.84 RAD 6645.6 VEL 12.102 PTH 7.00 VHP 3.787 DPA 6.30 RAP 46.88 ECC 1.4361  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 21 3459.16 -45.57 124.41 250.66 105.48 10 3 1 2459.2 -34.63 95.99  
 60.00 9 30 45 3391.58 -39.23 120.27 252.60 100.07 10 27 16 2391.6 -31.06 92.46  
 70.00 10 6 55 3285.16 -33.69 112.62 253.57 95.98 11 1 40 2285.2 -27.78 85.51  
 80.00 11 0 14 3118.10 -29.70 100.33 253.95 93.26 11 52 12 2118.1 -25.35 73.75  
 90.00 12 15 1 2876.73 -28.20 82.67 254.04 92.28 13 2 58 1876.7 -24.42 56.30  
 100.00 13 43 6 2592.57 -29.70 61.70 253.95 93.26 14 26 18 1592.6 -25.35 35.12  
 110.00 15 6 21 2331.98 -33.69 41.54 253.57 95.98 15 45 13 1332.0 -27.78 14.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3243 TRA -.5799 TC3 .7029 BAV .3176 SGT 1045.0 SGR 840.0 SG3 668.1 ST 20.6 SR 30.0 SS 12.3  
 RDE -.5385 RRA .1187 RC3 -.5563 FAU .22200 RRT -.3279 RRF .5795 RTF -.9258 CRT .8386 CR8 .5880 CST .1181  
 FDE .3687 FRA -1.7242 FC3 -7.2522 BSP 1549 SGB 1340.8 R23 -.2302 R13 .6397 LSA 35.7 MSA 14.0 SSA 3.5  
 BDE .6286 BRA .5919 BC3 .8984 FSP 1050 SG1 1118.0 SG2 743.1 THA 151.94 EL1 35.2 EL2 9.6 ALF 57.33

LAUNCH DATE AUG 27 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 33.177 GAL 5.68 AZL 88.90 HCA 107.54 SMA 202.50 ECC .27107 INC 1.0218 V1 29.478  
 RP 231.77 LAP .97 LOP 81.12 VP 22.133 GAP 13.40 AZP 90.31 TAL 27.10 TAP 134.64 RCA 147.61 APO 257.40 V2 23.728  
 RC 158.336 GL 6.59 GP -11.03 ZAL 44.29 ZAP 142.99 ETS 196.86 ZAE 166.89 ETE 286.74 ZAC 71.92 ETC 282.78 LVI -5.47

DISTANCE 349.187 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.313 VHL 5.130 DLA 12.95 RAL 13.54 RAD 6645.5 VEL 12.094 PTH 7.07 VHP 3.694 DPA 5.92 RAP 46.69 ECC 1.4331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 3 37 3460.23 -45.59 124.50 250.32 105.40 10 1 17 2460.2 -34.67 96.08  
 60.00 9 28 51 3393.10 -39.25 120.40 252.26 99.99 10 25 24 2393.1 -31.11 92.56  
 70.00 10 4 48 3287.27 -33.70 112.78 253.22 95.88 10 59 36 2287.3 -27.83 85.65  
 80.00 10 57 56 3120.82 -29.71 100.53 253.59 93.15 11 49 57 2120.8 -25.40 73.94  
 90.00 12 12 38 2879.74 -28.20 82.89 253.67 92.17 13 0 37 1879.7 -24.47 56.50  
 100.00 13 40 48 2595.29 -29.71 61.90 253.59 93.15 14 24 3 1595.3 -25.40 35.30  
 110.00 15 4 15 2334.09 -33.70 41.70 253.22 95.88 15 43 9 1334.1 -27.83 14.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3276 TRA -.5830 TC3 .6838 BAV .3172 SGT 1035.5 SGR 856.8 SG3 702.5 ST 20.9 SR 29.8 SS 12.9  
 RDE -.5329 RRA .1094 RC3 -.5882 FAU .23230 RRT -.3259 RRF .6031 RTF -.5034 CRT .8420 CR8 .5916 CST .1239  
 FDE .4001 FRA -1.8374 FC3 -7.6430 BSP 1557 SGB 1344.0 R23 -.2491 R13 .6391 LSA 35.7 MSA 14.4 SSA 3.5  
 BDE .6255 BRA .5932 BC3 .9018 FSP 1113 SG1 1112.7 SG2 733.0 THA 150.16 EL1 35.1 EL2 9.6 ALF 56.69

LAUNCH DATE AUG 27 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 33.151 GAL 5.68 AZL 88.94 HCA 108.54 SMA 201.97 ECC .26926 INC 1.0568 V1 29.478  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.052 GAP 13.10 AZP 90.34 TAL 27.25 TAP 135.80 RCA 147.59 APO 256.36 V2 23.669  
 RC 161.238 GL 6.83 GP -11.34 ZAL 44.13 ZAP 141.64 ETS 196.36 ZAE 166.86 ETE 280.98 ZAC 71.67 ETC 282.84 LVI -5.27

DISTANCE 352.918 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.137 VHL 5.112 DLA 13.09 RAL 13.28 RAD 6645.5 VEL 12.087 PTH 7.07 VHP 3.808 DPA 5.53 RAP 46.48 ECC 1.4301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 1 35 3461.58 -45.62 124.62 250.02 105.31 9 39 36 2461.6 -34.73 96.14  
 60.00 9 26 57 3394.93 -39.27 120.55 251.94 99.89 10 23 32 2394.9 -31.16 92.68  
 70.00 10 2 42 3289.72 -33.72 112.97 252.89 95.77 10 57 32 2289.7 -27.89 85.82  
 80.00 10 55 37 3123.92 -29.72 100.76 253.25 93.03 11 47 41 2123.9 -25.46 74.15  
 90.00 12 10 13 2883.15 -28.21 83.14 253.33 92.04 12 58 16 1883.2 -24.53 56.73  
 100.00 13 38 29 2598.39 -29.72 62.13 253.25 93.03 14 21 48 1598.4 -25.46 35.52  
 110.00 15 2 8 2336.54 -33.72 41.89 252.89 95.77 15 41 5 1336.5 -27.89 14.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3304 TRA -.5868 TC3 .6615 BAV .3172 SGT 1024.8 SGR 875.1 SG3 738.2 ST 21.1 SR 29.6 SS 13.5  
 RDE -.5270 RRA .0995 RC3 -.6214 FAU .24293 RRT -.3216 RRF .6284 RTF -.5226 CRT .8451 CR8 .5945 CST .1311  
 FDE .4332 FRA -1.9360 FC3 -8.0467 BSP 1559 SGB 1347.6 R23 -.2668 R13 .6398 LSA 35.7 MSA 14.7 SSA 3.5  
 BDE .6220 BRA .5950 BC3 .9076 FSP 1177 SG1 1108.8 SG2 765.0 THA 148.13 EL1 35.1 EL2 9.5 ALF 56.07

LAUNCH DATE AUG 27 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 33.127 GAL 5.68 AZL 88.91 HCA 109.55 SMA 201.48 ECC .26736 INC 1.0918 V1 29.478  
 RP 232.51 LAP 1.03 LOP 83.13 VP 21.974 GAP 12.79 AZP 90.37 TAL 27.40 TAP 136.95 RCA 147.57 APO 255.39 V2 23.650  
 RC 164.150 GL 7.08 GP -11.66 ZAL 43.98 ZAP 140.28 ETS 196.28 ZAE 166.89 ETE 275.13 ZAC 71.42 ETC 282.90 LVI -5.06

DISTANCE 356.656 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 25.971 VHL 5.096 DLA 13.25 RAL 12.99 RAD 6645.4 VEL 12.080 PTH 7.06 VHP 3.521 DPA 5.11 RAP 46.25 ECC 1.4274  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 0 13 3463.19 -45.65 124.77 249.75 105.21 9 57 57 2463.2 -34.79 96.25  
 60.00 9 25 4 3397.05 -39.30 120.72 251.65 99.77 10 21 41 2397.1 -31.23 92.83  
 70.00 10 0 36 3292.51 -33.74 113.19 252.59 95.64 10 55 28 2292.5 -27.96 86.01  
 80.00 10 53 18 3127.40 -29.73 101.02 252.94 92.90 11 45 25 2127.4 -25.52 74.39  
 90.00 12 7 47 2886.97 -28.22 83.42 253.01 91.90 12 55 54 1887.0 -24.60 56.99  
 100.00 13 38 10 2601.87 -29.73 62.39 252.94 92.90 14 19 31 1601.9 -25.52 35.75  
 110.00 15 0 2 2339.33 -33.74 42.11 252.59 95.64 15 39 2 1339.3 -27.96 14.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3328 TRA -.5913 TC3 .6364 BAV .3174 SGT 1013.5 SGR 894.9 SG3 774.9 ST 21.4 SR 29.3 SS 14.1  
 RDE -.5209 RRA .0892 RC3 -.6561 FAU .25387 RRT -.3142 RRF .6494 RTF -.4569 CRT .8477 CR8 .5982 CST .1389  
 FDE .4696 FRA -2.0776 FC3 -8.4625 BSP 1557 SGB 1352.0 R23 -.2831 R13 .6422 LSA 35.7 MSA 15.1 SSA 3.5  
 BDE .6182 BRA .5979 BC3 .9140 FSP 1243 SG1 1104.8 SG2 779.3 THA 145.83 EL1 35.0 EL2 9.5 ALF 55.44

LAUNCH DATE AUG 27 1973

FLIGHT TIME 156.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.90 VL 33.104 GAL 5.88 AZL 88.87 HCA 110.88 SMA 201.02 ECC .26897 INC 1.1273 V1 29.478
RP 232.89 LAP 1.06 LOP 84.14 VP 21.898 GAP 12.49 AZP 90.40 TAL 27.83 TAP 138.07 RCA 147.55 APO 284.49 V2 23.012
RC 167.073 GL 7.33 GP -11.99 ZAL 43.85 ZAP 136.89 ETS 195.97 ZAE 166.39 ETE 269.32 ZAC 71.17 ETC 282.97 LVI -4.88

PLANETOCENTRIC CONIC

C3 25.815 VHL 5.081 DLA 13.42 RAL 12.73 RAD 6645.3 VEL 12.074 PTH 7.05 VHP 3.440 DPA 4.69 RAP 46.00 ECC 1.4248
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 58 34 3465.07 -45.68 124.94 249.51 103.08 9 56 19 2465.1 -34.86 96.37
60.00 9 23 12 3399.47 -39.32 120.92 251.40 99.64 10 19 52 2399.5 -31.30 92.89
70.00 9 58 29 3295.63 -33.76 113.43 252.32 95.50 10 53 25 2295.6 -28.03 86.22
80.00 10 50 57 3131.26 -29.74 101.31 252.66 92.75 11 43 8 2131.3 -25.60 74.65
90.00 12 5 20 2891.18 -28.23 83.73 252.72 91.75 12 53 31 1891.2 -24.67 57.28
100.00 13 33 49 2605.73 -29.74 62.67 252.66 92.75 14 17 15 1605.7 -25.60 36.02
110.00 14 57 56 2342.45 -33.76 42.35 252.32 95.50 15 36 58 1342.4 -26.03 15.14

DIFFERENTIAL CORRECTIONS

TDE -.3351 TRA -.5989 TC3 .6074 BAU .3178 SGT 1001.3 SGR 916.3 SCS 812.6 ST 21.6 SR 29.1 SS 14.8
RDE -.5145 RRA .0784 RC3 -.6922 FAU .26506 RRT -.3027 RRF .6717 RTF -.4274 CRT .8500 CRS .6016 CST .1460
FDE .5084 FRA -2.2026 FC3 -8.8894 B8P 1556 SGB 1357.3 R23 -.2973 R13 .6466 LSA 35.7 MSA 15.5 S8A 3.5
BDE .6140 BRA .6021 BC3 .9209 F8P 1312 SGI 1100.3 SGI 794.8 THA 143.18 EL1 34.9 EL2 9.5 ALF 54.78

LAUNCH DATE AUG 27 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.98 VL 33.083 GAL 5.88 AZL 88.84 HCA 111.55 SMA 200.60 ECC .26448 INC 1.1632 V1 29.478
RP 233.25 LAP 1.06 LOP 85.13 VP 21.825 GAP 12.20 AZP 90.43 TAL 27.64 TAP 139.19 RCA 147.54 APO 293.65 V2 23.573
RC 170.003 GL 7.58 GP -12.33 ZAL 43.74 ZAP 137.48 ETS 195.67 ZAE 165.94 ETE 263.65 ZAC 70.92 ETC 283.04 LVI -4.65

PLANETOCENTRIC CONIC

C3 25.667 VHL 5.066 DLA 13.59 RAL 12.49 RAD 6645.3 VEL 12.068 PTH 7.05 VHP 3.362 DPA 4.24 RAP 45.73 ECC 1.4224
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 56 55 3467.20 -45.72 125.13 249.30 104.94 9 54 42 2467.2 -34.94 96.50
60.00 9 21 21 3402.17 -39.35 121.14 251.16 99.49 10 18 3 2402.2 -31.39 93.17
70.00 9 56 23 3299.08 -33.78 113.70 252.07 95.35 10 51 22 2299.1 -28.11 86.46
80.00 10 48 35 3135.50 -29.76 101.62 252.40 92.58 11 40 51 2135.5 -25.68 74.94
90.00 12 2 51 2895.79 -28.24 84.07 252.46 91.58 12 51 7 1895.8 -24.74 57.60
100.00 13 31 27 2609.97 -29.76 62.99 252.40 92.58 14 14 57 1610.0 -25.68 36.31
110.00 14 55 49 2345.90 -33.78 42.61 252.07 95.35 15 34 55 1345.9 -26.11 15.37

DIFFERENTIAL CORRECTIONS

TDE -.3371 TRA -.6037 TC3 .5749 BAU .3188 SGT 988.9 SGR 939.4 SCS 851.2 ST 21.8 SR 28.8 SS 15.4
RDE -.5078 RRA .0671 RC3 -.7297 FAU .27651 RRT -.2870 RRF .6935 RTF -.3939 CRT .8519 CRS .6056 CST .1529
FDE .5505 FRA -2.3311 FC3 -9.3266 B8P 1552 SGB 1364.0 R23 -.3074 R13 .6541 LSA 35.7 MSA 16.0 S8A 3.5
BDE .6095 BRA .6074 BC3 .9289 F8P 1381 SGI 1095.9 SGI 812.0 THA 140.08 EL1 34.8 EL2 9.4 ALF 54.12

LAUNCH DATE AUG 27 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.98 VL 33.063 GAL 5.67 AZL 88.80 HCA 112.54 SMA 200.20 ECC .26309 INC 1.1994 V1 29.478
RP 233.62 LAP 1.11 LOP 86.13 VP 21.754 GAP 11.90 AZP 90.46 TAL 27.74 TAP 140.28 RCA 147.53 APO 252.87 V2 23.536
RC 172.941 GL 7.83 GP -12.67 ZAL 43.65 ZAP 136.05 ETS 195.37 ZAE 165.36 ETE 258.23 ZAC 70.66 ETC 283.12 LVI -4.44

PLANETOCENTRIC CONIC

C3 25.527 VHL 5.052 DLA 13.77 RAL 12.27 RAD 6645.2 VEL 12.062 PTH 7.05 VHP 3.289 DPA 3.78 RAP 45.45 ECC 1.4201
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 55 17 3469.58 -45.76 125.34 249.11 104.77 9 53 7 2469.6 -35.04 96.86
60.00 9 19 30 3405.16 -39.39 121.39 250.96 99.33 10 16 15 2405.2 -31.48 93.37
70.00 9 54 15 3302.06 -33.81 113.99 251.84 95.17 10 49 18 2302.9 -28.20 86.71
80.00 10 46 12 3140.11 -29.77 101.96 252.16 92.40 11 38 32 2140.1 -25.76 75.26
90.00 12 0 20 2900.80 -28.25 84.43 252.22 91.40 12 48 41 1900.8 -24.83 57.94
100.00 13 29 4 2614.58 -29.77 63.33 252.16 92.40 14 12 38 1614.6 -25.76 36.62
110.00 14 53 42 2349.67 -33.81 42.91 251.84 95.17 15 32 51 1349.7 -26.20 15.63

DIFFERENTIAL CORRECTIONS

TDE -.3392 TRA -.6113 TC3 .5381 BAU .3202 SGT 976.4 SGR 964.1 SCS 890.5 ST 22.0 SR 28.4 SS 16.1
RDE -.5006 RRA .0583 RC3 -.7688 FAU .28814 RRT -.2686 RRF .7144 RTF -.3584 CRT .8538 CRS .6089 CST .1603
FDE .5963 FRA -2.4628 FC3 -9.7720 B8P 1551 SGB 1372.2 R23 -.3116 R13 .6684 LSA 35.7 MSA 16.4 S8A 3.5
BDE .6047 BRA .6140 BC3 .9382 F8P 1452 SGI 1091.7 SGI 831.4 THA 136.36 EL1 34.7 EL2 9.4 ALF 53.40

LAUNCH DATE AUG 27 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.98 VL 33.048 GAL 5.67 AZL 88.76 HCA 113.53 SMA 199.83 ECC .26178 INC 1.2361 V1 29.478
RP 233.89 LAP 1.13 LOP 87.12 VP 21.685 GAP 11.61 AZP 90.49 TAL 27.83 TAP 141.36 RCA 147.52 APO 252.15 V2 23.496
RC 175.888 GL 8.09 GP -13.02 ZAL 43.57 ZAP 134.59 ETS 195.07 ZAE 164.65 ETE 253.14 ZAC 70.40 ETC 283.20 LVI -4.24

PLANETOCENTRIC CONIC

C3 25.395 VHL 5.039 DLA 13.96 RAL 12.06 RAD 6645.2 VEL 12.057 PTH 7.04 VHP 3.218 DPA 3.31 RAP 45.14 ECC 1.4178
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 53 41 3472.22 -46.80 125.58 248.96 104.60 9 51 33 2472.2 -35.14 96.83
60.00 9 17 39 3408.42 -39.42 121.66 250.78 99.15 10 14 27 2408.4 -31.58 93.59
70.00 9 52 7 3305.06 -33.83 114.31 251.64 94.99 10 47 14 2307.0 -28.30 86.99
80.00 10 43 47 3145.09 -29.78 102.33 251.94 92.21 11 36 12 2145.1 -25.85 75.60
90.00 11 57 48 2906.21 -28.28 84.83 251.99 91.20 12 46 14 1906.2 -24.92 58.31
100.00 13 26 39 2619.56 -29.78 63.70 251.94 92.21 14 10 18 1619.6 -25.85 36.97
110.00 14 51 33 2353.78 -33.83 43.22 251.64 94.99 15 30 47 1353.8 -26.30 15.91

DIFFERENTIAL CORRECTIONS

TDE -.3410 TRA -.6210 TC3 .4975 BAU .3224 SGT 964.9 SGR 990.7 SCS 930.7 ST 22.3 SR 28.1 SS 16.8
RDE -.4931 RRA .0431 RC3 -.8089 FAU .30001 RRT -.2387 RRF .7345 RTF -.3118 CRT .8550 CRS .6141 CST .1667
FDE .6449 FRA -2.5935 FC -10.2274 B8P 1556 SGB 1383.0 R23 -.3066 R13 .6821 LSA 35.6 MSA 16.9 S8A 3.5
BDE .5998 BRA .6225 BC3 .9496 F8P 1526 SGI 1089.0 SGI 852.5 THA 131.85 EL1 34.6 EL2 9.4 ALF 52.66

LAUNCH DATE AUG 27 1973 FLIGHT TIME 164.00 ARRIVAL DATE FEB 7 1974

**HELIOCENTRIC CONIC** DISTANCE 375.435 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 33.028 GAL 5.66 AZL 88.73 HCA 114.52 SMA 199.50 ECC .26056 INC 1.2731 V1 29.478  
 RP 234.35 LAP 1.16 LOP 88.11 VP 21.619 GAP 11.32 AZP 90.53 TAL 27.91 TAP 142.43 RCA 147.52 APO 251.48 V2 23.461  
 RC 178.836 GL 8.35 GP -13.38 ZAL 43.51 ZAP 135.12 ETS 194.76 ZAE 163.81 ETE 248.41 ZAC 70.14 ETC 283.28 LVI -4.03

**PLANETOCENTRIC CONIC**

C3 25.270 VHL 5.027 DLA 14.17 RAL 11.85 RAD 6645.1 VEL 12.052 PTH 7.04 VHP 3.151 DPA 2.42 RAP 44.81 ECC 1.4159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 5 3475.10 -45.85 125.84 248.83 104.40 9 50 0 2475.1 -35.25 97.01  
 60.00 9 15 48 3411.97 -39.46 121.96 250.62 98.95 10 12 39 2412.0 -31.69 93.83  
 70.00 9 49 58 3311.39 -33.86 114.65 251.47 94.79 10 45 10 2311.4 -28.40 87.30  
 80.00 10 41 20 3150.45 -29.80 102.73 251.75 92.00 11 33 50 2150.4 -25.95 78.97  
 90.00 11 55 12 2912.02 -28.26 85.25 251.79 90.99 12 43 44 1912.0 -25.01 58.71  
 100.00 13 24 12 2624.92 -29.80 64.10 251.75 92.00 14 7 57 1624.9 -25.95 37.33  
 110.00 14 49 25 2358.20 -33.86 43.57 251.47 94.79 15 28 43 1358.2 -26.40 16.22

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3429 TRA -.6320 TC3 .4522 BAU .3294 SGT 954.6 SGR 1018.9 SG3 971.3 ST 22.5 SR 27.7 SS 17.6  
 RDE -.4852 RRA .0305 RC3 -.8505 FAU .31195 RRT -.2049 RRF .7536 RTF -.2621 CRT .8562 CRS .6193 CST .1741  
 FDE .6985 FRA -2.7292 FC-10.6872 BSP 1567 SGB 1396.2 R23 -.2871 R13 .7054 LSA 35.6 MSA 17.4 SSA 3.4  
 BDE .5941 BRA .6327 BC3 .9632 FSP 1600 SG1 1088.1 SG2 875.0 THA 126.17 EL1 34.4 EL2 9.4 ALF 31.65

LAUNCH DATE AUG 27 1973 FLIGHT TIME 166.00 ARRIVAL DATE FEB 9 1974

**HELIOCENTRIC CONIC** DISTANCE 379.205 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 33.012 GAL 5.65 AZL 88.69 HCA 115.51 SMA 199.28 ECC .25941 INC 1.3107 V1 29.478  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.555 GAP 11.04 AZP 90.56 TAL 27.97 TAP 143.48 RCA 147.51 APO 250.85 V2 23.424  
 RC 181.791 GL 8.62 GP -13.74 ZAL 43.47 ZAP 131.63 ETS 194.45 ZAE 162.86 ETE 244.06 ZAC 69.88 ETC 283.36 LVI -3.81

**PLANETOCENTRIC CONIC**

C3 25.151 VHL 5.015 DLA 14.37 RAL 11.66 RAD 6645.1 VEL 12.047 PTH 7.03 VHP 3.088 DPA 2.32 RAP 44.47 ECC 1.4139  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 29 3478.21 -45.91 126.12 248.73 104.19 9 48 27 2478.2 -35.37 97.21  
 60.00 9 13 56 3415.79 -39.50 122.27 250.49 98.74 10 10 52 2415.8 -31.80 94.09  
 70.00 9 47 48 3316.13 -33.88 115.02 251.31 94.57 10 43 4 2316.1 -28.51 87.62  
 80.00 10 38 51 3156.17 -29.81 103.15 251.58 91.78 11 31 27 2156.2 -26.05 76.36  
 90.00 11 52 35 2918.21 -28.27 85.70 251.61 90.76 12 41 13 1918.2 -25.11 59.14  
 100.00 13 21 43 2630.64 -29.81 64.52 251.58 91.78 14 5 34 1630.6 -26.05 37.73  
 110.00 14 47 14 2362.95 -33.86 43.93 251.31 94.57 15 26 37 1362.9 -28.51 16.54

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3403 TRA -.6399 TC3 .4094 BAU .3308 SGT 945.0 SGR 1050.5 SG3 1014.1 ST 22.5 SR 27.3 SS 18.2  
 RDE -.4776 RRA .0165 RC3 -.8947 FAU .32452 RRT -.1727 RRF .7725 RTF -.2141 CRT .8560 CRS .6158 CST .1684  
 FDE .7431 FRA -2.8779 FC-11.1703 BSP 1552 SGB 1411.6 R23 -.2429 R13 .7379 LSA 35.4 MSA 17.9 SSA 3.4  
 BDE .5865 BRA .6401 BC3 .9839 FSP 1664 SG1 1094.6 SG2 891.4 THA 118.98 EL1 34.1 EL2 9.3 ALF 51.42

LAUNCH DATE AUG 27 1973 FLIGHT TIME 168.00 ARRIVAL DATE FEB 11 1974

**HELIOCENTRIC CONIC** DISTANCE 382.978 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.997 GAL 5.64 AZL 88.65 HCA 116.49 SMA 198.89 ECC .25834 INC 1.3488 V1 29.478  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.492 GAP 10.75 AZP 90.60 TAL 28.02 TAP 144.51 RCA 147.51 APO 250.28 V2 23.387  
 RC 184.750 GL 8.69 GP -14.11 ZAL 43.44 ZAP 130.13 ETS 194.13 ZAE 161.80 ETE 240.10 ZAC 69.62 ETC 283.45 LVI -5.60

**PLANETOCENTRIC CONIC**

C3 25.038 VHL 5.004 DLA 14.59 RAL 11.49 RAD 6645.0 VEL 12.042 PTH 7.03 VHP 3.028 DPA 1.81 RAP 44.11 ECC 1.4121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 48 54 3481.58 -45.96 126.43 248.65 103.98 9 46 56 2481.6 -35.50 97.43  
 60.00 9 12 5 3419.90 -39.54 122.61 250.39 98.51 10 9 5 2419.9 -31.92 94.37  
 70.00 9 45 37 3321.21 -33.91 115.41 251.18 94.34 10 40 58 2321.2 -28.63 87.97  
 80.00 10 36 20 3162.29 -29.82 103.61 251.42 91.54 11 29 2 2162.3 -26.16 76.78  
 90.00 11 49 54 2924.84 -28.28 86.19 251.45 90.52 12 38 39 1924.8 -25.21 59.60  
 100.00 13 19 12 2638.76 -29.82 64.98 251.42 91.54 14 3 8 1638.8 -26.16 38.15  
 110.00 14 45 3 2368.03 -33.91 44.33 251.18 94.34 15 24 31 1368.0 -28.63 16.89

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3491 TRA -.6570 TC3 .3503 BAU .3352 SGT 939.9 SGR 1081.1 SG3 1054.3 ST 22.9 SR 26.6 SS 19.1  
 RDE -.4881 RRA .0037 RC3 -.9381 FAU .33626 RRT -.1188 RRF .7891 RTF -.1468 CRT .8574 CRS .6271 CST .1840  
 FDE .8137 FRA -3.0048 FC-11.6271 BSP 1603 SGB 1432.5 R23 -.1788 R13 .7704 LSA 35.5 MSA 18.4 SSA 3.4  
 BDE .5816 BRA .6570 BC3 1.0014 FSP 1750 SG1 1101.3 SG2 916.0 THA 110.11 EL1 34.1 EL2 9.3 ALF 50.19

LAUNCH DATE AUG 27 1973 FLIGHT TIME 170.00 ARRIVAL DATE FEB 13 1974

**HELIOCENTRIC CONIC** DISTANCE 386.753 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.984 GAL 5.63 AZL 88.61 HCA 117.47 SMA 198.63 ECC .25734 INC 1.3874 V1 29.478  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.432 GAP 10.47 AZP 90.64 TAL 28.06 TAP 145.53 RCA 147.51 APO 249.74 V2 23.391  
 RC 187.714 GL 9.16 GP -14.49 ZAL 43.43 ZAP 128.60 ETS 193.80 ZAE 160.66 ETE 238.50 ZAC 69.36 ETC 283.53 LVI -3.39

**PLANETOCENTRIC CONIC**

C3 24.930 VHL 4.993 DLA 14.82 RAL 11.32 RAD 6645.0 VEL 12.038 PTH 7.02 VHP 2.971 DPA 1.28 RAP 43.73 ECC 1.4103  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 20 3485.19 -46.02 126.76 248.60 103.71 9 45 25 2485.2 -35.63 97.67  
 60.00 9 10 13 3424.28 -39.59 122.98 250.30 98.27 10 7 17 2424.3 -32.05 94.68  
 70.00 9 43 24 3326.61 -33.94 115.83 251.06 94.09 10 38 50 2326.6 -28.75 88.35  
 80.00 10 33 46 3168.79 -29.83 104.09 251.29 91.29 11 26 35 2168.8 -26.27 77.23  
 90.00 11 47 10 2931.87 -28.28 86.70 251.31 90.26 12 36 2 1931.9 -25.32 60.08  
 100.00 13 16 38 2643.26 -29.83 65.46 251.29 91.29 14 0 41 1643.3 -26.27 38.60  
 110.00 14 42 50 2373.43 -33.94 44.75 251.06 94.09 15 22 24 1373.4 -28.75 17.26

**DIFFERENTIAL CORRECTIONS** MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3467 TRA -.6726 TC3 .2913 BAU .3419 SGT 938.3 SGR 1114.5 SG3 1095.7 ST 23.2 SR 26.4 SS 19.9  
 RDE -.4588 RRA -.0101 RC3 -.9836 FAU .34834 RRT -.0638 RRF .8051 RTF -.0790 CRT .8577 CRS .6321 CST .1898  
 FDE .8788 FRA -3.1399 FC-12.0965 BSP 1641 SGB 1456.9 R23 -.0911 R13 .8004 LSA 35.5 MSA 18.9 SSA 3.4  
 BDE .5750 BRA .6727 BC3 1.0258 FSP 1828 SG1 1119.8 SG2 931.9 THA 100.13 EL1 33.9 EL2 9.3 ALF 49.22

LAUNCH DATE AUG 27 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

DISTANCE 390.536

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.971 GAL 5.62 AZL 88.57 HCA 118.44 SMA 198.38 ECC .29641 INC 1.4265 V1 29.478
RP 235.77 LAP 1.25 LOP 92.03 VP 21.373 GAP 10.20 AZP 90.68 TAL 28.09 TAP 146.53 RCA 147.52 APO 249.25 V2 23.315
RC 190.680 GL 9.44 GP -14.87 ZAL 43.43 ZAP 127.06 ETS 193.46 ZAE 159.43 ETE 233.22 ZAC 69.09 ETC 263.63 LVI -3.17

PLANETOCENTRIC CONIC

C3 24.828 VHL 4.983 DLA 15.08 RAL 11.16 RAD 6644.9 VEL 12.033 PTH 7.02 VHP 2.917 DPA .73 RAP 43.34 ECC 1.4088
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 45 3489.03 -46.08 127.11 248.57 103.45 9 43 54 2489.0 -35.78 97.92
60.00 9 8 20 3428.92 -39.63 123.36 250.23 98.01 10 5 29 2428.9 -32.19 94.98
70.00 9 41 9 3332.32 -33.96 116.27 250.97 93.83 10 36 41 2332.3 -28.88 88.74
80.00 10 31 9 3175.64 -29.84 104.60 251.17 91.02 11 24 5 2175.6 -26.39 77.71
90.00 11 44 23 2939.29 -28.28 87.25 251.19 89.99 12 33 22 1939.3 -25.43 60.40
100.00 13 14 1 2650.12 -29.84 65.97 251.17 91.02 13 58 11 1650.1 -26.39 39.08
110.00 14 40 35 2379.14 -33.98 45.19 250.97 93.83 15 20 15 1379.1 -28.88 17.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3360 TRA -.6795 TC3 .2442 BAU .3527 SGT 930.0 SGR 1154.2 SG3 1142.2 ST 22.9 SR 26.0 SS 20.5
RDE -.4512 RRA -.0267 RC3-1.0341 FAU .36190 RRT -.0218 RRF .0217 RTF -.0229 CRT .8552 CRS .6189 CST .1679
FDE .9162 FRA-3.3089 FC-12.6188 B8P 1635 SGB 1482.2 R23 -.0281 R13 .8212 LSA 35.1 MSA 19.5 S8A 3.4
BDE .5637 BRA .6800 BC3 1.0825 F8P 1871 SG1 1154.7 SG2 929.4 THA 92.87 EL1 33.4 EL2 9.2 ALF 49.20

LAUNCH DATE AUG 27 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

DISTANCE 394.318

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.960 GAL 5.61 AZL 88.53 HCA 119.42 SMA 198.16 ECC .25554 INC 1.4663 V1 29.478
RP 236.12 LAP 1.28 LOP 93.01 VP 21.317 GAP 9.92 AZP 90.72 TAL 28.10 TAP 147.52 RCA 147.52 APO 248.80 V2 23.279
RC 193.849 GL 9.72 GP -15.26 ZAL 43.46 ZAP 125.51 ETS 193.12 ZAE 158.13 ETE 230.26 ZAC 68.83 ETC 283.72 LVI -2.95

PLANETOCENTRIC CONIC

C3 24.730 VHL 4.973 DLA 15.30 RAL 11.02 RAD 6644.9 VEL 12.029 PTH 7.02 VHP 2.866 DPA .18 RAP 42.94 ECC 1.4070
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 11 3493.13 -46.15 127.48 248.57 103.17 9 42 24 2493.1 -35.93 98.19
60.00 9 8 27 3433.87 -39.68 123.78 250.19 97.73 10 3 40 2433.9 -32.34 93.32
70.00 9 38 53 3338.41 -33.99 116.75 250.90 93.55 10 34 31 2338.4 -29.01 89.16
80.00 10 28 29 3182.95 -29.85 105.14 251.08 90.73 11 21 32 2182.9 -26.51 78.22
90.00 11 41 32 2947.19 -28.28 87.82 251.08 89.70 12 30 39 1947.2 -25.55 61.14
100.00 13 11 21 2657.42 -29.85 66.51 251.08 90.73 13 59 39 1657.4 -26.51 39.58
110.00 14 38 19 2385.22 -33.99 45.66 250.90 93.55 15 18 4 1385.2 -29.01 18.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3476 TRA -.7070 TC3 .1622 BAU .3607 SGT 946.4 SGR 1187.2 SG3 1179.4 ST 23.7 SR 25.3 SS 21.5
RDE -.4387 RRA -.0392 RC3-1.0790 FAU .37264 RRT .0612 RRF .8344 RTF .0681 CRT .8572 CRS .6391 CST .1982
FDE 1.0178 FRA-3.4135 FC-13.0452 B8P 1744 SGB 1519.5 R23 .0703 R13 .8316 LSA 35.4 MSA 20.0 S8A 3.3
BDE .5597 BRA .7081 BC3 1.0911 F8P 1981 SG1 1191.0 SG2 943.6 THA 82.44 EL1 33.4 EL2 9.2 ALF 47.23

LAUNCH DATE AUG 27 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

DISTANCE 398.103

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.949 GAL 5.60 AZL 88.49 HCA 120.39 SMA 197.95 ECC .25472 INC 1.5067 V1 29.478
RP 236.46 LAP 1.30 LOP 93.98 VP 21.282 GAP 9.65 AZP 90.76 TAL 28.11 TAP 146.50 RCA 147.53 APO 248.38 V2 23.244
RC 196.619 GL 10.00 GP -15.65 ZAL 43.49 ZAP 123.94 ETS 192.76 ZAE 156.76 ETE 227.56 ZAC 68.57 ETC 283.81 LVI -2.73

PLANETOCENTRIC CONIC

C3 24.837 VHL 4.964 DLA 15.56 RAL 10.89 RAD 6644.8 VEL 12.025 PTH 7.01 VHP 2.818 DPA -.39 RAP 42.52 ECC 1.4055
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 42 36 3497.46 -46.21 127.88 248.59 102.87 9 40 54 2497.5 -36.10 98.48
60.00 9 4 32 3439.08 -39.72 124.21 250.17 97.44 10 1 51 2439.1 -32.49 93.68
70.00 9 36 34 3344.80 -34.02 117.24 250.84 93.26 10 32 19 2344.8 -29.15 89.61
80.00 10 25 46 3190.82 -29.85 105.71 251.00 90.43 11 18 57 2190.6 -26.84 78.75
90.00 11 38 37 2955.50 -28.27 88.43 250.99 89.39 12 27 52 1955.5 -25.67 61.72
100.00 13 8 38 2665.09 -29.85 67.08 251.00 90.43 13 53 3 1665.1 -26.64 40.12
110.00 14 36 0 2391.62 -34.02 46.16 250.84 93.26 15 13 52 1391.6 -29.15 18.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3458 TRA -.7248 TC3 .0932 BAU .3730 SGT 960.3 SGR 1226.5 SG3 1221.4 ST 23.8 SR 24.8 SS 22.3
RDE -.4283 RRA -.0548 RC3-1.1288 FAU .38475 RRT .1278 RRF .8477 RTF .1440 CRT .8561 CRS .6392 CST .1935
FDE 1.0871 FRA-3.5530 FC-13.5200 B8P 1808 SGB 1557.8 R23 .1184 R13 .8401 LSA 35.3 MSA 20.6 S8A 3.3
BDE .5505 BRA .7269 BC3 1.1326 F8P 2031 SG1 1241.4 SG2 941.1 THA 76.32 EL1 33.1 EL2 9.2 ALF 46.33

LAUNCH DATE AUG 27 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC

DISTANCE 401.890

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.939 GAL 5.58 AZL 88.45 HCA 121.35 SMA 197.76 ECC .25396 INC 1.5479 V1 29.478
RP 236.81 LAP 1.32 LOP 94.95 VP 21.209 GAP 9.38 AZP 90.81 TAL 28.10 TAP 149.46 RCA 147.54 APO 247.99 V2 23.209
RC 199.589 GL 10.30 GP -16.05 ZAL 43.54 ZAP 122.36 ETS 192.40 ZAE 155.33 ETE 225.10 ZAC 68.30 ETC 283.90 LVI -2.50

PLANETOCENTRIC CONIC

C3 24.548 VHL 4.955 DLA 15.82 RAL 10.76 RAD 6644.8 VEL 12.022 PTH 7.01 VHP 2.774 DPA -.96 RAP 42.08 ECC 1.4040
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 41 1 3502.03 -46.28 128.30 248.63 102.55 9 39 23 2502.0 -36.27 98.78
60.00 9 2 36 3444.57 -39.77 124.67 250.17 97.13 10 0 0 2444.6 -32.65 96.05
70.00 9 34 12 3351.52 -34.04 117.77 250.80 92.95 10 30 4 2351.5 -29.30 90.08
80.00 10 22 59 3198.69 -29.86 106.31 250.93 90.12 11 16 17 2198.7 -26.77 79.31
90.00 11 35 37 2964.24 -28.27 89.07 250.92 89.07 12 25 1 1964.2 -25.80 62.33
100.00 13 5 51 2673.16 -29.86 67.68 250.93 90.12 13 50 24 1673.2 -26.77 40.68
110.00 14 33 39 2398.34 -34.04 46.69 250.80 92.95 15 13 37 1398.3 -29.30 19.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3385 TRA -.7389 TC3 .0287 BAU .3882 SGT 971.0 SGR 1270.9 SG3 1266.5 ST 23.7 SR 24.3 SS 23.0
RDE -.4190 RRA -.0721 RC3-1.1825 FAU .39777 RRT .1891 RRF .8608 RTF .2145 CRT .8532 CRS .6289 CST .1746
FDE 1.1387 FRA-3.7133 FC-14.0277 B8P 1870 SGB 1599.4 R23 .1373 R13 .8514 LSA 35.0 MSA 21.2 S8A 3.3
BDE .5387 BRA .7424 BC3 1.1828 F8P 2094 SG1 1299.4 SG2 932.6 THA 72.62 EL1 32.7 EL2 9.2 ALF 45.91



LAUNCH DATE AUG 27 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.931 GAL 5.57 AZL 88.41 HCA 122.32 SMA 197.60 ECC .25326 INC 1.5897 V1 29.478  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.157 GAP 9.11 AZP 90.83 TAL 28.08 TAP 150.40 RCA 147.55 APO 247.64 V2 23.174  
 RC 202.557 GL 10.59 GP -16.45 ZAL 43.60 ZAP 120.78 ETS 192.02 ZAE 153.86 ETE 222.86 ZAC 68.04 ETC 284.00 LVI -2.28

PLANETOCENTRIC CONIC  
 C3 24.463 VHL 4.946 DLA 16.10 RAL 10.64 RAD 6644.8 VEL 12.018 PTH 7.01 VHP 2.732 DPA -1.55 RAP 41.65 ECC 1.4026  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 25 3506.86 -46.35 129.74 248.69 102.21 9 37 52 2506.9 -36.45 99.10  
 60.00 9 0 39 3450.37 -39.82 125.16 250.19 96.80 9 58 9 2450.4 -32.81 96.46  
 70.00 9 31 48 3358.63 -34.07 118.32 250.78 92.62 10 27 47 2358.6 -29.45 90.58  
 80.00 10 20 7 3207.23 -29.86 106.95 250.89 89.78 11 13 35 2207.2 -26.91 79.91  
 90.00 11 32 32 2973.49 -28.25 89.75 250.86 88.74 12 22 6 1973.5 -25.93 62.98  
 100.00 13 2 59 2681.70 -29.86 68.32 250.89 89.78 13 47 41 1681.7 -26.91 41.28  
 110.00 14 31 15 2405.45 -34.07 47.24 250.78 92.62 15 11 20 1405.5 -29.45 19.49

DIFFERENTIAL CORRECTIONS  
 TDE -.3461 TRA -.7702 TC3 -.0662 BAU .4027  
 RDE -.4043 RRA -.0851 RC3-1.2296 FAU .40762  
 FDE 1.2586 FRA-3.8061 FC-14.4256 BSP 1998  
 BDE .5322 BRA .7746 BC3 1.2313 FSP 2208

MID-COURSE EXECUTION ACCURACY  
 SGT 1013.6 SGR 1307.4 SG3 1301.2  
 RRT .2737 RRF .8707 RTF .3021  
 SGB 1854.2 R23 .1831 R13 .8538  
 SG1 1366.0 SG2 933.0 THA 66.61

ORBIT DETERMINATION ACCURACY  
 ST 24.4 SR 23.5 SS 24.2  
 CRT .8546 CRS .6473 CST .2000  
 LSA 35.3 MSA 21.8 SSA 3.2  
 EL1 32.7 EL2 9.1 ALF 43.78

LAUNCH DATE AUG 27 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.923 GAL 5.55 AZL 88.37 HCA 123.28 SMA 197.44 ECC .25260 INC 1.6324 V1 29.478  
 RP 237.48 LAP 1.36 LOP 96.87 VP 21.107 GAP 8.85 AZP 90.90 TAL 28.06 TAP 151.34 RCA 147.57 APO 247.31 V2 23.140  
 RC 205.523 GL 10.90 GP -16.85 ZAL 43.68 ZAP 119.18 ETS 191.64 ZAE 152.33 ETE 220.80 ZAC 67.77 ETC 284.10 LVI -2.03

PLANETOCENTRIC CONIC  
 C3 24.382 VHL 4.938 DLA 16.39 RAL 10.53 RAD 6644.7 VEL 12.015 PTH 7.01 VHP 2.693 DPA -2.14 RAP 41.20 ECC 1.4013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 49 3511.93 -46.42 129.21 248.78 101.86 9 36 21 2511.9 -36.63 99.44  
 60.00 8 58 39 3456.45 -39.87 125.67 250.23 96.46 9 56 16 2456.4 -32.99 96.88  
 70.00 9 29 21 3366.08 -34.09 118.90 250.78 92.28 10 25 28 2366.1 -29.60 91.10  
 80.00 10 17 11 3216.18 -29.85 107.61 250.85 89.43 11 10 48 2216.2 -27.05 80.54  
 90.00 11 29 22 2983.19 -28.24 90.45 250.82 88.38 12 19 6 1983.2 -26.06 63.68  
 100.00 13 0 3 2690.65 -29.85 68.98 250.85 89.43 13 44 54 1690.7 -27.05 41.91  
 110.00 14 28 48 2412.90 -34.09 47.82 250.78 92.28 15 9 1 1412.9 -29.60 20.02

DIFFERENTIAL CORRECTIONS  
 TDE -.3444 TRA -.7938 TC3 -.1510 BAU .4207  
 RDE -.3917 RRA -.1011 RC3-1.2816 FAU .41875  
 FDE 1.3455 FRA-3.9328 FC-14.8690 BSP 2110  
 BDE .5215 BRA .8003 BC3 1.2905 FSP 2280

MID-COURSE EXECUTION ACCURACY  
 SGT 1050.8 SGR 1350.4 SG3 1340.4  
 RRT .3438 RRF .8811 RTF .3762  
 SGB 1710.9 R23 .1980 R13 .8621  
 SG1 1438.7 SG2 926.0 THA 63.21

ORBIT DETERMINATION ACCURACY  
 ST 24.6 SR 22.9 SS 25.1  
 CRT .8534 CRS .6479 CST .1981  
 LSA 35.3 MSA 22.4 SSA 3.2  
 EL1 32.4 EL2 9.1 ALF 42.53

LAUNCH DATE AUG 27 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.918 GAL 5.53 AZL 88.32 HCA 124.24 SMA 197.30 ECC .25199 INC 1.6758 V1 29.478  
 RP 237.81 LAP 1.39 LOP 97.84 VP 21.059 GAP 8.58 AZP 90.94 TAL 28.02 TAP 152.26 RCA 147.58 APO 247.02 V2 23.106  
 RC 208.485 GL 11.21 GP -17.26 ZAL 43.77 ZAP 117.58 ETS 191.24 ZAE 150.77 ETE 218.91 ZAC 67.51 ETC 284.19 LVI -1.82

PLANETOCENTRIC CONIC  
 C3 24.304 VHL 4.930 DLA 16.68 RAL 10.43 RAD 6644.7 VEL 12.012 PTH 7.00 VHP 2.656 DPA -2.74 RAP 40.74 ECC 1.4000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 36 12 3517.25 -46.50 129.70 248.89 101.49 9 34 49 2517.3 -36.83 99.80  
 60.00 8 56 38 3462.83 -39.91 126.20 250.28 96.10 9 54 21 2462.8 -33.17 97.32  
 70.00 9 26 51 3373.89 -34.11 119.31 250.79 91.92 10 23 5 2373.9 -29.77 91.65  
 80.00 10 14 11 3223.58 -29.84 108.31 250.84 89.07 11 7 56 2223.6 -27.19 81.20  
 90.00 11 26 7 2993.38 -28.22 91.20 250.79 88.01 12 16 0 1993.4 -26.20 64.37  
 100.00 12 57 2 2700.05 -29.84 69.68 250.84 89.07 13 42 2 1700.0 -27.19 42.37  
 110.00 14 26 17 2420.71 -34.11 48.43 250.79 91.92 15 6 38 1420.7 -29.77 20.57

DIFFERENTIAL CORRECTIONS  
 TDE -.3423 TRA -.8194 TC3 -.2404 BAU .4405  
 RDE -.3783 RRA -.1171 RC3-1.3342 FAU .42943  
 FDE 1.4365 FRA-4.0511 FC-15.2967 BSP 2237  
 BDE .5102 BRA .8277 BC3 1.3557 FSP 2353

MID-COURSE EXECUTION ACCURACY  
 SGT 1096.7 SGR 1394.3 SG3 1378.2  
 RRT .4108 RRF .8905 RTF .4357  
 SGB 1773.9 R23 .2080 R13 .8703  
 SG1 1517.4 SG2 918.8 THA 60.28

ORBIT DETERMINATION ACCURACY  
 ST 24.9 SR 22.2 SS 26.1  
 CRT .8521 CRS .6487 CST .1964  
 LSA 35.3 MSA 23.1 SSA 3.1  
 EL1 32.1 EL2 9.0 ALF 41.16

LAUNCH DATE AUG 27 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.909 GAL 5.51 AZL 88.28 HCA 125.20 SMA 197.18 ECC .25142 INC 1.7202 V1 29.478  
 RP 238.14 LAP 1.41 LOP 98.79 VP 21.012 GAP 8.32 AZP 90.99 TAL 27.97 TAP 153.17 RCA 147.60 APO 246.75 V2 23.073  
 RC 211.443 GL 11.52 GP -17.67 ZAL 43.87 ZAP 115.98 ETS 190.83 ZAE 149.18 ETE 217.16 ZAC 67.25 ETC 284.29 LVI -1.98

PLANETOCENTRIC CONIC  
 C3 24.231 VHL 4.922 DLA 16.99 RAL 10.34 RAD 6644.7 VEL 12.009 PTH 7.00 VHP 2.623 DPA -3.35 RAP 40.28 ECC 1.3988  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 34 33 3522.84 -46.57 130.22 249.02 101.09 9 33 16 2522.8 -37.03 100.18  
 60.00 8 54 35 3469.51 -39.96 126.77 250.36 95.72 9 52 24 2469.5 -33.35 97.79  
 70.00 9 24 17 3382.07 -34.12 120.15 250.82 91.54 10 20 39 2382.1 -29.93 92.23  
 80.00 10 11 4 3235.44 -29.83 109.04 250.83 88.68 11 5 0 2235.4 -27.34 81.90  
 90.00 11 22 45 3004.09 -28.19 91.98 250.77 87.62 12 12 49 2004.1 -26.33 65.13  
 100.00 12 53 56 2709.91 -29.83 70.41 250.83 88.68 13 39 6 1709.9 -27.34 43.26  
 110.00 14 23 43 2428.89 -34.12 49.07 250.82 91.54 15 4 12 1428.9 -29.93 21.14

DIFFERENTIAL CORRECTIONS  
 TDE -.3390 TRA -.8460 TC3 -.3332 BAU .4624  
 RDE -.3645 RRA -.1334 RC3-1.3879 FAU .43983  
 FDE 1.5314 FRA-4.1673 FC-15.7147 BSP 2374  
 BDE .4978 BRA .8565 BC3 1.4273 FSP 2419

MID-COURSE EXECUTION ACCURACY  
 SGT 1150.4 SGR 1439.9 SG3 1415.1  
 RRT .4726 RRF .8992 RTF .5092  
 SGB 1843.0 R23 .2133 R13 .8788  
 SG1 1602.0 SG2 911.3 THA 57.79

ORBIT DETERMINATION ACCURACY  
 ST 25.1 SR 21.4 SS 27.1  
 CRT .8504 CRS .6470 CST .1911  
 LSA 35.3 MSA 23.7 SSA 3.1  
 EL1 31.8 EL2 8.9 ALF 39.79

LAUNCH DATE AUG 27 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC										DISTANCE 420.648										EARTH TO MARS																																																																																																																																																																	
RL	151.15	LAL	.00	LOL	333.58	VL	32.903	GAL	5.49	AZL	88.23	HCA	126.15	SMA	197.07	ECC	.25090	INC	1.7855	V1	29.478	RP	236.47	LAP	1.43	LOP	99.75	VP	20.967	GAP	8.07	AZP	91.04	TAP	27.91	TAP	154.06	RCA	147.62	APO	246.51	V2	23.040	RC	214.394	GL	11.85	GP	-18.08	ZAL	43.99	ZAP	114.37	ETZ	190.40	ZAE	147.56	ETE	215.54	ZAC	66.99	ETC	284.38	LVI	-1.34																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	24.161	VHL	4.915	DLA	17.30	RAL	10.25	RAD	6644.6	VEL	12.006	PTH	7.00	VHP	2.592	DPA	-3.97	RAP	39.81	ECC	1.3976	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	30.00		8	32	53		3528.68		-46.65		130.77		249.17		100.68		9	31	42		2528.7		-37.25		100.57		60.00		8	52	29		3476.50		-40.01		127.35		250.45		95.32		9	50	23		2476.5		-33.55		98.28		70.00		9	21	39		3390.65		-34.14		120.82		250.87		91.15		10	18	9		2390.6		-30.10		92.84		80.00		10	7	52		3245.78		-29.81		109.81		250.84		88.28		11	1	58		2245.8		-27.49		92.63		90.00		11	19	16		3015.34		-28.15		92.80		250.77		87.21		12	9	31		2015.3		-26.47		85.92		100.00		12	50	44		2720.25		-29.81		71.18		250.84		88.28		13	36	4		1720.3		-27.49		44.00		110.00		14	21	5		2437.46		-34.14		49.74		250.87		91.15		15	1	43		1437.5		-30.10		21.75
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-0.3350	TRA	-0.8737	TC3	-0.4300	BAU	.4861	SGT	1212.0	SGR	1486.6	SG3	1450.9	ST	25.3	SR	20.7	SB	28.1	RDE	-0.3499	RRA	-1.1501	RC3	-1.4422	FAU	.44981	RRT	.5295	RRF	.8072	RTF	.5666	CRT	.8490	CRS	.6456	CST	.1842	FDE	1.6281	FRA	-4.2810	FC	-16.1178	BSP	2524	SCB	1918.1	R23	.2159	R13	.8870	LSA	35.4	MSA	24.3	SSA	3.1	BDE	.4844	BRA	.8865	BC3	1.5049	FSP	2461	SG1	1692.1	SG2	903.3	THA	55.61	EL1	31.4	EL2	8.8	ALF	38.36																																																																																																						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC										DISTANCE 424.641										EARTH TO MARS																																																																																																																																																																	
RL	151.15	LAL	.00	LOL	333.58	VL	32.898	GAL	5.47	AZL	88.19	HCA	127.10	SMA	196.97	ECC	.25041	INC	1.8118	V1	29.478	RP	236.79	LAP	1.44	LOP	100.70	VP	20.923	GAP	7.81	AZP	91.09	TAP	27.85	TAP	154.95	RCA	147.64	APO	246.29	V2	23.008	RC	217.340	GL	12.18	GP	-18.50	ZAL	44.12	ZAP	112.77	ETZ	189.96	ZAE	145.91	ETE	214.04	ZAC	66.73	ETC	284.48	LVI	-1.10																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	24.094	VHL	4.909	DLA	17.63	RAL	10.17	RAD	6644.6	VEL	12.003	PTH	7.00	VHP	2.564	DPA	-4.59	RAP	39.34	ECC	1.3965	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	30.00		8	31	12		3534.79		-46.72		131.34		249.34		100.25		9	30	6		2534.8		-37.47		100.90		60.00		8	50	20		3483.81		-40.05		127.97		250.56		94.91		9	48	24		2483.8		-33.75		98.80		70.00		9	18	56		3399.62		-34.15		121.52		250.93		90.74		10	15	36		2399.6		-30.28		93.47		80.00		10	4	34		3256.63		-29.79		110.62		250.86		87.86		10	58	50		2256.6		-27.84		83.40		90.00		11	15	39		3027.15		-28.11		93.66		250.77		86.78		12	6	6		2027.1		-26.81		66.76		100.00		12	47	26		2731.10		-29.79		71.98		250.86		87.86		13	32	57		1731.1		-27.64		44.77		110.00		14	18	23		2446.44		-34.15		50.44		250.93		90.74		14	59	9		1446.4		-30.28		22.39
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-0.3292	TRA	-0.9020	TC3	-0.5293	BAU	.5115	SGT	1279.9	SGR	1334.7	SG3	1485.2	ST	25.4	SR	19.9	SB	29.1	RDE	-0.3351	RRA	-1.1671	RC3	-1.4972	FAU	.45934	RRT	.5805	RRF	.9146	RTF	.8175	CRT	.8471	CRS	.6374	CST	.1731	FDE	1.7231	FRA	-4.3902	FC	-16.5047	BSP	2687	SCB	1998.4	R23	.2198	R13	.8952	LSA	35.4	MSA	25.0	SSA	3.0	BDE	.4698	BRA	.9174	BC3	1.5880	FSP	2536	SG1	1786.6	SG2	895.3	THA	53.73	EL1	31.1	EL2	8.6	ALF	36.95																																																																																																						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC										DISTANCE 426.437										EARTH TO MARS																																																																																																																																																																	
RL	151.15	LAL	.00	LOL	333.58	VL	32.894	GAL	5.45	AZL	88.14	HCA	128.05	SMA	196.88	ECC	.24996	INC	1.8590	V1	29.478	RP	239.10	LAP	1.46	LOP	101.65	VP	20.881	GAP	7.95	AZP	91.15	TAP	27.77	TAP	155.82	RCA	147.67	APO	246.09	V2	22.975	RC	220.278	GL	12.52	GP	-18.91	ZAL	44.27	ZAP	111.16	ETZ	189.92	ZAE	144.24	ETE	212.62	ZAC	66.46	ETC	284.57	LVI	-0.86																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	24.032	VHL	4.902	DLA	17.97	RAL	10.09	RAD	6644.6	VEL	12.000	PTH	6.99	VHP	2.538	DPA	-5.21	RAP	38.87	ECC	1.3955	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	30.00		8	29	28		3541.18		-46.80		131.94		249.53		99.79		9	28	29		2541.2		-37.69		101.43		60.00		8	48	9		3491.43		-40.09		128.62		250.69		94.47		9	46	20		2491.5		-33.95		99.34		70.00		9	16	9		3409.00		-34.15		122.25		251.00		90.30		10	12	58		2409.0		-30.46		94.15		80.00		10	1	8		3268.00		-29.76		111.46		250.89		87.41		10	55	36		2268.0		-27.80		84.21		90.00		11	11	55		3038.55		-28.06		94.57		250.79		86.33		12	2	34		2039.5		-26.76		67.63		100.00		12	44	0		2742.47		-29.76		72.83		250.89		87.41		13	29	43		1742.5		-27.80		45.57		110.00		14	15	35		2455.82		-34.15		51.17		251.00		90.30		14	56	31		1455.8		-30.46		23.06
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-0.3212	TRA	-0.9301	TC3	-0.6301	BAU	.5389	SGT	1352.3	SGR	1586.0	SG3	1519.9	ST	25.4	SR	19.2	SB	29.8	RDE	-0.3209	RRA	-1.1853	RC3	-1.5543	FAU	.46898	RRT	.6280	RRF	.9216	RTF	.6288	CRT	.8451	CRS	.6251	CST	.1540	FDE	1.8063	FRA	-4.3055	FC	-16.6944	BSP	2858	SCB	2084.2	R23	.2128	R13	.9039	LSA	35.3	MSA	25.6	SSA	3.0	BDE	.4540	BRA	.9484	BC3	1.6773	FSP	2573	SG1	1886.2	SG2	886.7	THA	52.17	EL1	30.7	EL2	8.5	ALF	36.67																																																																																																						

LAUNCH DATE AUG 27 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC										DISTANCE 432.232										EARTH TO MARS																																																																																																																																																																	
RL	151.15	LAL	.00	LOL	333.58	VL	32.890	GAL	5.42	AZL	88.09	HCA	129.00	SMA	198.81	ECC	.24955	INC	1.9078	V1	29.478	RP	239.42	LAP	1.48	LOP	102.80	VP	20.840	GAP	7.30	AZP	91.20	TAP	27.68	TAP	156.88	RCA	147.69	APO	245.92	V2	22.944	RC	223.209	GL	12.88	GP	-19.33	ZAL	44.42	ZAP	109.57	ETZ	189.05	ZAE	142.56	ETE	211.30	ZAC	66.20	ETC	284.66	LVI	-0.61																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	23.972	VHL	4.896	DLA	18.32	RAL	10.02	RAD	6644.6	VEL	11.998	PTH	6.99	VHP	2.514	DPA	-5.84	RAP	38.41	ECC	1.3945	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	30.00		8	27	43		3547.86		-46.87		132.56		249.75		99.31		9	26	51		2547.9		-37.93		101.90		60.00		8	45	54		3499.45		-40.13		129.29		250.83		94.01		9	44	13		2499.5		-34.16		99.82		70.00		9	13	16		3418.84		-34.15		123.02		251.09		89.85		10	10	15		2418.8		-30.65		94.85		80.00		9	57	35		3279.95		-29.72		112.35		250.94		86.95		10	52	15		2260.0		-27.96		85.06		90.00		11	8	1		3052.60		-28.00		95.52		250.82		85.86		11	58	53		2052.6		-26.90		68.56		100.00		12	40	27		2754.43		-29.72		73.71		250.94		86.95		13	26	21		1754.4		-27.96		46.43		110.00		14	12	43		2485.66		-34.15		51.94		251.09		89.85		14	53	48		1465.7		-30.65		23.77
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-0.3190	TRA	-0.9664	TC3	-0.7461	BAU	.5672	SGT	1446.4	SGR	1629.4	SG3	1544																																																																																																																																																																								

LAUNCH DATE AUG 27 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC DISTANCE 436.027 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.887 GAL 5.40 AZL 88.04 HCA 129.94 SMA 196.74 ECC .24917 INC 1.9571 V1 29.478  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.800 GAP 7.05 AZP 91.26 TAL 27.59 TAP 157.53 RCA 147.72 APO 245.77 V2 22.912  
 RC 226.132 GL 13.22 GP -19.75 ZAL 44.59 ZAP 107.98 ETS 188.56 ZAE 140.87 ETE 210.06 ZAC 65.94 ETC 284.78 LVI -.35

PLANETOCENTRIC CONIC  
 C3 23.918 VHL 4.890 DLA 18.68 RAL 9.96 RAD 6844.5 VEL 11.996 PTH 6.99 VHP 2.494 DPA -6.47 RAP 37.94 ECC 1.3936  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 55 3554.82 -48.95 133.22 249.98 98.81 9 23 10 2554.8 -38.18 102.38  
 60.00 8 43 35 3507.80 -40.17 130.00 250.99 93.34 9 42 3 2507.8 -34.38 100.52  
 70.00 9 10 18 3429.11 -34.15 123.82 251.19 89.37 10 7 27 2429.1 -30.84 95.59  
 80.00 9 53 54 3292.48 -29.67 113.27 250.99 86.46 10 48 46 2292.5 -28.11 85.96  
 90.00 11 3 57 3066.31 -27.93 96.51 250.85 83.36 11 55 4 2066.3 -27.04 69.54  
 100.00 12 36 45 2766.95 -29.67 74.64 250.99 86.46 13 22 52 1767.0 -28.11 47.32  
 110.00 14 9 44 2475.93 -34.15 52.74 251.19 89.37 14 51 0 1475.9 -30.84 24.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3114 TRA -.9994 TC3 -.8581 BAU .5974 SGT 1537.9 SGR 1878.5 SG3 1572.5 ST 26.0 SR 17.3 SS 32.4  
 RDE -.2839 RRA -.2162 RC3-1.6598 FAU .48300 RRT .7028 RRF .9328 RTF .7351 CRT .8463 CRS .6130 CST .1446  
 FDE 2.0553 FRA-4.6462 FC-17.4848 B8P 3244 SGB 2276.5 R23 .2164 R13 .9142 LSA 36.1 MSA 26.8 SSA 2.9  
 BDE .4213 BRA 1.0225 BC3 1.8685 F8P 2714 SG1 2102.3 SG2 873.5 THA 48.55 EL1 30.2 EL2 7.9 ALF 31.78

LAUNCH DATE AUG 27 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC DISTANCE 439.824 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.884 GAL 5.37 AZL 87.99 HCA 130.88 SMA 196.69 ECC .24882 INC 2.0079 V1 29.478  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.762 GAP 6.80 AZP 91.31 TAL 27.49 TAP 158.37 RCA 147.75 APO 245.63 V2 22.882  
 RC 229.048 GL 13.58 GP -20.17 ZAL 44.78 ZAP 106.40 ETS 188.09 ZAE 139.17 ETE 208.87 ZAC 65.68 ETC 284.84 LVI -.09

PLANETOCENTRIC CONIC  
 C3 23.864 VHL 4.885 DLA 19.05 RAL 9.89 RAD 6844.5 VEL 11.993 PTH 6.99 VHP 2.475 DPA -7.10 RAP 37.48 ECC 1.3927  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 5 3562.09 -47.02 133.91 250.24 98.29 9 23 27 2562.1 -38.43 102.90  
 60.00 8 41 12 3516.51 -40.21 130.74 251.17 93.04 9 39 48 2516.5 -34.61 101.15  
 70.00 9 7 14 3439.86 -34.14 124.66 251.30 88.88 10 4 33 2439.9 -31.03 96.37  
 80.00 9 50 3 3305.63 -29.61 114.25 251.06 85.96 10 45 9 2305.6 -28.27 86.90  
 90.00 10 59 43 3080.73 -27.84 97.56 250.90 84.85 11 51 4 2080.7 -27.19 70.57  
 100.00 12 32 55 2780.10 -29.61 75.61 251.06 85.96 13 19 15 1780.1 -28.27 48.27  
 110.00 14 6 40 2486.68 -34.14 53.58 251.30 88.88 14 48 7 1486.7 -31.03 25.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3029 TRA -1.0337 TC3 -.9736 BAU .6290 SGT 1835.9 SGR 1728.0 SG3 1597.7 ST 26.2 SR 16.4 SS 33.5  
 RDE -.2657 RRA -.2328 RC3-1.7143 FAU .48964 RRT .7338 RRF .9379 RTF .7642 CRT .8474 CRS .5981 CST .1287  
 FDE 2.1655 FRA-4.7187 FC-17.7636 B8P 3446 SGB 2379.5 R23 .2149 R13 .9197 LSA 36.4 MSA 27.3 SSA 2.8  
 BDE .4029 BRA 1.0596 BC3 1.9715 F8P 2761 SG1 2216.1 SG2 866.5 THA 47.13 EL1 30.0 EL2 7.6 ALF 30.00

LAUNCH DATE AUG 27 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC DISTANCE 443.620 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.881 GAL 5.35 AZL 87.94 HCA 131.82 SMA 196.65 ECC .24850 INC 2.0602 V1 29.478  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.725 GAP 6.56 AZP 91.37 TAL 27.38 TAP 159.20 RCA 147.78 APO 245.51 V2 22.851  
 RC 231.955 GL 13.96 GP -20.59 ZAL 44.97 ZAP 104.83 ETS 187.59 ZAE 137.46 ETE 207.75 ZAC 65.42 ETC 284.93 LVI .17

PLANETOCENTRIC CONIC  
 C3 23.815 VHL 4.880 DLA 19.43 RAL 9.84 RAD 6844.5 VEL 11.991 PTH 6.99 VHP 2.459 DPA -7.73 RAP 37.03 ECC 1.3919  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 11 3589.68 -47.09 134.63 250.52 97.74 9 21 41 2589.7 -38.69 103.43  
 60.00 8 38 44 3525.60 -40.24 131.51 251.37 92.51 9 37 30 2525.6 -34.84 101.81  
 70.00 9 4 2 3451.11 -34.12 125.54 251.42 88.36 10 1 33 2451.1 -31.22 97.19  
 80.00 9 46 3 3319.43 -29.54 115.27 251.13 85.42 10 41 22 2319.4 -28.43 87.90  
 90.00 10 55 17 3095.92 -27.75 98.66 250.95 84.30 11 46 53 2095.9 -27.33 71.66  
 100.00 12 28 54 2793.90 -29.54 76.63 251.13 85.42 13 15 28 1793.9 -28.43 49.26  
 110.00 14 3 29 2497.93 -34.12 54.46 251.42 88.36 14 45 6 1497.9 -31.22 26.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2929 TRA -1.0688 TC3 -1.0914 BAU .6617 SGT 1738.9 SGR 1777.6 SG3 1620.4 ST 26.4 SR 15.4 SS 34.8  
 RDE -.2466 RRA -.2494 RC3-1.7686 FAU .49552 RRT .7808 RRF .9425 RTF .7591 CRT .8499 CRS .5776 CST .1103  
 FDE 2.2789 FRA-4.7831 FC-18.0135 B8P 3657 SGB 2486.7 R23 .2132 R13 .9248 LSA 36.8 MSA 27.8 SSA 2.8  
 BDE .3829 BRA 1.0975 BC3 2.0782 F8P 2801 SG1 2333.3 SG2 859.8 THA 45.83 EL1 29.7 EL2 7.2 ALF 28.23

LAUNCH DATE AUG 27 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC DISTANCE 447.416 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.880 GAL 5.32 AZL 87.89 HCA 132.76 SMA 196.61 ECC .24821 INC 2.1137 V1 29.478  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.689 GAP 6.31 AZP 91.44 TAL 27.26 TAP 160.02 RCA 147.81 APO 245.41 V2 22.821  
 RC 234.852 GL 14.34 GP -21.01 ZAL 45.18 ZAP 103.27 ETS 187.08 ZAE 135.75 ETE 206.60 ZAC 65.15 ETC 285.02 LVI .44

PLANETOCENTRIC CONIC  
 C3 23.771 VHL 4.876 DLA 19.83 RAL 9.78 RAD 6844.5 VEL 11.990 PTH 6.99 VHP 2.445 DPA -8.37 RAP 36.58 ECC 1.3912  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 15 3577.59 -47.16 135.38 250.81 97.16 9 19 52 2577.6 -38.96 104.00  
 60.00 8 36 12 3535.09 -40.26 132.32 251.58 91.97 9 35 7 2535.1 -35.08 102.50  
 70.00 9 0 43 3462.88 -34.09 126.46 251.56 87.82 9 58 26 2462.9 -31.42 98.05  
 80.00 9 41 51 3333.95 -29.45 116.34 251.21 84.87 10 37 25 2333.9 -28.59 88.94  
 90.00 10 50 38 3111.93 -27.63 99.82 251.01 83.73 11 42 30 2111.9 -27.47 72.81  
 100.00 12 24 43 2808.42 -29.45 77.70 251.21 84.87 13 11 31 1808.4 -28.59 50.31  
 110.00 14 0 10 2509.70 -34.09 55.37 251.58 87.82 14 41 59 1509.7 -31.42 26.97

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2818 TRA -1.1049 TC3 -1.2120 BAU .6956 SGT 1847.0 SGR 1827.6 SG3 1640.7 ST 26.6 SR 14.5 SS 35.8  
 RDE -.2269 RRA -.2659 RC3-1.8227 FAU .50060 RRT .7842 RRF .9468 RTF .8103 CRT .8541 CRS .5509 CST .0895  
 FDE 2.3921 FRA-4.8383 FC-18.2349 B8P 3877 SGB 2598.4 R23 .2115 R13 .9294 LSA 37.3 MSA 28.2 SSA 2.7  
 BDE .3618 BRA 1.1364 BC3 2.1888 F8P 2839 SG1 2454.2 SG2 853.5 THA 44.61 EL1 29.5 EL2 6.8 ALF 26.47

LAUNCH DATE AUG 27 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.58 VL 32.878 GAL 5.29 AZL 87.83 HCA 133.69 SMA 196.89 ECC .24795 INC 2.1689 V1 29.478  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.655 GAP 6.07 AZP 91.50 TAL 27.14 TAP 160.83 RCA 147.84 APO 245.33 V2 22.792  
 RC 237.739 GL 14.73 GP -21.43 ZAL 45.40 ZAP 101.73 ETS 186.56 ZAE 134.04 ETE 205.66 ZAC 64.89 ETC 285.10 LVI .72

Distance 451.212 Earth to Mars

Planetary Conic: C3 23.730 VHL 4.871 DLA 20.24 RAL 9.73 RAD 6644.5 VEL 11.988 PTH 6.98 VHP 2.433 DPA -9.00 RAP 36.14 ECC 1.3905  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 14 3585.84 -47.23 136.16 251.13 96.56 9 18 0 2565.8 -39.24 104.59  
 60.00 8 33 34 3545.00 -40.28 133.16 251.80 91.39 9 32 39 2545.0 -35.32 103.23  
 70.00 8 57 16 3475.20 -34.06 127.42 251.71 87.25 9 55 12 2475.2 -31.62 98.95  
 80.00 9 37 28 3349.22 -29.36 117.46 251.30 84.28 10 33 17 2349.2 -28.75 90.05  
 90.00 10 45 44 3128.82 -27.50 101.04 251.07 83.14 11 37 53 2128.8 -27.60 74.03  
 100.00 12 20 20 2823.69 -29.36 78.83 251.30 84.28 13 7 23 1823.7 -28.75 51.42  
 110.00 13 56 43 2922.02 -34.06 56.34 251.71 87.25 14 38 45 1522.0 -31.62 27.67

Differential Corrections: TDE -.2667 TRA -1.1413 TC3 -1.3338 BAU .7307 SGT 1958.5 SGR 1879.6 SG3 1660.0 ST 26.7 SR 13.6 SS 36.9  
 RDE -.2072 RRA -.2836 RC3 -1.8778 FAU .50548 RRT .8030 RRF .9508 RTF .8293 CRT .8606 CRS .5138 CST .0621  
 FDE 2.4971 FRA -4.8987 FC -18.4409 BSP 4101 SGB 2714.5 R23 .2087 R13 .9339 LSA 37.9 MSA 28.5 SSA 2.7  
 BDE .3393 BRA 1.1760 BC3 2.3033 FSP 2860 SG1 2579.0 SG2 846.9 THA 43.54 EL1 29.3 EL2 6.3 ALF 24.86

LAUNCH DATE AUG 27 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.58 VL 32.878 GAL 5.26 AZL 87.77 HCA 134.63 SMA 196.57 ECC .24771 INC 2.2256 V1 29.478  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.621 GAP 5.83 AZP 91.56 TAL 27.00 TAP 161.63 RCA 147.88 APO 245.26 V2 22.763  
 RC 240.615 GL 15.14 GP -21.86 ZAL 45.63 ZAP 100.21 ETS 186.02 ZAE 132.33 ETE 204.68 ZAC 64.62 ETC 285.18 LVI 1.00

Distance 455.009 Earth to Mars

Planetary Conic: C3 23.695 VHL 4.868 DLA 20.67 RAL 9.68 RAD 6644.4 VEL 11.988 PTH 6.98 VHP 2.423 DPA -9.63 RAP 35.71 ECC 1.3900  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 10 3594.43 -47.29 136.99 251.47 95.93 9 16 5 2594.4 -39.52 105.22  
 60.00 8 30 51 3555.34 -40.29 134.04 252.04 90.80 9 30 6 2555.3 -35.87 104.00  
 70.00 8 53 41 3488.10 -34.01 128.42 251.86 86.66 9 51 49 2488.1 -31.83 99.90  
 80.00 9 32 51 3365.28 -29.24 118.64 251.39 83.67 10 28 56 2365.3 -28.90 91.22  
 90.00 10 40 34 3146.87 -27.35 102.32 251.13 82.51 11 33 1 2146.7 -27.73 75.32  
 100.00 12 15 43 2839.76 -29.24 80.01 251.39 83.67 13 3 3 1839.8 -28.90 52.59  
 110.00 13 53 7 2534.92 -34.01 57.34 251.86 86.66 14 35 22 1534.9 -31.83 28.82

Differential Corrections: TDE -.2519 TRA -1.1760 TC3 -1.4533 BAU .7673 SGT 2088.4 SGR 1937.8 SG3 1681.6 ST 26.8 SR 12.9 SS 37.7  
 RDE -.1902 RRA -.3042 RC3 -1.9377 FAU .51102 RRT .8237 RRF .9548 RTF .8469 CRT .8671 CRS .4827 CST .0196  
 FDE 2.5657 FRA -4.9821 FC -18.6710 BSP 4320 SGB 2834.3 R23 .2028 R13 .9391 LSA 38.3 MSA 28.8 SSA 2.6  
 BDE .3157 BRA 1.2147 BC3 2.4221 FSP 2839 SG1 2707.1 SG2 839.5 THA 42.74 EL1 29.1 EL2 5.9 ALF 23.70

LAUNCH DATE AUG 27 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.58 VL 32.877 GAL 5.23 AZL 87.72 HCA 135.58 SMA 196.58 ECC .24750 INC 2.2840 V1 29.478  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.589 GAP 5.59 AZP 91.63 TAL 26.86 TAP 162.42 RCA 147.91 APO 245.21 V2 22.734  
 RC 243.479 GL 15.56 GP -22.28 ZAL 45.87 ZAP 98.71 ETS 185.48 ZAE 130.63 ETE 203.74 ZAC 64.34 ETC 285.27 LVI 1.29

Distance 458.803 Earth to Mars

Planetary Conic: C3 23.663 VHL 4.864 DLA 21.11 RAL 9.63 RAD 6644.4 VEL 11.985 PTH 6.98 VHP 2.415 DPA -10.28 RAP 35.31 ECC 1.3894  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 2 3603.42 -47.35 137.85 251.83 95.27 9 14 5 2603.4 -39.82 105.88  
 60.00 8 28 1 3566.18 -40.30 134.96 252.30 90.17 9 27 27 2566.2 -35.82 104.80  
 70.00 8 49 55 3501.66 -33.95 129.48 252.03 86.04 9 48 17 2501.7 -32.03 100.91  
 80.00 9 27 59 3382.30 -29.11 119.89 251.49 83.03 10 24 22 2382.3 -29.06 92.46  
 90.00 10 35 5 3165.66 -27.17 103.68 251.20 81.85 11 27 51 2165.7 -27.85 76.69  
 100.00 12 10 51 2856.77 -29.11 81.26 251.49 83.03 12 58 28 1856.8 -29.06 53.83  
 110.00 13 49 21 2548.48 -33.95 58.39 252.03 86.04 14 31 50 1548.5 -32.03 29.82

Differential Corrections: TDE -.2407 TRA -1.2191 TC3 -1.5883 BAU .8033 SGT 2199.4 SGR 1977.4 SG3 1685.3 ST 27.2 SR 11.6 SS 39.4  
 RDE -.1825 RRA -.3152 RC3 -1.9812 FAU .51109 RRT .8237 RRF .9578 RTF .8483 CRT .8849 CRS .4122 CST .0114  
 FDE 2.7399 FRA -4.9333 FC -18.6991 BSP 4574 SGB 2957.8 R23 .2070 R13 .9409 LSA 39.7 MSA 29.0 SSA 2.5  
 BDE .2904 BRA 1.2392 BC3 2.5393 FSP 2924 SG1 2837.0 SG2 836.2 THA 41.38 EL1 29.1 EL2 5.1 ALF 21.43

LAUNCH DATE AUG 27 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 151.15 LAL .00 LOL 333.58 VL 32.877 GAL 5.20 AZL 87.66 HCA 136.48 SMA 196.56 ECC .24731 INC 2.3443 V1 29.478  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.558 GAP 5.35 AZP 91.70 TAL 26.72 TAP 163.20 RCA 147.95 APO 245.17 V2 22.708  
 RC 246.330 GL 15.99 GP -22.71 ZAL 46.13 ZAP 97.23 ETS 184.92 ZAE 128.94 ETE 202.83 ZAC 64.07 ETC 285.35 LVI 1.59

Distance 462.598 Earth to Mars

Planetary Conic: C3 23.636 VHL 4.862 DLA 21.56 RAL 9.59 RAD 6644.4 VEL 11.984 PTH 6.98 VHP 2.409 DPA -10.88 RAP 34.91 ECC 1.3890  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 48 3612.79 -47.41 138.75 252.21 94.58 9 12 1 2612.8 -40.12 106.57  
 60.00 8 25 4 3577.48 -40.30 135.92 252.57 89.52 9 24 41 2577.5 -36.08 105.65  
 70.00 8 45 59 3515.87 -33.88 130.58 252.21 85.39 9 44 35 2515.9 -32.24 101.96  
 80.00 9 22 51 3400.24 -28.95 121.20 251.59 82.36 10 19 31 2400.2 -29.20 93.78  
 90.00 10 29 17 3185.79 -26.97 105.12 251.26 81.16 11 22 23 2185.8 -27.97 78.15  
 100.00 12 5 43 2874.72 -28.95 82.57 251.59 82.36 12 53 38 1874.7 -29.20 55.14  
 110.00 13 45 25 2562.69 -33.88 59.50 252.21 85.39 14 28 8 1562.7 -32.24 30.86

Differential Corrections: TDE -.2239 TRA -1.2584 TC3 -1.7189 BAU .8409 SGT 2323.6 SGR 2027.7 SG3 1695.0 ST 27.4 SR 10.8 SS 40.8  
 RDE -.1398 RRA -.3316 RC3 -2.0331 FAU .51301 RRT .8519 RRF .9606 RTF .8702 CRT .9021 CRS .3360 CST -.0210  
 FDE 2.8533 FRA -4.9759 FC -18.7907 BSP 4815 SGB 3084.0 R23 .2056 R13 .9436 LSA 40.7 MSA 29.1 SSA 2.5  
 BDE .2639 BRA 1.3014 BC3 2.6611 FSP 2937 SG1 2969.9 SG2 831.0 THA 40.44 EL1 29.1 EL2 4.4 ALF 19.99

LAUNCH DATE AUG 27 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC DISTANCE 466.393 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.877 GAL 5.17 AZL 87.59 HCA 137.41 SMA 196.57 ECC .24714 INC 2.4069 V1 29.478  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.528 GAP 5.11 AZP 91.77 TAL 26.56 TAP 163.97 RCA 147.99 APO 245.15 V2 22.679  
 RC 249.167 GL 16.44 GP -23.14 ZAL 46.40 ZAP 95.77 ETS 184.38 ZAE 127.28 ETE 201.95 ZAC 63.78 ETC 285.42 LVI 1.90

PLANETOCENTRIC CONIC  
 C3 23.614 VHL 4.859 DLA 22.03 RAL 9.54 RAD 6644.4 VEL 11.983 PTH 6.98 VHP 2.406 DPA -11.50 RAP 34.53 ECC 1.3886  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 30 3622.57 -47.46 139.69 252.62 93.86 9 9 52 2622.6 -40.43 107.30  
 60.00 8 21 59 3589.31 -40.29 136.93 252.85 88.84 9 21 48 2589.3 -36.34 106.54  
 70.00 8 41 51 3530.80 -33.79 131.74 252.39 84.71 9 40 41 2530.8 -32.44 103.08  
 80.00 9 17 25 3419.26 -28.77 122.58 251.69 81.65 10 14 24 2419.3 -29.34 95.17  
 90.00 10 23 5 3207.24 -26.74 106.64 251.33 80.43 11 16 32 2207.2 -28.07 79.72  
 100.00 12 0 17 2893.73 -28.77 83.95 251.69 81.65 12 48 30 1893.7 -29.34 56.54  
 110.00 13 41 17 2577.62 -33.79 60.65 252.39 84.71 14 24 15 1577.6 -32.44 32.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2056 TRA-1.2985 TC3-1.8466 BAU .8791 SGT 2451.0 SGR 2078.1 S63 1702.1 ST 27.7 SR 10.0 SS 41.8  
 RDE -.1158 RRA -.3480 RC3-2.0844 FAU .51414 RRT .8639 RRF .9634 RTF .8804 CRT .9221 CRS .2360 CST -.0561  
 FDE 2.9670 FRA-4.9898 FC-18.8491 BSP 5059 SGB 3213.3 R23 .2043 R13 .9464 LSA 41.9 MSA 29.2 S5A 2.4  
 BDE .2359 BRA 1.3443 BC3 2.7847 FSP 2945 S61 3105.3 S62 826.2 THA 39.57 EL1 29.2 EL2 3.7 ALF 18.70

LAUNCH DATE AUG 27 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC DISTANCE 470.187 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.878 GAL 5.14 AZL 87.53 HCA 138.33 SMA 196.58 ECC .24699 INC 2.4708 V1 29.478  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.499 GAP 4.88 AZP 91.85 TAL 26.40 TAP 164.74 RCA 148.03 APO 245.13 V2 22.652  
 RC 251.989 GL 16.89 GP -23.58 ZAL 46.68 ZAP 94.34 ETS 183.77 ZAE 125.59 ETE 201.10 ZAC 63.50 ETC 285.50 LVI 2.21

PLANETOCENTRIC CONIC  
 C3 23.598 VHL 4.858 DLA 22.51 RAL 9.49 RAD 6644.4 VEL 11.982 PTH 6.98 VHP 2.404 DPA -12.12 RAP 34.17 ECC 1.3884  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 5 3632.77 -47.50 140.67 253.04 93.10 9 7 38 2632.8 -40.75 108.07  
 60.00 8 18 46 3601.68 -40.26 137.98 253.15 88.12 9 18 47 2601.7 -36.61 107.49  
 70.00 8 37 30 3546.50 -33.69 132.95 252.58 84.00 9 36 36 2546.5 -32.65 104.26  
 80.00 9 11 38 3439.45 -28.56 124.05 251.79 80.91 10 8 57 2439.4 -29.47 96.66  
 90.00 10 16 26 3230.19 -26.47 108.27 251.38 79.66 11 10 16 2230.2 -28.15 81.39  
 100.00 11 54 30 2913.92 -28.56 85.41 251.79 80.91 12 43 3 1913.9 -29.47 58.03  
 110.00 13 36 56 2593.32 -33.69 61.87 252.58 84.00 14 20 9 1593.3 -32.65 33.18

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1857 TRA-1.3393 TC3-1.9775 BAU .9178 SGT 2581.3 SGR 2127.3 S63 1705.6 ST 28.0 SR 9.3 SS 43.0  
 RDE -.0908 RRA -.3640 RC3-2.1338 FAU .51418 RRT .8744 RRF .9660 RTF .8892 CRT .9425 CRS .1148 CST -.0931  
 FDE 3.0821 FRA-4.9915 FC-18.8636 BSP 5313 SGB 3344.9 R23 .2035 R13 .9488 LSA 43.2 MSA 29.2 S5A 2.4  
 BDE .2067 BRA 1.3879 BC3 2.9092 FSP 2955 S61 3242.4 S62 821.8 THA 38.72 EL1 29.4 EL2 3.0 ALF 17.59

LAUNCH DATE AUG 27 1973

FLIGHT TIME 216.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC DISTANCE 473.980 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.879 GAL 5.11 AZL 87.46 HCA 139.25 SMA 196.60 ECC .24687 INC 2.5373 V1 29.478  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.471 GAP 4.65 AZP 91.92 TAL 26.24 TAP 165.49 RCA 148.07 APO 245.13 V2 22.625  
 RC 254.795 GL 17.37 GP -24.01 ZAL 46.98 ZAP 92.94 ETS 183.18 ZAE 123.94 ETE 200.27 ZAC 63.20 ETC 285.58 LVI 2.54

PLANETOCENTRIC CONIC  
 C3 23.588 VHL 4.857 DLA 23.01 RAL 9.45 RAD 6644.4 VEL 11.982 PTH 6.98 VHP 2.404 DPA -12.74 RAP 33.83 ECC 1.3882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 35 3643.44 -47.53 141.70 253.48 92.31 9 5 18 2643.4 -41.08 108.89  
 60.00 8 15 23 3614.64 -40.23 139.08 253.46 87.38 9 15 38 2614.6 -36.88 108.48  
 70.00 8 32 54 3563.04 -33.56 134.22 252.77 83.25 9 32 17 2563.0 -32.85 105.51  
 80.00 9 5 27 3460.95 -28.32 125.60 251.88 80.13 10 3 8 2461.0 -29.59 98.25  
 90.00 10 9 17 3254.85 -26.15 110.01 251.43 78.84 11 3 32 2254.8 -28.22 83.19  
 100.00 11 48 19 2935.42 -28.32 86.97 251.88 80.13 12 37 14 1935.4 -29.59 59.61  
 110.00 13 32 21 2609.86 -33.56 63.14 252.77 83.25 14 15 50 1609.9 -32.85 34.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1638 TRA-1.3804 TC3-2.1087 BAU .9571 SGT 2713.5 SGR 2176.7 S63 1706.7 ST 28.4 SR 8.8 SS 44.3  
 RDE -.0648 RRA -.3800 RC3-2.1826 FAU .51350 RRT .8836 RRF .9684 RTF .8869 CRT .9583 CRS -.0353 CST -.1329  
 FDE 3.1973 FRA-4.9851 FC-18.8465 BSP 5368 SGB 3478.6 R23 .2029 R13 .9510 LSA 44.6 MSA 29.2 S5A 2.3  
 BDE .1762 BRA 1.4317 BC3 3.0349 FSP 2956 S61 3381.1 S62 817.9 THA 37.94 EL1 29.7 EL2 2.4 ALF 16.71

LAUNCH DATE AUG 27 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC DISTANCE 477.773 EARTH TO MARS  
 RL 151.15 LAL .00 LOL 333.58 VL 32.880 GAL 5.07 AZL 87.39 HCA 140.17 SMA 196.63 ECC .24676 INC 2.6061 V1 29.478  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.444 GAP 4.41 AZP 92.00 TAL 26.07 TAP 166.24 RCA 148.11 APO 245.14 V2 22.599  
 RC 257.584 GL 17.86 GP -24.46 ZAL 47.28 ZAP 91.56 ETS 182.58 ZAE 122.30 ETE 199.47 ZAC 62.90 ETC 285.65 LVI 2.87

PLANETOCENTRIC CONIC  
 C3 23.584 VHL 4.856 DLA 23.53 RAL 9.40 RAD 6644.4 VEL 11.982 PTH 6.98 VHP 2.406 DPA -13.36 RAP 33.51 ECC 1.3881  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 57 3654.59 -47.56 142.78 253.95 91.48 9 2 52 2654.6 -41.41 109.74  
 60.00 8 11 51 3628.22 -40.18 140.23 253.78 86.60 9 12 19 2628.2 -37.15 109.53  
 70.00 8 28 3 3580.48 -33.41 135.56 252.97 82.47 9 27 43 2580.5 -33.04 106.83  
 80.00 8 58 50 3483.94 -28.04 127.25 251.97 79.30 9 56 54 2483.9 -29.69 99.95  
 90.00 10 1 31 3281.48 -25.79 111.87 251.46 77.98 10 56 13 2281.5 -28.27 85.13  
 100.00 11 41 41 2958.41 -28.04 88.62 251.97 79.30 12 31 0 1958.4 -29.69 61.31  
 110.00 13 27 29 2627.30 -33.41 64.48 252.97 82.47 14 11 17 1627.3 -33.04 35.75

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1404 TRA-1.4222 TC3-2.2405 BAU .9968 SGT 2848.1 SGR 2226.1 S63 1705.0 ST 28.9 SR 8.6 SS 45.5  
 RDE -.0383 RRA -.3960 RC3-2.2306 FAU .51204 RRT .8919 RRF .9705 RTF .9036 CRT .9627 CRS -.2027 CST -.1752  
 FDE 3.3068 FRA-4.9719 FC-18.7959 BSP 5825 SGB 3614.9 R23 .2023 R13 .9529 LSA 46.1 MSA 29.2 S5A 2.2  
 BDE .1456 BRA 1.4763 BC3 3.1615 FSP 2953 S61 3522.0 S62 814.2 THA 37.20 EL1 30.0 EL2 2.2 ALF 16.11



LAUNCH DATE AUG 27 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

RL 151.18 LAL .00 LOL 333.58 VL 32.891 GAL 4.89 AZL 87.01 MCA 144.74 SMA 198.84 ECC .24647 INC 2.9927 V1 29.478  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.328 GAP 3.29 AZP 92.44 TAL 25.12 TAP 169.86 RCA 148.32 APO 245.35 V2 22.475  
 RC 271.273 GL 20.58 GP -26.77 ZAL 49.03 ZAP 88.18 ETS 179.42 ZAE 114.43 ETE 195.72 ZAC 61.22 ETC 286.03 LVI 4.73

PLANETOCENTRIC CONIC

C3 23.684 VHL 4.867 DLA 26.39 RAL 9.09 RAD 6644.4 VEL 11.988 PTH 6.98 VHP 2.443 DPA -16.41 RAP 32.27 ECC 1.3898  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 46 39 3718.71 -47.49 148.97 256.58 86.71 8 48 37 2718.7 -43.20 114.87  
 60.00 7 50 57 3707.25 -39.85 146.89 255.52 82.11 8 52 44 2707.2 -30.53 115.79  
 70.00 7 58 30 3684.95 -32.20 143.47 253.90 77.95 8 59 55 2604.9 -33.89 114.86  
 80.00 8 15 40 3631.05 -25.75 137.57 252.09 74.34 9 16 11 2631.1 -29.77 110.87  
 90.00 9 7 21 3464.11 -22.61 124.29 251.06 72.55 10 5 5 2464.1 -27.74 98.45  
 100.00 10 58 32 3105.52 -25.75 98.94 252.09 74.34 11 50 18 2105.5 -29.77 72.24  
 110.00 12 57 57 2731.77 -32.20 72.39 253.90 77.95 13 43 29 1731.8 -33.89 43.78

DIFFERENTIAL CORRECTIONS

TDE .0071 TRA-1.6367 TC3-2.8897 BAV 1.2002  
 RDE .1121 RRA -.4767 RC3-2.4529 FAU .49298  
 FDE 3.8340 FRA-4.7927 FC-18.0201 B8P 7141  
 BDE .1123 BRA 1.7047 BC3 3.7904 F8P 2862

MID-COURSE EXECUTION ACCURACY

SGT 3541.0 SGR 2471.8 SG3 1856.7  
 RRT .9213 RRF .9793 RTF .9267  
 SGB 4318.4 R23 .2025 R13 .9602  
 SGI 4243.3 SG2 802.0 THA 34.13

ORBIT DETERMINATION ACCURACY

ST 32.5 SR 12.0 SS 51.8  
 CRT .8204 CR8 -.8348 CST -.4064  
 LSA 55.4 MSA 28.8 SSA 1.9  
 EL1 34.1 EL2 6.6 ALF 17.54

LAUNCH DATE AUG 27 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.894 GAL 4.85 AZL 86.92 MCA 145.65 SMA 196.89 ECC .24645 INC 3.0880 V1 29.478  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.303 GAP 3.06 AZP 92.54 TAL 24.92 TAP 170.56 RCA 148.37 APO 245.42 V2 22.452  
 RC 273.957 GL 21.19 GP -27.26 ZAL 49.42 ZAP 83.97 ETS 178.75 ZAE 112.93 ETE 195.01 ZAC 60.84 ETC 286.11 LVI 5.15

PLANETOCENTRIC CONIC

C3 23.733 VHL 4.872 DLA 27.03 RAL 9.00 RAD 6644.5 VEL 11.988 PTH 6.98 VHP 2.455 DPA -17.02 RAP 32.11 ECC 1.3906  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 2 3733.50 -47.42 150.40 257.16 85.61 8 45 16 2733.5 -43.57 116.09  
 60.00 7 45 57 3725.73 -39.47 148.42 255.88 81.08 8 48 3 2725.7 -38.80 117.28  
 70.00 7 51 11 3710.32 -31.83 145.35 254.05 76.90 8 53 1 2710.3 -34.01 116.83  
 80.00 8 3 48 3670.66 -24.99 140.27 251.97 73.11 9 4 59 2670.7 -29.82 113.80  
 90.00 8 50 11 3520.76 -21.41 128.01 250.71 71.07 9 48 52 2520.8 -27.29 102.53  
 100.00 10 46 40 3145.15 -24.99 101.64 251.97 73.11 11 39 5 2145.1 -29.82 75.17  
 110.00 12 50 37 2757.14 -31.83 74.27 254.05 76.90 13 36 34 1757.1 -34.01 45.75

DIFFERENTIAL CORRECTIONS

TDE .0433 TRA-1.6805 TC3-3.0149 BAV 1.2414  
 RDE .1457 RRA -.4933 RC3-2.4936 FAU .48698  
 FDE 3.9299 FRA-4.7371 FC-17.7641 B8P 7406  
 BDE .1520 BRA 1.7514 BC3 3.9125 F8P 2828

MID-COURSE EXECUTION ACCURACY

SGT 3681.7 SGR 2521.2 SG3 1639.5  
 RRT .9255 RRF .9807 RTF .9298  
 SGB 4462.2 R23 .2030 R13 .9613  
 SGI 4389.8 SG2 800.8 THA 33.63

ORBIT DETERMINATION ACCURACY

ST 33.7 SR 13.5 SS 53.2  
 CRT .7989 CR8 -.8839 CST -.4530  
 LSA 57.6 MSA 28.6 SSA 1.8  
 EL1 35.4 EL2 7.7 ALF 18.67

LAUNCH DATE AUG 27 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.897 GAL 4.81 AZL 86.83 MCA 146.55 SMA 196.95 ECC .24645 INC 3.1713 V1 29.478  
 RP 244.56 LAP 1.75 LOP 120.18 VP 20.285 GAP 2.83 AZP 92.65 TAL 24.71 TAP 171.26 RCA 148.41 APO 245.49 V2 22.430  
 RC 276.623 GL 21.83 GP -27.76 ZAL 49.82 ZAP 82.83 ETS 178.08 ZAE 111.45 ETE 194.31 ZAC 60.44 ETC 286.19 LVI 5.58

PLANETOCENTRIC CONIC

C3 23.794 VHL 4.878 DLA 27.69 RAL 8.91 RAD 6644.5 VEL 11.991 PTH 6.99 VHP 2.470 DPA -17.63 RAP 31.97 ECC 1.3916  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 12 3749.05 -47.33 151.89 257.76 84.47 8 41 42 2749.1 -43.95 117.39  
 60.00 7 40 37 3745.31 -39.25 150.04 256.24 80.01 8 43 2 2745.3 -39.07 118.88  
 70.00 7 43 12 3737.69 -31.39 147.36 254.18 75.78 8 45 29 2737.7 -34.10 118.96  
 80.00 7 49 57 3716.46 -24.05 143.35 251.77 71.76 8 51 54 2716.5 -29.36 117.18  
 90.00 8 26 42 3597.62 -19.63 132.94 250.08 69.23 9 26 40 2597.6 -26.47 108.00  
 100.00 10 32 49 3190.93 -24.05 104.72 251.77 71.76 11 26 0 2190.9 -29.36 78.55  
 110.00 12 42 38 2784.51 -31.39 76.28 254.18 75.78 13 29 3 1784.5 -34.10 47.88

DIFFERENTIAL CORRECTIONS

TDE .0819 TRA-1.7246 TC3-3.1378 BAV 1.2828  
 RDE .1810 RRA -.5102 RC3-2.5331 FAU .48034  
 FDE 4.0244 FRA-4.6767 FC-17.4768 B8P 7676  
 BDE .1987 BRA 1.7985 BC3 4.0327 F8P 2794

MID-COURSE EXECUTION ACCURACY

SGT 3822.8 SGR 2571.1 SG3 1819.9  
 RRT .9293 RRF .9820 RTF .9226  
 SGB 4607.0 R23 .2036 R13 .9622  
 SGI 4537.0 SG2 800.1 THA 33.17

ORBIT DETERMINATION ACCURACY

ST 33.0 SR 13.2 SS 54.3  
 CRT .7861 CR8 -.9178 CST -.4994  
 LSA 60.0 MSA 28.5 SSA 1.7  
 EL1 37.1 EL2 8.8 ALF 20.01

LAUNCH DATE AUG 27 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.901 GAL 4.77 AZL 86.73 MCA 147.46 SMA 197.02 ECC .24647 INC 3.2669 V1 29.478  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.266 GAP 2.61 AZP 92.75 TAL 24.50 TAP 171.95 RCA 148.46 APO 245.58 V2 22.407  
 RC 279.268 GL 22.48 GP -28.27 ZAL 50.24 ZAP 81.73 ETS 177.39 ZAE 110.00 ETE 193.62 ZAC 60.03 ETC 286.27 LVI 6.04

PLANETOCENTRIC CONIC

C3 23.869 VHL 4.888 DLA 28.38 RAL 8.81 RAD 6644.5 VEL 11.994 PTH 6.99 VHP 2.486 DPA -18.24 RAP 31.87 ECC 1.3928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 8 3765.44 -47.21 153.46 258.37 83.27 8 37 53 2765.4 -44.33 118.79  
 60.00 7 34 53 3766.08 -38.99 151.75 256.60 78.88 8 37 39 2766.1 -39.32 120.59  
 70.00 7 34 26 3767.43 -30.87 149.52 254.27 74.60 8 37 13 2767.4 -34.15 121.28  
 80.00 7 33 6 3771.63 -22.83 146.99 251.41 70.22 8 35 57 2771.6 -28.91 121.22  
 87.54 7 15 3 3630.02 -18.37 148.09 248.23 65.85 8 18 53 2830.0 -24.02 124.37  
 100.00 10 15 57 3246.10 -22.83 108.36 251.41 70.22 11 10 4 2246.1 -28.91 82.59  
 110.00 12 33 52 2814.25 -30.87 78.44 254.27 74.60 13 20 46 1814.2 -34.15 50.20

DIFFERENTIAL CORRECTIONS

TDE .1229 TRA-1.7687 TC3-3.2573 BAV 1.3240  
 RDE .2175 RRA -.5272 RC3-2.5702 FAU .47286  
 FDE 4.1121 FRA-4.6082 FC-17.1508 B8P 7951  
 BDE .2498 BRA 1.8456 BC3 4.1493 F8P 2756

MID-COURSE EXECUTION ACCURACY

SGT 3963.5 SGR 2620.3 SG3 1597.4  
 RRT .9327 RRF .9832 RTF .9350  
 SGB 4751.3 R23 .2044 R13 .9630  
 SGI 4683.5 SG2 799.7 THA 32.73

ORBIT DETERMINATION ACCURACY

ST 36.4 SR 17.0 SS 55.7  
 CRT .7813 CR8 -.9409 CST -.5419  
 LSA 62.5 MSA 28.4 SSA 1.7  
 EL1 38.9 EL2 9.9 ALF 21.47

LAUNCH DATE AUG 27 1973 FLIGHT TIME 236.00 ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC DISTANCE 511.869 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.904 GAL 4.73 AZL 86.63 HCA 148.38 SMA 197.09 ECC .24649 INC 3.3871 V1 29.478  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.248 GAP 2.39 AZP 92.87 TAL 24.28 TAP 172.84 RCA 148.51 APO 245.67 V2 22.386  
 RC 281.893 GL 23.17 GP -28.81 ZAL 50.68 ZAP 80.66 ETS 176.69 ZAE 108.58 ETE 192.94 ZAC 59.59 ETC 286.36 LVI 6.51

PLANETOCENTRIC CONIC

C3 23.958 VHL 4.895 DLA 29.09 RAL 8.70 RAD 8644.6 VEL 11.997 PTH 6.99 VHP 2.505 DPA -18.86 RAP 31.80 ECC 1.3943

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 7 30 46 3782.73 -47.06 155.10 258.99 82.01 8 33 49 2782.7 -44.71 120.28  
 60.00 7 28 43 3788.19 -38.60 153.95 256.95 77.69 8 31 51 2788.2 -39.55 122.42  
 70.00 7 24 43 3799.99 -30.26 151.86 254.31 73.34 8 28 3 2800.0 -34.15 123.83  
 80.00 7 10 38 3844.35 -21.08 151.68 250.78 68.35 8 14 42 2844.3 -28.13 126.48  
 82.88 6 36 22 3954.38 -15.71 157.38 248.35 65.20 7 42 17 2954.4 -24.59 133.68  
 100.00 9 53 30 3318.82 -21.08 113.04 250.78 68.35 10 48 49 2318.8 -28.13 87.85  
 110.00 12 24 10 2846.81 -30.26 80.78 254.31 73.34 13 11 36 1846.8 -34.15 52.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .1668 TRA-1.8135 TC3-3.3742 BAU 1.3658 SGT 4104.9 SGR 2671.7 SG3 1573.7 ST 38.0 SR 18.9 SS 57.0  
 RDE .2558 RRA -.5452 RC3-2.6074 FAU .46505 RRT .9359 RRF .9844 RTF .9372 CRT .7830 CRS -.9570 CST -.5836  
 FDE 4.1975 FRA-4.5400 FC-16.8049 BSP 8216 SGB 4897.8 R23 .2051 R13 .9638 LSA 65.2 HSA 28.2 SSA 1.6  
 BDE .3054 BRA 1.8937 BC3 4.2642 FSP 2710 SG1 4832.1 SG2 799.7 THA 32.34 EL1 41.1 EL2 10.9 ALF 23.01

LAUNCH DATE AUG 27 1973 FLIGHT TIME 238.00 ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC DISTANCE 515.652 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.908 GAL 4.69 AZL 86.53 HCA 149.26 SMA 197.16 ECC .24653 INC 3.4724 V1 29.478  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.231 GAP 2.18 AZP 92.99 TAL 24.06 TAP 173.32 RCA 148.55 APO 245.77 V2 22.365  
 RC 284.497 GL 23.89 GP -29.36 ZAL 51.14 ZAP 79.64 ETS 175.98 ZAE 107.18 ETE 192.26 ZAC 59.13 ETC 286.45 LVI 7.01

PLANETOCENTRIC CONIC

C3 24.064 VHL 4.906 DLA 29.83 RAL 8.57 RAD 8644.6 VEL 12.002 PTH 7.00 VHP 2.525 DPA -19.48 RAP 31.76 ECC 1.3960

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 7 26 6 3801.00 -46.87 156.83 259.62 80.69 8 29 27 2801.0 -45.09 121.87  
 60.00 7 22 3 3811.80 -38.32 155.45 257.28 76.44 8 25 35 2811.8 -39.77 124.34  
 70.00 7 13 50 3836.04 -29.52 154.41 254.28 71.99 8 17 46 2836.0 -34.08 126.64  
 80.00 6 24 4 3993.40 -17.06 160.92 248.97 65.12 7 30 37 2993.4 -25.84 136.96  
 80.09 6 14 0 4025.54 -18.05 162.81 248.47 64.51 7 21 6 3025.5 -25.17 139.13  
 100.00 9 6 56 3467.88 -17.06 122.28 248.97 65.12 10 4 44 2467.9 -25.84 98.32  
 110.00 12 13 17 2862.86 -29.52 83.33 254.28 71.99 13 1 19 1862.9 -34.08 55.56

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .2133 TRA-1.8584 TC3-3.4866 BAU 1.4073 SGT 4245.5 SGR 2722.6 SG3 1547.1 ST 39.9 SR 21.0 SS 58.2  
 RDE .2957 RRA -.5634 RC3-2.6419 FAU .45643 RRT .9387 RRF .9854 RTF .9391 CRT .7890 CRS -.9683 CST -.6225  
 FDE 4.2772 FRA-4.4638 FC-16.4205 BSP 8492 SGB 5043.5 R23 .2061 R13 .9645 LSA 68.0 HSA 28.1 SSA 1.5  
 BDE .3646 BRA 1.9419 BC3 4.3745 FSP 2664 SG1 4979.6 SG2 800.2 THA 31.97 EL1 43.5 EL2 11.9 ALF 24.55

LAUNCH DATE AUG 27 1973 FLIGHT TIME 240.00 ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC DISTANCE 519.435 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.912 GAL 4.65 AZL 86.42 HCA 150.16 SMA 197.24 ECC .24658 INC 3.5832 V1 29.478  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.214 GAP 1.96 AZP 93.11 TAL 23.83 TAP 173.99 RCA 148.60 APO 245.87 V2 22.344  
 RC 287.079 GL 24.64 GP -29.92 ZAL 51.61 ZAP 78.68 ETS 175.28 ZAE 105.81 ETE 191.60 ZAC 58.65 ETC 286.55 LVI 7.53

PLANETOCENTRIC CONIC

C3 24.188 VHL 4.918 DLA 30.60 RAL 8.42 RAD 8644.7 VEL 12.007 PTH 7.00 VHP 2.547 DPA -20.11 RAP 31.76 ECC 1.3981

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 7 21 5 3820.34 -46.64 158.64 260.26 79.31 8 24 45 2820.3 -45.46 123.59  
 60.00 7 14 48 3837.09 -37.90 157.47 257.58 75.13 8 18 45 2837.1 -39.96 126.52  
 70.00 7 1 26 3876.57 -28.64 157.23 254.16 70.54 8 6 3 2876.6 -33.91 129.79  
 77.80 5 56 19 4081.24 -16.40 167.14 248.60 63.80 7 4 20 3081.2 -25.78 143.49  
 77.80 5 56 19 4081.24 -16.40 167.14 248.60 63.80 7 4 20 3081.2 -25.78 143.49  
 77.80 5 56 19 4081.24 -16.40 167.14 248.60 63.80 7 4 20 3081.2 -25.78 143.49  
 110.00 12 0 52 2923.39 -28.64 86.15 254.16 70.54 12 49 36 1923.4 -33.91 58.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .2625 TRA-1.9039 TC3-3.5958 BAU 1.4493 SGT 4388.6 SGR 2775.3 SG3 1518.8 ST 41.9 SR 23.3 SS 59.3  
 RDE .3375 RRA -.5825 RC3-2.6756 FAU .44737 RRT .9413 RRF .9864 RTF .509 CRT .7982 CRS -.9763 CST -.6585  
 FDE 4.3917 FRA-4.3858 FC-16.0122 BSP 8757 SGB 5190.8 R23 .2070 R13 .9651 LSA 71.0 HSA 27.9 SSA 1.4  
 BDE .4275 BRA 1.9910 BC3 4.4819 FSP 2811 SG1 5128.6 SG2 801.2 THA 31.64 EL1 46.2 EL2 12.7 ALF 26.03

LAUNCH DATE AUG 27 1973 FLIGHT TIME 242.00 ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC DISTANCE 523.218 EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.916 GAL 4.60 AZL 86.30 HCA 151.06 SMA 197.31 ECC .24664 INC 3.7000 V1 29.478  
 RP 245.83 LAP 1.79 LOP 124.69 VP 20.199 GAP 1.74 AZP 93.24 TAL 23.60 TAP 174.68 RCA 148.65 APO 245.98 V2 22.324  
 RC 289.637 GL 25.42 GP -30.51 ZAL 52.10 ZAP 77.72 ETS 174.52 ZAE 104.48 ETE 190.93 ZAC 58.14 ETC 286.65 LVI 8.07

PLANETOCENTRIC CONIC

C3 24.333 VHL 4.933 DLA 31.40 RAL 8.26 RAD 8644.7 VEL 12.013 PTH 7.00 VHP 2.571 DPA -20.74 RAP 31.79 ECC 1.4005

LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

50.00 7 15 40 3840.86 -46.37 160.54 260.89 77.87 8 19 41 2840.9 -45.83 125.43  
 60.00 7 6 53 3864.31 -37.40 159.61 257.85 73.76 8 11 17 2864.3 -40.12 128.81  
 70.00 6 46 57 3923.21 -27.54 160.42 253.91 68.95 7 52 20 2923.2 -33.62 133.40  
 75.75 5 41 3 4128.80 -16.75 170.90 248.73 63.05 6 49 52 3128.8 -26.40 147.28  
 75.75 5 41 3 4128.80 -16.75 170.90 248.73 63.05 6 49 52 3128.8 -26.40 147.28  
 75.75 5 41 3 4128.80 -16.75 170.90 248.73 63.05 6 49 52 3128.8 -26.40 147.28  
 110.00 11 46 24 2970.03 -27.54 89.33 253.91 68.95 12 35 54 1970.0 -33.62 62.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE .3148 TRA-1.9498 TC3-3.6991 BAU 1.4910 SGT 4526.8 SGR 2827.5 SG3 1487.7 ST 44.1 SR 25.7 SS 60.6  
 RDE .3820 RRA -.6020 RC3-2.7060 FAU .43747 RRT .9437 RRF .9873 RTF .9423 CRT .8088 CRS -.9821 CST -.6915  
 FDE 4.4255 FRA-4.3011 FC-15.5645 BSP 9029 SGB 5337.3 R23 .2084 R13 .9656 LSA 74.2 HSA 27.8 SSA 1.4  
 BDE .4950 BRA 2.0406 BC3 4.5832 FSP 2559 SG1 5276.6 SG2 802.8 THA 31.32 EL1 49.2 EL2 13.5 ALF 27.44



LAUNCH DATE AUG 27 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.99 VL 32.920 GAL 4.56 AZL 86.18 HCA 151.98 SMA 197.40 ECC .24671 INC 3.8235 V1 29.478  
 RP 249.83 LAP 1.80 LOP 129.59 VP 20.184 GAP 1.93 AZP 93.38 TAL 23.37 TAP 175.32 RCA 148.70 APO 246.10 V2 22.305  
 RC 292.172 GL 26.24 GP -31.12 ZAL 52.61 ZAP 76.82 ETS 173.77 ZAE 103.17 ETE 190.27 ZAC 57.61 ETC 286.76 LVI 8.64

PLANETOCENTRIC CONIC  
 C3 24.301 VHL 4.950 DLA 32.23 RAL 8.07 RAD 6644.8 VEL 12.020 PTH 7.01 VHP 2.598 DPA -21.39 RAP 31.86 ECC 1.4032  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 49 3862.67 -46.04 162.54 261.51 76.36 8 14 12 2862.7 -46.16 127.41  
 60.00 6 58 10 3893.75 -36.82 161.89 258.07 72.31 8 3 4 2893.8 -40.24 131.31  
 70.00 6 29 23 3978.96 -26.12 164.13 253.45 67.17 7 35 42 2979.0 -33.11 137.67  
 73.85 5 27 22 4170.99 -17.10 174.30 248.87 62.26 6 36 53 3171.0 -27.04 150.72  
 73.85 5 27 22 4170.99 -17.10 174.30 248.87 62.26 6 36 53 3171.0 -27.04 150.72  
 73.85 5 27 22 4170.99 -17.10 174.30 248.87 62.26 6 36 53 3171.0 -27.04 150.72  
 110.00 11 28 49 3025.78 -26.12 93.05 253.45 67.17 12 19 15 2025.8 -33.11 66.59

DIFFERENTIAL CORRECTIONS  
 TDE .3696 TRA-1.9963 TC3-3.7979 BAU 1.5333  
 RDE .4273 RRA -.6231 RC3-2.7366 FAU .42741  
 FDE 4.4841 FRA-4.2174 FC-15.1022 BSP 9294  
 BDE .5649 BRA 2.0913 BC3 4.6811 FSP 2498

MID-COURSE EXECUTION ACCURACY  
 SGT 4667.1 SGR 2882.9 SG3 1455.5  
 RRT .9459 RRF .9862 RTF .9438  
 SGB 5485.7 R23 .2093 R13 .9662  
 SG1 5426.4 SG2 804.6 THA 31.06

ORBIT DETERMINATION ACCURACY  
 ST 46.6 SR 28.1 SS 61.6  
 CRT .8212 CRS -.9861 CST -.7217  
 LSA 77.4 MSA 27.6 SSA 1.3  
 EL1 52.5 EL2 14.2 ALF 28.69

LAUNCH DATE AUG 27 1973

FLIGHT TIME 246.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.925 GAL 4.52 AZL 86.05 HCA 152.85 SMA 197.48 ECC .24680 INC 3.9542 V1 29.478  
 RP 246.02 LAP 1.80 LOP 126.48 VP 20.171 GAP 1.32 AZP 93.52 TAL 23.13 TAP 175.97 RCA 148.74 APO 246.22 V2 22.286  
 RC 294.602 GL 27.10 GP -31.76 ZAL 53.14 ZAP 75.97 ETS 173.01 ZAE 101.90 ETE 189.61 ZAC 57.04 ETC 286.87 LVI 9.24

PLANETOCENTRIC CONIC  
 C3 24.696 VHL 4.969 DLA 33.10 RAL 7.86 RAD 6644.9 VEL 12.028 PTH 7.02 VHP 2.627 DPA -22.05 RAP 31.97 ECC 1.4064  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 3 27 3885.91 -45.64 164.65 262.12 74.78 8 8 13 2885.9 -46.52 129.56  
 60.00 6 48 31 3925.80 -36.13 164.33 258.23 70.78 7 53 57 2929.8 -40.30 134.03  
 70.00 6 6 16 4051.08 -24.13 168.78 252.61 65.06 7 13 47 3051.1 -32.22 143.10  
 72.04 5 14 46 4209.37 -17.46 177.44 249.02 61.43 6 24 55 3209.4 -27.70 153.91  
 72.04 5 14 46 4209.37 -17.46 177.44 249.02 61.43 6 24 55 3209.4 -27.70 153.91  
 72.04 5 14 46 4209.37 -17.46 177.44 249.02 61.43 6 24 55 3209.4 -27.70 153.91  
 110.00 11 5 42 3097.90 -24.13 97.70 252.61 65.06 11 57 20 2097.9 -32.22 72.02

DIFFERENTIAL CORRECTIONS  
 TDE .4281 TRA-2.0431 TC3-3.8896 BAU 1.5754  
 RDE .4759 RRA -.6447 RC3-2.7637 FAU .41655  
 FDE 4.5423 FRA-4.1268 FC-14.6026 BSP 9565  
 BDE .6401 BRA 2.1424 BC3 4.7715 FSP 2437

MID-COURSE EXECUTION ACCURACY  
 SGT 4805.8 SGR 2938.2 SG3 1420.6  
 RRT .9479 RRF .9890 RTF .9449  
 SGB 5632.8 R23 .2106 R13 .9666  
 SG1 5574.7 SG2 807.1 THA 30.81

ORBIT DETERMINATION ACCURACY  
 ST 49.2 SR 30.8 SS 62.7  
 CRT .8336 CRS -.9892 CST -.7490  
 LSA 80.9 MSA 27.5 SSA 1.2  
 EL1 56.1 EL2 14.9 ALF 29.85

LAUNCH DATE AUG 27 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.929 GAL 4.47 AZL 85.91 HCA 153.74 SMA 197.57 ECC .24689 INC 4.0929 V1 29.478  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.158 GAP 1.10 AZP 93.67 TAL 22.89 TAP 176.63 RCA 148.79 APO 246.35 V2 22.267  
 RC 297.167 GL 27.99 GP -32.43 ZAL 53.70 ZAP 75.18 ETS 172.24 ZAE 100.66 ETE 188.95 ZAC 56.44 ETC 287.00 LVI 9.87

PLANETOCENTRIC CONIC  
 C3 24.920 VHL 4.992 DLA 34.00 RAL 7.81 RAD 6645.0 VEL 12.037 PTH 7.02 VHP 2.658 DPA -22.72 RAP 32.12 ECC 1.4101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 56 32 3910.76 -45.18 168.88 262.70 73.13 8 1 42 2910.8 -46.82 131.88  
 60.00 6 37 44 3980.99 -35.31 166.95 258.29 69.16 7 43 45 2961.0 -40.28 137.03  
 70.00 5 25 25 4176.38 -20.32 178.51 250.82 61.94 6 35 1 3176.4 -30.07 152.23  
 70.28 5 2 55 4245.03 -17.82 180.41 249.17 60.55 6 13 40 3245.0 -28.37 156.94  
 70.28 5 2 55 4245.03 -17.82 180.41 249.17 60.55 6 13 40 3245.0 -28.37 156.94  
 70.28 5 2 55 4245.03 -17.82 180.41 249.17 60.55 6 13 40 3245.0 -28.37 156.94  
 110.00 10 24 51 3223.20 -20.32 105.43 250.82 61.94 11 18 34 2223.2 -30.07 81.18

DIFFERENTIAL CORRECTIONS  
 TDE .4895 TRA-2.0912 TC3-3.9757 BAU 1.6181  
 RDE .5268 RRA -.6682 RC3-2.7898 FAU .40537  
 FDE 4.5910 FRA-4.0375 FC-14.0828 BSP 9826  
 BDE .7191 BRA 2.1953 BC3 4.8568 FSP 2369

MID-COURSE EXECUTION ACCURACY  
 SGT 4945.1 SGR 2996.4 SG3 1384.3  
 RRT .9498 RRF .9898 RTF .5480  
 SGB 5782.1 R23 .2117 R13 .9671  
 SG1 5725.1 SG2 809.9 THA 30.60

ORBIT DETERMINATION ACCURACY  
 ST 52.1 SR 33.5 SS 63.7  
 CRT .8461 CRS -.9914 CST -.7736  
 LSA 84.5 MSA 27.4 SSA 1.2  
 EL1 59.9 EL2 15.9 ALF 30.88

LAUNCH DATE AUG 27 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.58 VL 32.934 GAL 4.43 AZL 85.76 HCA 154.63 SMA 197.66 ECC .24699 INC 4.2405 V1 29.478  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.146 GAP .89 AZP 93.83 TAL 22.64 TAP 177.27 RCA 148.84 APO 246.48 V2 22.249  
 RC 299.628 GL 28.94 GP -33.12 ZAL 54.27 ZAP 74.40 ETS 171.44 ZAE 99.46 ETE 188.30 ZAC 55.81 ETC 287.13 LVI 10.54

PLANETOCENTRIC CONIC  
 C3 25.178 VHL 5.018 DLA 34.95 RAL 7.34 RAD 6645.1 VEL 12.048 PTH 7.03 VHP 2.693 DPA -23.40 RAP 32.31 ECC 1.4144  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 48 56 3937.41 -44.62 169.19 263.23 71.41 7 54 33 2937.4 -47.10 134.39  
 60.00 6 25 30 4000.05 -34.32 169.80 258.24 67.44 7 32 10 3000.0 -40.16 140.34  
 68.56 4 51 38 4278.46 -18.18 183.25 249.32 59.63 6 2 57 3278.5 -29.07 159.85  
 68.56 4 51 38 4278.46 -18.18 183.25 249.32 59.63 6 2 57 3278.5 -29.07 159.85  
 68.56 4 51 38 4278.46 -18.18 183.25 249.32 59.63 6 2 57 3278.5 -29.07 159.85  
 68.56 4 51 38 4278.46 -18.18 183.25 249.32 59.63 6 2 57 3278.5 -29.07 159.85  
 68.56 4 51 38 4278.46 -18.18 183.25 249.32 59.63 6 2 57 3278.5 -29.07 159.85

DIFFERENTIAL CORRECTIONS  
 TDE .5555 TRA-2.1391 TC3-4.0527 BAU 1.6603  
 RDE .5816 RRA -.6922 RC3-2.8115 FAU .39342  
 FDE 4.6384 FRA-3.9398 FC-13.5275 BSP 10099  
 BDE .8043 BRA 2.2483 BC3 4.9324 FSP 2302

MID-COURSE EXECUTION ACCURACY  
 SGT 5081.7 SGR 3054.8 SG3 1345.4  
 RRT .9515 RRF .9904 RTF .9469  
 SGB 5929.2 R23 .2131 R13 .9674  
 SG1 5873.1 SG2 813.4 THA 30.41

ORBIT DETERMINATION ACCURACY  
 ST 55.1 SR 36.5 SS 64.7  
 CRT .8581 CRS -.9932 CST -.7958  
 LSA 88.4 MSA 27.2 SSA 1.1  
 EL1 64.1 EL2 16.1 ALF 31.81

LAUNCH DATE AUG 27 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

DISTANCE 542.107

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.939 GAL 4.38 AZL 85.80 HCA 155.52 SMA 197.76 ECC .24710 INC 4.3977 V1 29.478
RP 246.57 LAP 1.82 LOP 129.17 VP 20.134 GAP .88 AZP 94.00 TAP 22.39 TAP 177.91 RCA 148.89 APO 246.62 V2 22.232
RC 302.065 GL 29.93 GP -35.85 ZAL 54.07 ZAP 73.70 ETS 170.64 ZAE 88.29 ETE 187.64 ZAC 55.14 ETC 287.28 LVI 11.24

PLANETOCENTRIC CONIC

C3 25.475 VHL 5.047 DLA 35.93 RAL 7.03 RAD 6645.2 VEL 12.080 PTH 7.04 VHP 2.730 DPA -24.11 RAP 32.54 ECC 1.4192
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 40 34 3986.09 -43.97 171.64 263.71 69.61 7 46 40 2966.1 -47.32 137.13
60.00 6 11 25 4044.09 -33.13 172.92 258.01 65.60 7 18 49 3044.1 -39.90 144.06
66.85 4 40 48 4310.14 -18.54 185.99 249.48 58.65 5 32 38 3310.1 -29.78 162.67
66.85 4 40 48 4310.14 -18.54 185.99 249.48 58.65 5 32 38 3310.1 -29.78 162.67
66.85 4 40 48 4310.14 -18.54 185.99 249.48 58.65 5 32 38 3310.1 -29.78 162.67
66.85 4 40 48 4310.14 -18.54 185.99 249.48 58.65 5 32 38 3310.1 -29.78 162.67
66.85 4 40 48 4310.14 -18.54 185.99 249.48 58.65 5 32 38 3310.1 -29.78 162.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6235 TRA-2.1885 TC3-4.1220 BAU 1.7030 SGT 5218.1 SGR 3115.2 SG3 1304.4 ST 58.4 SR 39.5 SS 65.5
RDE .6383 RRA -.7183 RC3-2.8307 FAU .38099 RRT .9531 RRF .9911 RTF .9477 CRT .8692 CRS -.9944 CST -.8151
FDE 4.6705 FRA-3.8417 FC-12.9475 BSP 10373 SGB 6077.3 R23 .2145 R13 .9676 LSA 92.3 MSA 27.1 SSA 1.0
BDE .8923 BRA 2.3034 BC3 5.0004 FSP 2233 SG1 6022.1 SG2 817.2 THA 30.25 EL1 68.5 EL2 16.6 ALF 32.61

LAUNCH DATE AUG 27 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

DISTANCE 545.884

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.944 GAL 4.34 AZL 85.43 HCA 156.41 SMA 197.85 ECC .24722 INC 4.5658 V1 29.478
RP 246.74 LAP 1.83 LOP 130.08 VP 20.124 GAP .48 AZP 94.19 TAL 22.14 TAP 178.55 RCA 148.94 APO 246.76 V2 22.215
RC 304.476 GL 30.98 GP -34.61 ZAL 55.49 ZAP 73.04 ETS 169.82 ZAE 97.15 ETE 186.98 ZAC 54.43 ETC 287.44 LVI 11.98

PLANETOCENTRIC CONIC

C3 25.817 VHL 5.081 DLA 36.96 RAL 6.87 RAD 6645.3 VEL 12.074 PTH 7.06 VHP 2.770 DPA -24.83 RAP 32.82 ECC 1.4249
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 31 18 3997.07 -43.20 174.22 264.10 67.74 7 37 56 2997.1 -47.49 140.11
60.00 5 54 47 4094.90 -31.65 176.41 257.54 63.62 7 3 2 3094.9 -39.45 148.30
65.15 4 30 16 4340.46 -18.89 188.66 249.63 57.63 5 42 38 3340.5 -30.50 165.44
65.15 4 30 16 4340.46 -18.89 188.66 249.63 57.63 5 42 38 3340.5 -30.50 165.44
65.15 4 30 16 4340.46 -18.89 188.66 249.63 57.63 5 42 38 3340.5 -30.50 165.44
65.15 4 30 16 4340.46 -18.89 188.66 249.63 57.63 5 42 38 3340.5 -30.50 165.44
65.15 4 30 16 4340.46 -18.89 188.66 249.63 57.63 5 42 38 3340.5 -30.50 165.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6888 TRA-2.2450 TC3-4.1904 BAU 1.7522 SGT 5364.1 SGR 3198.3 SG3 1269.7 ST 61.7 SR 42.2 SS 65.7
RDE .6873 RRA -.7587 RC3-2.8660 FAU .37094 RRT .9557 RRF .9918 RTF .9501 CRT .8823 CRS -.9950 CST -.8333
FDE 4.6383 FRA-3.8036 FC-12.4393 BSP 10491 SGB 6245.2 R23 .2110 R13 .9691 LSA 95.8 MSA 26.8 SSA 1.0
BDE .9731 BRA 2.3697 BC3 5.0767 FSP 2094 SG1 6191.7 SG2 815.6 THA 30.26 EL1 72.8 EL2 16.8 ALF 33.08

LAUNCH DATE AUG 27 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

DISTANCE 549.657

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.949 GAL 4.29 AZL 85.25 HCA 157.30 SMA 197.95 ECC .24734 INC 4.7461 V1 29.478
RP 246.90 LAP 1.83 LOP 130.95 VP 20.114 GAP .27 AZP 94.38 TAL 21.89 TAP 179.19 RCA 148.99 APO 246.91 V2 22.199
RC 306.863 GL 32.08 GP -35.41 ZAL 56.15 ZAP 72.44 ETS 168.98 ZAE 96.06 ETE 186.32 ZAC 53.68 ETC 287.61 LVI 12.76

PLANETOCENTRIC CONIC

C3 26.208 VHL 5.119 DLA 38.03 RAL 6.27 RAD 6645.5 VEL 12.090 PTH 7.07 VHP 2.815 DPA -25.58 RAP 33.15 ECC 1.4313
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 20 58 4030.80 -42.30 176.95 264.38 65.79 7 28 9 3030.0 -47.37 143.36
60.00 5 34 14 4156.13 -29.72 180.45 256.69 61.42 6 43 30 3156.1 -38.67 153.32
63.43 4 19 54 4369.75 -19.24 191.29 249.78 56.54 5 32 44 3369.8 -31.24 168.19
63.43 4 19 54 4369.75 -19.24 191.29 249.78 56.54 5 32 44 3369.8 -31.24 168.19
63.43 4 19 54 4369.75 -19.24 191.29 249.78 56.54 5 32 44 3369.8 -31.24 168.19
63.43 4 19 54 4369.75 -19.24 191.29 249.78 56.54 5 32 44 3369.8 -31.24 168.19
63.43 4 19 54 4369.75 -19.24 191.29 249.78 56.54 5 32 44 3369.8 -31.24 168.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7860 TRA-2.2959 TC3-4.2385 BAU 1.7943 SGT 5496.1 SGR 3258.9 SG3 1222.9 ST 65.4 SR 45.6 SS 66.5
RDE .7547 RRA -.7859 RC3-2.8741 FAU .35878 RRT .9568 RRF .9923 RTF .9502 CRT .8909 CRS -.9959 CST -.8480
FDE 4.6705 FRA-3.8833 FC-11.7853 BSP 10796 SGB 6389.6 R23 .2137 R13 .9690 LSA 100.3 MSA 26.8 SSA .9
BDE 1.0753 BRA 2.4264 BC3 5.1210 FSP 2036 SG1 6336.5 SG2 821.8 THA 30.13 EL1 77.8 EL2 17.4 ALF 33.81

LAUNCH DATE AUG 27 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 553.429

EARTH TO MARS

RL 151.15 LAL .00 LOL 333.58 VL 32.954 GAL 4.24 AZL 85.06 HCA 158.18 SMA 198.05 ECC .24748 INC 4.9400 V1 29.478
RP 247.06 LAP 1.83 LOP 131.84 VP 20.108 GAP .06 AZP 94.39 TAL 21.63 TAP 179.81 RCA 149.04 APO 247.06 V2 22.183
RC 309.224 GL 33.24 GP -36.25 ZAL 56.83 ZAP 71.90 ETS 168.14 ZAE 95.01 ETE 185.66 ZAC 52.88 ETC 287.80 LVI 13.59

PLANETOCENTRIC CONIC

C3 26.660 VHL 5.163 DLA 39.18 RAL 5.81 RAD 6645.7 VEL 12.109 PTH 7.08 VHP 2.863 DPA -26.35 RAP 33.52 ECC 1.4388
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 19 4067.72 -41.23 179.85 264.51 63.76 7 17 7 3067.7 -47.55 146.94
60.00 5 6 28 4236.85 -26.98 185.53 255.14 58.85 6 17 3 3236.8 -37.30 159.74
61.71 4 9 41 4398.11 -19.57 193.88 249.93 55.39 5 22 59 3398.1 -31.99 170.92
61.71 4 9 41 4398.11 -19.57 193.88 249.93 55.39 5 22 59 3398.1 -31.99 170.92
61.71 4 9 41 4398.11 -19.57 193.88 249.93 55.39 5 22 59 3398.1 -31.99 170.92
61.71 4 9 41 4398.11 -19.57 193.88 249.93 55.39 5 22 59 3398.1 -31.99 170.92
61.71 4 9 41 4398.11 -19.57 193.88 249.93 55.39 5 22 59 3398.1 -31.99 170.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8455 TRA-2.3483 TC3-4.2755 BAU 1.8370 SGT 5627.3 SGR 3322.7 SG3 1174.4 ST 69.2 SR 49.2 SS 67.2
RDE .8253 RRA -.8168 RC3-2.8784 FAU .34220 RRT .9579 RRF .9927 RTF .9504 CRT .8989 CRS -.9963 CST -.8607
FDE 4.6857 FRA-3.5663 FC-11.1123 BSP 11087 SGB 6535.1 R23 .2182 R13 .9689 LSA 104.9 MSA 26.8 SSA .9
BDE 1.1815 BRA 2.4863 BC3 5.1541 FSP 1960 SG1 6482.4 SG2 828.0 THA 30.03 EL1 83.0 EL2 18.0 ALF 34.45

LAUNCH DATE AUG 27 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.50 VL 32.959 GAL 4.19 AZL 84.85 HCA 159.07 SMA 198.15 ECC .24782 INC 5.1492 V1 29.478  
 RP 247.22 LAP 1.84 LOP 132.73 VP 20.098 GAP -.14 AZP 94.81 TAL 21.37 TAP 180.44 RCA 149.09 APO 247.22 V2 22.168  
 RC 311.559 GL 34.46 GP -37.13 ZAL 57.54 ZAP 71.41 ETS 167.28 ZAE 93.99 ETE 184.99 ZAC 52.03 ETC 288.01 LVI 14.46

PLANETOCENTRIC CONIC  
 C3 27.180 VHL 5.213 DLA 40.33 RAL 5.28 RAD 6645.9 VEL 12.130 PTH 7.10 VHP 2.916 DPA -27.15 RAP 33.96 ECC 1.4473  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 56 3 4108.51 -39.95 182.93 264.43 61.65 7 4 32 3108.5 -47.38 150.86  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67  
 59.96 3 59 28 4425.87 -19.89 196.46 250.07 54.16 5 13 14 3425.9 -32.75 173.67

DIFFERENTIAL CORRECTIONS  
 TDE .9293 TRA-2.4023 TC3-4.2984 BAU 1.8804 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 5756.2 SGR 3391.1 SG3 1124.8 ST 73.2 SR 35.0 SS 67.7  
 RDE .9001 RRA -.8513 RC3-2.8796 FAU .32737 RRT .9591 RRF .9931 RTF .9305 CRT .9065 CRS -.9970 CST -.8721  
 FDE 4.6854 FRA-3.4509 FC-10.4273 B8P 11380 SGB 6660.9 R23 .2182 R13 .9689 LSA 109.6 MSA 26.8 SSA .8  
 BDE 1.2937 BRA 2.5487 BC3 5.1747 FSP 1893 SG1 6628.6 SG2 834.1 THA 29.99 EL1 88.4 EL2 18.5 ALF 35.04

LAUNCH DATE AUG 27 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.50 VL 32.965 GAL 4.15 AZL 84.62 HCA 159.95 SMA 198.26 ECC .24777 INC 5.3757 V1 29.478  
 RP 247.37 LAP 1.84 LOP 133.61 VP 20.090 GAP -.35 AZP 95.05 TAL 21.11 TAP 181.06 RCA 149.14 APO 247.38 V2 22.154  
 RC 313.869 GL 35.78 GP -38.07 ZAL 58.29 ZAP 70.99 ETS 166.40 ZAE 93.03 ETE 184.32 ZAC 51.13 ETC 288.24 LVI 15.38

PLANETOCENTRIC CONIC  
 C3 27.782 VHL 5.271 DLA 41.56 RAL 4.67 RAD 6646.1 VEL 12.155 PTH 7.12 VHP 2.974 DPA -27.97 RAP 34.44 ECC 1.4572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 40 44 4154.13 -38.43 186.22 264.08 59.44 6 49 58 3154.1 -47.02 155.22  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45  
 58.18 3 49 13 4453.11 -20.19 199.03 250.19 52.87 5 3 26 3453.1 -33.52 176.45

DIFFERENTIAL CORRECTIONS  
 TDE 1.0149 TRA-2.4590 TC3-4.3106 BAU 1.9248 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 5884.5 SGR 3463.9 SG3 1073.5 ST 77.2 SR 56.8 SS 67.9  
 RDE .9786 RRA -.8899 RC3-2.8766 FAU .31219 RRT .9602 RRF .9935 RTF .9507 CRT .9131 CRS -.9973 CST -.8817  
 FDE 4.6657 FRA-3.3358 FC3-9.7283 B8P 11661 SGB 6628.3 R23 .2202 R13 .9689 LSA 114.4 MSA 26.8 SSA .8  
 BDE 1.4098 BRA 2.6151 BC3 5.1823 FSP 1811 SG1 6776.4 SG2 840.4 THA 29.98 EL1 93.9 EL2 19.0 ALF 35.57

LAUNCH DATE AUG 27 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.50 VL 32.970 GAL 4.10 AZL 84.38 HCA 160.83 SMA 198.36 ECC .24793 INC 5.6217 V1 29.478  
 RP 247.51 LAP 1.84 LOP 134.50 VP 20.084 GAP -.55 AZP 95.31 TAL 20.84 TAP 181.87 RCA 149.18 APO 247.55 V2 22.140  
 RC 316.151 GL 37.13 GP -39.05 ZAL 59.07 ZAP 70.63 ETS 165.52 ZAE 92.10 ETE 183.65 ZAC 50.18 ETC 288.50 LVI 16.36

PLANETOCENTRIC CONIC  
 C3 28.481 VHL 5.337 DLA 42.85 RAL 3.98 RAD 6646.4 VEL 12.183 PTH 7.14 VHP 3.038 DPA -28.83 RAP 34.99 ECC 1.4687  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 22 40 4206.11 -36.56 189.80 263.35 57.13 6 32 46 3206.1 -46.40 160.08  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28  
 56.36 3 38 51 4480.00 -20.45 201.62 250.28 51.49 4 53 31 3480.0 -34.28 179.28

DIFFERENTIAL CORRECTIONS  
 TDE 1.1022 TRA-2.5194 TC3-4.3081 BAU 1.9706 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 6012.8 SGR 3541.3 SG3 1020.6 ST 81.3 SR 60.8 SS 67.9  
 RDE 1.0626 RRA -.9332 RC3-2.8682 FAU .29657 RRT .9613 RRF .9938 RTF .9507 CRT .9188 CRS -.9975 CST -.8896  
 FDE 4.6306 FRA-3.2201 FC3-9.0151 B8P 11930 SGB 6978.1 R23 .2223 R13 .9688 LSA 119.2 MSA 26.9 SSA .7  
 BDE 1.5310 BRA 2.6867 BC3 5.1755 FSP 1724 SG1 6926.5 SG2 847.4 THA 30.01 EL1 99.6 EL2 19.6 ALF 36.10

LAUNCH DATE AUG 27 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC  
 RL 151.15 LAL .00 LOL 333.50 VL 32.976 GAL 4.05 AZL 84.11 HCA 161.71 SMA 198.47 ECC .24809 INC 5.8903 V1 29.478  
 RP 247.65 LAP 1.85 LOP 135.38 VP 20.078 GAP -.75 AZP 95.59 TAL 20.57 TAP 182.29 RCA 149.23 APO 247.71 V2 22.126  
 RC 318.408 GL 38.59 GP -40.09 ZAL 59.89 ZAP 70.35 ETS 164.63 ZAE 91.23 ETE 182.97 ZAC 49.16 ETC 288.79 LVI 17.40

PLANETOCENTRIC CONIC  
 C3 29.293 VHL 5.412 DLA 44.19 RAL 3.17 RAD 6646.7 VEL 12.216 PTH 7.17 VHP 3.109 DPA -29.72 RAP 35.61 ECC 1.4821  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 0 38 4267.17 -34.23 193.77 262.05 54.68 6 11 45 3267.2 -45.38 165.62  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17  
 54.51 3 28 15 4506.78 -20.68 204.22 250.34 50.03 4 43 22 3506.8 -35.03 182.17

DIFFERENTIAL CORRECTIONS  
 TDE 1.1923 TRA-2.5811 TC3-4.2870 BAU 2.0166 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 6135.9 SGR 3621.7 SG3 965.4 ST 85.4 SR 64.9 SS 67.7  
 RDE 1.1522 RRA -.9807 RC3-2.8523 FAU .28036 RRT .9623 RRF .9940 RTF .9506 CRT .9238 CRS -.9977 CST -.8962  
 FDE 4.5765 FRA-3.0992 FC3-8.2857 B8P 12213 SGB 7125.1 R23 .2244 R13 .9686 LSA 124.0 MSA 27.0 SSA .7  
 BDE 1.6580 BRA 2.7611 BC3 5.1492 FSP 1635 SG1 7073.6 SG2 854.5 THA 30.08 EL1 105.4 EL2 20.1 ALF 36.62

LAUNCH DATE AUG 27 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.981 GAL 4.00 AZL 83.82 HCA 162.59 SMA 198.88 ECC .24827 INC 6.1849 V1 29.478
RP 247.78 LAP 1.85 LOP 136.27 VP 20.073 GAP -.99 AZP 95.90 TAL 20.30 TAP 182.89 RCA 149.28 APO 247.88 V2 22.113
RC 320.832 GL 40.13 GP -41.19 ZAL 60.76 ZAP 70.14 ETS 163.73 ZAE 90.41 ETE 182.30 ZAC 48.09 ETC 289.11 LVI 18.50

DISTANCE 572.289

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.244 VHL 5.499 DLA 45.60 RAL 2.24 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 3.188 DPA -30.65 RAP 36.28 ECC 1.4977
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 4 31 59 4343.40 -31.13 198.40 259.81 52.01 5 44 23 3343.4 -43.73 172.20
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14
52.61 3 17 20 4533.60 -20.86 206.85 250.34 48.49 4 32 54 3533.6 -35.77 185.14

DIFFERENTIAL CORRECTIONS

TDE 1.2826 TRA-2.6466 TC3-4.2478 BAU 2.0637
RDE 1.2474 RRA-1.0348 RC3-2.8294 FAU .26373
FDE 4.5002 FRA-2.9762 FC3-7.5492 BSP 12495
BDE 1.7892 BRA 2.8417 BC3 5.1038 FSP 1539

MID-COURSE EXECUTION ACCURACY

SGT 6256.5 SGR 3707.8 SG3 908.6
RRT .9634 RRF .9942 RTF .9504
SGB 7272.6 R23 .2265 R13 .9684
SG1 7221.4 SG2 861.4 THA 30.20

ORBIT DETERMINATION ACCURACY

ST 89.5 SR 69.1 SS 67.2
CRT .9280 CRS -.9977 CST -.9014
LSA 128.7 MSA 27.1 S8A .6
EL1 111.2 EL2 20.7 ALF 37.15

LAUNCH DATE AUG 27 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.987 GAL 3.95 AZL 83.49 HCA 163.47 SMA 198.89 ECC .24845 INC 6.5091 V1 29.478
RP 247.91 LAP 1.85 LOP 137.15 VP 20.089 GAP -1.16 AZP 96.24 TAL 20.03 TAP 183.50 RCA 149.33 APO 248.06 V2 22.101
RC 322.829 GL 41.77 GP -42.34 ZAL 61.66 ZAP 70.00 ETS 162.83 ZAE 89.65 ETE 181.62 ZAC 46.94 ETC 289.46 LVI 19.66

DISTANCE 576.032

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.362 VHL 5.600 DLA 47.07 RAL 1.17 RAD 6647.5 VEL 12.300 PTH 7.24 VHP 3.276 DPA -31.62 RAP 37.05 ECC 1.5161
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 3 46 44 4458.79 -26.11 204.81 255.36 48.70 5 1 2 3458.8 -40.49 181.38
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22
50.67 3 6 2 4580.55 -20.98 209.51 250.28 46.85 4 22 2 3580.6 -36.47 188.22

DIFFERENTIAL CORRECTIONS

TDE 1.3681 TRA-2.7190 TC3-4.1932 BAU 2.1140
RDE 1.3476 RRA-1.0967 RC3-2.7999 FAU .24675
FDE 4.3961 FRA-2.8551 FC3-6.8114 BSP 12739
BDE 1.9204 BRA 2.9318 BC3 5.0421 FSP 1438

MID-COURSE EXECUTION ACCURACY

SGT 6379.3 SGR 3801.1 SG3 850.2
RRT .9844 RRF .9943 RTF .9501
SGB 7428.9 R23 .2290 R13 .9681
SG1 7374.8 SG2 889.5 THA 30.35

ORBIT DETERMINATION ACCURACY

ST 93.3 SR 73.4 SS 86.3
CRT .9308 CRS -.9977 CST -.9046
LSA 133.2 MSA 27.4 S8A .6
EL1 116.7 EL2 21.4 ALF 37.71

LAUNCH DATE AUG 27 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.58 VL 32.993 GAL 3.90 AZL 83.13 HCA 164.34 SMA 198.81 ECC .24863 INC 6.6685 V1 29.478
RP 248.03 LAP 1.85 LOP 138.03 VP 20.068 GAP -1.35 AZP 96.82 TAL 19.78 TAP 184.10 RCA 149.38 APO 248.24 V2 22.089
RC 324.997 GL 43.52 GP -43.57 ZAL 62.62 ZAP 69.95 ETS 161.94 ZAE 88.96 ETE 180.93 ZAC 45.73 ETC 289.67 LVI 20.89

DISTANCE 579.794

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.884 VHL 5.717 DLA 48.60 RAL 359.91 RAD 6648.0 VEL 12.353 PTH 7.28 VHP 3.375 DPA -32.62 RAP 37.89 ECC 1.5379
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41
48.68 2 54 9 4587.91 -21.02 212.21 250.12 45.11 4 10 37 3587.9 -37.12 191.41

DIFFERENTIAL CORRECTIONS

TDE 1.4529 TRA-2.7921 TC3-4.1124 BAU 2.1637
RDE 1.4548 RRA-1.1632 RC3-2.7885 FAU .22908
FDE 4.2717 FRA-2.7233 FC3-6.0671 BSP 13041
BDE 2.0597 BRA 3.0255 BC3 4.9519 FSP 1338

MID-COURSE EXECUTION ACCURACY

SGT 6490.9 SGR 3897.6 SG3 789.4
RRT .9834 RRF .9943 RTF .9505
SGB 7571.2 R23 .2317 R13 .9677
SG1 7520.2 SG2 877.1 THA 30.56

ORBIT DETERMINATION ACCURACY

ST 96.8 SR 77.7 SS 85.0
CRT .9331 CRS -.9977 CST -.9066
LSA 137.4 MSA 27.7 S8A .6
EL1 122.2 EL2 22.2 ALF 38.31

LAUNCH DATE AUG 27 1973

FLIGHT TIME 274.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC

RL 151.15 LAL .00 LOL 333.88 VL 32.999 GAL 3.85 AZL 82.73 HCA 165.22 SMA 198.92 ECC .24883 INC 7.2689 V1 29.478
RP 248.14 LAP 1.85 LOP 138.92 VP 20.062 GAP -1.55 AZP 97.03 TAL 19.48 TAP 184.70 RCA 149.43 APO 248.42 V2 22.078
RC 327.134 GL 45.38 GP -44.86 ZAL 63.62 ZAP 69.99 ETS 161.07 ZAE 88.33 ETE 180.29 ZAC 44.44 ETC 290.32 LVI 22.20

DISTANCE 583.554

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.259 VHL 5.853 DLA 50.19 RAL 358.44 RAD 6648.6 VEL 12.416 PTH 7.32 VHP 3.487 DPA -33.67 RAP 38.82 ECC 1.5638
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72
46.64 2 41 34 4615.86 -20.96 214.95 249.82 43.28 3 58 30 3615.9 -37.70 194.72

DIFFERENTIAL CORRECTIONS

TDE 1.5253 TRA-2.8736 TC3-4.0119 BAU 2.2169
RDE 1.5663 RRA-1.2452 RC3-2.7082 FAU .21099
FDE 4.1137 FRA-2.5893 FC3-5.3318 BSP 13302
BDE 2.1863 BRA 3.1318 BC3 4.8404 FSP 1230

MID-COURSE EXECUTION ACCURACY

SGT 6602.3 SGR 4003.3 SG3 727.2
RRT .9664 RRF .9942 RTF .9487
SGB 7721.2 R23 .2351 R13 .9671
SG1 7670.3 SG2 885.5 THA 30.83

ORBIT DETERMINATION ACCURACY

ST 99.8 SR 81.9 SS 83.3
CRT .9337 CRS -.9975 CST -.9063
LSA 141.0 MSA 28.2 S8A .5
EL1 127.1 EL2 23.0 ALF 38.99

LAUNCH DATE AUG 27 1973

FLIGHT TIME 276.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

DISTANCE 507.313

EARTH TO MARS

RL 191.15 LAL .00 LOL 333.90 VL 33.008 GAL 3.79 AZL 82.28 MCA 166.09 SMA 199.04 ECC .24903 INC 7.7180 V1 20.478  
 RP 248.25 LAP 1.85 LOP 139.80 VP 20.080 GAP -1.75 AZP 97.49 TAL 19.21 TAP 185.30 RCA 149.47 APO 248.40 V2 22.067  
 RC 329.241 GL 47.36 GP -46.22 ZAL 64.68 ZAP 70.13 ETS 160.21 ZAE 87.77 ETE 179.68 ZAC 43.00 ETC 290.84 LVI 23.98

PLANETOCENTRIC CONIC

C3 38.151 VML 6.013 DLA 51.84 RAL 356.70 RAD 6849.3 VEL 12.492 PTM 7.38 VMP 3.619 DPA -34.78 RAP 39.84 ECC 1.9950  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17  
 44.55 2 20 0 4644.52 -20.79 217.73 249.36 41.36 3 45 32 3644.5 -38.19 190.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5811 TRA-2.9633 TCS-3.8892 BAU 2.2743 SGT 6710.8 SGR 4120.7 SG3 664.0 ST 102.1 SR 86.0 SS 61.0  
 RDE 1.6803 RRA-1.3396 RC3-2.6490 FAU .19269 RRT .9675 RRF .9939 RTF .9477 CRT .9329 CRS -.9972 CST -.8033  
 FDE 3.9193 FRA-2.4527 FC3-4.6145 BSP 13532 SGB 7875.0 R23 .2386 R13 .9664 LSA 143.9 MSA 28.9 SSA .4  
 BDE 2.3072 BRA 3.2520 BC3 4.7057 PSP 1115 SGI 7824.1 SG2 893.7 TMA 31.17 EL1 131.3 EL2 24.1 ALF 39.76

LAUNCH DATE AUG 27 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

DISTANCE 591.069

EARTH TO MARS

RL 191.15 LAL .00 LOL 333.90 VL 33.010 GAL 3.74 AZL 81.77 MCA 166.98 SMA 199.15 ECC .24923 INC 8.7254 V1 20.478  
 RP 248.35 LAP 1.85 LOP 140.60 VP 20.059 GAP -1.95 AZP 98.02 TAL 18.93 TAP 185.89 RCA 149.52 APO 248.79 V2 22.057  
 RC 331.317 GL 49.47 GP -47.66 ZAL 65.78 ZAP 70.37 ETS 159.40 ZAE 87.29 ETE 179.03 ZAC 41.63 ETC 291.43 LVI 25.04

PLANETOCENTRIC CONIC

C3 38.448 VML 6.200 DLA 53.55 RAL 354.64 RAD 6850.1 VEL 12.503 PTM 7.45 VMP 3.782 DPA -33.89 RAP 40.98 ECC 1.6327  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76  
 42.43 2 13 33 4674.25 -20.48 220.55 248.64 39.36 3 31 28 3674.2 -38.55 201.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6101 TRA-3.0613 TCS-3.7413 BAU 2.3347 SGT 6812.5 SGR 4246.1 SG3 598.7 ST 103.4 SR 89.7 SS 58.1  
 RDE 1.7950 RRA-1.4483 RC3-2.5760 FAU .17377 RRT .9684 RRF .9934 RTF .9459 CRT .9295 CRS -.9966 CST -.8983  
 FDE 3.6889 FRA-2.3048 FC3-3.9129 BSP 13759 SGB 8027.4 R23 .2439 R13 .9652 LSA 145.6 MSA 29.9 SSA .4  
 BDE 2.4114 BRA 3.3666 BC3 4.5424 PSP 999 SGI 7976.4 SG2 903.8 TMA 31.57 EL1 134.5 EL2 25.4 ALF 40.64

LAUNCH DATE AUG 28 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 8 1973

HELIOCENTRIC CONIC

DISTANCE 263.904

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 34.618 GAL 5.66 AZL 89.77 HCA 81.90 SMA 237.75 ECC .37579 INC .2304 V1 29.484
RP 222.67 LAP .23 LOP 56.45 VP 25.176 GAP 21.79 AZP 89.97 TAL 20.87 TAP 102.77 RCA 148.41 APO 327.10 V2 24.694
RC 98.756 GL 1.27 GP -5.82 ZAL 52.54 ZAP 168.63 ETS 212.31 ZAE 158.42 ETE 343.34 ZAC 76.83 ETC 282.35 LVI -10.10

PLANETOCENTRIC CONIC

C3 39.154 VHL 6.257 DLA 11.62 RAL 24.67 RAD 6650.4 VEL 12.611 PTH 7.47 VHP 7.252 DPA 11.20 RAP 46.10 ECC 1.6444
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 49 14 3533.17 -46.70 131.19 269.73 100.36 10 48 7 2533.2 -37.41 100.88
60.00 10 16 3 3461.81 -39.91 126.12 271.09 96.16 11 13 45 2461.8 -33.14 97.25
70.00 10 53 53 3350.50 -34.04 117.69 271.67 93.00 11 49 43 2350.5 -29.27 90.01
80.00 11 48 49 3178.40 -29.85 104.80 271.84 90.91 12 41 47 2178.4 -26.44 77.90
90.00 13 4 20 2934.65 -28.28 86.91 271.86 90.16 13 53 15 1934.6 -25.36 60.27
100.00 14 31 41 2652.87 -29.85 66.17 271.84 90.91 15 15 53 1852.9 -26.44 39.27
110.00 15 53 19 2397.32 -34.04 46.61 271.67 93.00 16 33 16 1397.3 -29.27 18.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2991 TRA -.7223 TC3 .4312 BAU .2330 SGT 906.7 SGR 850.4 SCS 174.1 ST 17.1 SR 29.9 SS 3.7
RDE -.6489 RRA .2358 RC3 -.1169 FAU .07244 RRT -.1103 RRF .1542 RTF -.5334 CRT .7321 CRS .7497 CST .2973
FDE .0900 FRA -.2054 FC3 -1.6018 B8P 1154 SGB 1115.8 R23 -.0360 R13 .5408 LSA 32.8 MSA 10.8 S8A 2.0
BDE .7145 BRA .7598 BC3 .4468 F8P 222 SG1 912.4 S62 642.4 THA 170.97 EL1 32.7 EL2 10.6 ALF 64.46

LAUNCH DATE AUG 28 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 10 1973

HELIOCENTRIC CONIC

DISTANCE 266.981

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 34.504 GAL 5.67 AZL 89.73 HCA 82.99 SMA 234.50 ECC .36740 INC .2650 V1 29.484
RP 223.06 LAP .28 LOP 57.54 VP 24.981 GAP 21.38 AZP 89.97 TAL 21.28 TAP 104.27 RCA 148.35 APO 320.66 V2 24.652
RC 98.976 GL 1.48 GP -5.96 ZAL 51.92 ZAP 167.75 ETS 210.61 ZAE 158.51 ETE 342.70 ZAC 76.67 ETC 282.34 LVI -9.92

PLANETOCENTRIC CONIC

C3 38.046 VHL 6.168 DLA 11.59 RAL 23.99 RAD 6650.0 VEL 12.567 PTH 7.44 VHP 7.027 DPA 11.12 RAP 46.29 ECC 1.6261
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 46 41 3525.22 -46.60 130.44 268.32 100.92 10 45 26 2525.2 -37.12 100.34
60.00 10 13 32 3453.75 -39.85 125.44 269.75 96.61 11 11 6 2453.7 -32.91 96.69
70.00 10 51 25 3342.30 -34.01 117.05 270.38 93.37 11 47 7 2342.3 -29.10 89.43
80.00 11 46 24 3170.06 -29.83 104.18 270.58 91.24 12 39 14 2170.1 -26.29 77.32
90.00 13 1 56 2926.24 -28.28 86.29 270.61 90.47 13 50 43 1926.2 -25.23 59.69
100.00 14 29 16 2644.53 -29.83 65.55 270.58 91.24 15 13 20 1644.5 -26.29 38.69
110.00 15 50 51 2389.12 -34.01 45.97 270.38 93.37 16 30 40 1389.1 -29.10 18.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2994 TRA -.7122 TC3 .4561 BAU .2408 SGT 922.0 SGR 856.7 SCS 185.9 ST 17.2 SR 30.1 SS 3.9
RDE -.6438 RRA .2334 RC3 -.1271 FAU .07615 RRT -.1178 RRF .1652 RTF -.5414 CRT .7371 CRS .7293 CST .2582
FDE .0929 FRA -.2389 FC3 -1.7329 B8P 1188 SGB 1132.0 R23 -.0392 R13 .5495 LSA 33.1 MSA 10.8 S8A 2.1
BDE .7101 BRA .7495 BC3 .4735 F8P 240 SG1 928.4 S62 647.6 THA 170.59 EL1 33.0 EL2 10.6 ALF 64.27

LAUNCH DATE AUG 28 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 12 1973

HELIOCENTRIC CONIC

DISTANCE 270.127

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 34.399 GAL 5.69 AZL 89.70 HCA 84.08 SMA 231.53 ECC .35955 INC .2994 V1 29.484
RP 223.44 LAP .30 LOP 58.63 VP 24.793 GAP 20.98 AZP 89.97 TAL 21.70 TAP 105.78 RCA 148.28 APO 314.78 V2 24.611
RC 101.244 GL 1.69 GP -6.11 ZAL 51.31 ZAP 166.84 ETS 209.13 ZAE 158.65 ETE 342.00 ZAC 76.49 ETC 282.32 LVI -9.74

PLANETOCENTRIC CONIC

C3 37.032 VHL 6.085 DLA 11.96 RAL 23.33 RAD 6649.6 VEL 12.527 PTH 7.41 VHP 6.810 DPA 11.02 RAP 46.47 ECC 1.6095
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 44 10 3517.80 -46.50 129.76 266.97 101.45 10 42 48 2517.8 -36.85 99.84
60.00 10 11 3 3446.24 -39.79 124.81 268.46 97.04 11 8 29 2446.2 -32.70 96.17
70.00 10 48 58 3334.68 -33.97 116.46 269.15 93.72 11 44 33 2334.7 -28.93 88.90
80.00 11 43 59 3162.31 -29.82 103.61 269.37 91.54 12 36 42 2162.3 -26.16 76.78
90.00 12 59 33 2918.44 -28.27 85.72 269.41 90.75 13 48 11 1918.4 -25.11 59.15
100.00 14 26 51 2636.78 -29.82 64.98 269.37 91.54 15 10 48 1636.8 -26.16 38.15
110.00 15 48 24 2381.50 -33.97 45.37 269.15 93.72 16 28 6 1381.5 -28.93 17.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2997 TRA -.7021 TC3 .4808 BAU .2475 SGT 936.5 SGR 862.8 SCS 198.3 ST 17.4 SR 30.3 SS 4.1
RDE -.6390 RRA .2309 RC3 -.1378 FAU .08006 RRT -.1257 RRF .1766 RTF -.5.87 CRT .7422 CRS .7089 CST .2217
FDE .0982 FRA -.2757 FC3 -1.8718 B8P 1217 SGB 1147.3 R23 -.0426 R13 .5577 LSA 33.4 MSA 10.9 S8A 2.1
BDE .7058 BRA .7391 BC3 .5000 F8P 260 SG1 943.7 S62 652.8 THA 170.19 EL1 33.3 EL2 10.6 ALF 64.08

LAUNCH DATE AUG 28 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 14 1973

HELIOCENTRIC CONIC

DISTANCE 273.336

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 34.289 GAL 5.71 AZL 89.87 HCA 85.16 SMA 228.81 ECC .35220 INC .3336 V1 29.484
RP 223.83 LAP .33 LOP 59.71 VP 24.613 GAP 20.59 AZP 89.97 TAL 22.11 TAP 107.27 RCA 148.22 APO 309.39 V2 24.589
RC 103.580 GL 1.90 GP -6.27 ZAL 50.72 ZAP 165.92 ETS 207.83 ZAE 158.85 ETE 341.22 ZAC 76.32 ETC 282.32 LVI -8.55

PLANETOCENTRIC CONIC

C3 36.104 VHL 6.009 DLA 11.53 RAL 22.68 RAD 6649.3 VEL 12.490 PTH 7.38 VHP 6.601 DPA 10.91 RAP 46.64 ECC 1.5942
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 41 40 3510.89 -46.41 129.12 265.67 101.93 10 40 11 2510.9 -36.60 99.37
60.00 10 8 35 3439.25 -39.73 124.23 267.23 97.43 11 5 55 2439.3 -32.49 95.69
70.00 10 46 32 3327.59 -33.94 115.91 267.96 94.05 11 42 0 2327.6 -28.77 88.41
80.00 11 41 35 3155.12 -29.81 103.08 268.21 91.82 12 34 10 2155.1 -26.03 76.29
90.00 12 57 10 2911.20 -28.26 85.19 268.25 91.02 13 45 41 1911.2 -25.00 58.66
100.00 14 24 27 2629.60 -29.81 64.44 268.21 91.82 15 8 17 1629.6 -26.03 37.66
110.00 15 45 58 2374.41 -33.94 44.82 267.96 94.05 16 25 33 1374.4 -28.77 17.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2890 TRA -.6810 TC3 .5171 BAU .2597 SGT 949.4 SGR 868.7 SCS 211.1 ST 17.0 SR 30.4 SS 4.3
RDE -.6342 RRA .2285 RC3 -.1488 FAU .08406 RRT -.1447 RRF .1877 RTF -.5738 CRT .7403 CRS .6997 CST .1959
FDE .1024 FRA -.3122 FC3 -2.0156 B8P 1111 SGB 1161.2 R23 -.0292 R13 .5827 LSA 33.4 MSA 10.8 S8A 2.1
BDE .6969 BRA .7183 BC3 .5381 F8P 283 SG1 958.8 S62 655.2 THA 168.99 EL1 33.2 EL2 10.5 ALF 64.84

LAUNCH DATE AUG 28 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 16 1973

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 34.206 GAL 5.73 AZL 89.63 HCA 86.24 SMA 226.31 ECC .34533 INC .3675 V1 29.484  
 RP 224.22 LAP .37 LOP 80.79 VP 24.441 GAP 20.20 AZP 89.98 TAL 22.52 TAP 108.76 RCA 148.16 APO 304.46 V2 24.527  
 RC 105.921 GL 2.11 GP -8.42 ZAL 50.14 ZAP 164.99 ETS 206.68 ZAE 159.08 ETE 340.38 ZAC 76.15 ETC 282.31 LVI -9.37

PLANETOCENTRIC CONIC  
 C3 35.254 VHL 5.937 DLA 11.52 RAL 22.05 RAD 6649.0 VEL 12.456 PTH 7.35 VHP 6.401 DPA 10.79 RAP 46.80 ECC 1.5802  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 39 13 3304.52 -46.32 128.53 264.44 102.38 10 37 38 2504.5 -36.36 98.84  
 60.00 10 6 9 3432.83 -39.67 123.69 266.08 97.79 11 3 22 2432.8 -32.31 95.25  
 70.00 10 44 8 3321.10 -33.91 115.40 266.82 94.34 11 39 29 2321.1 -28.62 87.97  
 80.00 11 39 12 3148.56 -29.79 102.59 267.09 92.07 12 31 41 2148.6 -25.91 75.84  
 90.00 12 54 48 2904.61 -28.25 84.71 267.14 91.26 13 43 12 1904.6 -24.89 58.20  
 100.00 14 22 4 2623.03 -29.79 63.96 267.09 92.07 15 5 47 1623.0 -25.91 37.20  
 110.00 15 43 34 2367.92 -33.91 44.32 266.82 94.34 16 23 2 1367.9 -28.62 16.88

DIFFERENTIAL CORRECTIONS  
 TDE -.2934 TRA -.6753 TC3 .5384 BAU .2639  
 RDE -.6299 RRA .2255 RC3 -.1609 FAU .08847  
 FDE .1047 FRA -.3559 FC3-2.1725 BSP 1190  
 BDE .6949 BRA .7119 BC3 .5600 F8P 304

MID-COURSE EXECUTION ACCURACY  
 SGT 963.4 SGR 674.8 SG3 225.1  
 RRT -.1497 RRF .2011 RTF -.5732  
 SGB 1176.2 R23 -.0394 R13 .5836  
 SG1 973.3 SG2 660.4 THA 168.82

ORBIT DETERMINATION ACCURACY  
 ST 17.3 SR 30.6 SS 4.6  
 CRT .7481 CRS .6735 CST .1593  
 LSA 33.7 MSA 10.9 SSA 2.3  
 EL1 33.6 EL2 10.5 ALF 64.31

LAUNCH DATE AUG 28 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 18 1973

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 34.118 GAL 5.74 AZL 89.60 HCA 87.32 SMA 224.02 ECC .33890 INC .4012 V1 29.484  
 RP 224.61 LAP .40 LOP 61.87 VP 24.276 GAP 19.81 AZP 89.98 TAL 22.91 TAP 110.23 RCA 148.10 APO 299.94 V2 24.485  
 RC 108.326 GL 2.32 GP -6.59 ZAL 49.59 ZAP 164.03 ETS 205.67 ZAE 159.36 ETE 339.43 ZAC 75.97 ETC 282.30 LVI -9.18

PLANETOCENTRIC CONIC  
 C3 34.474 VHL 5.871 DLA 11.50 RAL 21.44 RAD 6648.7 VEL 12.425 PTH 7.33 VHP 6.208 DPA 10.67 RAP 46.94 ECC 1.5674  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 36 48 3498.65 -46.23 127.99 263.27 102.78 10 35 7 2498.7 -36.14 98.55  
 60.00 10 3 45 3426.92 -39.61 123.20 264.94 98.12 11 0 52 2426.9 -32.13 94.84  
 70.00 10 41 45 3315.15 -33.88 114.94 265.74 94.62 11 37 0 2315.1 -28.49 87.56  
 80.00 11 36 50 3142.56 -29.78 102.14 266.03 92.31 12 29 13 2142.6 -25.81 75.42  
 90.00 12 52 26 2898.59 -28.24 84.27 266.09 91.48 13 40 44 1898.6 -24.79 57.79  
 100.00 14 19 42 2617.04 -29.78 63.51 266.03 92.31 15 3 19 1617.0 -25.81 36.79  
 110.00 15 41 11 2361.97 -33.88 43.86 265.74 94.62 16 20 33 1362.0 -28.49 16.47

DIFFERENTIAL CORRECTIONS  
 TDE -.2966 TRA -.6685 TC3 .5561 BAU .2685  
 RDE -.6257 RRA .2225 RC3 -.1735 FAU .09311  
 FDE .1081 FRA -.4017 FC3-2.3382 BSP 1251  
 BDE .6924 BRA .7045 BC3 .5826 F8P 327

MID-COURSE EXECUTION ACCURACY  
 SGT 976.4 SGR 680.8 SG3 239.9  
 RRT -.1562 RRF .2150 RTF -.5744  
 SGB 1190.3 R23 -.0478 R13 .5863  
 SG1 987.2 SG2 665.1 THA 168.52

ORBIT DETERMINATION ACCURACY  
 ST 17.6 SR 30.7 SS 4.6  
 CRT .7550 CRS .6511 CST .1292  
 LSA 33.9 MSA 11.0 SSA 2.4  
 EL1 33.8 EL2 10.5 ALF 63.89

LAUNCH DATE AUG 28 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 34.035 GAL 5.76 AZL 89.57 HCA 88.39 SMA 221.90 ECC .33288 INC .4347 V1 29.484  
 RP 225.00 LAP .43 LOP 62.94 VP 24.117 GAP 19.43 AZP 89.99 TAL 23.30 TAP 111.69 RCA 148.04 APO 295.77 V2 24.443  
 RC 110.773 GL 2.54 GP -6.76 ZAL 49.05 ZAP 163.06 ETS 204.76 ZAE 159.68 ETE 338.43 ZAC 75.78 ETC 282.30 LVI -9.00

PLANETOCENTRIC CONIC  
 C3 33.758 VHL 5.810 DLA 11.50 RAL 20.84 RAD 6648.4 VEL 12.396 PTH 7.31 VHP 6.022 DPA 10.53 RAP 47.07 ECC 1.5558  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 34 26 3493.26 -46.15 127.49 262.16 103.16 10 32 39 2493.3 -35.94 98.20  
 60.00 10 1 23 3421.52 -39.56 122.75 263.87 98.42 10 58 25 2421.5 -31.97 94.48  
 70.00 10 39 23 3309.73 -33.85 114.52 264.70 94.86 11 34 33 2309.7 -28.36 87.18  
 80.00 11 34 29 3137.13 -29.76 101.74 265.01 92.52 12 26 48 2137.1 -25.71 75.05  
 90.00 12 50 5 2893.14 -28.23 83.87 265.08 91.68 13 38 18 1893.1 -24.70 57.42  
 100.00 14 17 20 2611.60 -29.76 63.11 265.01 92.52 15 0 52 1611.6 -25.71 36.42  
 110.00 15 38 49 2356.55 -33.85 43.44 264.70 94.86 16 18 6 1356.5 -28.36 16.10

DIFFERENTIAL CORRECTIONS  
 TDE -.2990 TRA -.6609 TC3 .5759 BAU .2732  
 RDE -.6216 RRA .2192 RC3 -.1868 FAU .09797  
 FDE .1120 FRA -.4507 FC3-2.5125 BSP 1298  
 BDE .6898 BRA .6963 BC3 .6054 F8P 351

MID-COURSE EXECUTION ACCURACY  
 SGT 988.5 SGR 686.7 SG3 255.5  
 RRT -.1639 RRF .2296 RTF -.5784  
 SGB 1203.6 R23 -.0553 R13 .5899  
 SG1 1000.3 SG2 669.5 THA 168.12

ORBIT DETERMINATION ACCURACY  
 ST 17.8 SR 30.8 SS 5.1  
 CRT .7614 CRS .6304 CST .1028  
 LSA 34.2 MSA 11.0 SSA 2.5  
 EL1 34.0 EL2 10.5 ALF 63.54

LAUNCH DATE AUG 28 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 33.957 GAL 5.78 AZL 89.53 HCA 89.46 SMA 219.98 ECC .32724 INC .4680 V1 29.484  
 RP 225.39 LAP .47 LOP 64.01 VP 23.964 GAP 19.05 AZP 89.00 TAL 23.69 TAP 113.14 RCA 147.98 APO 291.93 V2 24.401  
 RC 113.259 GL 2.75 GP -6.94 ZAL 48.53 ZAP 162.06 ETS 203.94 ZAE 160.04 ETE 337.30 ZAC 75.60 ETC 282.30 LVI -8.81

PLANETOCENTRIC CONIC  
 C3 33.100 VHL 5.753 DLA 11.50 RAL 20.25 RAD 6648.2 VEL 12.370 PTH 7.29 VHP 5.844 DPA 10.38 RAP 47.18 ECC 1.5447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 32 6 3488.35 -46.07 127.05 261.11 103.50 10 30 14 2488.3 -35.75 97.86  
 60.00 9 59 3 3416.61 -39.51 122.34 262.86 98.69 10 56 0 2416.6 -31.82 94.14  
 70.00 10 37 3 3304.83 -33.82 114.14 263.72 95.09 11 32 7 2304.8 -28.25 86.85  
 80.00 11 32 8 3132.23 -29.75 101.38 264.04 92.71 12 24 20 2132.2 -25.61 74.72  
 90.00 12 47 44 2888.25 -28.22 83.51 264.11 91.85 13 35 52 1888.3 -24.62 57.08  
 100.00 14 15 0 2606.71 -29.75 62.75 264.04 92.71 14 58 27 1606.7 -25.61 36.08  
 110.00 15 36 29 2351.65 -33.82 43.06 263.72 95.09 16 15 41 1351.6 -28.25 15.77

DIFFERENTIAL CORRECTIONS  
 TDE -.3008 TRA -.6532 TC3 .5953 BAU .2780  
 RDE -.6177 RRA .2157 RC3 -.2009 FAU .10309  
 FDE .1166 FRA -.5027 FC3-2.6964 BSP 1340  
 BDE .6870 BRA .6879 BC3 .6283 F8P 377

MID-COURSE EXECUTION ACCURACY  
 SGT 999.8 SGR 692.7 SG3 271.9  
 RRT -.1726 RRF .2448 RTF -.5788  
 SGB 1216.3 R23 -.0622 R13 .5940  
 SG1 1012.8 SG2 673.6 THA 167.65

ORBIT DETERMINATION ACCURACY  
 ST 18.0 SR 30.9 SS 5.4  
 CRT .7673 CRS .6119 CST .0803  
 LSA 34.4 MSA 11.1 SSA 2.6  
 EL1 34.2 EL2 10.4 ALF 63.24

LAUNCH DATE AUG 28 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC

DISTANCE 290.118

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.88 VL 33.884 GAL 5.79 AZL 89.50 HCA 90.82 SMA 218.16 ECC .32196 INC .5011 V1 29.484
RP 225.78 LAP .50 LOP 65.07 VP 23.817 GAP 18.68 AZP 90.00 TAL 24.08 TAP 114.88 RCA 147.92 APO 288.39 V2 24.359
RC 115.782 GL 2.97 GP -7.12 ZAL 48.03 ZAP 161.08 ETS 203.20 ZAE 160.44 ETE 338.08 ZAC 78.41 ETC 282.31 LVI -8.82

PLANETOCENTRIC CONIC

C3 32.495 VHL 5.700 DLA 11.51 RAL 19.69 RAD 6648.0 VEL 12.346 PTH 7.27 VHP 5.672 DPA 10.22 RAP 47.28 ECC 1.8348
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 29 49 3483.88 -48.00 126.84 260.11 103.80 10 27 52 2483.9 -35.58 97.58
60.00 9 56 45 3412.18 -39.46 121.97 261.90 98.94 10 53 37 2412.2 -31.69 93.84
70.00 10 54 44 3300.43 -33.79 113.80 262.78 95.28 11 29 44 2300.4 -28.15 88.85
80.00 11 29 49 3127.88 -29.73 101.05 263.12 92.88 12 21 56 2127.9 -25.53 74.42
90.00 12 45 24 2883.91 -28.21 83.20 263.19 92.01 13 33 28 1883.9 -24.54 58.79
100.00 14 12 40 2602.35 -29.73 62.42 263.12 92.88 14 56 3 1602.3 -25.53 35.79
110.00 15 34 10 2347.25 -33.79 42.72 262.78 95.28 16 13 17 1347.3 -28.15 18.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3024 TRA -.6433 TC3 .6139 BAU .2827 8GT 1010.1 8GR 698.8 8G3 289.1 8T 18.2 8R 31.0 88 5.7
RDE -.6138 RRA .2119 RC3 -.2156 FAU .10848 RRT -.1819 RRF .2607 RTF -.5812 CRT .7730 CRS .5982 CBT .0624
PDE .1221 FRA -.5580 FC3-2.8901 B8P 1372 8GB 1220.3 R23 -.0689 R13 .5982 LSA 34.5 MSA 11.2 88A 2.6
BDE .6842 BRA .6792 BC3 .6507 F8P 405 8G1 1024.8 8G2 677.4 THA 167.12 EL1 34.4 EL2 10.4 ALP 62.96

LAUNCH DATE AUG 28 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC

DISTANCE 293.590

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.88 VL 33.815 GAL 5.81 AZL 89.47 HCA 91.58 SMA 218.49 ECC .31701 INC .5342 V1 29.484
RP 226.17 LAP .53 LOP 66.13 VP 23.676 GAP 18.31 AZP 90.01 TAL 24.42 TAP 116.01 RCA 147.86 APO 285.12 V2 24.318
RC 118.341 GL 3.18 GP -7.31 ZAL 47.55 ZAP 160.02 ETS 202.53 ZAE 160.87 ETE 334.69 ZAC 75.22 ETC 282.31 LVI -8.43

PLANETOCENTRIC CONIC

C3 31.938 VHL 5.651 DLA 11.53 RAL 19.14 RAD 6647.8 VEL 12.323 PTH 7.25 VHP 5.506 DPA 10.04 RAP 47.38 ECC 1.8258
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 27 34 3479.87 -45.93 126.27 259.18 104.08 10 25 34 2479.9 -35.43 97.32
60.00 9 54 29 3408.21 -39.42 121.64 260.98 99.16 10 51 17 2408.2 -31.57 93.58
70.00 10 32 26 3296.53 -33.77 113.50 261.89 95.46 11 27 23 2296.5 -28.05 88.28
80.00 11 27 30 3124.05 -29.72 100.77 262.24 93.03 12 19 34 2124.0 -25.46 74.16
90.00 12 43 5 2880.11 -28.20 82.92 262.32 92.15 13 31 5 1880.1 -24.48 58.53
100.00 14 10 22 2598.52 -29.72 62.14 262.24 93.03 14 53 40 1598.5 -25.46 35.52
110.00 15 31 53 2343.35 -33.77 42.42 261.89 95.46 16 10 86 1343.4 -28.05 15.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3036 TRA -.6375 TC3 .6315 BAU .2871 8GT 1019.5 8GR 708.0 8G3 307.3 8T 18.3 8R 31.1 88 6.0
RDE -.6100 RRA .2079 RC3 -.2311 FAU .11414 RRT -.1918 RRF .2774 RTF -.5831 CRT .7786 CRS .5912 CBT .0464
PDE .1280 FRA -.6171 FC3-3.0939 B8P 1400 8GB 1239.5 R23 -.0759 R13 .6022 LSA 34.7 MSA 11.3 88A 2.7
BDE .6818 BRA .6708 BC3 .6724 F8P 435 8G1 1038.6 8G2 681.1 THA 166.83 EL1 34.6 EL2 10.3 ALP 62.69

LAUNCH DATE AUG 28 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC

DISTANCE 297.082

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.88 VL 33.780 GAL 5.82 AZL 89.43 HCA 92.64 SMA 214.98 ECC .31238 INC .5873 V1 29.484
RP 226.98 LAP .87 LOP 67.19 VP 23.840 GAP 17.98 AZP 90.03 TAL 24.77 TAP 117.42 RCA 147.81 APO 282.10 V2 24.278
RC 120.933 GL 3.40 GP -7.81 ZAL 47.09 ZAP 160.98 ETS 201.92 ZAE 161.34 ETE 333.17 ZAC 78.03 ETC 282.32 LVI -8.24

PLANETOCENTRIC CONIC

C3 31.424 VHL 5.606 DLA 11.55 RAL 18.61 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 5.347 DPA 9.86 RAP 47.43 ECC 1.8172
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
90.00 9 28 22 3476.27 -45.87 125.95 259.27 104.32 10 23 18 2476.3 -38.29 97.09
80.00 9 52 13 3404.70 -39.38 121.33 260.12 99.38 10 49 0 2404.7 -31.46 93.34
70.00 10 30 10 3293.11 -33.74 113.23 261.04 95.62 11 25 4 2293.1 -27.97 88.08
80.00 11 25 12 3120.73 -29.71 100.82 261.40 93.16 12 17 13 2120.7 -25.40 73.93
90.00 12 40 46 2876.84 -28.20 82.88 261.48 92.27 13 28 43 1876.8 -24.42 58.30
100.00 14 8 4 2593.20 -29.71 61.89 261.40 93.16 14 51 10 1593.2 -25.40 35.30
110.00 15 29 37 2339.93 -33.74 42.15 261.04 95.62 16 8 37 1339.9 -27.97 14.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3049 TRA -.6299 TC3 .6477 BAU .2813 8GT 1027.8 8GR 711.3 8G3 326.8 8T 18.8 8R 31.1 88 6.4
RDE -.6083 RRA .2038 RC3 -.2474 FAU .12010 RRT -.1918 RRF .2990 RTF -.5848 CRT .7837 CRS .5871 CBT .0380
PDE .1344 FRA -.6802 FC3-3.3089 B8P 1425 8GB 1290.0 R23 -.0830 R13 .6061 LSA 34.8 MSA 11.4 88A 2.8
BDE .6786 BRA .6820 BC3 .6934 F8P 487 8G1 1048.8 8G2 684.7 THA 168.67 EL1 34.7 EL2 10.3 ALP 62.48

LAUNCH DATE AUG 28 1973

FLIGHT TIME 124.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC

DISTANCE 300.822

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.88 VL 33.689 GAL 5.84 AZL 89.40 HCA 93.70 SMA 213.82 ECC .30803 INC .6002 V1 29.484
RP 226.95 LAP .80 LOP 68.24 VP 23.409 GAP 17.99 AZP 90.04 TAL 25.11 TAP 118.81 RCA 147.75 APO 279.30 V2 24.234
RC 123.588 GL 3.62 GP -7.71 ZAL 46.85 ZAP 157.91 ETS 201.35 ZAE 161.82 ETE 331.48 ZAC 74.83 ETC 282.34 LVI -8.06

PLANETOCENTRIC CONIC

C3 30.950 VHL 5.563 DLA 11.58 RAL 18.10 RAD 6647.4 VEL 12.283 PTH 7.22 VHP 5.193 DPA 9.66 RAP 47.48 ECC 1.5094
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 23 12 3473.10 -45.82 125.66 257.43 104.54 10 21 5 2473.1 -35.17 96.88
60.00 9 50 3 3401.62 -39.33 121.10 259.30 99.52 10 46 45 2401.6 -31.37 93.13
70.00 10 27 56 3290.16 -33.72 113.01 260.24 95.75 11 22 46 2290.2 -27.90 85.85
80.00 11 22 55 3117.91 -29.69 100.32 260.61 93.27 12 14 53 2117.9 -25.34 73.74
90.00 12 38 28 2874.00 -28.19 82.48 260.69 92.37 13 26 22 1874.1 -24.37 58.12
100.00 14 5 47 2592.38 -29.69 61.88 260.61 93.27 14 48 59 1592.4 -25.34 35.11
110.00 15 27 22 2336.98 -33.72 41.92 260.24 95.75 16 6 19 1337.0 -27.90 14.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3064 TRA -.6229 TC3 .6623 BAU .2951 8GT 1035.1 8GR 717.9 8G3 346.7 8T 18.6 8R 31.2 88 6.8
RDE -.6025 RRA .1990 RC3 -.2645 FAU .12635 RRT -.2128 RRF .3132 RTF -.5851 CRT .7891 CRS .5584 CBT .0227
PDE .1421 FRA -.7462 FC3-3.5341 B8P 1447 8GB 1259.7 R23 -.0908 R13 .6095 LSA 35.0 MSA 11.5 88A 2.9
BDE .6759 BRA .6530 BC3 .7132 F8P 500 8G1 1055.1 8G2 688.2 THA 165.19 EL1 34.8 EL2 10.2 ALP 62.17



LAUNCH DATE AUG 28 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC										DISTANCE 304.177										EARTH TO MARS																							
RL	151.12	LAL	.00	LOL	334.55	VL	33.631	GAL	5.85	AZL	89.37	HCA	94.75	SMA	212.20	ECC	.30396	INC	.6332	V1	29.484	RC	126.208	GL	3.84	GP	-7.92	ZAL	46.24	ZAP	156.83	ETS	200.83	ZAE	162.33	ETE	329.60	ZAC	74.63	ETC	282.35	LVI	-7.87
RP	227.34	LAP	.63	LOP	69.29	VP	23.283	GAP	17.23	AZP	90.05	TAL	25.44	TAP	120.19	RCA	147.70	APO	276.70	V2	24.193	RC	126.208	GL	3.84	GP	-7.92	ZAL	46.24	ZAP	156.83	ETS	200.83	ZAE	162.33	ETE	329.60	ZAC	74.63	ETC	282.35	LVI	-7.87
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	30.512	VHL	5.524	DLA	11.62	RAL	17.81	RAD	6647.2	VEL	12.266	PTH	7.21	VHP	5.046	DPA	9.45	RAP	47.51	ECC	1.5022	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1						
50.00	9	21	5	3470.32	-45.77	125.41	256.63	104.72	10	18	55	2470.3	-35.06	96.70	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
60.00	9	47	54	3398.96	-39.32	120.88	256.53	99.67	10	44	33	2399.0	-31.29	92.95	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
70.00	10	25	43	3267.67	-33.71	112.81	259.48	95.86	11	20	31	2287.7	-27.84	85.68	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
80.00	11	20	39	3115.58	-29.69	100.14	259.86	93.36	12	12	35	2115.6	-25.30	73.58	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
90.00	12	36	10	2871.83	-26.18	82.32	259.95	92.45	13	24	2	1871.8	-24.34	55.96	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
100.00	14	3	31	2590.05	-29.69	61.51	259.86	93.36	14	46	41	1590.0	-25.30	34.95	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
110.00	15	25	9	2334.49	-33.71	41.73	259.48	95.86	16	4	4	1334.5	-27.84	14.60	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1																	
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
TDE	-.3079	TRA	-.6161	TC3	.6752	BAU	.2986	RRT	-.2233	RRF	.3321	RTF	-.5850	CRT	.7944	CRS	.5473	CST	.0159	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1												
RDE	-.5988	RRA	.1942	RC3	-.2824	FAU	.13289	RRT	-.2233	RRF	.3321	RTF	-.5850	CRT	.7944	CRS	.5473	CST	.0159	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1												
FDE	.1507	FRA	-.8165	FC3	-3.7705	BSP	1466	SGB	1268.6	R23	-.0992	R13	.6125	LSA	35.1	MSA	11.7	SSA	2.9	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1												
BDE	.6733	BRA	.6460	BC3	.7319	FSP	536	SG1	1063.5	SG2	691.7	THA	164.45	EL1	35.0	EL2	10.2	ALF	61.89	SGT	1041.2	SGR	724.8	SG3	367.8	ST	18.8	SR	31.2	SS	7.1												

LAUNCH DATE AUG 28 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC										DISTANCE 307.754										EARTH TO MARS																							
RL	151.12	LAL	.00	LOL	334.55	VL	33.577	GAL	5.86	AZL	89.33	HCA	95.79	SMA	210.97	ECC	.30015	INC	.6660	V1	29.484	RC	126.887	GL	4.06	GP	-8.14	ZAL	45.84	ZAP	155.72	ETS	200.35	ZAE	162.86	ETE	327.52	ZAC	74.42	ETC	282.37	LVI	-7.68
RP	227.73	LAP	.66	LOP	70.34	VP	23.162	GAP	16.88	AZP	90.07	TAL	25.76	TAP	121.55	RCA	147.65	APO	274.30	V2	24.152	RC	126.887	GL	4.06	GP	-8.14	ZAL	45.84	ZAP	155.72	ETS	200.35	ZAE	162.86	ETE	327.52	ZAC	74.42	ETC	282.37	LVI	-7.68
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	30.107	VHL	5.487	DLA	11.67	RAL	17.14	RAD	6647.0	VEL	12.249	PTH	7.20	VHP	4.904	DPA	9.22	RAP	47.52	ECC	1.4955	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5						
50.00	9	19	1	3467.92	-45.73	125.19	255.89	104.89	10	16	49	2467.9	-34.97	96.55	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
60.00	9	45	46	3396.72	-39.29	120.69	257.80	99.79	10	42	23	2396.7	-31.22	92.80	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
70.00	10	23	31	3285.62	-33.69	112.66	258.76	95.96	11	18	17	2285.6	-27.79	85.54	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
80.00	11	18	24	3113.72	-29.68	100.01	259.15	93.43	12	10	17	2113.7	-25.26	73.45	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
90.00	12	33	53	2870.07	-28.18	82.19	259.24	92.52	13	21	43	1870.1	-24.30	55.84	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
100.00	14	1	16	2588.19	-29.68	61.37	259.15	93.43	14	44	24	1588.2	-25.26	34.82	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
110.00	15	22	58	2332.43	-33.69	41.57	258.76	95.96	16	1	50	1332.4	-27.79	14.46	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5																	
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
TDE	-.3091	TRA	-.6099	TC3	.6865	BAU	.3018	RRT	-.2344	RRF	.3520	RTF	-.5841	CRT	.7992	CRS	.5377	CST	.0085	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5												
RDE	-.5951	RRA	.1889	RC3	-.3013	FAU	.13979	RRT	-.2344	RRF	.3520	RTF	-.5841	CRT	.7992	CRS	.5377	CST	.0085	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5												
FDE	.1594	FRA	-.8907	FC3	-4.0198	BSP	1481	SGB	1277.0	R23	-.1080	R13	.6152	LSA	35.2	MSA	11.8	SSA	3.0	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5												
BDE	.6706	BRA	.6385	BC3	.7497	FSP	573	SG1	1071.1	SG2	695.2	THA	163.63	EL1	35.1	EL2	10.1	ALF	61.62	SGT	1046.2	SGR	732.1	SG3	390.1	ST	18.9	SR	31.2	SS	7.5												

LAUNCH DATE AUG 28 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC										DISTANCE 311.352										EARTH TO MARS																							
RL	151.12	LAL	.00	LOL	334.55	VL	33.526	GAL	5.87	AZL	89.30	HCA	96.84	SMA	209.83	ECC	.29658	INC	.6990	V1	29.484	RC	126.592	GL	4.28	GP	-8.36	ZAL	45.47	ZAP	154.60	ETS	199.90	ZAE	163.39	ETE	325.19	ZAC	74.22	ETC	282.39	LVI	-7.49
RP	228.12	LAP	.69	LOP	71.38	VP	23.045	GAP	16.53	AZP	90.08	TAL	26.06	TAP	122.90	RCA	147.60	APO	272.06	V2	24.110	RC	126.592	GL	4.28	GP	-8.36	ZAL	45.47	ZAP	154.60	ETS	199.90	ZAE	163.39	ETE	325.19	ZAC	74.22	ETC	282.39	LVI	-7.49
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
C3	29.732	VHL	5.453	DLA	11.73	RAL	16.68	RAD	6646.9	VEL	12.234	PTH	7.18	VHP	4.767	DPA	8.99	RAP	47.52	ECC	1.4893	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9						
50.00	9	16	59	3485.90	-45.69	125.01	255.19	105.02	10	14	45	2465.9	-34.89	96.42	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
60.00	9	43	40	3394.87	-39.27	120.54	257.11	99.89	10	40	15	2394.9	-31.16	92.68	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
70.00	10	21	21	3284.00	-33.66	112.53	258.09	96.03	11	16	5	2284.0	-27.75	85.43	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
80.00	11	16	9	3112.33	-29.67	99.90	258.48	93.48	12	8	1	2112.3	-25.24	73.38	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
90.00	12	31	37	2886.78	-28.17	82.09	258.57	92.57	13	19	26	1868.8	-24.28	55.76	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
100.00	13	59	1	2586.80	-29.67	61.27	258.48	93.48	14	42	8	1586.8	-25.24	34.73	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
110.00	15	20	48	2330.81	-33.66	41.45	258.09	96.03	15	59	38	1330.8	-27.75	14.33	SGT	1049.8	SGR	739.8	SG3	413.4	ST	19.0	SR	31.2	SS	7.9																	
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																							
TDE	-.3105	TRA	-.6042	TC3	.6954	BAU	.3045	RRT	-.2452	RRF	.3725	RTF	-.5519	CRT</																													

LAUNCH DATE AUG 28 1973 FLIGHT TIME 134.00 ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC										DISTANCE 310.604										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.58	VL	33.433	GAL	5.89	AZL	89.23	HCA	98.91	SMA	207.79	ECC	.29008	INC	.7850	V1	29.484	RP	226.90	LAP	.76	LOP	73.46	VP	22.823	GAP	15.85	AZP	90.12	TAL	26.63	TAP	123.54	RCA	147.51	APO	266.06	V2	24.028	RC	137.073	GL	4.73	GP	-8.83	ZAL	44.78	ZAP	152.29	ETS	199.08	ZAE	164.47	ETE	319.71	ZAC	73.79	ETC	282.45	LVI	-7.11																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	29.082	VHL	5.391	DLA	11.86	RAL	15.83	RAD	6646.6	VEL	12.207	PTH	7.16	VHP	4.809	DPA	8.47	RAP	47.48	ECC	1.4783	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	13	3	3462.93	-45.64	124.74	253.93	105.22	10	10	46	2462.0	-34.78	96.23	60.00	9	39	35	3392.33	-39.24	120.33	255.87	100.03	10	36	7	2392.3	-31.08	92.51	70.00	10	17	5	3282.00	-33.67	112.38	256.85	96.12	11	11	47	2282.0	-27.71	85.29	80.00	11	11	42	3110.89	-29.67	99.80	257.25	93.54	12	3	32	2110.9	-25.21	73.26	90.00	12	27	4	2867.61	-28.17	82.01	257.34	92.61	13	14	52	1867.6	-24.26	55.68	100.00	13	54	33	2585.37	-29.67	61.16	257.25	93.54	14	37	39	1585.4	-25.21	34.63	110.00	15	16	31	2328.82	-33.67	41.29	256.85	96.12	15	55	20	1328.0	-27.71	14.21
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-0.3138	TRA	-0.5948	TC3	.7067	BAU	.3088	SGT	1053.1	SGR	756.9	SG3	463.4	ST	19.3	SR	31.1	SS	8.8	RDE	-0.5838	RRA	.1711	RC3	-0.3636	FAU	.16236	RRT	-0.2658	RRF	.4154	RTF	-.5742	CRT	.8135	CRS	.5213	CST	.0032	FDE	.1944	FRA	-1.1392	FC3	-4.8367	BSP	1514	SGB	1296.9	R23	-.1394	R13	.6201	LSA	35.5	MSA	12.4	SSA	3.2	BDE	.6626	BRA	.6189	BC3	.7948	FSP	698	SG1	1087.5	SG2	706.6	THA	160.84	EL1	35.3	EL2	9.9	ALF	60.60																									

LAUNCH DATE AUG 28 1973 FLIGHT TIME 136.00 ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC										DISTANCE 322.254										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	33.391	GAL	5.90	AZL	89.20	HCA	99.94	SMA	206.87	ECC	.28714	INC	.7981	V1	29.484	RP	229.28	LAP	.79	LOP	74.49	VP	22.718	GAP	15.51	AZP	90.14	TAL	26.89	TAP	126.83	RCA	147.47	APO	266.27	V2	23.988	RC	139.847	GL	4.95	GP	-9.08	ZAL	44.47	ZAP	151.10	ETS	198.70	ZAE	164.99	ETE	316.48	ZAC	73.58	ETC	282.48	LVI	-6.92																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	28.762	VHL	5.363	DLA	11.94	RAL	15.43	RAD	6646.5	VEL	12.194	PTH	7.15	VHP	4.387	DPA	8.19	RAP	47.38	ECC	1.4733	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	11	9	3461.95	-45.62	124.66	253.36	105.29	10	8	51	2462.0	-34.74	96.17	60.00	9	37	35	3391.60	-39.23	120.27	255.30	100.07	10	34	7	2391.6	-31.06	92.46	70.00	10	14	58	3281.60	-33.66	112.35	256.29	96.14	11	9	40	2281.6	-27.70	85.27	80.00	11	9	29	3110.83	-29.67	99.79	256.69	93.54	12	1	19	2110.8	-25.21	73.26	90.00	12	24	48	2867.71	-28.17	82.02	256.78	92.60	13	12	36	1867.7	-24.26	55.68	100.00	13	52	20	2585.30	-29.67	61.16	256.69	93.54	14	35	26	1585.3	-25.21	34.62	110.00	15	14	24	2328.42	-33.66	41.26	256.29	96.14	15	53	13	1328.4	-27.70	14.18
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-0.3155	TRA	-0.5913	TC3	.7089	BAU	.3104	SGT	1052.9	SGR	766.4	SG3	490.2	ST	19.5	SR	31.1	SS	9.3	RDE	-0.5796	RRA	.1644	RC3	-0.3864	FAU	.17058	RRT	-0.2755	RRF	.4379	RTF	-.5683	CRT	.8178	CRS	.5172	CST	.0030	FDE	.2079	FRA	-1.2303	FC3	-5.1346	BSP	1520	SGB	1302.3	R23	-.1518	R13	.6209	LSA	35.5	MSA	12.6	SSA	3.2	BDE	.6599	BRA	.6137	BC3	.8074	FSP	743	SG1	1091.1	SG2	711.0	THA	159.76	EL1	35.3	EL2	9.9	ALF	60.34																									

LAUNCH DATE AUG 28 1973 FLIGHT TIME 138.00 ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC										DISTANCE 325.919										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	33.351	GAL	5.91	AZL	89.17	HCA	100.97	SMA	206.02	ECC	.28438	INC	.8312	V1	29.484	RP	229.67	LAP	.82	LOP	75.52	VP	22.617	GAP	15.18	AZP	90.16	TAL	27.14	TAP	128.11	RCA	147.43	APO	264.61	V2	23.947	RC	142.641	GL	5.17	GP	-9.33	ZAL	44.18	ZAP	149.89	ETS	198.34	ZAE	165.48	ETE	312.89	ZAC	73.36	ETC	282.52	LVI	-6.72																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	28.482	VHL	5.337	DLA	12.03	RAL	15.05	RAD	6646.4	VEL	12.183	PTH	7.14	VHP	4.271	DPA	7.90	RAP	47.30	ECC	1.4687	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	9	17	3461.30	-45.61	124.60	252.83	105.33	10	6	58	2461.3	-34.72	96.13	60.00	9	35	37	3391.23	-39.23	120.24	254.78	100.09	10	32	8	2391.2	-31.05	92.44	70.00	10	12	52	3281.58	-33.66	112.34	255.76	96.14	11	7	34	2281.6	-27.70	85.27	80.00	11	7	16	3111.19	-29.67	99.82	256.16	93.53	11	59	7	2111.2	-25.21	73.28	90.00	12	22	32	2868.24	-28.17	82.05	256.25	92.58	13	10	21	1868.2	-24.27	55.72	100.00	13	50	8	2585.66	-29.67	61.19	256.16	93.53	14	33	13	1585.7	-25.21	34.63	110.00	15	12	19	2328.40	-33.66	41.26	255.78	96.14	15	51	7	1328.4	-27.70	14.18
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-0.3174	TRA	-0.5885	TC3	.7082	BAU	.3117	SGT	1051.1	SGR	776.7	SG3	518.0	ST	19.6	SR	31.0	SS	9.7	RDE	-0.5754	RRA	.1573	RC3	-0.4103	FAU	.17913	RRT	-0.2842	RRF	.4607	RTF	-.509	CRT	.8221	CRS	.5156	CST	.0060	FDE	.2239	FRA	-1.3257	FC3	-5.4448	BSP	1526	SGB	1307.0	R23	-.1651	R13	.6213	LSA	35.6	MSA	12.8	SSA	3.3	BDE	.6572	BRA	.6092	BC3	.8185	FSP	792	SG1	1093.5	SG2	715.8	THA	158.61	EL1	35.4	EL2	9.8	ALF	59.95																									

LAUNCH DATE AUG 28 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC										DISTANCE 329.596										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	33.314	GAL	5.92	AZL	89.14	HCA	102.00	SMA	205.23	ECC	.28179	INC	.8645	V1	29.484	RP	230.05	LAP	.88	LOP	76.55	VP	22.519	GAP	14.86	AZP	90.18	TAL	27.37	TAP	129.37	RCA	147.40	APO	263.06	V2	23.907	RC	145.456	GL	5.40	GP	-9.60	ZAL	43.92	ZAP	148.67	ETS	198.00	ZAE	165.93	ETE	308.91	ZAC	73.14	ETC	282.56	LVI	-6.53																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	28.221	VHL	5.312	DLA	12.13	RAL	14.68	RAD	6646.3	VEL	12.172	PTH	7.13	VHP	4.158	DPA	7.59	RAP	47.20	ECC	1.4645	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	9	7	27	3460.96	-45.61	124.57	252.34	105.35	10	5	8	2461.0	-34.70	96.10	60.00	9	33	40	3391.19	-39.23	120.24	254.29	100.09	10	30	11	2391.2	-31.05	92.44	70.00	10	10	48	3281.95	-33.67	112.37	255.27	96.12	11	5	30	2281.9	-27.70	85.29	80.00	11	5	3	3111.86	-29.67	99.87	255.67	93.50	11	56	55	2112.0	-25.23	73.33	90.00	12	20	16	2869.20	-28.17	82.12	255.76	92.55	13	8	5	1869.2	-24.29	55.78	100.00	13	47	55	2586.43	-29.67	61.24	255.67	93.50	14	31	2	1586.4	-25.23	34.70	110.00	15	10	14	2328.77	-33.67	41.29	255.27	96.12	15	49	3	1328.8	-27.70	14.21
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-0.3194	TRA	-0.5868	TC3	.7048	BAU	.3125	SGT	1048.0	SGR	787.8	SG3	547.1	ST	19.8	SR	30.9	SS	10.2	RDE	-0.5712	RRA	.1498	RC3	-0.4353	FAU	.18802	RRT	-0.2919	RRF	.4839	RTF	-.5516	CRT	.8261	CRS	.5152	CST	.0102	FDE	.2415	FRA	-1.4252	FC3	-5.7677	BSP	1526	SGB	1311.1	R23	-.1794	R13	.6213	LSA	35.6	MSA	13.1	SSA	3.3	BDE	.6544	BRA	.6056	BC3	.8284	FSP	842	SG1	1094.9	SG2	721.3	THA	157.37	EL1	35.4	EL2	9.7	ALF	59.55																									

LAUNCH DATE AUG 28 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

DISTANCE 333.287

EARTH TO MARS

RL 131.12 LAL .00 LOL 334.88 VL 33.270 GAL 5.92 AZL 89.10 HCA 103.02 BMA 204.40 ECC .27936 INC .6900 V1 29.484
RP 230.44 LAP .87 LOP 77.87 VP 22.424 GAP 14.83 AZP 90.20 TAL 27.60 TAP 130.02 RCA 147.36 APO 261.61 V2 23.867
RC 148.280 GL 5.83 GP -9.87 ZAL 43.87 ZAP 147.41 ETS 197.87 ZAE 186.93 ETE 304.91 ZAC 72.91 ETC 282.81 LVI -8.34

PLANETOCENTRIC CONIC

C3 27.978 VHL 5.288 DLA 12.23 RAL 14.33 RAD 6646.2 VEL 12.163 PTH 7.13 VHP 4.050 DPA 7.27 RAP 47.07 ECC 1.4608
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 9 40 3480.91 -48.61 124.86 291.88 105.38 10 3 20 2460.9 -34.70 96.10
60.00 9 31 45 3391.48 -39.23 120.26 293.63 100.08 10 28 16 2391.3 -31.06 92.45
70.00 10 8 44 3282.86 -33.87 112.43 294.81 96.09 11 3 26 2282.7 -27.72 85.34
80.00 11 2 51 3113.11 -29.68 99.96 295.20 93.45 11 54 44 2113.1 -25.25 73.41
90.00 12 18 0 2870.86 -26.18 82.22 295.29 92.50 13 5 50 1870.6 -24.31 65.88
100.00 13 48 43 2587.88 -23.68 61.33 295.20 93.45 14 28 50 1587.8 -23.25 54.78
110.00 15 8 10 2329.47 -22.07 41.34 294.81 96.09 15 48 59 1329.5 -22.72 44.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3113 TRA -.8788 TC3 .7188 BAU .3178 8GT 1043.8 8GR 800.7 8G3 578.4 8T 19.4 8R 30.8 88 10.7
RDE -.5873 RRA .1413 RC3 -.4621 FAU .18761 RRT -.3128 RRF .8088 RTF -.8356 CRT .8265 CR8 .8012 CBT -.0082
FDE .2580 FRA -1.8384 FC3 -0.1148 B8P 1412 8GB 1318.8 R23 -.1772 R13 .8338 L8A 35.4 M8A 13.3 88A 3.3
BDE .8471 BRA .5926 BC3 .8498 B8P 888 8G1 1096.8 8G2 721.8 THA 185.31 EL1 35.1 EL2 9.6 ALP 60.04

LAUNCH DATE AUG 28 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

DISTANCE 336.887

EARTH TO MARS

RL 131.12 LAL .00 LOL 334.88 VL 33.248 GAL 5.93 AZL 89.07 HCA 104.04 BMA 203.80 ECC .27709 INC .9316 V1 29.484
RP 230.82 LAP .80 LOP 78.59 VP 22.333 GAP 14.21 AZP 90.23 TAL 27.80 TAP 131.84 RCA 147.33 APO 260.28 V2 23.827
RC 151.140 GL 5.86 GP -10.19 ZAL 43.44 ZAP 148.14 ETS 197.33 ZAE 186.86 ETE 299.72 ZAC 72.68 ETC 282.63 LVI -6.19

PLANETOCENTRIC CONIC

C3 27.751 VHL 5.288 DLA 12.34 RAL 14.00 RAD 6646.1 VEL 12.183 PTH 7.12 VHP 3.947 DPA 6.93 RAP 48.93 ECC 1.4587
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 3 54 3461.18 -48.61 124.59 291.47 105.34 10 1 35 2461.2 -34.71 96.12
60.00 9 29 51 3392.10 -39.24 120.31 293.41 100.04 10 26 23 2392.1 -31.08 92.50
70.00 10 6 40 3283.75 -33.88 112.51 294.39 96.04 11 1 24 2283.8 -27.75 85.41
80.00 11 0 38 3114.68 -29.68 100.08 294.77 93.39 11 82 33 2114.7 -25.26 73.82
90.00 12 15 43 2872.37 -26.18 82.38 294.86 92.43 13 3 35 1872.4 -24.34 66.00
100.00 13 43 30 2589.16 -23.68 61.45 294.77 93.39 14 28 39 1589.2 -23.28 54.89
110.00 15 6 7 2330.87 -22.07 41.43 294.39 96.04 15 44 57 1330.8 -22.75 44.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3175 TRA -.5798 TC3 .6978 BAU .3162 8GT 1037.5 8GR 813.6 8G3 609.4 8T 19.8 8R 30.7 88 11.2
RDE -.5825 RRA .1331 RC3 -.4692 FAU .20704 RRT -.3119 RRF .8320 RTF -.5365 CRT .8318 CR8 .5076 CBT .0075
FDE .2763 FRA -1.6440 FC3 -0.4591 B8P 1457 8GB 1318.4 R23 -.2001 R13 .8286 L8A 35.5 M8A 13.7 88A 3.4
BDE .8459 BRA .5947 BC3 .8523 B8P 944 8G1 1097.3 8G2 730.6 THA 154.10 EL1 35.2 EL2 9.6 ALP 59.22

LAUNCH DATE AUG 28 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 340.688

EARTH TO MARS

RL 131.12 LAL .00 LOL 334.88 VL 33.215 GAL 5.93 AZL 89.03 HCA 105.05 BMA 203.17 ECC .27496 INC .9654 V1 29.484
RP 231.20 LAP .93 LOP 79.61 VP 22.248 GAP 13.89 AZP 90.25 TAL 27.99 TAP 133.03 RCA 147.30 APO 259.03 V2 23.787
RC 154.008 GL 6.09 GP -10.43 ZAL 43.23 ZAP 144.85 ETS 197.03 ZAE 186.91 ETE 294.58 ZAC 72.45 ETC 282.70 LVI -5.96

PLANETOCENTRIC CONIC

C3 27.537 VHL 5.248 DLA 12.48 RAL 13.89 RAD 6646.0 VEL 12.149 PTH 7.11 VHP 3.848 DPA 6.57 RAP 48.77 ECC 1.4532
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 2 11 3461.72 -48.62 124.64 291.09 105.30 9 59 32 2461.7 -34.73 96.15
60.00 9 27 59 3393.04 -39.25 120.39 293.02 99.99 10 24 32 2393.0 -31.11 92.56
70.00 10 4 38 3284.19 -33.89 112.62 293.99 95.97 10 59 23 2284.2 -27.78 85.51
80.00 10 58 26 3116.65 -29.69 100.22 294.37 93.31 11 50 22 2116.6 -25.32 73.65
90.00 12 13 26 2874.36 -26.19 82.32 294.46 92.35 13 1 20 1874.6 -24.38 66.15
100.00 13 41 18 2591.12 -23.69 61.59 294.37 93.31 14 24 29 1591.1 -23.32 55.02
110.00 15 4 4 2332.01 -22.08 41.54 293.99 95.97 15 42 56 1332.0 -22.78 44.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3223 TRA -.5630 TC3 .6820 BAU .3152 8GT 1030.1 8GR 827.7 8G3 641.7 8T 20.2 8R 30.5 88 11.8
RDE -.3578 RRA .1243 RC3 -.5178 FAU .21886 RRT -.3111 RRF .8894 RTF -.5.74 CRT .8360 CR8 .5130 CBT .0192
FDE .3018 FRA -1.7547 FC3 -0.8177 B8P 1481 8GB 1321.4 R23 -.2210 R13 .8294 L8A 35.6 M8A 14.0 88A 3.4
BDE .8440 BRA .5961 BC3 .8582 B8P 1003 8G1 1094.6 8G2 740.3 THA 182.87 EL1 35.3 EL2 9.6 ALP 58.52

LAUNCH DATE AUG 28 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

DISTANCE 344.418

EARTH TO MARS

RL 131.12 LAL .00 LOL 334.88 VL 33.188 GAL 5.93 AZL 89.00 HCA 106.07 BMA 202.57 ECC .27298 INC .9994 V1 29.484
RP 231.58 LAP .98 LOP 80.82 VP 22.159 GAP 13.58 AZP 90.28 TAL 28.17 TAP 134.24 RCA 147.28 APO 257.87 V2 23.748
RC 156.890 GL 6.32 GP -10.72 ZAL 43.04 ZAP 143.53 ETS 196.73 ZAE 167.05 ETE 289.03 ZAC 72.22 ETC 282.76 LVI -5.76

PLANETOCENTRIC CONIC

C3 27.337 VHL 5.228 DLA 12.59 RAL 13.39 RAD 6645.9 VEL 12.136 PTH 7.11 VHP 3.783 DPA 6.21 RAP 46.58 ECC 1.4499
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 9 0 29 3482.58 -45.83 124.71 250.74 105.25 9 50 11 2482.5 -34.76 96.21
60.00 9 26 8 3394.28 -39.28 120.49 252.66 99.92 10 22 42 2394.3 -31.14 92.64
70.00 10 2 36 3286.97 -33.70 112.76 253.62 95.89 10 57 23 2287.0 -27.83 85.63
80.00 10 56 13 3118.99 -29.70 100.40 254.00 93.22 11 48 12 2119.0 -25.36 73.81
90.00 12 11 8 2877.18 -26.20 82.71 254.08 92.28 12 59 5 1877.2 -24.43 66.33
100.00 13 39 5 2593.48 -23.70 61.76 254.00 93.22 14 22 18 1593.5 -23.36 55.18
110.00 15 2 2 2333.79 -22.07 41.60 253.62 95.89 15 40 56 1333.8 -22.83 44.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3261 TRA -.5888 TC3 .6638 BAU .3144 8GT 1021.6 8GR 843.1 8G3 675.1 8T 20.4 8R 30.3 88 12.3
RDE -.5524 RRA .1151 RC3 -.5473 FAU .22700 RRT -.3089 RRF .5788 RTF -.4985 CRT .8395 CR8 .5176 CBT .0289
FDE .3288 FRA -1.8697 FC3 -7.1890 B8P 1495 8GB 1324.6 R23 -.2412 R13 .8233 L8A 35.7 M8A 14.4 88A 3.4
BDE .8415 BRA .5980 BC3 .8603 B8P 1084 8G1 1091.4 8G2 750.6 THA 181.02 EL1 35.3 EL2 9.5 ALP 57.88

LAUNCH DATE AUG 28 1973

FLIGHT TIME 180.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC										DISTANCE 346.146										EARTH TO MARS																																																								
RL	151.12	LAL	.00	LOL	334.95	VL	33.150	GAL	9.93	AZL	88.97	HCA	107.08	BMA	202.02	ECC	.27109	INC	1.0335	V1	29.484	RL	151.12	LAL	.00	LOL	334.95	VL	33.150	GAL	9.93	AZL	88.97	HCA	107.08	BMA	202.02	ECC	.27109	INC	1.0335	V1	29.484	RP	231.95	LAP	.99	LOP	81.63	VP	22.077	GAP	13.27	AZP	90.30	TAL	28.33	TAP	138.41	RCA	147.26	APC	258.79	V2	23.708											
RC	159.789	GL	6.36	GP	-11.03	ZAL	42.87	ZAP	142.19	ETA	196.43	ZAE	167.08	ETE	263.26	ZAC	71.98	ETC	282.82	LVI	-8.57	RC	159.789	GL	6.36	GP	-11.03	ZAL	42.87	ZAP	142.19	ETA	196.43	ZAE	167.08	ETE	263.26	ZAC	71.98	ETC	282.82	LVI	-8.57	PLANETOCENTRIC CONIC																																
C3	27.148	VHL	5.210	DLA	12.73	RAL	13.11	RAD	8645.9	VEL	12.120	PTH	7.10	VHP	3.682	DPA	5.82	RAP	46.38	ECC	1.4480	C3	27.148	VHL	5.210	DLA	12.73	RAL	13.11	RAD	8645.9	VEL	12.120	PTH	7.10	VHP	3.682	DPA	5.82	RAP	46.38	ECC	1.4480	LNCH AZMTH	LNCH TIME	L-1 TIME	INJ LAT	INJ LONG	INJ RT ABC	INJ AZMTH	INJ TIME	PO	CBT TIM	INJ 2 LAT	INJ 2 LONG																					
50.00	8 58 49	3483.84	-45.65	124.81	250.42	109.17	9 56 32	2463.0	-34.01	96.28	60.00	9 24 17	3395.82	-39.28	120.82	252.34	99.84	10 20 53	2395.8	-31.19	92.74	70.00	10 0 34	3289.09	-33.72	112.92	253.29	95.80	10 35 23	2289.1	-27.88	89.78	80.00	10 53 59	3121.71	-29.71	100.60	253.85	93.12	11 46 1	2121.7	-25.42	74.00	90.00	12 8 49	2880.19	-28.20	82.93	253.73	92.15	12 56 49	1880.2	-24.48	56.53	100.00	13 36 51	2596.18	-29.71	61.97	253.65	93.12	14 20 7	1596.2	-23.42	39.36	110.00	15 0 0	2335.91	-33.72	41.84	253.29	93.80	15 38 58	1338.9	-27.88	14.89
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																								
TDE	-.3294	TRA	-.5910	TC3	.6433	BAU	.3138	8GT	1012.2	8GR	889.8	8G3	709.6	8T	20.7	8R	30.1	8B	12.9	TDE	-.3294	TRA	-.5910	TC3	.6433	BAU	.3138	8GT	1012.2	8GR	889.8	8G3	709.6	8T	20.7	8R	30.1	8B	12.9	RDE	-.5471	RRA	.1084	RC3	-.3783	FAU	.23747	RRT	-.3047	RFP	.6021	RTF	-.4738	CRT	.8426	CR8	.8224	CBT	.0384																	
FDE	.3981	FRA	-1.9891	FC3	-7.5728	B8P	1489	8GB	1328.2	8Z3	-.2804	R13	.8228	L8A	35.7	M8A	14.7	88A	3.4	FDE	.3981	FRA	-1.9891	FC3	-7.5728	B8P	1489	8GB	1328.2	8Z3	-.2804	R13	.8228	L8A	35.7	M8A	14.7	88A	3.4	BDE	.6388	BRA	.6003	BC3	.8880	F8P	1127	8G1	1087.8	8G2	788.0	THA	149.14	EL1	35.3	EL2	9.8	ALP	87.88																	

LAUNCH DATE AUG 28 1973

FLIGHT TIME 182.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC										DISTANCE 351.882										EARTH TO MARS																																																								
RL	151.12	LAL	.00	LOL	334.95	VL	33.134	GAL	9.93	AZL	88.93	HCA	108.08	BMA	201.81	ECC	.28934	INC	1.0880	V1	29.484	RL	151.12	LAL	.00	LOL	334.95	VL	33.134	GAL	9.93	AZL	88.93	HCA	108.08	BMA	201.81	ECC	.28934	INC	1.0880	V1	29.484	RP	232.33	LAP	1.02	LOP	82.83	VP	21.987	GAP	12.86	AZP	90.33	TAL	28.48	TAP	138.86	RCA	147.24	APC	258.78	V2	23.670											
RC	162.693	GL	6.78	GP	-11.34	ZAL	42.72	ZAP	140.83	ETA	196.13	ZAE	166.97	ETE	277.38	ZAC	71.74	ETC	282.88	LVI	-8.37	RC	162.693	GL	6.78	GP	-11.34	ZAL	42.72	ZAP	140.83	ETA	196.13	ZAE	166.97	ETE	277.38	ZAC	71.74	ETC	282.88	LVI	-8.37	PLANETOCENTRIC CONIC																																
C3	26.971	VHL	5.193	DLA	12.88	RAL	12.84	RAD	8645.8	VEL	12.121	PTH	7.09	VHP	3.878	DPA	5.42	RAP	46.15	ECC	1.4439	C3	26.971	VHL	5.193	DLA	12.88	RAL	12.84	RAD	8645.8	VEL	12.121	PTH	7.09	VHP	3.878	DPA	5.42	RAP	46.15	ECC	1.4439	LNCH AZMTH	LNCH TIME	L-1 TIME	INJ LAT	INJ LONG	INJ RT ABC	INJ AZMTH	INJ TIME	PO	CBT TIM	INJ 2 LAT	INJ 2 LONG																					
50.00	8 57 10	3468.00	-48.88	124.93	250.14	109.08	9 54 55	2468.0	-34.88	96.36	60.00	9 22 28	3397.65	-39.30	120.77	252.04	99.74	10 19 8	2397.7	-31.25	92.87	70.00	9 58 32	3291.34	-33.73	113.11	252.98	95.89	10 33 23	2291.5	-27.94	89.94	80.00	10 51 45	3124.79	-29.72	100.83	253.34	93.00	11 43 50	2124.8	-25.48	74.21	90.00	12 8 29	2883.58	-28.21	83.17	253.41	92.03	12 54 33	1883.8	-24.54	56.78	100.00	13 34 37	2599.26	-29.72	62.19	253.34	93.00	14 17 58	1599.3	-23.48	39.58	110.00	14 57 58	2336.38	-33.73	42.03	252.98	93.89	15 38 58	1338.4	-27.94	14.88
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																								
TDE	-.3323	TRA	-.5938	TC3	.6200	BAU	.3138	8GT	1001.9	8GR	878.0	8G3	748.4	8T	21.0	8R	29.9	8B	13.5	TDE	-.3323	TRA	-.5938	TC3	.6200	BAU	.3138	8GT	1001.9	8GR	878.0	8G3	748.4	8T	21.0	8R	29.9	8B	13.5	RDE	-.5415	RRA	.0952	RC3	-.6107	FAU	.24830	RRT	-.2979	RFP	.6253	RTF	-.4484	CRT	.8454	CR8	.8286	CBT	.0468																	
FDE	.3881	FRA	-1.9891	FC3	-7.9700	B8P	1497	8GB	1332.2	8Z3	-.2782	R13	.8237	L8A	35.7	M8A	15.1	88A	3.4	FDE	.3881	FRA	-1.9891	FC3	-7.9700	B8P	1497	8GB	1332.2	8Z3	-.2782	R13	.8237	L8A	35.7	M8A	15.1	88A	3.4	BDE	.6354	BRA	.6034	BC3	.8702	F8P	1191	8G1	1083.8	8G2	775.0	THA	148.88	EL1	35.3	EL2	9.5	ALP	86.84																	

LAUNCH DATE AUG 28 1973

FLIGHT TIME 184.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC										DISTANCE 355.824										EARTH TO MARS																																																								
RL	151.12	LAL	.00	LOL	334.95	VL	33.111	GAL	9.93	AZL	88.90	HCA	109.08	BMA	201.03	ECC	.28789	INC	1.1028	V1	29.484	RL	151.12	LAL	.00	LOL	334.95	VL	33.111	GAL	9.93	AZL	88.90	HCA	109.08	BMA	201.03	ECC	.28789	INC	1.1028	V1	29.484	RP	232.70	LAP	1.04	LOP	83.04	VP	21.920	GAP	12.86	AZP	90.36	TAL	28.62	TAP	137.70	RCA	147.22	APC	258.85	V2	23.631											
RC	165.810	GL	7.03	GP	-11.65	ZAL	42.89	ZAP	139.45	ETA	195.83	ZAE	166.73	ETE	271.42	ZAC	71.90	ETC	282.95	LVI	-8.18	RC	165.810	GL	7.03	GP	-11.65	ZAL	42.89	ZAP	139.45	ETA	195.83	ZAE	166.73	ETE	271.42	ZAC	71.90	ETC	282.95	LVI	-8.18	PLANETOCENTRIC CONIC																																
C3	26.804	VHL	5.177	DLA	13.03	RAL	12.59	RAD	8645.7	VEL	12.118	PTH	7.08	VHP	3.491	DPA	5.01	RAP	45.90	ECC	1.4411	C3	26.804	VHL	5.177	DLA	13.03	RAL	12.59	RAD	8645.7	VEL	12.118	PTH	7.08	VHP	3.491	DPA	5.01	RAP	45.90	ECC	1.4411	LNCH AZMTH	LNCH TIME	L-1 TIME	INJ LAT	INJ LONG	INJ RT ABC	INJ AZMTH	INJ TIME	PO	CBT TIM	INJ 2 LAT	INJ 2 LONG																					
50.00	8 55 33	3468.81	-49.71	125.08	249.88	104.97	9 53 20	2468.8	-34.92	96.47	60.00	9 20 40	3399.77	-39.33	120.95	251.77	99.62	10 17 20	2399.8	-31.31	93.01	70.00	9 56 30	3294.31	-33.75	113.33	252.69	95.58	10 31 24	2294.3	-28.00	86.13	80.00	10 49 30	3128.25	-29.73	101.08	253.04	92.87	11 41 38	2128.2	-25.54	74.44	90.00	12 4 8	2887.35	-28.22	83.45	253.11	91.89	12 52 18	1887.4	-24.60	57.02	100.00	13 32 22	2602.72	-29.73	62.45	253.04	92.87	14 13 45	1602.7	-23.54	39.81	110.00	14 55 58	2341.13	-33.75	42.24	252.69	93.58	15 34 57	1341.1	-28.00	15.05
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																								
TDE	-.3348	TRA	-.6017	TC3	.5933	BAU	.3138	8GT	990.9	8GR	887.7	8G3	782.1	8T	21.2	8R	29.7	8B	14.1	TDE	-.3348	TRA	-.6017	TC3	.5933	BAU	.3138	8GT	990.9	8GR	887.7	8G3	782.1	8T	21.2	8R	29.7	8B	14.1	RDE	-.5357	RRA	.0845	RC3	-.6443	FAU	.25938	RRT	-.2875	RFP	.6480	RTF	-.4.98	CRT	.8478	CR8	.8313	CBT	.0580																	
FDE	.4229	FRA	-2.2402	FC3	-8.3777	B8P	1498	8GB	1337.1	8Z3	-.2841	R13	.8287	L8A	35.7	M8A	15.8	88A	3.4	FDE	.4229	FRA	-2.2402	FC3	-8.3777	B8P	1498	8GB	1337.1	8Z3	-.2841	R13	.8287	L8A	35.7	M8A	15.8	88A	3.4	BDE	.6318	BRA	.6078	BC3	.8789	F8P	1287	8G1	1079.0	8G2	788.8	THA	144.80	EL1	35.2	EL2	9.5	ALP	86.02																	

LAUNCH DATE AUG 28 1973

FLIGHT TIME 186.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC										DISTANCE 359.373										EARTH TO MARS																																													
RL	151.12	LAL	.00	LOL	334.95	VL	33.089	GAL	9.92	AZL	88.88	HCA	110.08	BMA	200.88	ECC	.28615	INC	1.1380	V1	29.484	RL	151.12	LAL	.00	LOL	334.95	VL	33.089	GAL	9.92	AZL	88.88	HCA	110.08	BMA	200.88	ECC	.28615	INC	1.1380	V1	29.484	RP	233.07	LAP	1.07	LOP	84.04	VP	21.845	GAP	12.38	AZP	90.30	TAL	28.74	TAP	138.82	RCA	147.20	APC	259.98	V2	23.593
RC	168.837	GL	7.28	GP	-11.98	ZAL	42.47	ZAP	138.08	ETA	195.53	ZAE	166.38	ETE	268.89	ZAC	71.28	ETC	283.02	LVI	-4.80	RC	168.837	GL	7.28	GP	-11.98	ZAL	42.47	ZAP	138.08	ETA	195.53	ZAE	166.38	ETE	268.89	ZAC	71.28	ETC	283.02	LVI	-4.80																						

LAUNCH DATE AUG 28 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC

DISTANCE 363.188

EARTH TO MARS

RL 181.12 LAL .00 LOL 334.85 VL 33.068 GAL 5.92 AZL 88.83 HCA 111.08 SMA 200.18 ECC .28471 INC 1.1734 V1 29.484
RP 233.44 LAP 1.08 LOP 86.63 VP 21.773 GAP 12.00 AZP 90.42 TAL 28.85 TAP 139.92 RCA 147.19 APO 253.17 V2 23.584
RC 171.472 GL 7.52 GP -12.31 ZAL 42.37 ZAP 139.92 ETS 195.23 ZAE 165.82 ETE 239.99 ZAC 71.01 ETC 283.09 LVI -4.78

PLANETOCENTRIC CONIC

C3 26.498 VHL 5.147 DLA 13.37 RAL 12.12 RAD 6645.6 VEL 12.102 PTH 7.08 VHP 3.336 DPA 4.14 RAP 45.39 ECC 1.4381
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 52 23 3470.59 -45.78 125.43 249.46 104.71 9 50 13 2470.6 -35.08 98.72
60.00 9 17 5 3404.84 -39.38 121.38 251.31 99.34 10 13 49 2404.8 -31.47 93.35
70.00 9 22 26 3300.81 -35.79 113.83 252.20 95.27 10 47 26 2300.6 -28.18 88.57
80.00 10 44 57 3136.24 -29.76 101.67 252.53 92.55 11 37 13 2136.2 -25.69 74.09
90.00 11 59 22 2896.06 -28.24 84.09 252.59 91.57 12 47 38 1896.1 -24.75 57.62
100.00 13 27 49 2610.71 -29.76 63.04 252.53 92.55 14 11 20 1610.7 -25.69 38.36
110.00 14 51 52 2347.63 -33.79 42.75 252.20 95.27 15 31 0 1347.6 -28.18 18.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3399 TRA -.6173 TC3 .3288 BAV .3152 SGT 968.7 SGR 941.6 SG3 858.2 ST 21.7 BR 29.1 BR 15.3
RDE -.5230 RRA .0618 RC3 -.7158 FAU .20226 RRT -.2531 RRF .6915 RTF -.3490 CRT .8515 CR8 .3429 CST .0726
FDE .5008 FRA-2.5024 FC3-9.2226 BSP 1492 SGB 1350.9 R23 -.3183 R13 .6412 LSA 35.7 MSA 16.4 SBA 3.4
BDE .6237 BRA .6204 BC3 .8888 F8P 1396 SGI 1069.9 SGI 824.7 THA 138.20 EL1 35.1 EL2 9.5 ALF 54.69

LAUNCH DATE AUG 28 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC

DISTANCE 366.888

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 33.049 GAL 5.91 AZL 88.79 HCA 112.07 SMA 199.80 ECC .26336 INC 1.2092 V1 29.484
RP 233.80 LAP 1.12 LOP 86.62 VP 21.703 GAP 11.77 AZP 90.45 TAL 28.94 TAP 141.01 RCA 147.18 APO 252.42 V2 23.517
RC 174.413 GL 7.77 GP -12.64 ZAL 42.29 ZAP 135.18 ETS 194.93 ZAE 165.16 ETE 254.60 ZAC 70.77 ETC 283.16 LVI -4.59

PLANETOCENTRIC CONIC

C3 26.354 VHL 5.134 DLA 13.55 RAL 11.91 RAD 6645.6 VEL 12.096 PTH 7.07 VHP 3.263 DPA 3.68 RAP 45.05 ECC 1.4337
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 50 49 3472.94 -45.82 125.65 249.29 104.55 9 48 42 2472.9 -35.17 98.87
60.00 9 15 18 3407.79 -39.42 121.61 251.12 99.18 10 12 5 2407.8 -31.56 93.55
70.00 9 50 23 3304.53 -33.82 114.12 251.99 95.10 10 45 27 2304.5 -28.24 88.63
80.00 10 42 39 3140.78 -29.77 102.01 252.31 92.38 11 35 0 2140.8 -25.77 75.30
90.00 11 56 56 2900.99 -28.23 84.45 252.36 91.39 12 45 17 1901.0 -24.83 57.95
100.00 13 25 31 2615.25 -29.77 63.38 252.31 92.38 14 9 6 1615.2 -25.77 36.87
110.00 14 49 49 2351.35 -33.82 43.04 251.99 95.10 15 29 1 1351.4 -28.24 15.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3420 TRA -.6267 TC3 .4910 BAV .3168 SGT 957.8 SGR 966.0 SG3 897.5 ST 21.9 BR 28.8 BR 16.0
RDE -.5161 RRA .0497 RC3 -.7532 FAU .29403 RRT -.2280 RRF .7123 RTF -.3067 CRT .8520 CR8 .3480 CST .0800
FDE .5433 FRA-2.6392 FC3-9.6591 BSP 1492 SGB 1360.4 R23 -.3146 R13 .6560 LSA 35.7 MSA 16.9 SBA 3.4
BDE .6192 BRA .6286 BC3 .8991 F8P 1466 SGI 1066.1 SGI 845.1 THA 133.93 EL1 35.0 EL2 9.4 ALF 53.99

LAUNCH DATE AUG 28 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

DISTANCE 370.653

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 33.031 GAL 5.91 AZL 88.75 HCA 113.06 SMA 199.45 ECC .26210 INC 1.2453 V1 29.484
RP 234.17 LAP 1.15 LOP 87.62 VP 21.636 GAP 11.48 AZP 90.49 TAL 29.02 TAP 142.08 RCA 147.18 APO 251.73 V2 23.479
RC 177.360 GL 8.02 GP -12.99 ZAL 42.23 ZAP 133.72 ETS 194.63 ZAE 164.36 ETE 249.75 ZAC 70.52 ETC 283.24 LVI -4.39

PLANETOCENTRIC CONIC

C3 26.219 VHL 5.120 DLA 13.74 RAL 11.71 RAD 6645.5 VEL 12.091 PTH 7.07 VHP 3.194 DPA 3.20 RAP 44.72 ECC 1.4315
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 49 16 3475.54 -45.86 125.88 249.15 104.37 9 47 12 2475.5 -35.27 97.04
60.00 9 13 31 3411.01 -39.45 121.88 250.95 99.00 10 10 22 2411.0 -31.66 93.76
70.00 9 48 19 3308.57 -33.84 114.43 251.81 94.92 10 43 28 2308.6 -28.34 87.10
80.00 10 40 19 3143.67 -29.78 102.37 252.10 92.19 11 32 44 2143.7 -25.88 75.84
90.00 11 54 29 2906.30 -28.28 84.83 252.16 91.20 12 42 55 1906.3 -24.92 58.32
100.00 13 23 11 2620.14 -29.78 63.74 252.10 92.19 14 6 51 1620.1 -25.88 37.01
110.00 14 47 48 2355.39 -33.84 43.35 251.81 94.92 15 27 1 1355.4 -28.34 16.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3442 TRA -.6377 TC3 .4489 BAV .3191 SGT 948.2 SGR 992.1 SG3 937.4 ST 22.2 BR 28.5 BR 16.6
RDE -.5088 RRA .0371 RC3 -.7922 FAU .30384 RRT -.1968 RRF .7321 RTF -.2.88 CRT .8540 CR8 .3536 CST .0875
FDE .5895 FRA-2.7773 FC-10.1021 BSP 1499 SGB 1372.4 R23 -.3006 R13 .6777 LSA 35.6 MSA 17.3 SBA 3.4
BDE .6144 BRA .6387 BC3 .9105 F8P 1539 SGI 1083.7 SGI 867.1 THA 128.52 EL1 34.9 EL2 9.4 ALF 53.28

LAUNCH DATE AUG 28 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC

DISTANCE 374.423

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 33.015 GAL 5.90 AZL 88.72 HCA 114.05 SMA 199.12 ECC .26091 INC 1.2820 V1 29.484
RP 234.53 LAP 1.17 LOP 88.60 VP 21.570 GAP 11.19 AZP 90.52 TAL 29.09 TAP 143.14 RCA 147.17 APO 251.08 V2 23.442
RC 180.313 GL 8.27 GP -13.34 ZAL 42.18 ZAP 132.23 ETS 194.32 ZAE 163.45 ETE 245.20 ZAC 70.27 ETC 283.32 LVI -4.19

PLANETOCENTRIC CONIC

C3 26.092 VHL 5.108 DLA 13.94 RAL 11.52 RAD 6645.4 VEL 12.085 PTH 7.06 VHP 3.129 DPA 2.72 RAP 44.38 ECC 1.4294
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 47 44 3478.36 -45.91 126.14 249.03 104.18 9 45 42 2478.4 -35.37 97.22
60.00 9 11 44 3414.48 -39.49 122.16 250.81 98.81 10 8 38 2414.5 -31.76 94.00
70.00 9 46 15 3312.90 -33.87 114.77 251.64 94.72 10 41 28 2312.9 -28.44 87.40
80.00 10 37 57 3150.90 -29.80 102.76 251.92 91.98 11 30 28 2150.9 -25.96 76.00
90.00 11 51 59 2911.96 -28.26 85.25 251.97 90.99 12 40 31 1912.0 -25.01 58.71
100.00 13 20 49 2625.37 -29.80 64.13 251.92 91.98 14 4 34 1625.4 -25.96 37.37
110.00 14 45 41 2359.71 -33.87 43.68 251.64 94.72 15 25 1 1359.7 -28.44 16.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3381 TRA -.6401 TC3 .4182 BAV .3258 SGT 933.8 SGR 1023.1 SG3 981.8 ST 21.9 BR 28.2 BR 17.2
RDE -.5031 RRA .0223 RC3 -.8380 FAU .31915 RRT -.1789 RRF .7529 RTF -.2231 CRT .8521 CR8 .3400 CST .0673
FDE .6139 FRA-2.9413 FC-10.5897 BSP 1436 SGB 1385.2 R23 -.2581 R13 .7137 LSA 35.3 MSA 17.8 SBA 3.4
BDE .6050 BRA .6405 BC3 .9339 F8P 1388 SGI 1073.0 SGI 876.0 THA 121.47 EL1 34.5 EL2 9.4 ALF 53.42

LAUNCH DATE AUG 28 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 33.000 GAL 5.89 AZL 88.68 HCA 115.03 SMA 198.83 ECC .25981 INC 1.3190 V1 29.484
RP 234.89 LAP 1.20 LOP 89.59 VP 21.507 GAP 10.90 AZP 90.56 TAL 29.15 TAP 144.18 RCA 147.17 APO 250.48 V2 23.405
RC 183.270 GL 8.53 GP -13.70 ZAL 42.15 ZAP 130.73 ETS 194.00 ZAE 182.44 ETE 241.06 ZAC 70.02 ETC 283.41 LVI -3.89

DISTANCE 378.195

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.969 VHL 5.096 DLA 14.15 RAL 11.35 RAD 6645.4 VEL 12.080 PTH 7.06 VHP 3.067 DPA 2.22 RAP 44.02 ECC 1.4274
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 48 13 3481.43 -45.96 126.42 248.95 103.97 9 44 14 2481.4 -35.49 97.42
60.00 9 9 57 3418.24 -39.53 122.48 250.69 98.60 10 6 55 2418.2 -31.87 94.25
70.00 9 44 10 3317.57 -33.89 119.13 251.90 94.51 10 39 27 2317.6 -28.54 87.72
80.00 10 35 33 3156.53 -29.81 103.18 251.76 91.76 11 28 10 2156.5 -26.06 76.39
90.00 11 49 26 2910.06 -28.27 85.69 251.80 90.76 12 38 4 1918.1 -25.11 59.13
100.00 13 18 25 2631.01 -29.81 64.55 251.76 91.76 14 2 16 1631.0 -26.06 37.75
110.00 14 43 36 2364.39 -33.89 44.05 251.50 94.51 15 23 0 1364.4 -28.54 16.64

DIFFERENTIAL CORRECTIONS

TDE -.3452 TRA -.6812 TC3 .3569 BAU .3280
RDE -.4938 RRA .0102 RC3 -.8748 FAU .33052
PDE .6849 FRA-3.0643 FC-11.0189 B8P 1512
BDE .6025 BRA .6613 BC3 .9448 F8P 1679

MID-COURSE EXECUTION ACCURACY

SGT 933.1 SGR 1050.4 SG3 1019.9
RRR -.1203 RRF .7697 RTF -.1507
SGB 1405.0 R23 -.2010 R13 .7453
SG1 1073.6 SG2 906.3 THA 112.69

ORBIT DETERMINATION ACCURACY

ST 22.6 SR 27.8 SS 18.0
CRT .8546 CR8 .8597 C8T .0937
LSA 35.5 M8A 18.3 S8A 3.3
EL1 34.5 EL2 9.4 ALF 81.90

LAUNCH DATE AUG 28 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.988 GAL 5.88 AZL 88.64 HCA 116.01 SMA 198.55 ECC .25877 INC 1.3566 V1 29.484
RP 235.24 LAP 1.22 LOP 90.57 VP 21.445 GAP 10.62 AZP 90.60 TAL 29.17 TAP 145.20 RCA 147.17 APO 249.93 V2 23.369
RC 186.232 GL 8.79 GP -14.06 ZAL 42.13 ZAP 129.21 ETS 193.68 ZAE 161.32 ETE 237.29 ZAC 69.77 ETC 283.49 LVI -3.76

DISTANCE 381.971

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.852 VHL 5.094 DLA 14.36 RAL 11.19 RAD 6645.3 VEL 12.075 PTH 7.06 VHP 3.008 DPA 1.70 RAP 43.65 ECC 1.4255
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 42 3484.73 -46.01 126.72 248.88 103.74 9 42 47 2484.7 -35.62 97.64
60.00 9 8 10 3422.26 -39.57 122.81 250.60 98.38 10 5 12 2422.3 -31.99 94.53
70.00 9 42 3 3322.54 -33.92 115.51 251.38 94.28 10 37 26 2322.5 -28.66 88.06
80.00 10 33 7 3162.52 -29.82 103.62 251.62 91.53 11 25 80 2162.5 -26.16 76.80
90.00 11 46 51 2924.53 -28.28 86.17 251.65 90.53 12 35 36 1924.5 -25.21 59.58
100.00 13 15 59 2636.99 -29.82 64.99 251.62 91.53 13 59 56 1637.0 -26.16 38.17
110.00 14 41 29 2369.38 -33.92 44.43 251.38 94.28 15 20 59 1369.4 -28.66 16.88

DIFFERENTIAL CORRECTIONS

TDE -.3494 TRA -.6791 TC3 .2984 BAU .3332
RDE -.4848 RRA -.0031 RC3 -.8168 FAU .34235
PDE .7507 FRA-3.1973 FC-11.4647 B8P 1561
BDE .5976 BRA .6791 BC3 .9641 F8P 1783

MID-COURSE EXECUTION ACCURACY

SGT 933.3 SGR 1080.5 SG3 1059.8
RRR -.0644 RRF .7862 RTF -.0815
SGB 1427.8 R23 -.1077 R13 .7794
SG1 1086.8 SG2 926.0 THA 101.83

ORBIT DETERMINATION ACCURACY

ST 23.0 SR 27.3 SS 18.8
CRT .8555 CR8 .8715 C8T .1084
LSA 35.5 M8A 18.9 S8A 3.3
EL1 34.5 EL2 9.4 ALF 80.77

LAUNCH DATE AUG 28 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.973 GAL 5.87 AZL 88.61 HCA 116.99 SMA 198.30 ECC .25781 INC 1.3946 V1 29.484
RP 235.59 LAP 1.24 LOP 91.55 VP 21.388 GAP 10.34 AZP 90.63 TAL 29.22 TAP 146.21 RCA 147.17 APO 249.42 V2 23.332
RC 189.197 GL 9.05 GP -14.43 ZAL 42.13 ZAP 127.68 ETS 193.35 ZAE 160.12 ETE 233.88 ZAC 69.52 ETC 283.58 LVI -3.58

DISTANCE 385.751

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.740 VHL 5.074 DLA 14.59 RAL 11.03 RAD 6645.3 VEL 12.071 PTH 7.05 VHP 2.952 DPA 1.18 RAP 43.28 ECC 1.4236
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 11 3488.26 -46.07 127.04 248.84 103.50 9 41 20 2488.3 -35.75 97.87
60.00 9 6 22 3426.54 -39.61 123.17 250.52 98.14 10 3 29 2426.5 -32.12 94.82
70.00 9 39 55 3327.82 -33.94 115.92 251.28 94.04 10 35 23 2327.8 -28.77 88.43
80.00 10 30 39 3168.86 -29.83 104.10 251.50 91.28 11 23 28 2168.9 -26.27 77.24
90.00 11 44 13 2931.40 -28.28 86.67 251.52 90.28 12 33 5 1931.4 -25.31 60.03
100.00 13 13 31 2643.34 -29.83 65.46 251.50 91.28 13 57 34 1643.3 -26.27 38.61
110.00 14 39 21 2374.64 -33.94 44.84 251.28 94.04 15 18 56 1374.6 -28.77 17.35

DIFFERENTIAL CORRECTIONS

TDE -.3510 TRA -.6961 TC3 .2392 BAU .3408
RDE -.4759 RRA -.0174 RC3 -.8809 FAU .35457
PDE .8107 FRA-3.3387 FC-11.9254 B8P 1603
BDE .5913 BRA .6963 BC3 .9902 F8P 1838

MID-COURSE EXECUTION ACCURACY

SGT 935.9 SGR 1113.5 SG3 1101.2
RRR -.0669 RRF .8022 RTF -.1114
SGB 1434.6 R23 -.0074 R13 .8022
SG1 1113.5 SG2 935.8 THA 91.13

ORBIT DETERMINATION ACCURACY

ST 23.3 SR 26.9 SS 19.9
CRT .8555 CR8 .8765 C8T .1138
LSA 35.5 M8A 19.4 S8A 3.3
EL1 34.3 EL2 9.5 ALF 49.84

LAUNCH DATE AUG 28 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.981 GAL 5.88 AZL 88.57 HCA 117.98 SMA 198.08 ECC .25690 INC 1.4332 V1 29.484
RP 235.94 LAP 1.27 LOP 92.52 VP 21.329 GAP 10.06 AZP 90.67 TAL 29.24 TAP 147.20 RCA 147.18 APO 248.95 V2 23.297
RC 192.185 GL 9.32 GP -14.80 ZAL 42.14 ZAP 126.13 ETS 193.01 ZAE 158.85 ETE 230.78 ZAC 69.26 ETC 283.67 LVI -3.37

DISTANCE 389.533

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.834 VHL 5.063 DLA 14.82 RAL 10.89 RAD 6645.3 VEL 12.066 PTH 7.05 VHP 2.900 DPA .64 RAP 42.85 ECC 1.4219
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 41 41 3492.01 -46.13 127.38 248.82 103.24 9 39 53 2492.0 -35.89 98.12
60.00 9 4 34 3431.09 -39.65 123.55 250.47 97.89 10 1 45 2431.1 -32.25 95.13
70.00 9 37 45 3333.42 -33.97 116.38 251.19 93.78 10 33 19 2333.4 -28.90 88.82
80.00 10 26 8 3175.58 -29.84 104.59 251.40 91.02 11 21 3 2175.6 -26.39 77.70
90.00 11 41 32 2938.66 -28.28 87.20 251.41 90.01 12 30 31 1938.7 -25.42 60.85
100.00 13 11 0 2650.05 -29.84 65.98 251.40 91.02 13 55 10 1650.1 -26.39 39.07
110.00 14 37 12 2380.24 -33.97 45.28 251.19 93.78 15 16 52 1380.2 -28.90 17.73

DIFFERENTIAL CORRECTIONS

TDE -.3523 TRA -.7146 TC3 .1757 BAU .3499
RDE -.4663 RRA -.0319 RC3 -1.0057 FAU .36659
PDE .8774 FRA-3.4774 FC-12.3809 B8P 1657
BDE .5845 BRA .7153 BC3 1.0210 F8P 1916

MID-COURSE EXECUTION ACCURACY

SGT 943.6 SGR 1147.6 SG3 1142.1
RRR -.0558 RRF .8171 RTF .0825
SGB 1485.8 R23 .0753 R13 .8138
SG1 1151.3 SG2 939.2 THA 82.09

ORBIT DETERMINATION ACCURACY

ST 23.6 SR 26.4 SS 20.3
CRT .8553 CR8 .8830 C8T .1199
LSA 35.4 M8A 20.0 S8A 3.3
EL1 34.1 EL2 9.5 ALF 48.84

LAUNCH DATE AUG 28 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

DISTANCE 393.318

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.85 VL 32.980 GAL 5.84 AZL 88.93 HCA 118.94 SMA 197.85 ECC .28808 INC 1.4724 V1 29.484
RP 236.29 LAP 1.29 LOP 93.49 VP 21.273 GAP 9.79 AZP 90.71 TAL 29.25 TAP 148.18 RCA 147.19 APO 248.81 V2 23.281
RC 195.134 GL 9.80 GP -15.18 ZAL 42.17 ZAP 124.87 ET8 192.86 ZAE 157.80 ETE 227.88 ZAC 69.01 ETC 293.76 LVI -3.18

PLANETOCENTRIC CONIC

C3 25.932 VHL 5.093 DLA 15.08 RAL 10.76 RAD 8645.2 VEL 12.082 PTH 7.05 VHP 2.880 DPA .09 RAP 42.43 ECC 1.4202
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 40 11 3496.00 -46.19 127.75 248.82 102.97 9 38 27 2496.0 -36.04 98.38
60.00 9 2 45 3435.91 -39.70 123.95 250.43 97.82 10 0 1 2435.9 -32.40 98.48
70.00 9 38 34 3339.33 -33.99 116.82 251.13 93.81 10 31 13 2339.3 -29.03 99.23
80.00 10 23 34 3182.67 -29.85 105.12 251.31 90.74 11 18 36 2182.7 -26.31 78.20
90.00 11 38 47 2946.33 -28.28 87.76 251.32 89.73 12 27 53 1946.3 -25.54 61.08
100.00 13 8 25 2657.15 -29.85 66.49 251.31 90.74 13 52 43 1657.1 -26.31 39.56
110.00 14 35 0 2386.15 -33.99 45.74 251.13 93.81 15 14 46 1386.2 -29.03 18.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3528 TRA -.7340 TC3 .1087 BAU .3610 SGT 956.6 SGR 1183.7 SG3 1183.2 ST 23.8 SR 25.9 SS 21.1
RDE -.4584 RRA -.0469 RC3-1.0521 FAU .37865 RRT .1216 RRF .8312 RTF .1380 CRT .8946 CRS .5875 CST .1234
FDE .9451 FRA-3.6171 FC-12.8394 BSP 1721 SGB 1921.9 R23 .1313 R13 .8216 LSA 35.4 MSA 21.1 SSA 3.3
BDE .5769 BRA .7355 BC3 1.0577 F8P 1991 SG1 1199.0 SG2 937.4 THA 75.24 EL1 33.9 EL2 9.5 ALF 47.86

LAUNCH DATE AUG 28 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 397.105

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.940 GAL 5.82 AZL 88.49 HCA 119.91 SMA 197.85 ECC .25927 INC 1.5122 V1 29.484
RP 236.83 LAP 1.31 LOP 94.48 VP 21.219 GAP 9.52 AZP 90.75 TAL 29.25 TAP 149.15 RCA 147.20 APO 248.11 V2 23.226
RC 198.104 GL 9.87 GP -15.56 ZAL 42.22 ZAP 122.99 ET8 192.31 ZAE 156.10 ETE 225.43 ZAC 68.76 ETC 283.85 LVI -2.95

PLANETOCENTRIC CONIC

C3 25.434 VHL 5.043 DLA 15.31 RAL 10.63 RAD 8645.2 VEL 12.088 PTH 7.04 VHP 2.804 DPA -.47 RAP 42.00 ECC 1.4186
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 38 40 3500.22 -46.25 128.13 248.85 102.68 9 37 0 2500.2 -36.20 98.66
60.00 9 0 55 3440.99 -39.74 124.37 250.42 97.33 9 58 16 2441.0 -32.54 98.81
70.00 9 33 20 3345.56 -34.02 117.30 251.08 93.22 10 29 6 2345.6 -29.17 89.66
80.00 10 22 56 3190.14 -29.85 105.68 251.24 90.45 11 16 6 2190.1 -26.63 78.72
90.00 11 35 58 2954.41 -28.27 88.35 251.23 89.43 12 25 13 1954.4 -25.66 61.63
100.00 13 5 48 2664.62 -29.85 67.05 251.24 90.45 13 50 13 1664.6 -26.63 40.08
110.00 14 32 47 2392.38 -34.02 46.22 251.08 93.22 15 12 39 1392.4 -29.17 18.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3507 TRA -.7532 TC3 .0408 BAU .3744 SGT 973.4 SGR 1222.6 SG3 1225.2 ST 24.0 SR 25.4 SS 21.8
RDE -.4466 RRA -.0627 RC3-1.1004 FAU .39095 RRT .1887 RRF .8446 RTF .2119 CRT .8530 CRS .5876 CST .1187
FDE 1.0086 FRA-3.7617 FC-13.3071 BSP 1791 SGB 1562.8 R23 .1621 R13 .8307 LSA 35.2 MSA 21.1 SSA 3.2
BDE .5678 BRA .7558 BC3 1.1011 F8P 2055 SG1 1254.4 SG2 932.0 THA 70.46 EL1 33.6 EL2 9.5 ALF 47.02

LAUNCH DATE AUG 28 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

DISTANCE 400.895

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.930 GAL 5.81 AZL 88.45 HCA 120.87 SMA 197.48 ECC .25454 INC 1.5327 V1 29.484
RP 236.98 LAP 1.33 LOP 95.43 VP 21.167 GAP 9.25 AZP 90.80 TAL 29.23 TAP 150.10 RCA 147.21 APO 247.74 V2 23.191
RC 201.073 GL 10.16 GP -15.95 ZAL 42.27 ZAP 121.41 ET8 191.94 ZAE 154.63 ETE 223.10 ZAC 68.51 ETC 283.94 LVI -2.74

PLANETOCENTRIC CONIC

C3 25.342 VHL 5.034 DLA 15.57 RAL 10.52 RAD 8645.1 VEL 12.054 PTH 7.04 VHP 2.760 DPA -1.04 RAP 41.56 ECC 1.4171
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 37 9 3504.87 -46.32 128.54 248.90 102.37 9 35 33 2504.7 -36.37 98.95
60.00 8 59 4 3446.33 -39.79 124.82 250.42 97.03 9 56 30 2446.3 -32.70 98.18
70.00 9 31 4 3352.11 -34.04 117.81 251.05 92.92 10 26 56 2352.1 -29.31 90.12
80.00 10 20 15 3197.99 -29.86 106.26 251.18 90.15 11 13 33 2198.0 -26.76 79.26
90.00 11 33 5 2962.90 -28.27 88.97 251.17 89.12 12 22 28 1962.9 -25.78 62.24
100.00 13 3 7 2672.46 -29.86 67.63 251.18 90.15 13 47 39 1672.5 -26.76 40.63
110.00 14 30 31 2398.92 -34.04 46.73 251.05 92.92 15 10 30 1398.9 -29.31 19.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3424 TRA -.7877 TC3 -.0223 BAU .3906 SGT 887.5 SGR 1268.8 SG3 1270.8 ST 23.8 SR 25.0 SS 22.4
RDE -.4384 RRA -.0811 RC3-1.1527 FAU .40425 RRT .2457 RRF .8979 RTF .2.97 CRT .8495 CRS .5731 CST .0849
FDE 1.0472 FRA-3.9334 FC-13.8102 BSP 1863 SGB 1808.3 R23 .1671 R13 .8445 LSA 34.8 MSA 21.8 SSA 3.2
BDE .5583 BRA .7720 BC3 1.1529 F8P 2087 SG1 1315.3 SG2 922.0 THA 87.84 EL1 33.2 EL2 9.5 ALF 46.77

LAUNCH DATE AUG 28 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

DISTANCE 404.884

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.922 GAL 5.79 AZL 88.41 HCA 121.84 SMA 197.32 ECC .25388 INC 1.5939 V1 29.484
RP 237.31 LAP 1.35 LOP 96.39 VP 21.116 GAP 8.98 AZP 90.84 TAL 29.21 TAP 151.04 RCA 147.23 APO 247.41 V2 23.187
RC 204.040 GL 10.45 GP -16.34 ZAL 42.34 ZAP 119.82 ET8 191.56 ZAE 153.13 ETE 220.98 ZAC 68.26 ETC 284.04 LVI -2.53

PLANETOCENTRIC CONIC

C3 25.251 VHL 5.025 DLA 15.84 RAL 10.41 RAD 8645.1 VEL 12.051 PTH 7.04 VHP 2.720 DPA -1.62 RAP 41.11 ECC 1.4158
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 35 38 3509.37 -46.39 128.98 248.97 102.04 9 34 7 2509.4 -36.54 99.27
60.00 8 57 11 3451.98 -39.83 125.29 250.45 96.71 9 54 43 2452.0 -32.86 96.37
70.00 9 28 46 3359.03 -34.07 118.35 251.04 92.61 10 24 45 2359.0 -29.46 90.60
80.00 10 17 30 3206.29 -29.86 106.88 251.14 89.82 11 10 56 2206.3 -26.89 79.85
90.00 11 30 7 2971.89 -28.28 89.83 251.12 88.79 12 19 39 1971.9 -25.91 62.87
100.00 13 0 22 2680.77 -29.86 68.25 251.14 89.82 13 45 3 1680.8 -26.89 41.21
110.00 14 28 12 2405.84 -34.07 47.27 251.04 92.61 15 8 18 1405.8 -29.46 19.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3528 TRA -.8032 TC3 -.1205 BAU .4058 SGT 1040.6 SGR 1299.9 SG3 1302.5 ST 24.7 SR 24.2 SS 23.6
RDE -.4230 RRA -.0932 RC3-1.1960 FAU .41332 RRT .3288 RRF .8674 RTF .3642 CRT .8513 CRS .6018 CST .1328
FDE 1.1778 FRA-4.0127 FC-14.1711 BSP 2001 SGB 1865.0 R23 .2081 R13 .8462 LSA 35.2 MSA 22.4 SSA 3.2
BDE .5508 BRA .8086 BC3 1.2021 F8P 2218 SG1 1387.3 SG2 920.8 THA 82.15 EL1 33.3 EL2 9.4 ALF 44.41

LAUNCH DATE AUG 28 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 26 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.915 GAL 9.77 AZL 88.36 HCA 122.80 SMA 197.17 ECC .25322 INC 1.6358 V1 29.484  
 RP 237.85 LAP 1.38 LOP 97.36 VP 21.067 GAP 8.71 AZP 90.89 TAL 29.17 TAP 151.97 RCA 147.24 APO 247.10 V2 23.123  
 RC 207.005 GL 10.74 GP -16.73 ZAL 42.43 ZAP 118.22 ETS 191.17 ZAE 151.59 ETE 219.04 ZAC 68.01 ETC 284.13 LVI -2.31

Distance 406.476

Planetocentric Conic: C3 25.184 VHL 5.016 DLA 16.12 RAL 10.31 RAD 8645.1 VEL 12.047 PTH 7.03 VHP 2.682 DPA -2.21 RAP 40.65 ECC 1.4141  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 34 5 3514.30 -46.46 129.43 249.06 101.69 9 32 40 2514.3 -36.72 99.60  
 60.00 8 55 17 3457.89 -39.88 125.79 250.49 98.30 9 52 55 2457.9 -33.03 96.98  
 70.00 9 26 24 3366.26 -34.09 118.92 251.04 92.27 10 22 31 2366.3 -29.61 91.11  
 80.00 10 14 41 3214.98 -29.85 107.52 251.12 89.48 11 8 16 2215.0 -27.03 80.45  
 90.00 11 27 5 2981.30 -26.24 90.32 251.08 88.45 12 16 48 1981.3 -26.03 63.52  
 100.00 12 57 33 2689.45 -29.85 68.89 251.12 89.48 13 42 22 1689.5 -27.03 41.82  
 110.00 14 25 51 2413.08 -34.09 47.83 251.04 92.27 15 6 4 1413.1 -29.61 20.03

Differential Corrections: TDE -.3518 TRA -.8290 TC3 -.2054 BAU .4248 SGT 1084.2 8GR 1341.3 8G3 1340.8 ST 24.9 SR 23.6 88 24.4  
 RDE -.4108 RRA -.1093 RC3-1.2458 FAU .42434 RRT .3949 RRF .8777 RTF .4334 CRT .8500 CRS .6042 CST .1326  
 FDE 1.2616 FRA-4.1409 FC-14.5985 B8P 2118 8GB 1724.7 R23 .2169 R13 .8557 LSA 35.2 M8A 23.0 88A 3.1  
 BDE .5409 BRA .8362 BC3 1.2628 F8P 2284 8G1 1463.1 8G2 913.2 THA 59.25 EL1 33.0 EL2 9.4 ALF 43.15

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 28 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.908 GAL 9.75 AZL 88.32 HCA 123.75 SMA 197.04 ECC .25284 INC 1.6785 V1 29.484  
 RP 237.98 LAP 1.40 LOP 98.31 VP 21.020 GAP 8.45 AZP 90.93 TAL 29.12 TAP 152.88 RCA 147.26 APO 248.82 V2 23.090  
 RC 209.964 GL 11.04 GP -17.12 ZAL 42.53 ZAP 116.62 ETS 190.77 ZAE 150.01 ETE 217.24 ZAC 67.76 ETC 284.22 LVI -2.89

Distance 412.269

Planetocentric Conic: C3 25.082 VHL 5.008 DLA 16.41 RAL 10.22 RAD 8645.0 VEL 12.044 PTH 7.03 VHP 2.647 DPA -2.80 RAP 40.19 ECC 1.4128  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 32 32 3519.47 -46.53 129.91 249.17 101.33 9 31 12 2519.5 -36.91 99.95  
 60.00 8 53 20 3484.08 -39.92 126.31 250.55 96.03 9 51 5 2484.1 -33.20 97.41  
 70.00 9 24 0 3373.85 -34.11 119.51 251.06 91.92 10 20 14 2373.8 -29.78 91.65  
 80.00 10 11 47 3224.09 -29.89 108.20 251.11 89.13 11 5 31 2224.1 -27.17 81.10  
 90.00 11 23 57 2991.18 -28.22 91.04 251.06 88.09 12 13 48 1991.2 -26.17 64.22  
 100.00 12 54 39 2698.57 -29.85 69.57 251.11 89.13 13 39 37 1698.6 -27.17 42.46  
 110.00 14 23 26 2420.66 -34.11 48.43 251.06 91.92 15 3 47 1420.7 -29.78 20.56

Differential Corrections: TDE -.3500 TRA -.8562 TC3 -.2938 BAU .4457 SGT 1135.7 8GR 1364.1 8G3 1378.1 ST 25.2 SR 23.0 88 25.3  
 RDE -.3980 RRA -.1254 RC3-1.2963 FAU .43503 RRT .4563 RRF .8872 RTF .4967 CRT .8463 CRS .6060 CST .1314  
 FDE 1.3486 FRA-4.2606 FC-15.0158 B8P 2250 8GB 1790.4 R23 .2216 R13 .8653 LSA 35.1 M8A 23.7 88A 3.1  
 BDE .5300 BRA .8654 BC3 1.3292 F8P 2352 8G1 1544.4 8G2 905.6 THA 58.79 EL1 32.6 EL2 9.3 ALF 41.89

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 2 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.902 GAL 9.73 AZL 88.28 HCA 124.71 SMA 196.93 ECC .25209 INC 1.7222 V1 29.484  
 RP 238.30 LAP 1.42 LOP 99.27 VP 20.974 GAP 8.19 AZP 90.98 TAL 29.07 TAP 153.78 RCA 147.28 APO 246.57 V2 23.056  
 RC 212.919 GL 11.35 GP -17.52 ZAL 42.64 ZAP 115.01 ETS 190.36 ZAE 148.39 ETE 215.98 ZAC 67.52 ETC 284.32 LVI -1.87

Distance 418.063

Planetocentric Conic: C3 25.003 VHL 5.000 DLA 16.71 RAL 10.14 RAD 8645.0 VEL 12.041 PTH 7.03 VHP 2.614 DPA -3.40 RAP 39.78 ECC 1.4115  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 58 3524.88 -46.60 130.41 249.30 100.95 9 29 43 2524.9 -37.11 100.32  
 60.00 8 51 22 3470.57 -39.97 126.85 250.63 95.66 9 49 13 2470.6 -33.58 97.87  
 70.00 9 21 32 3381.79 -34.12 120.13 251.09 91.56 10 17 54 2381.8 -29.93 92.21  
 80.00 10 8 48 3233.85 -29.83 108.91 251.11 88.75 11 2 42 2233.6 -27.31 81.77  
 90.00 11 20 42 3001.54 -28.19 91.80 251.05 87.71 12 10 44 2001.5 -26.30 64.95  
 100.00 12 51 40 2708.12 -29.83 70.28 251.11 88.75 13 36 48 1708.1 -27.31 43.14  
 110.00 14 20 58 2428.81 -34.12 49.04 251.09 91.56 15 1 27 1428.6 -29.93 21.12

Differential Corrections: TDE -.3473 TRA -.8848 TC3 -.3065 BAU .4684 SGT 1195.1 8GR 1427.5 8G3 1413.7 ST 25.3 SR 22.3 88 26.2  
 RDE -.3846 RRA -.1417 RC3-1.3470 FAU .44513 RRT .5133 RRF .8959 R7F .5448 CRT .8464 CRS .6069 CST .1287  
 FDE 1.4394 FRA-4.3755 FC-15.4129 B8P 2397 8GB 1861.7 R23 .2237 R13 .8745 LSA 35.1 M8A 24.3 88A 3.1  
 BDE .5182 BRA .8960 BC3 1.4014 F8P 2419 8G1 1631.0 8G2 897.7 THA 54.59 EL1 32.5 EL2 9.3 ALF 40.49

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 4 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.897 GAL 9.71 AZL 88.23 HCA 125.68 SMA 196.82 ECC .25158 INC 1.7666 V1 29.484  
 RP 238.63 LAP 1.44 LOP 100.22 VP 20.929 GAP 7.93 AZP 91.03 TAL 29.00 TAP 154.67 RCA 147.31 APO 246.34 V2 23.024  
 RC 215.868 GL 11.66 GP -17.91 ZAL 42.78 ZAP 113.41 ETS 189.93 ZAE 146.78 ETE 214.04 ZAC 67.27 ETC 284.41 LVI -1.64

Distance 419.858

Planetocentric Conic: C3 24.927 VHL 4.993 DLA 17.02 RAL 10.08 RAD 8645.0 VEL 12.037 PTH 7.02 VHP 2.584 DPA -4.00 RAP 39.24 ECC 1.4102  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 23 3530.55 -46.67 130.94 249.46 100.55 9 28 13 2530.5 -37.31 100.70  
 60.00 8 49 21 3477.35 -40.01 127.43 250.73 95.28 9 47 19 2477.4 -33.57 98.34  
 70.00 9 19 0 3390.10 -34.14 120.78 251.14 91.17 10 15 30 2390.1 -30.09 92.80  
 80.00 10 5 43 3243.66 -29.82 109.65 251.12 88.36 10 59 47 2243.7 -27.46 82.48  
 90.00 11 17 22 3012.42 -28.16 92.59 251.05 87.31 12 7 34 2012.4 -26.44 65.71  
 100.00 12 48 35 2718.13 -29.82 71.02 251.12 88.36 13 33 53 1718.1 -27.46 43.85  
 110.00 14 18 26 2436.92 -34.14 49.69 251.14 91.17 14 59 3 1436.9 -30.09 21.71

Differential Corrections: TDE -.3437 TRA -.9143 TC3 -.4823 BAU .4931 SGT 1261.6 8GR 1472.4 8G3 1448.3 ST 25.7 SR 21.6 88 27.2  
 RDE -.3707 RRA -.1585 RC3-1.3987 FAU .45492 RRT .5649 RRF .9040 RTF .6061 CRT .8445 CRS .6051 CST .1229  
 FDE 1.5301 FRA-4.4889 FC-15.7996 B8P 2553 8GB 1938.9 R23 .2236 R13 .8835 LSA 35.1 M8A 25.0 88A 3.0  
 BDE .5055 BRA .9279 BC3 1.4795 F8P 2478 8G1 1722.7 8G2 889.8 THA 52.68 EL1 32.3 EL2 9.2 ALF 39.11

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE AUG 28 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 423.654 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.882 GAL 5.69 AZL 88.19 HCA 128.81 SMA 198.79 ECC .29111 INC 1.01280 V1 29.484  
 RP 239.95 LAP 1.45 LOP 101.17 VP 20.887 GAP 7.68 AZP 91.08 TAL 28.93 TAP 158.84 RCA 147.33 APO 246.14 V2 22.981  
 RC 218.810 GL 11.98 GP -18.31 ZAL 42.90 ZAP 111.80 ETS 188.90 ZAE 146.10 ETE 212.60 ZAC 87.02 ETC 284.80 LVI -1.61

PLANETOCENTRIC CONIC  
 C3 24.888 VHL 4.988 DLA 17.34 RAL 9.89 RAD 8644.9 VEL 12.034 PTH 7.02 VHP 2.987 DPA -4.81 RAP 38.77 ECC 1.4000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 46 3536.47 -48.74 131.50 249.83 100.13 9 26 42 2536.5 -37.53 101.11  
 60.00 8 47 18 3484.44 -40.06 128.02 250.84 94.87 9 45 23 2484.4 -33.76 98.88  
 70.00 9 16 24 3398.79 -34.15 121.45 251.21 90.77 10 13 3 2398.8 -30.26 93.42  
 80.00 10 2 33 3254.15 -29.79 110.43 251.15 87.95 10 56 47 2254.2 -27.61 83.22  
 90.00 11 13 54 3023.83 -28.12 93.42 251.06 86.90 12 4 18 2023.8 -26.97 86.32  
 100.00 12 45 25 2728.62 -29.79 71.80 251.15 87.95 13 30 53 1728.6 -27.61 44.50  
 110.00 14 15 50 2445.61 -34.15 50.37 251.21 90.77 14 56 36 1445.6 -30.26 22.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3388 TRA -.9444 TC3 -.5808 BAU .5198 SGT 1334.0 SGR 1818.9 SG3 1482.1 ST 29.9 SR 20.8 SS 28.1  
 RDE -.3388 RRA -.1757 RC3-1.4514 FAU .48440 RRT .6110 RRF .9115 RTF .6518 CRT .8424 CR8 .8006 CST .1134  
 FDE 1.6189 FRA-4.5993 FC-18.1780 B8P 2721 SGB 2021.5 R23 .2216 R13 .8922 LSA 35.0 MSA 25.7 SSA 3.0  
 BDE .4917 BRA .9806 BC3 1.5633 F8P 2530 SGI 1819.1 SG2 881.8 THA 51.01 EL1 32.0 EL2 9.1 ALP 37.74

LAUNCH DATE AUG 28 1973 FLIGHT TIME 192.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 427.451 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.888 GAL 5.66 AZL 88.14 HCA 127.56 SMA 198.65 ECC .29068 INC 1.0584 V1 29.484  
 RP 239.26 LAP 1.47 LOP 102.12 VP 20.845 GAP 7.42 AZP 91.13 TAL 28.85 TAP 158.41 RCA 147.36 APO 245.95 V2 22.980  
 RC 221.744 GL 12.31 GP -18.71 ZAL 43.05 ZAP 110.20 ETS 189.05 ZAE 143.42 ETE 211.25 ZAC 86.78 ETC 284.59 LVI -1.18

PLANETOCENTRIC CONIC  
 C3 24.786 VHL 4.979 DLA 17.87 RAL 9.92 RAD 8644.9 VEL 12.032 PTH 7.02 VHP 2.532 DPA -5.22 RAP 38.29 ECC 1.4079  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 26 7 3542.65 -46.81 132.08 249.82 99.68 9 25 10 2542.7 -37.75 101.94  
 60.00 8 45 12 3491.84 -40.10 128.65 250.97 94.45 9 43 24 2491.8 -33.96 99.37  
 70.00 9 13 43 3407.87 -34.15 122.16 251.28 90.35 10 10 31 2407.9 -30.44 94.06  
 80.00 9 59 16 3265.13 -29.76 111.25 251.19 87.53 10 53 41 2265.1 -27.76 84.00  
 90.00 11 10 19 3035.78 -28.08 94.29 251.08 86.47 12 0 55 2035.8 -26.71 87.37  
 100.00 12 42 8 2739.61 -29.76 72.62 251.19 87.53 13 27 47 1739.6 -27.76 45.37  
 110.00 14 13 10 2454.69 -34.15 51.08 251.28 90.35 14 54 4 1454.7 -30.44 22.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3308 TRA -.9740 TC3 -.6797 BAU .5478 SGT 1409.6 SGR 1568.4 SG3 1516.2 ST 26.0 SR 20.2 SS 28.9  
 RDE -.3432 RRA -.1942 RC3-1.5061 FAU .47393 RRT .6519 RRF .9188 RTF .6920 CRT .8397 CR8 .5891 CST .0943  
 FDE 1.6954 FRA-4.7183 FC-18.5537 B8P 2698 SGB 2108.8 R23 .2187 R13 .9011 LSA 34.8 MSA 26.4 SSA 3.0  
 BDE .4767 BRA .9932 BC3 1.6524 F8P 2559 SGI 1919.4 SG2 873.5 THA 49.66 EL1 31.6 EL2 9.0 ALP 36.55

LAUNCH DATE AUG 28 1973 FLIGHT TIME 194.00 ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC DISTANCE 431.247 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.884 GAL 5.64 AZL 88.09 HCA 128.50 SMA 198.59 ECC .29028 INC 1.9059 V1 29.484  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.805 GAP 7.17 AZP 91.19 TAL 28.75 TAP 157.26 RCA 147.39 APO 245.79 V2 22.928  
 RC 224.672 GL 12.65 GP -19.12 ZAL 43.21 ZAP 108.61 ETS 188.59 ZAE 141.73 ETE 209.99 ZAC 86.53 ETC 284.68 LVI -.94

PLANETOCENTRIC CONIC  
 C3 24.720 VHL 4.972 DLA 18.02 RAL 9.87 RAD 8644.9 VEL 12.029 PTH 7.02 VHP 2.510 DPA -5.84 RAP 37.82 ECC 1.4068  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 26 3549.12 -46.89 132.68 250.04 99.22 9 23 35 2549.1 -37.98 101.89  
 60.00 8 43 3 3499.58 -40.14 129.31 251.12 94.01 9 41 22 2499.6 -34.17 99.93  
 70.00 9 10 58 3417.38 -34.15 122.91 251.37 89.91 10 7 55 2417.4 -30.62 94.79  
 80.00 9 55 51 3276.67 -29.73 112.10 251.24 87.08 10 50 28 2276.7 -27.91 84.83  
 90.00 11 6 35 3048.37 -28.02 95.21 251.12 86.01 11 57 23 2048.4 -26.85 88.26  
 100.00 12 38 43 2751.18 -29.73 73.47 251.24 87.08 13 24 34 1751.1 -27.91 46.19  
 110.00 14 10 24 2464.20 -34.15 51.82 251.37 89.91 14 51 28 1464.2 -30.62 23.88

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3298 TRA -1.0127 TC3 -.7953 BAU .5767 SGT 1508.6 SGR 1608.9 SG3 1539.3 ST 26.5 SR 19.2 SS 30.1  
 RDE -.3240 RRA -.2079 RC3-1.5533 FAU .48008 RRT .8891 RRF .9242 RTF .7559 CRT .8404 CR8 .5953 CST .1048  
 FDE 1.8353 FRA-4.7894 FC-18.8138 B8P 3091 SGB 2205.5 R23 .2209 R13 .9057 LSA 35.2 MSA 27.0 SSA 2.9  
 BDE .4623 BRA 1.0338 BC3 1.7450 F8P 2854 SGI 2027.8 SG2 887.4 THA 47.87 EL1 31.5 EL2 8.7 ALP 34.34

LAUNCH DATE AUG 28 1973 FLIGHT TIME 196.00 ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC DISTANCE 435.043 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.881 GAL 5.61 AZL 88.05 HCA 129.48 SMA 198.53 ECC .24992 INC 1.9546 V1 29.484  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.768 GAP 6.92 AZP 91.24 TAL 28.65 TAP 158.10 RCA 147.42 APO 245.45 V2 22.897  
 RC 227.591 GL 12.99 GP -19.52 ZAL 43.38 ZAP 107.03 ETS 188.11 ZAE 140.04 ETE 208.79 ZAC 86.29 ETC 284.29 LVI -.70

PLANETOCENTRIC CONIC  
 C3 24.657 VHL 4.966 DLA 18.37 RAL 9.81 RAD 8644.8 VEL 12.028 PTH 7.02 VHP 2.490 DPA -6.45 RAP 37.35 ECC 1.4058  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 43 3555.88 -46.96 133.32 250.27 98.74 9 21 59 2555.9 -38.21 102.46  
 60.00 8 40 50 3507.65 -40.17 129.99 251.28 93.54 9 39 17 2507.7 -34.38 100.51  
 70.00 9 8 7 3427.31 -34.15 123.68 251.48 89.46 10 5 14 2427.3 -30.80 95.46  
 80.00 9 52 19 3288.75 -29.63 113.00 251.29 86.61 10 47 8 2288.7 -28.07 83.69  
 90.00 11 2 42 3061.97 -27.95 96.17 251.16 85.53 11 53 44 2061.6 -26.99 89.20  
 100.00 12 35 11 2763.22 -28.68 74.37 251.29 86.61 13 21 14 1763.2 -28.07 47.06  
 110.00 14 7 33 2474.13 -34.15 52.60 251.48 89.46 14 48 47 1474.1 -30.80 24.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3231 TRA -1.0477 TC3 -.9061 BAU .6075 SGT 1603.5 SGR 1655.4 SG3 1565.5 ST 26.7 SR 18.3 SS 31.2  
 RDE -.3070 RRA -.2242 RC3-1.6049 FAU .48717 RRT .7209 RRF .8288 RTF .7557 CRT .8397 CR8 .5877 CST .1041  
 FDE 1.9414 FRA-4.8461 FC-17.1049 B8P 3288 SGB 2304.7 R23 .2191 R13 .9120 LSA 35.3 MSA 27.7 SSA 2.9  
 BDE .4457 BRA 1.0715 BC3 1.8430 F8P 2704 SGI 2138.0 SG2 880.5 THA 48.28 EL1 31.3 EL2 8.5 ALP 32.66

LAUNCH DATE AUG 28 1973

FLIGHT TIME 199.00

ARRIVAL DATE MAR 14 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.879 GAL 5.59 AZL 88.00 HCA 130.39 SMA 196.49 ECC .24958 INC 2.0044 V1 29.484  
 RP 240.18 LAP 1.33 LOP 104.95 VP 20.728 GAP 6.67 AZP 91.30 TAL 28.54 TAP 158.93 RCA 147.45 APO 245.52 V2 22.866  
 RC 230.502 GL 13.34 GP -19.92 ZAL 43.57 ZAP 105.46 ETS 187.63 ZAE 138.33 ZAE 138.33 ETE 207.66 ZAC 66.04 ETC 284.65 LVI -.45

Distance 436.840 Earth to Mars

Planetocentric Conic: C3 24.598 VHL 4.960 DLA 18.73 RAL 9.76 RAD 6644.8 VEL 12.024 PTH 7.01 VHP 2.472 DPA -7.07 RAP 36.89 ECC 1.4048  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 58 3562.89 -47.03 133.86 250.52 98.23 9 20 21 2582.9 -36.46 102.95  
 60.00 8 38 33 3516.07 -40.20 130.70 251.46 93.06 9 37 9 2516.1 -34.60 101.11  
 70.00 9 5 10 3437.69 -34.14 124.49 251.59 88.98 10 2 28 2437.7 -30.99 96.21  
 80.00 9 48 39 3301.41 -29.63 113.93 251.36 86.12 10 43 40 2301.4 -28.22 86.60  
 90.00 10 58 39 3075.43 -27.88 97.17 251.21 85.04 11 49 55 2075.4 -27.13 70.19  
 100.00 12 31 31 2775.88 -29.63 75.30 251.36 86.12 13 17 47 1775.9 -28.22 47.97  
 110.00 14 4 36 2484.51 -34.14 53.41 251.59 88.98 14 46 1 1484.5 -30.99 25.13

Differential Corrections: TDE -.3152 TRA -1.0838 TC3 -1.0198 BAU .6397 8GT 1703.9 8GR 1702.4 8G3 1569.7 8T 27.0 8R 17.8 88 32.2  
 RDE -.2894 RRA -.2407 RC3 -1.6866 FAU .49361 RRT .7487 RRF .9350 RTF .7813 CRT .8399 CR8 .8784 C8T .0818  
 FDE 2.0498 FRA -4.8166 FC -17.3728 B8P 3495 8GB 2408.7 R23 .2171 R13 .9177 L8A 35.8 M8A 28.3 88A 2.8  
 BDE .4279 BRA 1.1102 BC3 1.9453 F8P 2749 8G1 2252.3 8G2 853.7 T8A 44.97 EL1 31.1 EL2 8.2 ALP 30.95

LAUNCH DATE AUG 28 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 16 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.877 GAL 5.56 AZL 87.84 HCA 131.33 SMA 196.45 ECC .24927 INC 2.0585 V1 29.484  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.692 GAP 6.42 AZP 91.36 TAL 28.43 TAP 159.78 RCA 147.48 APO 245.42 V2 22.836  
 RC 233.405 GL 13.71 GP -20.32 ZAL 43.77 ZAP 103.09 ETS 187.13 ZAE 136.62 ETE 206.56 ZAC 65.76 ETC 284.93 LVI -.20

Distance 442.637 Earth to Mars

Planetocentric Conic: C3 24.543 VHL 4.954 DLA 19.11 RAL 9.71 RAD 6644.8 VEL 12.022 PTH 7.01 VHP 2.456 DPA -7.68 RAP 36.43 ECC 1.4039  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 10 3570.21 -47.10 134.68 250.80 97.70 9 18 40 2870.2 -38.71 103.47  
 60.00 8 36 12 3524.86 -40.23 131.45 251.65 92.56 9 34 57 2524.9 -34.82 101.75  
 70.00 9 2 7 3448.54 -34.12 125.34 251.72 88.48 9 59 36 2448.5 -31.18 97.00  
 80.00 9 44 49 3314.69 -29.56 114.92 251.44 85.61 10 40 4 2314.7 -28.38 87.55  
 90.00 10 54 25 3090.00 -27.79 98.23 251.26 84.51 11 45 55 2090.0 -27.27 71.24  
 100.00 12 27 41 2789.16 -29.56 78.28 251.44 85.61 13 14 10 1789.2 -28.38 48.92  
 110.00 14 1 33 2495.36 -34.12 54.26 251.72 88.48 14 43 9 1495.4 -31.18 25.92

Differential Corrections: TDE -.3063 TRA -1.1207 TC3 -1.1359 BAU .6731 8GT 1809.3 8GR 1749.8 8G3 1611.5 8T 27.2 8R 16.8 88 33.3  
 RDE -.2712 RRA -.2572 RC3 -1.7081 FAU .49931 RRT .7731 RRF .9397 RTF .8035 CRT .8412 CR8 .8608 C8T .0865  
 FDE 2.1567 FRA -4.9792 FC -17.6127 B8P 3709 8GB 2517.0 R23 .2149 R13 .9228 L8A 35.8 M8A 28.9 88A 2.8  
 BDE .4091 BRA 1.1498 BC3 2.0513 F8P 2788 8G1 2370.2 8G2 847.2 T8A 43.76 EL1 30.9 EL2 7.9 ALP 29.24

LAUNCH DATE AUG 28 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.876 GAL 5.53 AZL 87.89 HCA 132.28 SMA 196.42 ECC .24899 INC 2.1080 V1 29.484  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.857 GAP 6.18 AZP 91.42 TAL 28.30 TAP 160.58 RCA 147.51 APO 245.33 V2 22.807  
 RC 236.297 GL 14.08 GP -20.73 ZAL 43.98 ZAP 102.35 ETS 186.63 ZAE 134.91 ETE 205.55 ZAC 65.55 ETC 285.01 LVI .05

Distance 446.434 Earth to Mars

Planetocentric Conic: C3 24.491 VHL 4.949 DLA 19.50 RAL 9.67 RAD 6644.8 VEL 12.019 PTH 7.01 VHP 2.443 DPA -8.30 RAP 35.99 ECC 1.4031  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 19 3577.85 -47.17 135.40 251.09 97.14 9 18 56 2577.9 -38.97 104.02  
 60.00 8 33 46 3534.02 -40.26 132.23 251.86 92.03 9 32 40 2534.0 -35.05 102.42  
 70.00 8 58 57 3459.88 -34.10 126.22 251.86 87.95 9 58 37 2459.9 -31.37 97.83  
 80.00 9 40 49 3328.63 -29.49 115.94 251.52 85.07 10 38 18 2328.6 -28.53 88.96  
 90.00 10 49 59 3105.35 -27.68 99.34 251.33 83.97 11 41 44 2105.3 -27.41 72.34  
 100.00 12 23 41 2803.10 -29.49 77.31 251.52 85.07 13 10 24 1803.1 -28.53 49.93  
 110.00 13 58 23 2506.70 -34.10 55.14 251.86 87.95 14 40 10 1506.7 -31.37 26.75

Differential Corrections: TDE -.2960 TRA -1.1588 TC3 -1.2548 BAU .7074 8GT 1919.4 8GR 1797.0 8G3 1630.7 8T 27.4 8R 15.7 88 34.4  
 RDE -.2523 RRA -.2739 RC3 -1.7589 FAU .50413 RRT .7948 RRF .9441 RTF .8227 CRT .8439 CR8 .8402 C8T .0468  
 FDE 2.2653 FRA -5.0352 FC -17.8202 B8P 3929 8GB 2629.4 R23 .2128 R13 .9275 L8A 36.2 M8A 29.4 88A 2.7  
 BDE .3889 BRA 1.1903 BC3 2.1605 F8P 2821 8G1 2491.4 8G2 840.7 T8A 42.63 EL1 30.7 EL2 7.5 ALP 27.93

LAUNCH DATE AUG 28 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 151.12 LAL .00 LOL 334.55 VL 32.875 GAL 5.50 AZL 87.84 HCA 133.19 SMA 196.40 ECC .24874 INC 2.1618 V1 29.484  
 RP 241.07 LAP 1.58 LOP 107.78 VP 20.823 GAP 5.94 AZP 91.48 TAL 28.17 TAP 161.37 RCA 147.55 APO 245.28 V2 22.777  
 RC 239.179 GL 14.48 GP -21.13 ZAL 44.20 ZAP 100.92 ETS 186.11 ZAE 133.21 ETE 204.87 ZAC 65.30 ETC 285.06 LVI .32

Distance 450.231 Earth to Mars

Planetocentric Conic: C3 24.444 VHL 4.944 DLA 19.90 RAL 9.63 RAD 6644.8 VEL 12.017 PTH 7.01 VHP 2.432 DPA -8.91 RAP 35.85 ECC 1.4023  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 24 3585.81 -47.23 136.16 251.40 96.56 9 15 10 2585.8 -38.24 104.59  
 60.00 8 31 15 3543.58 -40.28 133.04 252.08 91.48 9 30 19 2543.6 -35.28 103.12  
 70.00 8 55 39 3471.75 -34.07 127.15 252.00 87.41 9 53 31 2471.7 -31.57 98.70  
 80.00 9 36 38 3343.28 -29.39 117.02 251.62 84.51 10 32 21 2343.3 -28.69 89.82  
 90.00 10 45 20 3121.51 -27.56 100.51 251.39 83.40 11 37 21 2121.5 -27.54 73.50  
 100.00 12 19 30 2817.75 -29.39 78.39 251.62 84.51 13 6 28 1817.7 -28.69 50.99  
 110.00 13 55 5 2518.87 -34.07 56.07 252.00 87.41 14 37 4 1518.8 -31.57 27.82

Differential Corrections: TDE -.2837 TRA -1.1965 TC3 -1.3741 BAU .7430 8GT 2031.9 8GR 1846.7 8G3 1649.3 8T 27.6 8R 14.8 88 35.4  
 RDE -.2337 RRA -.2912 RC3 -1.8113 FAU .50880 RRT .8134 RRF .9482 RTF .8395 CRT .8478 CR8 .8515 C8T .0247  
 FDE 2.3630 FRA -5.0910 FC -18.0204 B8P 4153 8GB 2745.7 R23 .2097 R13 .9322 L8A 36.8 M8A 29.8 88A 2.7  
 BDE .3676 BRA 1.2314 BC3 2.2736 F8P 2838 8G1 2615.8 8G2 834.5 T8A 41.64 EL1 30.5 EL2 7.1 ALP 25.96

LAUNCH DATE AUG 28 1973 FLIGHT TIME 206.00 ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC DISTANCE 454.029 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.874 GAL 5.47 AZL 87.78 HCA 134.13 SMA 196.39 ECC .24651 INC 2.2174 V1 29.484  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.590 GAP 5.70 AZP 91.54 TAL 28.03 TAP 162.16 RCA 147.59 APO 245.20 V2 22.749  
 RC 242.049 GL 14.85 GP -21.54 ZAL 44.43 ZAP 99.30 E78 185.58 ZAE 131.50 ETE 203.62 ZAC 65.04 ETC 285.17 LVI .58

PLANETOCENTRIC CONIC  
 C3 24.401 VHL 4.940 DLA 20.31 RAL 9.58 RAD 6644.7 VEL 12.016 PTH 7.01 VHP 2.422 DPA -9.52 RAP 35.12 ECC 1.4016  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 26 3594.10 -47.29 136.95 251.74 95.95 9 13 20 2594.1 -39.51 103.19  
 60.00 8 28 39 3553.55 -40.29 133.89 252.32 90.90 9 27 53 2553.5 -35.92 103.86  
 70.00 8 32 13 3484.15 -34.02 128.11 252.16 86.84 9 50 17 2484.1 -31.77 99.61  
 80.00 9 32 15 3358.66 -29.29 118.15 251.71 83.92 10 28 13 2358.7 -28.84 90.74  
 90.00 10 40 26 3138.55 -27.42 101.73 251.46 82.80 11 32 44 2138.5 -27.67 74.73  
 100.00 12 15 7 2833.13 -29.29 79.52 251.71 83.92 13 2 20 1833.1 -28.84 52.11  
 110.00 13 31 39 2530.97 -34.02 57.03 252.16 86.84 14 33 50 1531.0 -31.77 28.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2671 TRA-1.2320 TC3-1.4901 BAU .7800 SGT 2141.2 SGR 1904.5 SCS 1672.1 ST 27.7 SR 14.2 SS 36.0  
 RDE -.2186 RRA -.3128 RC3-1.8700 FAU .51477 RRT .8308 RRF .9525 RTF .8558 CRT .8512 CRS .4672 CST -.0184  
 FDE 2.4157 FRA-5.1850 FC-18.2637 BSP 4370 SGB 2865.6 R23 .2028 R13 .9378 LSA 36.8 MSA 30.1 SSA 2.6  
 BDE .3452 BRA 1.2711 BC3 2.3911 FSP 2798 SG1 2743.6 SG2 827.4 THA 40.98 EL1 30.4 EL2 6.8 ALF 24.93

LAUNCH DATE AUG 28 1973 FLIGHT TIME 208.00 ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC DISTANCE 457.823 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.874 GAL 5.44 AZL 87.73 HCA 135.05 SMA 196.39 ECC .24630 INC 2.2745 V1 29.484  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.559 GAP 5.46 AZP 91.61 TAL 27.89 TAP 162.94 RCA 147.63 APO 245.15 V2 22.720  
 RC 244.907 GL 15.26 GP -21.95 ZAL 44.68 ZAP 97.82 E78 185.04 ZAE 129.81 ETE 202.71 ZAC 64.79 ETC 285.24 LVI .86

PLANETOCENTRIC CONIC  
 C3 24.360 VHL 4.936 DLA 20.74 RAL 9.55 RAD 6644.7 VEL 12.014 PTH 7.01 VHP 2.415 DPA -10.13 RAP 34.72 ECC 1.4009  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 23 3602.77 -47.35 137.78 252.09 95.32 9 11 26 2602.8 -39.80 103.83  
 60.00 8 25 57 3563.99 -40.30 134.77 252.57 90.30 9 25 21 2564.0 -35.77 104.64  
 70.00 8 48 38 3497.19 -33.97 129.13 252.33 86.24 9 46 55 2497.2 -31.97 100.57  
 80.00 9 27 37 3374.94 -29.17 119.35 251.81 83.31 10 23 52 2374.9 -28.99 91.92  
 90.00 10 35 14 3156.64 -27.26 103.03 251.54 82.16 11 27 51 2156.6 -27.80 76.04  
 100.00 12 10 29 2849.41 -29.17 80.72 251.81 83.31 12 57 59 1849.4 -28.99 53.29  
 110.00 13 48 4 2544.01 -33.97 58.05 252.33 86.24 14 30 28 1544.0 -31.07 29.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2580 TRA-1.2776 TC3-1.6242 BAU .8162 SGT 2274.9 SGR 1936.6 SCS 1672.5 ST 28.2 SR 12.9 SS 37.7  
 RDE -.1905 RRA -.3221 RC3-1.9086 FAU .51386 RRT .8437 RRF .9551 RTF .8654 CRT .8661 CRS .4375 CST -.0156  
 FDE 2.6006 FRA-5.1358 FC-18.2618 BSP 4627 SGB 2988.9 R23 .2080 R13 .9388 LSA 38.2 MSA 30.3 SSA 2.6  
 BDE .3207 BRA 1.3176 BC3 2.5061 FSP 2900 SG1 2873.0 SG2 824.0 THA 39.61 EL1 30.4 EL2 6.0 ALF 22.51

LAUNCH DATE AUG 28 1973 FLIGHT TIME 210.00 ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC DISTANCE 461.619 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.874 GAL 5.41 AZL 87.67 HCA 135.98 SMA 196.39 ECC .24812 INC 2.3334 V1 29.484  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.529 GAP 5.22 AZP 91.68 TAL 27.73 TAP 163.71 RCA 147.66 APO 245.12 V2 22.692  
 RC 247.751 GL 15.67 GP -22.35 ZAL 44.94 ZAP 96.35 E78 184.49 ZAE 128.13 ETE 201.83 ZAC 64.53 ETC 285.32 LVI 1.15

PLANETOCENTRIC CONIC  
 C3 24.326 VHL 4.932 DLA 21.18 RAL 9.51 RAD 6644.7 VEL 12.013 PTH 7.00 VHP 2.410 DPA -10.73 RAP 34.32 ECC 1.4003  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 16 3611.79 -47.40 138.65 252.46 94.65 9 9 28 2611.8 -40.09 106.50  
 60.00 8 23 8 3574.87 -40.30 135.70 252.84 89.67 9 22 43 2574.9 -36.02 105.45  
 70.00 8 44 53 3510.83 -33.91 130.19 252.51 85.62 9 43 24 2510.8 -32.17 101.59  
 80.00 9 22 45 3392.07 -29.02 120.60 251.92 82.66 10 19 17 2392.1 -29.14 93.18  
 90.00 10 29 45 3175.78 -27.07 104.40 251.61 81.50 11 22 41 2175.8 -27.91 77.43  
 100.00 12 5 37 2866.54 -29.02 81.97 251.92 82.66 12 53 24 1866.5 -29.14 54.55  
 110.00 13 44 19 2557.64 -33.91 59.11 252.51 85.62 14 26 57 1557.6 -32.17 30.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2421 TRA-1.3183 TC3-1.7500 BAU .8541 SGT 2399.3 SGR 1986.7 SCS 1682.0 ST 28.3 SR 12.0 SS 38.8  
 RDE -.1688 RRA -.3385 RC3-1.9381 FAU .51574 RRT .8584 RRF .9583 RTF .8761 CRT .8795 CRS .3810 CST -.0438  
 FDE 2.7076 FRA-5.1569 FC-18.3550 BSP 4867 SGB 3115.1 R23 .2064 R13 .9420 LSA 39.1 MSA 30.4 SSA 2.3  
 BDE .2932 BRA 1.3611 BC3 2.6262 FSP 2910 SG1 3005.5 SG2 819.0 THA 38.78 EL1 30.5 EL2 5.4 ALF 21.05

LAUNCH DATE AUG 28 1973 FLIGHT TIME 212.00 ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC DISTANCE 465.414 EARTH TO MARS  
 RL 151.12 LAL .00 LOL 334.55 VL 32.874 GAL 5.38 AZL 87.81 HCA 136.91 SMA 196.41 ECC .24796 INC 2.3941 V1 29.484  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.499 GAP 4.98 AZP 91.75 TAL 27.57 TAP 164.48 RCA 147.71 APO 245.11 V2 22.665  
 RC 250.580 GL 16.10 GP -22.77 ZAL 45.21 ZAP 94.90 E79 183.93 ZAE 126.46 ETE 200.98 ZAC 64.26 ETC 285.38 LVI 1.44

PLANETOCENTRIC CONIC  
 C3 24.296 VHL 4.929 DLA 21.64 RAL 9.48 RAD 6644.7 VEL 12.011 PTH 7.00 VHP 2.407 DPA -11.34 RAP 33.95 ECC 1.3998  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 4 3621.20 -47.45 139.56 252.86 93.96 9 7 26 2621.2 -40.39 107.20  
 60.00 8 20 12 3586.24 -40.29 136.67 253.11 89.01 9 19 58 2586.2 -36.27 106.31  
 70.00 8 40 57 3525.14 -33.83 131.30 252.69 84.97 9 39 42 2525.1 -32.37 102.66  
 80.00 9 17 36 3410.18 -28.86 121.92 252.02 81.99 10 14 27 2410.2 -29.28 94.50  
 90.00 10 23 55 3196.12 -26.86 105.85 251.68 80.81 11 17 11 2196.1 -28.02 78.91  
 100.00 12 0 28 2884.65 -28.86 83.29 252.02 81.99 12 45 33 1884.6 -28.28 55.87  
 110.00 13 40 23 2571.96 -33.83 60.21 252.69 84.97 14 23 15 1572.0 -32.37 31.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2252 TRA-1.3602 TC3-1.8776 BAU .8924 SGT 2527.4 SGR 2033.5 SCS 1687.9 ST 28.8 SR 11.2 SS 40.0  
 RDE -.1457 RRA -.3544 RC3-2.0058 FAU .51649 RRT .8675 RRF .9612 RTF .873 CRT .8973 CRS .3089 CST -.0726  
 FDE 2.8205 FRA-5.1655 FC-18.4044 BSP 5114 SGB 3243.9 R23 .2054 R13 .947 LSA 40.2 MSA 30.5 SSA 2.4  
 BDE .2682 BRA 1.4056 BC3 2.7475 FSP 2922 SG1 3140.1 SG2 814.3 THA 37.5 EL1 30.5 EL2 4.7 ALF 19.66

LAUNCH DATE AUG 28 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.076 GAL 5.34 AZL 87.54 HCA 137.03 SMA 196.42 ECC .24782 INC 2.4968 V1 29.484
RP 242.46 LAP 1.05 LOP 112.40 VP 20.471 GAP 4.75 AZP 91.02 TAL 27.41 TAP 165.23 RCA 147.75 APO 245.10 V2 22.638
RC 253.394 GL 16.55 GP -23.10 ZAL 45.49 ZAP 93.48 ETS 183.35 ZAE 124.00 ETE 200.16 ZAC 63.99 ETC 285.46 LVI 1.74

PLANETOCENTRIC CONIC

C3 24.271 VHL 4.927 DLA 22.11 RAL 9.44 RAD 6644.7 VEL 12.010 PTH 7.00 VHP 2.405 DPA -11.94 RAP 33.59 ECC 1.3994
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 4 47 3631.03 -47.49 140.50 253.27 93.23 9 5 18 2631.0 -40.70 107.94
60.00 8 17 8 3598.13 -40.27 137.68 253.41 88.33 9 17 6 2598.1 -36.53 107.22
70.00 8 36 49 3540.17 -33.73 132.46 252.88 84.28 9 35 49 2540.2 -32.56 103.78
80.00 9 12 9 3429.37 -28.67 123.32 252.13 81.28 10 9 18 2429.4 -29.41 95.92
90.00 10 17 40 3217.80 -26.62 107.39 251.75 80.07 11 11 18 2217.8 -28.11 80.48
100.00 11 55 1 2903.84 -28.67 84.68 252.13 81.28 12 43 24 1903.8 -29.41 57.28
110.00 13 38 15 2586.99 -33.73 61.38 252.88 84.28 14 19 22 1587.0 -32.56 32.70

DIFFERENTIAL CORRECTIONS

TDE -.2063 TRA-1.4021 TC3-2.0056 BAU .9312
RDE -.1219 RRA -.3699 RC3-2.0525 FAU .51638
FDE 2.9317 FRA-5.1613 FC-18.4191 BSP 5366
BDE .2396 BRA 1.4501 BC3 2.8697 FSP 2929

MID-COURSE EXECUTION ACCURACY

SGT 2637.2 SGR 2079.8 SG3 1690.8
RRT .8772 RRF .9638 RTF .8933
SGB 3374.3 R23 .2046 R13 .9471
SG1 3275.7 SG2 810.1 THA 37.12

ORBIT DETERMINATION ACCURACY

ST 29.2 SR 10.4 SS 41.2
CRT .9176 CR8 .2180 CBT -.1040
LSA 41.4 MSA 30.5 SBA 2.4
EL1 30.7 EL2 3.9 ALF 18.42

LAUNCH DATE AUG 28 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.877 GAL 5.31 AZL 87.48 HCA 138.75 SMA 196.49 ECC .24769 INC 2.5216 V1 29.484
RP 242.73 LAP 1.86 LOP 113.32 VP 20.444 GAP 4.52 AZP 91.90 TAL 27.24 TAP 165.98 RCA 147.79 APO 245.11 V2 22.612
RC 256.191 GL 17.01 GP -23.60 ZAL 45.79 ZAP 92.09 ETS 182.77 ZAE 123.16 ETE 199.36 ZAC 63.71 ETC 285.53 LVI 2.05

PLANETOCENTRIC CONIC

C3 24.252 VHL 4.925 DLA 22.59 RAL 9.40 RAD 6644.7 VEL 12.010 PTH 7.00 VHP 2.406 DPA -12.53 RAP 33.25 ECC 1.3991
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 24 3641.28 -47.53 141.49 253.70 92.47 9 3 5 2641.3 -41.01 108.72
60.00 8 13 56 3610.57 -40.24 138.74 253.71 87.61 9 14 6 2610.6 -36.79 108.17
70.00 8 32 27 3555.99 -33.82 133.68 253.07 83.57 9 31 43 2556.0 -32.76 104.97
80.00 9 8 20 3449.75 -28.45 124.79 252.23 80.53 10 3 50 2449.7 -29.53 97.42
90.00 10 10 59 3241.00 -26.33 109.03 251.81 79.30 11 5 0 2241.0 -28.19 82.18
100.00 11 49 12 2924.22 -28.45 86.16 252.23 80.53 12 37 56 1924.2 -29.53 58.79
110.00 13 31 54 2602.80 -33.82 62.60 253.07 83.57 14 15 17 1602.8 -32.76 33.89

DIFFERENTIAL CORRECTIONS

TDE -.1859 TRA-1.4447 TC3-2.1345 BAU .9704
RDE -.0969 RRA -.3853 RC3-2.0983 FAU .51545
FDE 3.0445 FRA-5.1496 FC-18.4007 BSP 5619
BDE .2096 BRA 1.4952 BC3 2.9932 FSP 2930

MID-COURSE EXECUTION ACCURACY

SGT 2789.4 SGR 2126.0 SG3 1691.1
RRT .8858 RRF .9662 RTF .9002
SGB 3507.2 R23 .2041 R13 .9492
SG1 3413.3 SG2 806.1 THA 36.38

ORBIT DETERMINATION ACCURACY

ST 29.5 SR 9.7 SS 42.4
CRT .9393 CR8 .1034 CBT -.1376
LSA 42.7 MSA 30.5 SBA 2.3
EL1 30.9 EL2 3.2 ALF 17.36

LAUNCH DATE AUG 28 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.879 GAL 5.27 AZL 87.41 HCA 139.87 SMA 198.48 ECC .24759 INC 2.5887 V1 29.484
RP 242.99 LAP 1.68 LOP 114.24 VP 20.418 GAP 4.28 AZP 91.97 TAL 27.06 TAP 166.72 RCA 147.83 APO 245.13 V2 22.586
RC 258.972 GL 17.48 GP -24.02 ZAL 46.10 ZAP 90.73 ETS 182.18 ZAE 121.53 ETE 198.58 ZAC 63.42 ETC 285.60 LVI 2.37

PLANETOCENTRIC CONIC

C3 24.239 VHL 4.923 DLA 23.10 RAL 9.38 RAD 6644.7 VEL 12.009 PTH 7.00 VHP 2.408 DPA -13.12 RAP 32.94 ECC 1.3989
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 7 59 54 3651.99 -47.55 142.53 254.16 91.67 9 0 46 2632.0 -41.33 109.54
60.00 8 10 34 3623.60 -40.20 139.84 254.03 86.86 9 10 57 2623.6 -37.06 109.17
70.00 8 27 31 3572.64 -33.48 134.96 253.27 82.82 9 27 24 2572.6 -32.96 108.23
80.00 9 0 7 3471.47 -28.20 126.36 252.33 79.75 9 57 58 2471.5 -29.64 99.02
90.00 10 3 46 3265.95 -26.01 110.79 251.86 78.48 10 58 12 2266.0 -28.24 84.00
100.00 11 42 59 2949.94 -28.20 87.72 252.33 79.75 12 32 5 1945.9 -29.64 60.39
110.00 13 27 18 2619.46 -33.48 63.88 253.27 82.82 14 10 57 1619.5 -32.96 35.15

DIFFERENTIAL CORRECTIONS

TDE -.1839 TRA-1.4878 TC3-2.2634 BAU 1.0102
RDE -.0714 RRA -.4012 RC3-2.1438 FAU .51388
FDE 3.1522 FRA-5.1342 FC-18.3547 BSP 5876
BDE .1787 BRA 1.5410 BC3 3.1175 FSP 2926

MID-COURSE EXECUTION ACCURACY

SGT 2923.5 SGR 2172.6 SG3 1689.3
RRT .8936 RRF .9685 RTF .5.63
SGB 3642.4 R23 .2037 R13 .9512
SG1 3552.9 SG2 802.5 THA 35.69

ORBIT DETERMINATION ACCURACY

ST 30.0 SR 9.2 SS 43.6
CRT .9577 CR8 -.0342 CBT -.1740
LSA 44.2 MSA 30.5 SBA 2.2
EL1 31.3 EL2 2.9 ALF 18.54

LAUNCH DATE AUG 28 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.881 GAL 5.24 AZL 87.34 HCA 140.58 SMA 198.82 ECC .24750 INC 2.6583 V1 29.484
RP 243.24 LAP 1.89 LOP 115.16 VP 20.393 GAP 4.03 AZP 92.03 TAL 26.87 TAP 167.48 RCA 147.88 APO 245.15 V2 22.580
RC 261.736 GL 17.97 GP -24.45 ZAL 46.42 ZAP 89.40 ETS 181.58 ZAE 119.93 ETE 197.82 ZAC 63.12 ETC 285.67 LVI 2.70

PLANETOCENTRIC CONIC

C3 24.232 VHL 4.923 DLA 23.82 RAL 9.32 RAD 6644.7 VEL 12.009 PTH 7.00 VHP 2.412 DPA -13.71 RAP 32.65 ECC 1.3988
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 7 57 17 3663.19 -47.57 143.81 254.83 90.84 8 58 21 2663.2 -41.67 110.41
60.00 8 7 1 3637.26 -40.14 141.00 254.36 86.08 9 7 39 2637.3 -37.33 110.23
70.00 8 22 59 3590.22 -33.32 136.31 253.47 82.04 9 22 49 2590.2 -33.15 107.57
80.00 8 53 26 3494.70 -27.90 128.02 252.42 78.92 9 51 41 2494.7 -29.73 100.74
90.00 9 55 35 3292.93 -25.63 112.67 251.89 77.61 10 50 48 2292.9 -28.28 85.97
100.00 11 36 18 2969.17 -27.90 89.39 252.42 78.92 12 25 47 1969.2 -29.73 62.11
110.00 13 22 26 2637.04 -33.32 65.23 253.47 82.04 14 6 23 1637.0 -33.15 36.49

DIFFERENTIAL CORRECTIONS

TDE -.1397 TRA-1.5310 TC3-2.3919 BAU 1.0501
RDE -.0446 RRA -.4165 RC3-2.1877 FAU .51143
FDE 3.2608 FRA-5.1063 FC-18.2717 BSP 6138
BDE .1466 BRA 1.5867 BC3 3.2415 FSP 2919

MID-COURSE EXECUTION ACCURACY

SGT 3058.5 SGR 2218.5 SG3 1684.4
RRT .9004 RRF .9706 RTF .9117
SGB 3778.4 R23 .2036 R13 .9530
SG1 3692.9 SG2 799.3 THA 35.03

ORBIT DETERMINATION ACCURACY

ST 30.5 SR 9.0 SS 44.8
CRT .9672 CR8 -.1905 CBT -.2123
LSA 45.7 MSA 30.4 SBA 2.2
EL1 31.7 EL2 2.2 ALF 15.94



LAUNCH DATE AUG 28 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

DISTANCE 499.538

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.85 VL 32.894 GAL 5.05 AZL 86.95 HCA 145.13 SMA 186.77 ECC .24730 INC 3.0491 V1 29.484
RP 244.45 LAP 1.74 LOP 119.72 VP 20.282 GAP 2.93 AZP 92.50 TAL 25.88 TAP 171.01 RCA 148.11 APO 245.44 V2 22.441
RC 275.292 GL 20.70 GP -26.70 ZAL 48.22 ZAP 83.22 ETS 178.43 ZAE 112.24 ETE 194.24 ZAC 61.45 ETC 286.03 LVI 4.55

PLANETOCENTRIC CONIC

C3 24.321 VHL 4.932 DLA 26.50 RAL 9.05 RAD 8644.7 VEL 12.012 PTH 7.00 VHP 2.457 DPA -16.64 RAP 31.57 ECC 1.4003
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 42 0 3727.62 -47.45 149.83 257.29 86.05 8 44 7 2727.6 -43.42 115.60
60.00 7 46 4 3716.77 -39.56 147.68 256.12 81.58 8 48 1 2716.8 -38.68 116.56
70.00 7 53 15 3695.60 -32.05 144.26 254.41 77.50 8 54 50 2695.6 -33.95 115.69
80.00 8 9 42 3643.94 -25.51 138.45 252.51 73.94 9 10 26 2643.9 -29.73 111.82
90.00 9 0 38 3479.40 -22.30 125.30 251.44 72.14 9 58 37 2479.4 -27.63 99.55
100.00 10 52 34 3118.41 -25.51 99.82 252.51 73.94 11 44 32 2118.4 -29.73 73.19
110.00 12 52 41 2742.42 -32.05 73.18 254.41 77.50 13 36 24 1742.4 -33.95 44.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0096 TRA-1.7524 TC3-3.0236 BAU 1.2540 8GT 3751.0 SGR 2450.8 8G3 1624.7 8T 34.4 8R 11.9 88 90.9
RDE .1037 RRA -.4956 RC3-2.3945 FAU .48877 RRT .9256 RRF .9792 RTF .9304 CRT .8498 CR8 -.8139 CST -.4216
PDE 3.7599 FRA-4.8749 FC-17.3986 B8P 7445 8GB 4480.6 R23 .2053 R13 .9595 L8A 55.0 M8A 29.8 88A 1.8
BDE .1041 BRA 1.8212 BC3 3.8569 F8P 2805 8G1 4410.6 8G2 789.1 THA 32.32 EL1 35.9 EL2 6.0 ALF 16.88

LAUNCH DATE AUG 28 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

DISTANCE 503.323

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.85 VL 32.897 GAL 5.01 AZL 86.86 HCA 146.04 SMA 186.84 ECC .24730 INC 3.1375 V1 29.484
RP 244.88 LAP 1.75 LOP 120.83 VP 20.263 GAP 2.71 AZP 92.60 TAL 25.88 TAP 171.70 RCA 148.16 APO 245.92 V2 22.418
RC 277.948 GL 21.31 GP -27.18 ZAL 48.62 ZAP 82.09 ETS 177.77 ZAE 110.77 ETE 193.56 ZAC 61.06 ETC 286.10 LVI 4.88

PLANETOCENTRIC CONIC

C3 24.369 VHL 4.936 DLA 27.14 RAL 8.97 RAD 8644.7 VEL 12.014 PTH 7.01 VHP 2.471 DPA -17.22 RAP 31.44 ECC 1.4010
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 38 23 3742.49 -47.37 151.26 257.88 84.99 8 40 45 2742.5 -43.79 116.84
60.00 7 41 3 3735.39 -39.36 149.22 256.48 80.55 8 43 18 2735.4 -38.94 118.07
70.00 7 45 51 3721.25 -31.65 146.16 254.55 76.45 8 47 52 2721.2 -34.05 117.68
80.00 7 57 34 3684.42 -24.72 141.20 252.38 72.70 8 58 58 2684.4 -29.55 114.82
90.00 8 42 44 3538.42 -21.01 129.15 251.05 70.63 9 41 43 2538.4 -27.12 103.79
100.00 10 40 26 3158.89 -24.72 102.57 252.38 72.70 11 33 5 2158.9 -29.55 78.19
110.00 12 45 17 2768.07 -31.65 75.07 254.55 76.45 13 31 25 1768.1 -34.05 46.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0463 TRA-1.7973 TC3-3.1449 BAU 1.2953 8GT 3890.8 SGR 2497.8 8G3 1605.8 8T 35.6 8R 13.3 88 92.1
RDE .1373 RRA -.8118 RC3-2.4326 FAU .48223 RRT .9292 RRF .9806 RTF .9329 CRT .8253 CR8 -.8682 CST -.4642
PDE 3.6539 FRA-4.8091 FC-17.1319 B8P 7715 8GB 4623.6 R23 .2082 R13 .9605 L8A 57.2 M8A 29.6 88A 1.8
BDE .1450 BRA 1.8687 BC3 3.9759 F8P 2773 8G1 4555.9 8G2 788.4 THA 31.88 EL1 37.3 EL2 7.2 ALF 17.82

LAUNCH DATE AUG 28 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

DISTANCE 507.109

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.89 VL 32.901 GAL 4.98 AZL 86.77 HCA 146.94 SMA 186.91 ECC .24732 INC 3.2300 V1 29.484
RP 244.90 LAP 1.78 LOP 121.83 VP 20.248 GAP 2.49 AZP 92.71 TAL 25.44 TAP 172.39 RCA 148.21 APO 245.81 V2 22.397
RC 280.884 GL 21.94 GP -27.88 ZAL 49.04 ZAP 81.00 ETS 177.09 ZAE 109.33 ETE 192.89 ZAC 60.68 ETC 286.10 LVI 5.40

PLANETOCENTRIC CONIC

C3 24.429 VHL 4.943 DLA 27.81 RAL 8.89 RAD 8644.8 VEL 12.017 PTH 7.01 VHP 2.487 DPA -17.81 RAP 31.34 ECC 1.4020
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 34 32 3788.14 -47.87 182.78 258.48 83.80 8 37 10 2788.1 -44.16 118.16
60.00 7 38 40 3788.14 -39.13 180.85 256.84 79.47 8 38 19 2755.1 -39.19 119.69
70.00 7 37 46 3748.95 -31.19 148.18 254.67 75.33 8 40 13 2749.0 -34.12 119.84
80.00 7 43 19 3731.46 -23.73 144.34 252.15 71.33 8 45 31 2731.5 -29.25 118.28
90.00 8 17 23 3621.31 -19.05 134.44 250.33 68.70 9 17 44 2621.3 -26.16 109.67
100.00 10 26 11 3205.84 -23.73 105.71 252.15 71.33 11 19 37 2205.9 -29.25 79.65
110.00 12 37 12 2795.77 -31.19 77.10 254.67 75.33 13 23 48 1795.8 -34.12 48.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0881 TRA-1.8427 TC3-3.2636 BAU 1.3367 8GT 4031.1 SGR 2545.5 8G3 1684.9 8T 38.9 8R 14.9 88 93.3
RDE .1780 RRA -.8287 RC3-2.4697 FAU .47510 RRT .9325 RRF .9818 RTF .9351 CRT .8090 CR8 -.9057 CST -.5088
PDE 3.8418 FRA-4.7409 FC-16.8368 B8P 7978 8GB 4767.6 R23 .2071 R13 .9613 L8A 58.6 M8A 29.4 88A 1.7
BDE .1818 BRA 1.9170 BC3 4.0927 F8P 2732 8G1 4702.8 8G2 788.0 THA 31.48 EL1 38.9 EL2 8.3 ALF 18.95

LAUNCH DATE AUG 28 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

DISTANCE 510.894

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.89 VL 32.905 GAL 4.98 AZL 86.67 HCA 147.84 SMA 186.98 ECC .24734 INC 3.3269 V1 29.484
RP 246.11 LAP 1.77 LOP 122.44 VP 20.227 GAP 2.27 AZP 92.82 TAL 25.22 TAP 173.07 RCA 148.26 APO 245.70 V2 22.378
RC 283.188 GL 22.60 GP -28.10 ZAL 49.48 ZAP 79.98 ETS 178.41 ZAE 107.98 ETE 192.83 ZAC 60.28 ETC 286.26 LVI 5.88

PLANETOCENTRIC CONIC

C3 24.803 VHL 4.980 DLA 28.80 RAL 8.78 RAD 8644.8 VEL 12.020 PTH 7.01 VHP 2.508 DPA -18.40 RAP 31.27 ECC 1.4033
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 30 26 3774.83 -47.13 184.33 259.09 82.60 8 33 21 2774.6 -44.53 119.58
60.00 7 38 54 3776.08 -38.88 182.86 257.19 78.34 8 32 50 2776.1 -39.43 121.41
70.00 7 38 58 3776.08 -30.88 180.38 254.78 74.14 8 31 51 2779.1 -34.15 122.19
80.00 7 28 48 3788.78 -22.43 148.10 251.78 69.76 8 28 58 2788.8 -29.73 122.47
86.38 7 0 53 3689.22 -18.88 180.80 248.85 65.83 8 5 22 2869.2 -24.00 127.23
100.00 10 0 39 3263.84 -22.43 106.47 251.78 69.76 11 3 3 2263.2 -28.75 83.84
110.00 12 28 19 2822.90 -30.88 79.88 254.78 74.14 13 15 25 1825.0 -34.15 51.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1864 TRA-1.8883 TC3-3.3788 BAU 1.3788 8GT 4171.3 SGR 2594.1 8G3 1861.9 8T 38.3 8R 16.6 88 94.8
RDE .2081 RRA -.8481 RC3-2.5057 FAU .46741 RRT .9356 RRF .9831 RTF .9372 CRT .8004 CR8 -.9318 CST -.5457
PDE 4.0847 FRA-4.6884 FC-16.8144 B8P 8237 8GB 4912.2 R23 .2080 R13 .9621 L8A 62.1 M8A 29.3 88A 1.8
BDE .2434 BRA 1.9688 BC3 4.2071 F8P 2687 8G1 4848.5 8G2 788.1 THA 31.10 EL1 40.7 EL2 9.4 ALF 20.22

LAUNCH DATE AUG 28 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC										DISTANCE 914.678										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	32.909	GAL	4.88	AZL	86.57	HCA	148.74	SMA	197.08	ECC	.24738	INC	3.4287	V1	29.484	RC	245.32	LAP	1.78	LOP	123.34	VP	20.211	GAP	2.05	AZP	92.93	TAL	24.99	TAP	173.74	RCA	148.31	APO	245.81	V2	22.354	RP	285.791	GL	23.29	GP	-20.71	ZAL	49.93	ZAP	78.93	ETS	175.72	ZAE	106.54	ETE	191.57	ZAC	59.82	ETC	286.34	LVI	6.33																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	24.593	VHL	4.959	DLA	29.22	RAL	8.67	RAD	6644.8	VEL	12.024	PTH	7.01	VHP	2.525	DPA	-19.00	RAP	31.23	ECC	1.4047	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	40.0	SR	18.5	SS	55.7	CRT	.7977	CRS	-.9502	CST	-.5841	L8A	64.7	MSA	29.1	SSA	1.6	EL1	42.8	EL2	10.4	ALF	21.58																																	
50.00	7	26	3	3792.03	-46.97	155.98	259.71	81.34	8	29	15	2792.0	-44.91	121.09	60.00	7	23	40	3798.38	-38.53	154.37	257.53	77.15	8	26	58	2798.4	-39.65	123.27	70.00	7	19	0	3812.15	-30.01	152.73	254.78	72.88	8	22	32	2812.1	-34.13	124.78	80.00	7	1	47	3866.38	-20.52	153.07	251.03	67.82	8	6	13	2866.4	-27.84	128.06	82.34	6	28	5	3974.53	-15.59	158.81	248.77	64.98	7	34	19	2974.5	-24.57	135.16	100.00	9	44	39	3340.86	-20.52	114.44	251.03	67.82	10	40	20	2340.9	-27.84	89.43	110.00	12	18	26	2858.96	-30.01	81.84	254.78	72.88	13	6	5	1859.0	-34.13	53.69
TDE	.1705	TRA	-1.9330	TC3	-3.4913	BAU	1.4194	SGT	4310.8	SGR	2642.1	SG3	1536.2	ST	40.0	SR	18.5	SS	55.7	RDE	.2480	RRA	-.5836	RC3	-2.5393	FAU	.45891	RRT	.9383	RRF	.9842	RTF	.9390	CRT	.7977	CRS	-.9502	CST	-.5841	FDE	4.1055	FRA	-4.5890	FC	-16.1549	BSP	8506	SG8	5056.0	R23	.2092	R13	.9628	L8A	64.7	MSA	29.1	SSA	1.6	BDE	.2993	BRA	2.0143	BC3	4.3171	FSP	2643	SG1	4994.2	SG2	788.4	THA	30.75	EL1	42.8	EL2	10.4	ALF	21.58																									

LAUNCH DATE AUG 28 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC										DISTANCE 518.461										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	32.913	GAL	4.84	AZL	86.46	HCA	149.64	SMA	197.14	ECC	.24743	INC	3.5356	V1	29.484	RC	245.53	LAP	1.79	LOP	124.24	VP	20.195	GAP	1.83	AZP	93.05	TAL	24.76	TAP	174.41	RCA	148.36	APO	245.91	V2	22.334	RP	288.361	GL	24.01	GP	-29.26	ZAL	50.40	ZAP	77.96	ETS	175.01	ZAE	105.19	ETE	190.92	ZAC	59.35	ETC	286.43	LVI	6.83																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	24.700	VHL	4.970	DLA	29.96	RAL	8.55	RAD	6644.9	VEL	12.028	PTH	7.02	VHP	2.546	DPA	-19.60	RAP	31.23	ECC	1.4065	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	41.8	SR	20.5	SS	56.8	CRT	.8001	CRS	-.9631	CST	-.6206	L8A	67.5	MSA	29.0	SSA	1.5	EL1	45.1	EL2	11.4	ALF	22.98																																	
50.00	7	21	20	3810.44	-46.77	157.71	260.34	80.02	8	24	51	2810.4	-45.27	122.71	60.00	7	16	55	3822.22	-38.15	156.28	257.85	75.90	8	20	38	2822.2	-39.86	125.26	70.00	7	7	54	3848.84	-29.25	155.31	254.73	71.53	8	12	3	2848.8	-34.03	127.64	79.67	6	6	49	4042.06	-15.93	163.98	248.89	64.28	7	14	11	3042.1	-25.15	140.35	79.67	6	6	49	4042.06	-15.93	163.98	248.89	64.28	7	14	11	3042.1	-25.15	140.35	79.67	6	6	49	4042.06	-15.93	163.98	248.89	64.28	7	14	11	3042.1	-25.15	140.35	110.00	12	7	21	2895.66	-29.25	84.23	254.73	71.53	12	55	36	1895.7	-34.03	56.55
TDE	.2174	TRA	-1.9797	TC3	-3.5988	BAU	1.4607	SGT	4449.6	SGR	2691.8	SG3	1509.0	ST	41.8	SR	20.5	SS	56.8	RDE	.2856	RRA	-.5820	RC3	-2.5723	FAU	.45001	RRT	.9409	RRF	.9853	RTF	.9406	CRT	.8001	CRS	-.9631	CST	-.6206	FDE	4.1816	FRA	-4.9077	FC	-15.7730	BSP	8772	SG8	5200.4	R23	.2104	R13	.9634	L8A	67.5	MSA	29.0	SSA	1.5	BDE	.3590	BRA	2.0635	BC3	4.4238	FSP	2592	SG1	5140.2	SG2	789.4	THA	30.44	EL1	45.1	EL2	11.4	ALF	22.98																									

LAUNCH DATE AUG 28 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC										DISTANCE 522.242										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	32.917	GAL	4.79	AZL	86.35	HCA	150.54	SMA	197.22	ECC	.24749	INC	3.6482	V1	29.484	RC	245.73	LAP	1.79	LOP	125.14	VP	20.180	GAP	1.62	AZP	93.18	TAL	24.53	TAP	175.07	RCA	148.41	APO	246.03	V2	22.314	RP	290.907	GL	24.77	GP	-29.82	ZAL	50.88	ZAP	77.03	ETS	174.29	ZAE	103.87	ETE	190.27	ZAC	58.87	ETC	286.53	LVI	7.35																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	24.826	VHL	4.983	DLA	30.73	RAL	8.40	RAD	6644.9	VEL	12.033	PTH	7.02	VHP	2.570	DPA	-20.21	RAP	31.27	ECC	1.4086	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	43.8	SR	22.7	SS	58.0	CRT	.8058	CRS	-.9723	CST	-.6846	L8A	70.5	MSA	28.8	SSA	1.4	EL1	47.8	EL2	12.3	ALF	24.37																																	
50.00	7	16	16	3829.93	-46.52	159.53	260.97	78.64	8	20	6	2829.9	-45.64	124.44	60.00	7	9	35	3847.78	-37.71	158.31	258.15	74.59	8	13	43	2847.8	-40.03	127.42	70.00	6	55	13	3890.25	-28.32	158.17	254.59	70.06	8	0	3	2890.2	-33.84	130.85	77.43	5	49	40	4096.00	-16.27	168.18	249.02	63.56	6	57	56	3096.0	-25.76	144.59	77.43	5	49	40	4096.00	-16.27	168.18	249.02	63.56	6	57	56	3096.0	-25.76	144.59	77.43	5	49	40	4096.00	-16.27	168.18	249.02	63.56	6	57	56	3096.0	-25.76	144.59	110.00	11	94	39	2937.07	-28.32	87.09	254.59	70.06	12	43	36	1937.1	-33.84	59.77
TDE	.2671	TRA	-2.0261	TC3	-3.7028	BAU	1.5023	SGT	4588.6	SGR	2742.3	SG3	1479.6	ST	43.8	SR	22.7	SS	58.0	RDE	.3271	RRA	-.6010	RC3	-2.6037	FAU	.44054	RRT	.9432	RRF	.9863	RTF	.9420	CRT	.8058	CRS	-.9723	CST	-.6846	FDE	4.2528	FRA	-4.4213	FC	-15.3628	BSP	9044	SG8	5345.8	R23	.2117	R13	.9639	L8A	70.5	MSA	28.8	SSA	1.4	BDE	.4223	BRA	2.1133	BC3	4.5264	FSP	2542	SG1	5286.7	SG2	790.8	THA	30.15	EL1	47.8	EL2	12.3	ALF	24.37																									

LAUNCH DATE AUG 28 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC										DISTANCE 528.023										EARTH TO MARS																																																																																				
RL	151.12	LAL	.00	LOL	334.55	VL	32.922	GAL	4.75	AZL	86.23	HCA	151.44	SMA	197.31	ECC	.24756	INC	3.7871	V1	29.484	RC	245.93	LAP	1.80	LOP	126.04	VP	20.168	GAP	1.40	AZP	93.31	TAL	24.29	TAP	175.72	RCA	148.46	APO	246.15	V2	22.295	RP	293.430	GL	25.55	GP	-30.41	ZAL	51.39	ZAP	76.14	ETS	173.56	ZAE	102.57	ETE	189.63	ZAC	58.35	ETC	286.63	LVI	7.91																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	24.974	VHL	4.997	DLA	31.54	RAL	8.24	RAD	6645.0	VEL	12.039	PTH	7.03	VHP	2.595	DPA	-20.83	RAP	31.34	ECC	1.4110	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	46.0	SR	25.0	SS	59.1	CRT	.8140	CRS	-.9790	CST	-.6861	L8A	73.6	MSA	28.6	SSA	1.4	EL1	50.7	EL2	13.2	ALF	25.71																																	
50.00	7	10	48	3850.63	-46.22	161.44	261.60	77.19	8	14	59	2850.6	-45.99	126.31	60.00	7	1	33	3875.32	-37.19	160.46	258.40	73.21	8	6	8	2875.3	-40.17	129.75	70.00	6	40	18	3938.15	-27.17	161.42	254.29	68.46	7	45	56	2938.1	-33.50	134.55	75.42	5	34	44	4142.45	-16.62	171.86	249.16	62.80	6	43	47	3142.5	-26.38	148.31	75.42	5	34	44	4142.45	-16.62	171.86	249.16	62.80	6	43	47	3142.5	-26.38	148.31	75.42	5	34	44	4142.45	-16.62	171.86	249.16	62.80	6	43	47	3142.5	-26.38	148.31	110.00	11	39	45	2984.96	-27.17	90.34	254.29	68.46	12	29	30	1985.0	-33.50	63.47
TDE	.3196	TRA	-2.0727	TC3	-3.8013	BAU	1.5440	SGT	4726.9	SGR	2794.2	SG3	1448.5	ST	46.0	SR	25.0	SS	59.1	RDE	.3709	RRA	-.6209	RC3	-2.6337	FAU	.43058	RRT	.9453	RRF	.9872	RTF	.9432	CRT	.8140	CRS	-.9790	CST	-.6861	FDE	4.3200	FRA	-4.3325	FC	-14.9263	BSP	9306	SG8	5491.0	R23	.2131	R13	.9644	L8A	73.6	MSA	28.6	SSA	1.4	BDE	.4896	BRA	2.1637	BC3	4.6245	FSP	2485	SG1	5433.5	SG2	792.7	THA	29.90	EL1	50.7	EL2	13.2	ALF	25.71																									

LAUNCH DATE AUG 28 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 529.803

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.926 GAL 4.70 AZL 86.11 HCA 152.33 SMA 197.40 ECC .24764 INC 3.8927 V1 29.484
RP 246.12 LAP 1.81 LOP 126.93 VP 20.153 GAP 1.19 AZP 93.45 TAL 24.05 TAP 176.38 RCA 148.51 APO 246.28 V2 22.276
RC 299.928 GL 26.38 GP -31.02 ZAL 51.91 ZAP 75.29 ETS 172.61 ZAE 101.31 ETE 188.98 ZAC 57.80 ETC 286.73 LVI 8.48

PLANETOCENTRIC CONIC

C3 25.146 VHL 5.015 DLA 32.38 RAL 8.05 RAD 6648.1 VEL 12.046 PTH 7.03 VHP 2.623 DPA -21.46 RAP 31.45 ECC 1.4138
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 4 53 3872.64 -45.87 163.45 262.21 75.68 8 9 26 2872.6 -46.33 128.33
60.00 6 52 42 3905.16 -36.58 162.76 258.61 71.75 7 57 47 2905.2 -40.27 132.28
70.00 6 22 1 3995.98 -25.66 165.24 253.77 66.65 7 28 37 2996.0 -32.92 138.96
73.53 5 21 16 4183.89 -16.97 175.21 249.30 62.00 6 31 0 3183.9 -27.02 151.70
73.53 5 21 16 4183.89 -16.97 175.21 249.30 62.00 6 31 0 3183.9 -27.02 151.70
73.53 5 21 16 4183.89 -16.97 175.21 249.30 62.00 6 31 0 3183.9 -27.02 151.70
110.00 11 21 28 3042.80 -25.66 94.16 253.77 66.65 12 12 10 2042.8 -32.92 67.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3750 TRA-2.1200 TC3-3.8948 BAU 1.5859 SGT 4865.0 SGR 2847.5 SG3 1415.5 ST 48.4 SR 27.4 SS 60.2
RDE .4185 RRA -.6419 RC3-2.6620 FAU .42013 RRT .9473 RRF .9881 RTF .9443 CRT .8238 CRS -.9838 CST -.7150
FDE 4.3792 FRA-4.2408 FC-14.4645 BSP 9572 SGB 5637.1 R23 .2145 R13 .9648 LSA 76.8 MSA 28.5 SSA 1.3
BDE .5604 BRA 2.2151 BC3 4.7176 FSP 2426 SG1 5580.7 SG2 795.1 THA 29.87 EL1 53.9 EL2 14.0 ALF 26.97

LAUNCH DATE AUG 28 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 533.581

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.931 GAL 4.66 AZL 85.97 HCA 153.22 SMA 197.48 ECC .24773 INC 4.0259 V1 29.484
RP 246.30 LAP 1.81 LOP 127.83 VP 20.141 GAP .98 AZP 93.65 TAL 23.80 TAP 177.02 RCA 148.56 APO 246.41 V2 22.258
RC 298.401 GL 27.24 GP -31.86 ZAL 52.46 ZAP 74.49 ETS 172.05 ZAE 100.09 ETE 188.34 ZAC 57.22 ETC 286.85 LVI 9.09

PLANETOCENTRIC CONIC

C3 25.345 VHL 5.034 DLA 33.25 RAL 7.83 RAD 6645.1 VEL 12.055 PTH 7.04 VHP 2.653 DPA -22.10 RAP 31.59 ECC 1.4171
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 58 27 3886.13 -45.46 165.56 262.61 74.10 8 3 23 2896.1 -46.65 130.51
60.00 6 42 53 3937.89 -35.86 165.22 258.74 70.22 7 48 31 2937.7 -40.30 135.05
70.00 5 57 24 4072.58 -23.51 170.14 252.82 64.48 7 5 17 3072.6 -31.90 144.70
71.73 5 8 48 4221.80 -17.33 178.32 249.44 61.16 6 19 9 3221.8 -27.68 154.86
71.73 5 8 48 4221.80 -17.33 178.32 249.44 61.16 6 19 9 3221.8 -27.68 154.86
71.73 5 8 48 4221.80 -17.33 178.32 249.44 61.16 6 19 9 3221.8 -27.68 154.86
110.00 10 56 50 3119.40 -23.51 99.06 252.82 64.48 11 48 50 2119.4 -31.90 73.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4338 TRA-2.1676 TC3-3.9813 BAU 1.6277 SGT 5001.6 SGR 2902.0 SG3 1380.4 ST 51.0 SR 30.0 SS 61.2
RDE .4647 RRA -.6639 RC3-2.6881 FAU .40910 RRT .9491 RRF .9889 RTF .9453 CRT .8344 CRS -.9873 CST -.7415
FDE 4.4338 FRA-4.1458 FC-13.9740 BSP 9838 SGB 5782.5 R23 .2160 R13 .9652 LSA 80.3 MSA 26.3 SSA 1.2
BDE .6358 BRA 2.2670 BC3 4.8036 FSP 2384 SG1 5727.2 SG2 798.0 THA 29.47 EL1 57.3 EL2 14.7 ALF 28.14

LAUNCH DATE AUG 28 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

DISTANCE 537.359

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.936 GAL 4.61 AZL 85.83 HCA 154.11 SMA 197.58 ECC .24783 INC 4.1874 V1 29.484
RP 246.48 LAP 1.82 LOP 128.72 VP 20.129 GAP .77 AZP 93.75 TAL 23.55 TAP 177.66 RCA 148.62 APO 246.55 V2 22.241
RC 300.850 GL 28.15 GP -32.33 ZAL 53.02 ZAP 73.74 ETS 171.27 ZAE 98.89 ETE 187.70 ZAC 56.61 ETC 286.97 LVI 9.73

PLANETOCENTRIC CONIC

C3 25.576 VHL 5.057 DLA 34.17 RAL 7.59 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.686 DPA -22.76 RAP 31.78 ECC 1.4209
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 51 25 3921.28 -44.98 167.78 263.37 72.45 7 58 46 2921.3 -46.94 132.87
60.00 6 31 52 3973.48 -35.00 167.87 258.78 68.60 7 38 5 2973.5 -40.25 138.09
69.98 4 57 5 4256.94 -17.68 181.26 249.59 60.28 6 8 2 3256.9 -28.35 157.86
69.98 4 57 5 4256.94 -17.68 181.26 249.59 60.28 6 8 2 3256.9 -28.35 157.86
69.98 4 57 5 4256.94 -17.68 181.26 249.59 60.28 6 8 2 3256.9 -28.35 157.86
69.98 4 57 5 4256.94 -17.68 181.26 249.59 60.28 6 8 2 3256.9 -28.35 157.86
69.98 4 57 5 4256.94 -17.68 181.26 249.59 60.28 6 8 2 3256.9 -28.35 157.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4967 TRA-2.2155 TC3-4.0806 BAU 1.8695 SGT 5136.8 SGR 2957.8 SG3 1343.3 ST 53.9 SR 32.7 SS 62.2
RDE .5164 RRA -.8889 RC3-2.7118 FAU .39751 RRT .9508 RRF .9888 RTF .5.61 CRT .8454 CRS -.9900 CST -.7857
FDE 4.4852 FRA-4.0458 FC-13.4559 BSP 10112 SGB 5927.5 R23 .2176 R13 .9655 LSA 83.9 MSA 28.2 SSA 1.2
BDE .7163 BRA 2.3195 BC3 4.8827 FSP 2301 SG1 5873.1 SG2 801.4 THA 29.30 EL1 61.1 EL2 15.4 ALF 29.24

LAUNCH DATE AUG 28 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

DISTANCE 541.135

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.941 GAL 4.57 AZL 85.68 HCA 155.00 SMA 197.68 ECC .24793 INC 4.3179 V1 29.484
RP 246.85 LAP 1.82 LOP 129.61 VP 20.119 GAP .56 AZP 93.91 TAL 23.30 TAP 178.30 RCA 148.67 APO 246.69 V2 22.224
RC 303.274 GL 29.10 GP -33.03 ZAL 53.62 ZAP 73.03 ETS 170.49 ZAE 97.73 ETE 187.08 ZAC 55.97 ETC 287.11 LVI 10.41

PLANETOCENTRIC CONIC

C3 25.842 VHL 5.083 DLA 35.12 RAL 7.31 RAD 6645.3 VEL 12.075 PTH 7.06 VHP 2.721 DPA -23.44 RAP 32.01 ECC 1.4253
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 41 3948.23 -44.38 170.12 263.88 70.72 7 49 30 2948.2 -47.19 135.42
60.00 6 19 21 4013.32 -33.97 170.75 258.68 66.87 7 26 14 3013.3 -40.10 141.47
68.26 4 45 33 4290.05 -18.04 184.08 249.74 59.35 5 57 23 3290.0 -29.05 160.76
68.26 4 45 33 4290.05 -18.04 184.08 249.74 59.35 5 57 23 3290.0 -29.05 160.76
68.26 4 45 33 4290.05 -18.04 184.08 249.74 59.35 5 57 23 3290.0 -29.05 160.76
68.26 4 45 33 4290.05 -18.04 184.08 249.74 59.35 5 57 23 3290.0 -29.05 160.76
68.26 4 45 33 4290.05 -18.04 184.08 249.74 59.35 5 57 23 3290.0 -29.05 160.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5608 TRA-2.2658 TC3-4.1346 BAU 1.7126 SGT 5274.2 SGR 3017.8 SG3 1305.3 ST 56.8 SR 35.5 SS 63.0
RDE .5689 RRA -.7128 RC3-2.7348 FAU .38579 RRT .9525 RRF .9903 RTF .9469 CRT .8562 CRS -.9919 CST -.7869
FDE 4.5187 FRA-3.9509 FC-12.9244 BSP 10357 SGB 6076.5 R23 .2189 R13 .9659 LSA 87.6 MSA 28.1 SSA 1.1
BDE .7987 BRA 2.3753 BC3 4.9572 FSP 2228 SG1 6022.9 SG2 805.1 THA 29.16 EL1 65.1 EL2 16.0 ALF 30.18



LAUNCH DATE AUG 28 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.946 GAL 4.52 AZL 85.52 HCA 155.89 SMA 197.78 ECC .24805 INC 4.4786 V1 29.484
RP 246.82 LAP 1.83 LOP 130.50 VP 20.109 GAP .35 AZP 94.09 TAL 23.04 TAP 178.93 RCA 148.72 APO 246.84 V2 22.207
RC 305.673 GL 30.10 GP -33.76 ZAL 54.23 ZAP 72.37 ETS 169.66 ZAE 96.60 ETE 186.41 ZAC 55.28 ETC 287.26 LVI 11.12

PLANETOCENTRIC CONIC

C3 26.150 VHL 5.114 DLA 36.11 RAL 6.99 RAD 6645.5 VEL 12.088 PTH 7.07 VHP 2.760 DPA -24.13 RAP 32.28 ECC 1.4304
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 35 11 3977.28 -43.70 172.58 264.33 68.93 7 41 28 2977.3 -47.39 136.20
60.00 6 4 52 4058.38 -32.72 173.91 258.41 65.03 7 12 30 3058.4 -39.79 145.26
66.55 4 35 6 4321.48 -18.39 186.80 249.89 58.36 5 47 7 3321.5 -29.76 163.57
66.55 4 35 6 4321.48 -18.39 186.80 249.89 58.36 5 47 7 3321.5 -29.76 163.57
66.55 4 35 6 4321.48 -18.39 186.80 249.89 58.36 5 47 7 3321.5 -29.76 163.57
66.55 4 35 6 4321.48 -18.39 186.80 249.89 58.36 5 47 7 3321.5 -29.76 163.57

DIFFERENTIAL CORRECTIONS

TDE .6235 TRA-2.3211 TC3-4.2056 BAU 1.7606
RDE .6156 RRA -.7501 RC3-2.7703 FAU .37592
FDE 4.4973 FRA-3.9039 FC-12.4457 BSP 10496
BDE .8762 BRA 2.4393 BC3 5.0360 FSP 2099

MID-COURSE EXECUTION ACCURACY

SGT 5417.6 SGR 3096.0 SG3 1271.9
RRF .9549 RRF .9911 RTF .9491
SGB 6239.9 R23 .2160 R13 .9673
SG1 6187.8 SG2 804.6 THA 29.16

ORBIT DETERMINATION ACCURACY

ST 59.9 SR 38.1 S8 63.3
CRT .8696 CRS -.9929 CST -.8074
LSA 91.0 MSA 27.7 S8A 1.0
EL1 69.1 EL2 16.3 ALF 30.83

LAUNCH DATE AUG 28 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.951 GAL 4.47 AZL 85.35 HCA 156.78 SMA 197.88 ECC .24817 INC 4.6506 V1 29.484
RP 246.98 LAP 1.83 LOP 131.39 VP 20.100 GAP .14 AZP 94.28 TAL 22.78 TAP 179.56 RCA 148.77 APO 246.99 V2 22.191
RC 308.046 GL 31.16 GP -34.53 ZAL 54.87 ZAP 71.77 ETS 168.86 ZAE 95.52 ETE 185.76 ZAC 54.55 ETC 287.42 LVI 11.88

PLANETOCENTRIC CONIC

C3 26.503 VHL 5.148 DLA 37.15 RAL 6.63 RAD 6645.6 VEL 12.102 PTH 7.08 VHP 2.802 DPA -24.89 RAP 32.60 ECC 1.4362
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 25 43 4008.76 -42.90 175.18 264.69 67.06 7 32 32 3008.8 -47.53 141.23
60.00 5 47 38 4110.81 -31.16 177.48 257.87 63.03 6 56 8 3110.8 -39.27 149.62
64.84 4 24 35 4351.63 -18.74 189.47 250.04 57.32 5 37 6 3351.6 -30.48 166.34
64.84 4 24 35 4351.63 -18.74 189.47 250.04 57.32 5 37 6 3351.6 -30.48 166.34
64.84 4 24 35 4351.63 -18.74 189.47 250.04 57.32 5 37 6 3351.6 -30.48 166.34
64.84 4 24 35 4351.63 -18.74 189.47 250.04 57.32 5 37 6 3351.6 -30.48 166.34

DIFFERENTIAL CORRECTIONS

TDE .6965 TRA-2.3718 TC3-4.2583 BAU 1.8023
RDE .6781 RRA -.7771 RC3-2.7824 FAU .36228
FDE 4.5330 FRA-3.7875 FC-11.8341 BSP 10790
BDE .9721 BRA 2.4959 BC3 5.0867 FSP 2041

MID-COURSE EXECUTION ACCURACY

SGT 5548.9 SGR 3155.0 SG3 1227.6
RRF .9561 RRF .9916 RTF .9493
SGB 6383.2 R23 .2186 R13 .9672
SG1 6331.6 SG2 810.0 THA 29.05

ORBIT DETERMINATION ACCURACY

ST 63.3 SR 41.3 S8 64.2
CRT .8784 CRS -.9942 CST -.8241
LSA 95.2 MSA 27.7 S8A 1.0
EL1 73.7 EL2 17.0 ALF 31.69

LAUNCH DATE AUG 28 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.957 GAL 4.42 AZL 85.16 HCA 157.66 SMA 197.98 ECC .24830 INC 4.8353 V1 29.484
RP 247.14 LAP 1.84 LOP 132.28 VP 20.091 GAP -.06 AZP 94.47 TAL 22.52 TAP 180.18 RCA 148.82 APO 247.14 V2 22.176
RC 310.393 GL 32.27 GP -35.34 ZAL 55.54 ZAP 71.22 ETS 168.03 ZAE 94.47 ETE 185.11 ZAC 53.78 ETC 287.59 LVI 12.67

PLANETOCENTRIC CONIC

C3 26.910 VHL 5.188 DLA 38.23 RAL 6.22 RAD 6645.8 VEL 12.119 PTH 7.09 VHP 2.847 DPA -25.59 RAP 32.96 ECC 1.4429
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 15 9 4043.05 -41.95 177.92 264.93 65.11 7 22 32 3043.0 -47.58 144.55
60.00 5 26 6 4174.66 -29.11 181.84 256.90 60.80 6 35 40 3174.7 -38.39 154.82
63.12 4 14 14 4380.73 -19.08 192.08 250.19 56.22 5 27 15 3380.7 -31.22 169.08
63.12 4 14 14 4380.73 -19.08 192.08 250.19 56.22 5 27 15 3380.7 -31.22 169.08
63.12 4 14 14 4380.73 -19.08 192.08 250.19 56.22 5 27 15 3380.7 -31.22 169.08
63.12 4 14 14 4380.73 -19.08 192.08 250.19 56.22 5 27 15 3380.7 -31.22 169.08

DIFFERENTIAL CORRECTIONS

TDE .7740 TRA-2.4228 TC3-4.2997 BAU 1.8441
RDE .7451 RRA -.8056 RC3-2.7906 FAU .34814
FDE 4.5600 FRA-3.6656 FC-11.2002 BSP 11080
BDE 1.0743 BRA 2.5532 BC3 5.1259 FSP 1978

MID-COURSE EXECUTION ACCURACY

SGT 5877.7 SGR 3216.0 SG3 1181.4
RRF .9572 RRF .9921 RTF .9494
SGB 6525.3 R23 .2213 R13 .9671
SG1 6474.0 SG2 816.4 THA 28.97

ORBIT DETERMINATION ACCURACY

ST 67.0 SR 44.7 S8 64.9
CRT .8869 CRS -.9952 CST -.8390
LSA 99.7 MSA 27.6 S8A .9
EL1 78.6 EL2 17.6 ALF 32.48

LAUNCH DATE AUG 28 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

RL 151.12 LAL .00 LOL 334.55 VL 32.982 GAL 4.38 AZL 84.97 HCA 158.55 SMA 198.08 ECC .24844 INC 5.0341 V1 29.484
RP 247.29 LAP 1.84 LOP 133.17 VP 20.084 GAP -.27 AZP 94.69 TAL 22.28 TAP 180.80 RCA 148.88 APO 247.30 V2 22.181
RC 312.717 GL 33.45 GP -36.20 ZAL 56.25 ZAP 70.73 ETS 167.16 ZAE 93.46 ETE 184.45 ZAC 52.96 ETC 287.79 LVI 13.58

PLANETOCENTRIC CONIC

C3 27.380 VHL 5.233 DLA 39.37 RAL 5.74 RAD 6646.0 VEL 12.138 PTH 7.11 VHP 2.897 DPA -26.35 RAP 33.38 ECC 1.4506
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 3 12 4080.87 -40.83 180.84 265.01 63.08 7 11 13 3080.7 -47.51 148.18
60.00 4 56 2 4261.47 -26.11 187.03 255.11 58.14 6 7 4 3261.5 -36.81 161.64
61.39 4 3 59 4409.05 -19.41 194.67 250.33 55.05 5 17 28 3409.1 -31.97 171.83
61.39 4 3 59 4409.05 -19.41 194.67 250.33 55.05 5 17 28 3409.1 -31.97 171.83
61.39 4 3 59 4409.05 -19.41 194.67 250.33 55.05 5 17 28 3409.1 -31.97 171.83
61.39 4 3 59 4409.05 -19.41 194.67 250.33 55.05 5 17 28 3409.1 -31.97 171.83

DIFFERENTIAL CORRECTIONS

TDE .8548 TRA-2.4733 TC3-4.3296 BAU 1.8865
RDE .8157 RRA -.8374 RC3-2.7858 FAU .33369
FDE 4.5720 FRA-3.5455 FC-10.5510 BSP 11379
BDE 1.1816 BRA 2.6131 BC3 5.1538 FSP 1907

MID-COURSE EXECUTION ACCURACY

SGT 5804.9 SGR 3281.0 SG3 1133.8
RRF .9583 RRF .9925 RTF .9494
SGB 6668.0 R23 .2237 R13 .9670
SG1 6617.0 SG2 822.9 THA 28.93

ORBIT DETERMINATION ACCURACY

ST 70.7 SR 48.3 S8 65.6
CRT .8950 CRS -.9959 CST -.8523
LSA 104.2 MSA 27.6 S8A .9
EL1 83.7 EL2 18.2 ALF 33.19

LAUNCH DATE AUG 28 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 32.968 GAL 4.33 AZL 84.75 HCA 159.43 SMA 198.20 ECC .24859 INC 5.2488 V1 29.484  
 RP 247.44 LAP 1.84 LOP 134.88 VP 20.077 GAP -.47 AZP 94.92 TAL 21.99 TAP 181.42 RCA 148.93 APO 247.46 V2 22.147  
 RC 315.013 GL 34.69 GP -37.09 ZAL 56.98 ZAP 70.30 ETS 166.32 ZAE 92.50 ETE 183.79 ZAC 52.09 ETC 288.00 LVI 14.41

DISTANCE 559,998 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.924 VHL 5.284 DLA 40.55 RAL 5.20 RAD 6646.2 VEL 12.160 PTH 7.13 VHP 2.951 DPA -27.15 RAP 33.85 ECC 1.4596  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 49 34 4122.33 -39.50 183.94 264.87 60.96 6 58 16 3122.3 -47.29 152.19  
 59.63 3 53 46 4436.64 -19.72 197.25 250.46 53.81 5 7 42 3436.6 -32.73 174.58  
 59.63 3 53 46 4436.64 -19.72 197.25 250.46 53.81 5 7 42 3436.6 -32.73 174.58  
 59.63 3 53 46 4436.64 -19.72 197.25 250.46 53.81 5 7 42 3436.6 -32.73 174.58  
 59.63 3 53 46 4436.64 -19.72 197.25 250.46 53.81 5 7 42 3436.6 -32.73 174.58  
 59.63 3 53 46 4436.64 -19.72 197.25 250.46 53.81 5 7 42 3436.6 -32.73 174.58

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .9360 TRA-2.5321 TC3-4.3498 BAU 1.9308 SGT 5934.7 SGR 3351.2 SG3 1085.0 ST 74.6 SR 51.9 SS 65.8  
 RDE .8894 RRA -.8739 RC3-2.7982 FAU .31900 RRT .9593 RRF .9929 RTF .9494 CRT .9020 CRS -.9964 CBT -.8632  
 FDE 4.5647 FRA-3.4294 FC3-9.8899 BSP 11642 SGB 6815.5 R23 .2260 R13 .9669 LSA 108.8 MSA 27.6 SBA .8  
 BDE 1.2912 BRA 2.6788 BC3 5.1721 FSP 1829 SG1 6764.8 SG2 829.8 THA 28.92 EL1 88.9 EL2 18.6 ALF 33.84

LAUNCH DATE AUG 28 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 32.973 GAL 4.28 AZL 84.52 HCA 160.31 SMA 198.31 ECC .24874 INC 5.4818 V1 29.484  
 RP 247.58 LAP 1.84 LOP 134.94 VP 20.071 GAP -.87 AZP 95.16 TAL 21.72 TAP 182.03 RCA 148.98 APO 247.63 V2 22.133  
 RC 317.282 GL 36.00 GP -38.04 ZAL 57.75 ZAP 69.93 ETS 165.45 ZAE 91.58 ETE 183.13 ZAC 51.17 ETC 288.24 LVI 15.35

DISTANCE 563,767 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 28.554 VHL 5.344 DLA 41.80 RAL 4.57 RAD 6648.4 VEL 12.186 PTH 7.15 VHP 3.011 DPA -27.97 RAP 34.38 ECC 1.4899  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 33 45 4189.10 -37.90 187.28 264.43 58.75 6 43 14 3169.1 -46.86 156.63  
 57.84 3 43 27 4463.90 -20.00 199.82 250.56 52.50 4 57 51 3463.9 -33.49 177.37  
 57.84 3 43 27 4463.90 -20.00 199.82 250.56 52.50 4 57 51 3463.9 -33.49 177.37  
 57.84 3 43 27 4463.90 -20.00 199.82 250.56 52.50 4 57 51 3463.9 -33.49 177.37  
 57.84 3 43 27 4463.90 -20.00 199.82 250.56 52.50 4 57 51 3463.9 -33.49 177.37  
 57.84 3 43 27 4463.90 -20.00 199.82 250.56 52.50 4 57 51 3463.9 -33.49 177.37

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.0217 TRA-2.5892 TC3-4.3538 BAU 1.9752 SGT 6059.6 SGR 3425.3 SG3 1034.5 ST 78.5 SR 55.7 SS 66.1  
 RDE .9681 RRA -.9139 RC3-2.7958 FAU .30388 RRT .9604 RRF .9933 RTF .9495 CRT .9087 CRS -.9967 CBT -.8730  
 FDE 4.5423 FRA-3.3112 FC3-9.2133 BSP 11928 SGB 6960.7 R23 .2280 R13 .9659 LSA 113.5 MSA 27.6 SBA .7  
 BDE 1.4075 BRA 2.7458 BC3 5.1742 FSP 1747 SG1 6910.2 SG2 836.5 THA 28.96 EL1 94.3 EL2 19.4 ALF 34.48

LAUNCH DATE AUG 28 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 32.979 GAL 4.23 AZL 84.26 HCA 161.19 SMA 198.42 ECC .24890 INC 5.7352 V1 29.484  
 RP 247.71 LAP 1.85 LOP 135.83 VP 20.066 GAP -.87 AZP 95.43 TAL 21.45 TAP 182.64 RCA 149.03 APO 247.80 V2 22.120  
 RC 319.522 GL 37.40 GP -39.05 ZAL 58.56 ZAP 69.63 ETS 164.56 ZAE 90.71 ETE 182.46 ZAC 50.18 ETC 288.50 LVI 16.38

DISTANCE 567,535 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.287 VHL 5.412 DLA 43.10 RAL 3.85 RAD 6646.7 VEL 12.216 PTH 7.17 VHP 3.078 DPA -28.83 RAP 34.98 ECC 1.4820  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 14 58 4222.69 -35.95 190.90 263.57 56.44 6 25 21 3222.7 -46.15 161.60  
 56.01 3 32 59 4490.88 -20.26 202.41 250.64 51.11 4 47 50 3490.9 -34.24 180.22  
 56.01 3 32 59 4490.88 -20.26 202.41 250.64 51.11 4 47 50 3490.9 -34.24 180.22  
 56.01 3 32 59 4490.88 -20.26 202.41 250.64 51.11 4 47 50 3490.9 -34.24 180.22  
 56.01 3 32 59 4490.88 -20.26 202.41 250.64 51.11 4 47 50 3490.9 -34.24 180.22  
 56.01 3 32 59 4490.88 -20.26 202.41 250.64 51.11 4 47 50 3490.9 -34.24 180.22

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1083 TRA-2.6500 TC3-4.3436 BAU 2.0208 SGT 6184.1 SGR 3503.3 SG3 982.0 ST 82.5 SR 59.6 SS 66.1  
 RDE 1.0520 RRA -.9584 RC3-2.7873 FAU .28824 RRT .9815 RRF .9935 RTF .9493 CRT .9143 CRS -.9970 CBT -.8810  
 FDE 4.5034 FRA-3.1903 FC3-8.5203 BSP 12200 SGB 7107.5 R23 .2304 R13 .9667 LSA 118.2 MSA 27.7 SBA .7  
 BDE 1.5281 BRA 2.8180 BC3 5.1810 FSP 1682 SG1 7037.2 SG2 844.1 THA 29.03 EL1 99.9 EL2 20.0 ALF 35.05

LAUNCH DATE AUG 28 1973 FLIGHT TIME 268.00 ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 32.985 GAL 4.18 AZL 83.99 HCA 162.07 SMA 198.53 ECC .24907 INC 6.0124 V1 29.484  
 RP 247.84 LAP 1.85 LOP 136.71 VP 20.061 GAP -1.07 AZP 95.72 TAL 21.17 TAP 183.24 RCA 149.08 APO 247.98 V2 22.107  
 RC 321.734 GL 38.87 GP -40.11 ZAL 59.40 ZAP 69.41 ETS 163.67 ZAE 89.89 ETE 181.79 ZAC 49.14 ETC 288.79 LVI 17.42

DISTANCE 571,301 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.143 VHL 5.490 DLA 44.46 RAL 3.02 RAD 6647.1 VEL 12.251 PTH 7.20 VHP 3.151 DPA -29.73 RAP 35.63 ECC 1.4961  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 51 50 4286.22 -33.48 194.96 262.10 53.98 6 3 17 3286.2 -45.01 167.30  
 54.14 3 22 18 4517.71 -20.47 205.02 250.68 49.63 4 37 35 3517.7 -34.99 183.13  
 54.14 3 22 18 4517.71 -20.47 205.02 250.68 49.63 4 37 35 3517.7 -34.99 183.13  
 54.14 3 22 18 4517.71 -20.47 205.02 250.68 49.63 4 37 35 3517.7 -34.99 183.13  
 54.14 3 22 18 4517.71 -20.47 205.02 250.68 49.63 4 37 35 3517.7 -34.99 183.13  
 54.14 3 22 18 4517.71 -20.47 205.02 250.68 49.63 4 37 35 3517.7 -34.99 183.13

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1953 TRA-2.7142 TC3-4.3168 BAU 2.0674 SGT 6306.4 SGR 3586.2 SG3 927.7 ST 86.5 SR 63.7 SS 65.8  
 RDE 1.1410 RRA -1.0088 RC3-2.7724 FAU .27211 RRT .9625 RRF .9938 RTF .9491 CRT .9190 CRS -.9972 CBT -.8873  
 FDE 4.4439 FRA-3.0688 FC3-7.8152 BSP 12467 SGB 7254.8 R23 .2327 R13 .9665 LSA 122.9 MSA 27.8 SBA .6  
 BDE 1.6525 BRA 2.8956 BC3 5.1302 FSP 1571 SG1 7204.6 SG2 851.6 THA 29.14 EL1 105.4 EL2 20.6 ALF 35.64

LAUNCH DATE AUG 28 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC

DISTANCE 575.065

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.99D GAL 4.12 AZL 83.68 HCA 162.95 SMA 198.64 ECC .24924 INC 6.3168 V1 29.484  
 RP 247.97 LAP 1.85 LOP 137.59 VP 20.058 GAP -1.27 AZP 96.04 TAL 20.90 TAP 183.84 RCA 149.13 APO 248.15 V2 22.095  
 RC 323.917 GL 40.45 GP -41.23 ZAL 60.29 ZAP 69.25 ETS 162.78 ZAE 69.12 ETE 181.11 ZAC 48.03 ETC 289.12 LVI 18.54

PLANETOCENTRIC CONIC

C3 31.146 VHL 5.581 DLA 45.88 RAL 2.06 RAD 6647.4 VEL 12.291 PTH 7.23 VHP 3.232 DPA -30.66 RAP 36.36 ECC 1.5126  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 21 7 4367.23 -30.13 199.78 259.55 51.26 5 33 55 3367.2 -43.13 174.18  
 52.23 3 11 16 4544.57 -20.63 207.65 250.66 48.06 4 27 1 3544.6 -35.71 186.13  
 52.23 3 11 16 4544.57 -20.63 207.65 250.66 48.06 4 27 1 3544.6 -35.71 186.13  
 52.23 3 11 16 4544.57 -20.63 207.65 250.66 48.06 4 27 1 3544.6 -35.71 186.13  
 52.23 3 11 16 4544.57 -20.63 207.65 250.66 48.06 4 27 1 3544.6 -35.71 186.13  
 52.23 3 11 16 4544.57 -20.63 207.65 250.66 48.06 4 27 1 3544.6 -35.71 186.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2827 TRA-2.7812 TC3-4.2701 BAU 2.1150 SGT 6424.5 SGR 3675.0 SG3 871.7 ST 90.4 SR 67.8 SS 65.2  
 RDE 1.2355 RRA-1.0656 RC3-2.7507 FAU .25557 RRT .9636 RRF .9939 RTF .9489 CRT .9231 CRS -.9972 CST -.8924  
 FDE 4.3618 FRA-2.9453 FC3-7.1039 BSP 12741 SGB 7401.3 R23 .2348 R13 .9663 LSA 127.4 MSA 28.0 SSA .6  
 BDE 1.7809 BRA 2.9763 BC3 5.0794 FSP 1475 SGI 7351.3 S62 858.8 THA 29.30 EL1 111.0 EL2 21.2 ALF 36.24

LAUNCH DATE AUG 28 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC

DISTANCE 578.828

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 32.996 GAL 4.07 AZL 83.35 HCA 163.82 SMA 198.76 ECC .24942 INC 6.6528 V1 29.484  
 RP 248.09 LAP 1.85 LOP 138.47 VP 20.055 GAP -1.47 AZP 96.39 TAL 20.62 TAP 184.44 RCA 149.18 APO 248.33 V2 22.084  
 RC 326.069 GL 42.12 GP -42.41 ZAL 61.23 ZAP 69.18 ETS 161.88 ZAE 88.42 ETE 180.44 ZAC 46.85 ETC 289.49 LVI 19.74

PLANETOCENTRIC CONIC

C3 32.329 VHL 5.686 DLA 47.37 RAL .93 RAD 6647.9 VEL 12.339 PTH 7.27 VHP 3.324 DPA -31.64 RAP 37.16 ECC 1.5321  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 26 9 4506.00 -23.97 207.25 253.83 47.58 4 41 15 3506.0 -38.95 184.85  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23  
 50.27 2 59 46 4571.72 -20.73 210.33 250.56 46.40 4 15 57 3571.7 -36.40 189.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3662 TRA-2.8531 TC3-4.2053 BAU 2.1650 SGT 6541.0 SGR 3770.4 SG3 814.0 ST 94.0 SR 72.0 SS 64.3  
 RDE 1.3358 RRA-1.1299 RC3-2.7214 FAU .23861 RRT .9646 RRF .9939 RTF .9484 CRT .9260 CRS -.9972 CST -.8955  
 FDE 4.2562 FRA-2.8171 FC3-6.3895 BSP 12999 SGB 7549.9 R23 .2374 R13 .9660 LSA 131.8 MSA 28.3 SSA .5  
 BDE 1.9107 BRA 3.0687 BC3 5.0091 FSP 1374 SGI 7499.9 S62 867.0 THA 29.51 EL1 116.4 EL2 22.0 ALF 36.87

LAUNCH DATE AUG 28 1973

FLIGHT TIME 274.00

ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC

DISTANCE 582.589

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 33.002 GAL 4.02 AZL 82.97 HCA 164.70 SMA 198.87 ECC .24961 INC 7.0258 V1 29.484  
 RP 248.20 LAP 1.85 LOP 139.36 VP 20.053 GAP -1.67 AZP 96.78 TAL 20.34 TAP 185.04 RCA 149.23 APO 248.52 V2 22.073  
 RC 328.191 GL 43.89 GP -43.66 ZAL 62.22 ZAP 69.19 ETS 161.00 ZAE 87.78 ETE 179.77 ZAC 45.60 ETC 289.91 LVI 21.00

PLANETOCENTRIC CONIC

C3 33.733 VHL 5.808 DLA 48.92 RAL 359.62 RAD 6648.4 VEL 12.395 PTH 7.31 VHP 3.427 DPA -32.66 RAP 38.05 ECC 1.5552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45  
 48.26 2 47 40 4599.28 -20.75 213.04 250.36 44.64 4 4 20 3599.3 -37.03 192.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4433 TRA-2.9302 TC3-4.1185 BAU 2.2163 SGT 6653.4 SGR 3870.7 SG3 754.0 ST 97.3 SR 76.3 SS 62.9  
 RDE 1.4425 RRA-1.2023 RC3-2.6811 FAU .22094 RRT .9656 RRF .9939 RTF .9475 CRT .9275 CRS -.9971 CST -.8965  
 FDE 4.1260 FRA-2.6819 FC3-5.6703 BSP 13270 SGB 7697.4 R23 .2409 R13 .9654 LSA 135.7 MSA 29.7 SSA .3  
 BDE 2.0406 BRA 3.1673 BC3 4.9143 FSP 1274 SGI 7647.4 S62 876.3 THA 29.75 EL1 121.5 EL2 22.8 ALF 37.56

LAUNCH DATE AUG 28 1973

FLIGHT TIME 276.00

ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC

DISTANCE 586.349

EARTH TO MARS

RL 151.12 LAL .00 LOL 334.55 VL 33.008 GAL 3.97 AZL 82.56 HCA 165.57 SMA 198.99 ECC .24980 INC 7.4425 V1 29.484  
 RP 248.30 LAP 1.85 LOP 140.24 VP 20.051 GAP -1.87 AZP 97.21 TAL 20.06 TAP 185.63 RCA 149.28 APO 248.70 V2 22.062  
 RC 330.263 GL 45.79 GP -44.99 ZAL 63.26 ZAP 69.30 ETS 160.13 ZAE 87.21 ETE 179.12 ZAC 44.28 ETC 290.38 LVI 22.35

PLANETOCENTRIC CONIC

C3 35.412 VHL 5.951 DLA 50.54 RAL 358.08 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 3.544 DPA -33.72 RAP 39.04 ECC 1.5828  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81  
 46.20 2 34 49 4627.49 -20.66 215.79 250.01 42.79 3 51 56 3627.5 -37.59 195.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5068 TRA-3.0144 TC3-4.0104 BAU 2.2709 SGT 6763.0 SGR 3980.3 SG3 692.5 ST 100.0 SR 80.4 SS 61.1  
 RDE 1.5325 RRA-1.2864 RC3-2.6318 FAU .20293 RRT .9665 RRF .9937 RTF .9464 CRT .9274 CRS -.9968 CST -.8949  
 FDE 3.9621 FRA-2.5425 FC3-4.9611 BSP 13512 SGB 7847.4 R23 .2449 R13 .9645 LSA 139.1 MSA 29.3 SSA .5  
 BDE 2.1635 BRA 3.2774 BC3 4.7968 FSP 1166 SGI 7797.2 S62 886.0 THA 30.06 EL1 126.1 EL2 23.9 ALF 38.32

LAUNCH DATE AUG 28 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 33.014 GAL 3.92 AZL 82.09 MCA 166.44 SMA 199.11 ECC .23001 INC 7.9114 V1 29.484  
 RP 248.40 LAP 1.85 LOP 141.12 VP 20.050 GAP -2.06 AZP 97.69 TAL 19.78 TAP 186.22 RCA 149.33 APO 248.09 V2 22.052  
 RC 332.344 GL 47.81 GP -48.39 ZAL 64.35 ZAP 89.51 ETS 159.29 ZAE 86.71 ETE 178.48 ZAC 42.87 ETC 290.91 LVI 23.77

DISTANCE 590.107 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.437 VHL 6.119 DLA 52.21 RAL 358.25 RAD 8849.8 VEL 12.543 PTH 7.42 VHP 3.678 DPA -34.82 RAP 40.12 ECC 1.6161  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29  
 44.09 2 21 1 4656.52 -20.45 218.58 249.46 40.84 3 38 38 3656.5 -38.04 199.29

DIFFERENTIAL CORRECTIONS  
 TDE 1.5518 TRA-3.1055 TC3-3.8771 BAV 2.3292 SGT 6866.6 SGR 4103.5 SG3 630.2 ST 102.0 SR 84.2 SS 58.7  
 RDE 1.6833 RRA-1.3668 RC3-2.5741 FAU .18473 RRT .9677 RRF .9933 RTF .9453 CRT .9260 CRS -.9964 CST -.8807  
 FDC 3.7593 FRA-2.4030 FC3-4.2720 BSP 13745 SGB 7998.8 R23 .2484 R13 .9838 LSA 141.5 MSA 30.0 SSA .4  
 BDC 2.2746 BRA 3.4011 BC3 4.6538 FSP 1049 SGI 7948.7 SG2 893.6 TMA 30.47 EL1 129.8 EL2 25.0 ALF 39.14

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 28 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC  
 RL 151.12 LAL .00 LOL 334.55 VL 33.020 GAL 3.86 AZL 81.56 MCA 167.31 SMA 199.23 ECC .23021 INC 8.4427 V1 29.484  
 RP 248.50 LAP 1.85 LOP 141.99 VP 20.050 GAP -2.28 AZP 98.24 TAL 19.49 TAP 186.80 RCA 149.38 APO 249.08 V2 22.043  
 RC 334.376 GL 49.97 GP -47.88 ZAL 65.51 ZAP 89.82 ETS 158.49 ZAE 86.31 ETE 177.87 ZAC 41.38 ETC 291.53 LVI 23.27

DISTANCE 593.861 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.904 VHL 6.317 DLA 53.93 RAL 354.08 RAD 8650.6 VEL 12.640 PTH 7.49 VHP 3.832 DPA -35.97 RAP 41.32 ECC 1.6367  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92  
 41.95 2 6 3 4686.63 -20.08 221.41 248.66 38.82 3 24 10 3686.6 -38.35 202.92

DIFFERENTIAL CORRECTIONS  
 TDE 1.5661 TRA-3.2042 TC3-3.7175 BAV 2.3892 SGT 6980.2 SGR 4228.8 SG3 584.9 ST 102.8 SR 87.9 SS 55.8  
 RDE 1.7782 RRA-1.4980 RC3-2.4974 FAU .18544 RRT .9684 RRF .9926 RTF .9426 CRT .9210 CRS -.9958 CST -.8807  
 FDC 3.5305 FRA-2.2418 FC3-3.3894 BSP 14018 SGB 8144.1 R23 .2559 R13 .9619 LSA 142.9 MSA 31.3 SSA .4  
 BDC 2.3695 BRA 3.5371 BC3 4.4785 FSP 942 SGI 8093.4 SG2 907.4 TMA 30.90 EL1 132.6 EL2 26.6 ALF 40.14

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 29 1973

FLIGHT TIME 102.00

ARRIVAL DATE DEC 9 1973

HELIOCENTRIC CONIC										DISTANCE 262.501										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.866	GAL	5.97	AZL	89.75	HCA	81.48	SMA	236.13	ECC	.37301	INC	.2486	V1	29.491	RP	222.86	LAP	.25	LOP	56.99	VP	25.079	GAP	21.67	AZP	89.96	TAL	22.15	TAP	103.63	RCA	148.05	APO	324.21	V2	24.673	RC	97.860	GL	1.36	GP	-5.84	ZAL	50.80	ZAP	168.17	ETS	211.11	ZAE	159.52	ETE	343.10	ZAC	76.81	ETC	282.35	LVI	10.075
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	39.864	VHL	6.314	DLA	11.41	RAL	23.89	RAD	6650.6	VEL	12.639	PTH	7.49	VHP	7.177	DPA	11.19	RAP	46.13	ECC	1.6561	SGT	897.9	SGR	651.7	SG3	176.5	ST	16.8	SR	30.0	SS	3.6	CRT	.7360	CRS	.6657	CST	.1608																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-1.095	RRF	.1553	RTF	-.5262	LSA	32.8	MSA	10.6	SSA	2.0	EL1	32.7	EL2	10.4	ALF	64.79																						
50.00	9	43	0	3533.52	-46.71	131.22	269.19	100.34	10	41	54	2533.5	-37.42	100.91	50.00	10	10	4	3461.51	-39.91	126.09	270.54	96.17	11	7	45	2461.5	-33.13	97.23	60.00	10	48	10	3349.38	-34.03	117.60	271.14	93.05	11	44	0	2349.4	-29.25	89.93																					
60.00	10	10	4	3461.51	-39.91	126.09	270.54	96.17	11	7	45	2461.5	-33.13	97.23	80.00	11	43	23	3176.42	-29.84	104.66	271.31	90.99	12	36	19	2176.4	-26.40	77.76	90.00	12	59	2	2932.27	-28.28	86.73	271.33	90.24	13	47	54	1932.3	-25.33	60.11																					
70.00	10	48	10	3349.38	-34.03	117.60	271.14	93.05	11	44	0	2349.4	-29.25	89.93	100.00	14	26	15	2650.89	-29.84	68.03	271.31	90.99	15	10	25	1650.9	-26.40	39.13	110.00	15	47	36	2396.19	-34.03	46.52	271.14	93.05	16	27	33	1396.2	-29.25	18.85																					

LAUNCH DATE AUG 29 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 11 1973

HELIOCENTRIC CONIC										DISTANCE 265.611										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.456	GAL	5.98	AZL	89.72	HCA	82.57	SMA	232.99	ECC	.36482	INC	.2829	V1	29.491	RP	223.25	LAP	.28	LOP	56.08	VP	24.886	GAP	21.27	AZP	89.96	TAL	22.57	TAP	105.14	RCA	147.99	APO	317.98	V2	24.631	RC	100.104	GL	1.56	GP	-5.99	ZAL	50.18	ZAP	167.27	ETS	209.53	ZAE	158.64	ETE	342.43	ZAC	76.64	ETC	282.33	LVI	-9.90
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	38.777	VHL	6.227	DLA	11.38	RAL	23.23	RAD	6650.2	VEL	12.596	PTH	7.46	VHP	6.954	DPA	11.10	RAP	46.32	ECC	1.6382	SGT	912.5	SGR	658.1	SG3	188.4	ST	17.0	SR	30.2	SS	3.8	CRT	.7409	CRS	.6405	CST	.1209																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-1.169	RRF	.1663	RTF	-.5335	LSA	33.1	MSA	10.7	SSA	2.1	EL1	33.0	EL2	10.4	ALF	64.62																						
50.00	9	40	30	3525.83	-46.61	130.50	267.81	100.88	10	39	16	2525.8	-37.14	100.36	60.00	10	7	36	3453.70	-39.85	125.44	269.24	96.62	11	5	9	2453.7	-32.91	96.69	70.00	10	45	45	3341.42	-34.00	116.98	269.88	93.41	11	41	27	2341.4	-29.08	89.37																					
60.00	10	7	36	3453.70	-39.85	125.44	269.24	96.62	11	5	9	2453.7	-32.91	96.69	80.00	11	41	0	3168.32	-29.83	104.06	270.08	91.30	12	33	49	2168.3	-26.26	77.20	90.00	12	56	41	2924.10	-28.28	86.14	270.11	90.54	13	45	25	1924.1	-25.20	59.55																					
70.00	10	45	45	3341.42	-34.00	116.98	269.88	93.41	11	41	27	2341.4	-29.08	89.37	100.00	14	23	52	2642.80	-29.83	65.42	270.08	91.30	15	7	55	1642.8	-26.26	38.57	110.00	15	45	11	2388.24	-34.00	45.90	269.88	93.41	16	25	0	1388.2	-29.08	18.29																					

LAUNCH DATE AUG 29 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 13 1973

HELIOCENTRIC CONIC										DISTANCE 268.789										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.353	GAL	5.99	AZL	89.68	HCA	83.65	SMA	230.11	ECC	.35716	INC	.3171	V1	29.491	RP	223.64	LAP	.32	LOP	59.17	VP	24.701	GAP	20.87	AZP	89.97	TAL	22.99	TAP	106.65	RCA	147.92	APO	312.30	V2	24.590	RC	102.397	GL	1.77	GP	-6.13	ZAL	49.59	ZAP	166.36	ETS	208.14	ZAE	158.82	ETE	341.69	ZAC	76.47	ETC	282.32	LVI	-9.72
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	37.782	VHL	6.147	DLA	11.38	RAL	22.58	RAD	6649.9	VEL	12.556	PTH	7.43	VHP	6.740	DPA	11.00	RAP	46.49	ECC	1.6218	SGT	926.4	SGR	664.3	SG3	201.0	ST	17.2	SR	30.3	SS	4.1	CRT	.7461	CRS	.6174	CST	.0866																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-1.244	RRF	.1778	RTF	-.5305	LSA	33.3	MSA	10.8	SSA	2.2	EL1	33.3	EL2	10.4	ALF	64.44																						
50.00	9	38	1	3518.66	-46.52	129.84	266.49	101.39	10	36	40	2518.7	-36.88	99.89	60.00	10	5	9	3446.44	-39.79	124.83	268.99	97.02	11	2	36	2446.4	-32.70	96.18	70.00	10	43	21	3334.04	-33.97	116.41	268.67	93.75	11	38	55	2334.0	-28.91	88.88																					
60.00	10	5	9	3446.44	-39.79	124.83	268.99	97.02	11	2	36	2446.4	-32.70	96.18	80.00	11	38	39	3160.82	-29.82	103.50	268.90	91.60	12	31	20	2160.8	-26.13	76.88	90.00	12	54	20	2916.54	-28.27	85.58	268.94	90.82	13	42	57	1916.5	-25.08	59.02																					
70.00	10	43	21	3334.04	-33.97	116.41	268.67	93.75	11	38	55	2334.0	-28.91	88.88	100.00	14	21	31	2635.29	-29.82	64.87	268.90	91.60	15	5	26	1635.3	-26.13	38.05	110.00	15	42	48	2380.88	-33.97	45.33	268.67	93.75	16	22	28	1380.9	-28.91	17.78																					

LAUNCH DATE AUG 29 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 15 1973

HELIOCENTRIC CONIC										DISTANCE 272.026										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.255	GAL	6.01	AZL	89.65	HCA	84.74	SMA	227.47	ECC	.35000	INC	.3511	V1	29.491	RP	224.03	LAP	.35	LOP	60.25	VP	24.523	GAP	20.47	AZP	89.97	TAL	23.41	TAP	108.15	RCA	147.86	APO	307.09	V2	24.548	RC	104.735	GL	1.97	GP	-6.29	ZAL	49.00	ZAP	165.42	ETS	206.93	ZAE	159.04	ETE	340.88	ZAC	76.30	ETC	282.32	LVI	-9.54
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.872	VHL	6.072	DLA	11.32	RAL	21.94	RAD	6649.6	VEL	12.520	PTH	7.40	VHP	6.533	DPA	10.89	RAP	46.64	ECC	1.6068	SGT	939.1	SGR	670.3	SG3	214.0	ST	16.8	SR	30.5	SS	4.3	CRT	.7450	CRS	.6055	CST	.0615																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-1.422	RRF	.1892	RTF	-.5629	LSA	33.4	MSA	10.7	SSA	2.2	EL1	33.3	EL2	10.3	ALF	65.10																						
50.00	9	35	35	3511.99	-46.42	129.22	265.24	101.85	10	34	7	2512.0	-36.64	99.44	60.00	10	2	44	3439.70	-39.73	124.26	266.79	97.40	11	0	4	2439.7	-32.51	95.72	70.00	10	40	58	3327.20	-33.94	115.88	267.52	94.07	11	36	26	2327.2	-28.76	88.39																					
60.00	10	2	44	3439.70	-39.73	124.26	266.79	97.40	11	0	4	2439.7	-32.51	95.72	80.00	11	36	18	3153.87	-29.80	102.98	267.77	91.87	12	28	52	2153.9	-26.01	76.20	90.00	12	52	0	2909.55	-28.26	85.07	267.81	91.08	13	40	29	1909.6	-24.97	58.55																					
70.00	10	40	58	3327.20	-33.94	115.88	267.52	94.07	11	36	26	2327.2	-28.76	88.39	100.00	14	19	10	2628.35	-29.80	64.35	267.77	91.87	15	2	58	1628.3	-26.01	37.57	110.00	15	40	25	2374.02	-33.94	44.79	267.52	94.07	16	19	59	1374.0	-28.76	17.30																					

LAUNCH DATE AUG 29 1973 FLIGHT TIME 110.00 ARRIVAL DATE DEC 17 1973

HELIOCENTRIC CONIC										DISTANCE 275.317										EARTH TO MARS																																																																																																																																																																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.164	GAL	6.02	AZL	89.61	HCA	85.81	SMA	225.06	ECC	.34330	INC	.3847	V1	29.491	RP	224.42	LAP	.38	LOP	61.33	VP	24.353	GAP	20.08	AZP	89.97	TAL	23.82	TAP	109.63	RCA	147.79	APO	302.32	V2	24.506	RC	107.119	GL	2.18	GP	-6.45	ZAL	48.44	ZAP	164.47	ETS	205.85	ZAE	159.30	ETE	339.99	ZAC	76.13	ETC	282.31	LVI	-9.35																																																																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																																													
C3	36.037	VHL	6.003	DLA	11.31	RAL	21.32	RAD	6649.3	VEL	12.487	PTH	7.38	VHP	6.335	DPA	10.77	RAP	46.78	ECC	1.9931	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																																		
50.00	9	33	11	3503.85	-46.34	128.65	264.04	102.28	10	31	37	2505.9	-36.41	99.03	50.00	9	30	49	3500.20	-46.25	128.13	262.91	102.68	10	29	10	2500.2	-36.20	98.66	60.00	10	0	22	3433.51	-39.67	123.75	265.65	97.75	10	57	35	2433.5	-32.33	95.29	60.00	9	58	1	3427.82	-39.62	123.27	264.57	98.07	10	55	9	2427.8	-32.16	94.90	70.00	10	38	37	3320.94	-33.91	115.39	266.41	94.35	11	33	58	2320.9	-28.62	87.95	70.00	10	36	18	3313.21	-33.68	114.95	265.36	94.61	11	31	33	2315.2	-28.49	87.56	80.00	11	33	58	3147.54	-29.79	102.51	266.69	92.11	12	26	26	2147.5	-25.90	75.77	80.00	11	31	39	3141.77	-29.77	102.08	265.65	92.34	12	24	1	2141.8	-25.79	75.37	90.00	12	49	41	2903.18	-28.25	84.61	266.74	91.31	13	38	4	1903.2	-24.87	58.10	90.00	12	47	23	2897.39	-28.24	84.18	265.71	91.52	13	35	40	1897.4	-24.77	57.71	100.00	14	16	50	2622.01	-29.79	63.88	266.69	92.11	15	0	32	1622.0	-25.90	37.13	100.00	14	14	31	2616.24	-29.77	63.45	265.65	92.34	14	58	7	1616.2	-25.79	36.74	110.00	15	38	4	2367.76	-33.91	44.31	266.41	94.35	16	17	31	1367.8	-28.62	16.87	110.00	15	35	44	2362.03	-33.88	43.86	265.36	94.61	16	15	8	1362.0	-28.49	16.48
TDE	-.2942	TRA	-.6899	TC3	.5288	BAU	.2662	SGT	952.3	SGR	878.4	SG3	228.3	ST	17.1	SR	30.7	SS	4.6	RDE	-.8388	RRA	.2268	RC3	-.1608	FAU	.09046	RRT	-.1474	RRF	.2025	RTF	-.5828	CRT	.7524	CR8	.5788	C8T	.0288	FDE	.0892	FRA	-.4158	FC3	-2.1753	BSP	1171	SG8	1188.1	R23	-.0420	R13	.5741	L8A	33.7	M8A	10.8	S8A	2.3	BDE	.7033	BRA	.7072	BC3	.5524	F8P	309	SG1	962.3	SG2	862.0	THA	168.55	EL1	33.6	EL2	10.3	ALF	64.63																																																																																																																																		

LAUNCH DATE AUG 29 1973 FLIGHT TIME 112.00 ARRIVAL DATE DEC 19 1973

HELIOCENTRIC CONIC										DISTANCE 278.856										EARTH TO MARS																																																																																																																																																																																													
RL	151.08	LAL	.00	LOL	335.52	VL	34.078	GAL	6.04	AZL	89.58	HCA	86.89	SMA	222.83	ECC	.33704	INC	.4183	V1	29.491	RP	224.81	LAP	.42	LOP	62.40	VP	24.190	GAP	19.69	AZP	89.98	TAL	24.22	TAP	111.11	RCA	147.73	APO	297.94	V2	24.464	RC	108.544	GL	2.39	GP	-6.61	ZAL	47.90	ZAP	163.50	ETS	204.89	ZAE	159.61	ETE	339.02	ZAC	75.95	ETC	282.31	LVI	-9.17																																																																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																																													
C3	35.271	VHL	5.939	DLA	11.30	RAL	20.72	RAD	6649.0	VEL	12.457	PTH	7.35	VHP	6.144	DPA	10.84	RAP	46.91	ECC	1.5805	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																																		
50.00	9	30	49	3500.20	-46.25	128.13	262.91	102.68	10	29	10	2500.2	-36.20	98.66	50.00	9	58	1	3427.82	-39.62	123.27	264.57	98.07	10	55	9	2427.8	-32.16	94.90	60.00	10	36	18	3313.21	-33.68	114.95	265.36	94.61	11	31	33	2315.2	-28.49	87.56	60.00	11	31	39	3141.77	-29.77	102.08	265.65	92.34	12	24	1	2141.8	-25.79	75.37	70.00	10	38	37	3320.94	-33.91	115.39	266.41	94.35	11	33	58	2320.9	-28.62	87.95	70.00	10	36	18	3313.21	-33.68	114.95	265.36	94.61	11	31	33	2315.2	-28.49	87.56	80.00	11	33	58	3147.54	-29.79	102.51	266.69	92.11	12	26	26	2147.5	-25.90	75.77	80.00	11	31	39	3141.77	-29.77	102.08	265.65	92.34	12	24	1	2141.8	-25.79	75.37	90.00	12	49	41	2903.18	-28.25	84.61	266.74	91.31	13	38	4	1903.2	-24.87	58.10	90.00	12	47	23	2897.39	-28.24	84.18	265.71	91.52	13	35	40	1897.4	-24.77	57.71	100.00	14	16	50	2622.01	-29.79	63.88	266.69	92.11	15	0	32	1622.0	-25.90	37.13	100.00	14	14	31	2616.24	-29.77	63.45	265.65	92.34	14	58	7	1616.2	-25.79	36.74	110.00	15	38	4	2367.76	-33.91	44.31	266.41	94.35	16	17	31	1367.8	-28.62	16.87	110.00	15	35	44	2362.03	-33.88	43.86	265.36	94.61	16	15	8	1362.0	-28.49	16.48
TDE	-.2973	TRA	-.6831	TC3	.5473	BAU	.2708	SGT	964.6	SGR	882.5	SG3	243.2	ST	17.4	SR	30.8	SS	4.9	RDE	-.8358	RRA	.2234	RC3	-.1730	FAU	.09522	RRT	-.1538	RRF	.2163	RTF	-.5840	CRT	.7592	CR8	.5581	C8T	.0030	FDE	.0819	FRA	-.4651	FC3	-2.3371	BSP	1228	SG8	1181.6	R23	-.0503	R13	.5769	L8A	33.9	M8A	10.9	S8A	2.4	BDE	.7011	BRA	.6997	BC3	.5740	F8P	332	SG1	975.4	SG2	866.8	THA	168.23	EL1	33.8	EL2	10.3	ALF	64.24																																																																																																																																		

LAUNCH DATE AUG 29 1973 FLIGHT TIME 114.00 ARRIVAL DATE DEC 21 1973

HELIOCENTRIC CONIC										DISTANCE 282.038										EARTH TO MARS																																																																																																																																																																																													
RL	151.08	LAL	.00	LOL	335.52	VL	33.997	GAL	6.05	AZL	89.55	HCA	87.96	SMA	220.79	ECC	.33118	INC	.4516	V1	29.491	RP	225.20	LAP	.45	LOP	63.47	VP	24.033	GAP	19.31	AZP	89.98	TAL	24.81	TAP	112.57	RCA	147.87	APO	293.91	V2	24.422	RC	112.011	GL	2.60	GP	-6.78	ZAL	47.37	ZAP	162.51	ETS	204.03	ZAE	159.96	ETE	337.94	ZAC	75.77	ETC	282.31	LVI	-8.99																																																																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																																													
C3	34.588	VHL	5.879	DLA	11.29	RAL	20.14	RAD	6648.7	VEL	12.429	PTH	7.33	VHP	5.980	DPA	10.49	RAP	47.03	ECC	1.5889	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																																		
50.00	9	28	31	3495.03	-46.18	127.66	261.83	103.03	10	26	46	2495.0	-36.01	98.31	50.00	9	55	43	3422.83	-39.57	122.84	263.53	98.38	10	52	45	2422.8	-32.00	94.59	60.00	10	33	59	3310.00	-33.85	114.54	264.36	94.85	11	29	9	2310.0	-28.37	87.20	60.00	11	29	21	3138.54	-29.76	101.70	264.67	92.54	12	21	38	2138.5	-25.69	75.01	70.00	10	38	37	3320.94	-33.91	115.39	266.41	94.35	11	33	58	2320.9	-28.62	87.95	70.00	10	36	18	3313.21	-33.68	114.95	265.36	94.61	11	31	33	2315.2	-28.49	87.56	80.00	11	33	58	3147.54	-29.79	102.51	266.69	92.11	12	26	26	2147.5	-25.90	75.77	80.00	11	31	39	3141.77	-29.77	102.08	265.65	92.34	12	24	1	2141.8	-25.79	75.37	90.00	12	49	41	2903.18	-28.25	84.61	266.74	91.31	13	38	4	1903.2	-24.87	58.10	90.00	12	47	23	2897.39	-28.24	84.18	265.71	91.52	13	35	40	1897.4	-24.77	57.71	100.00	14	16	50	2622.01	-29.79	63.88	266.69	92.11	15	0	32	1622.0	-25.90	37.13	100.00	14	14	31	2616.24	-29.77	63.45	265.65	92.34	14	58	7	1616.2	-25.79	36.74	110.00	15	38	4	2367.76	-33.91	44.31	266.41	94.35	16	17	31	1367.8	-28.62	16.87	110.00	15	35	44	2362.03	-33.85	43.46	264.36	94.85	16	12	42	1356.8	-28.37	16.12
TDE	-.2998	TRA	-.6561	TC3	.5857	BAU	.2752	SGT	978.1	SGR	888.5	SG3	258.9	ST	17.6	SR	30.9	SS	5.2	RDE	-.8312	RRA	.2200	RC3	-.1861	FAU	.10020	RRT	-.1614	RRF	.2308	RTF	-.5858	CRT	.7652	CR8	.5367	C8T	-.0188	FDE	.0951	FRA	-.5170	FC3	-2.5095	BSP	1275	SG8	1194.5	R23	-.0577	R13	.5803	L8A	34.1	M8A	11.0	S8A	2.5	BDE	.6987	BRA	.6920	BC3	.5955	F8P	357	SG1	988.0	SG2	871.3	THA	167.81	EL1	34.1	EL2	10.3	ALF	63.92																																																																																																																																		

LAUNCH DATE AUG 29 1973 FLIGHT TIME 116.00 ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC										DISTANCE 285.459										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	33.920	GAL	6.07	AZL	89.52	HCA	89.02	SMA	218.90	ECC	.32569	INC	.4847	V1	29.491	RP	225.59	LAP	.48	LOP	64.54	VP	23.882	GAP	18.93	AZP	89.99	TAL	25.00	TAP	114.02	RCA	147.80	APO	290.19	V2	24.380	RC	114.316	GL	2.81	GP	-6.96	ZAL	46.87	ZAP	161.50	ETS	203.26	ZAE	160.35	ETE	336.78	ZAC	75.59	ETC	282.31	LVI	-8.81
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.921	VHL	5.824	DLA	11.29	RAL	19.57	RAD	6648.5	VEL	12.403	PTH	7.31	VHP	5.783	DPA	10.34	RAP	47.13	ECC	1.5583	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME</																											

LAUNCH DATE AUG 29 1973 FLIGHT TIME 118.00 ARRIVAL DATE DEC 28 1973

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 33.848 GAL 6.08 AZL 89.48 HCA 90.09 SMA 217.15 ECC .32055 INC .5177 V1 29.491  
 RP 225.98 LAP .52 LOP 65.60 VP 23.737 GAP 18.56 AZP 90.00 TAL 25.37 TAP 115.46 RCA 147.54 APO 286.76 V2 24.338  
 RC 117.057 GL 3.02 GP -7.14 ZAL 46.38 ZAP 180.48 ETS 202.56 ZAE 180.77 ETE 335.45 ZAC 75.40 ETC 282.32 LVI -0.63

Planetocentric Conic: C3 33.326 VHL 5.773 DLA 11.30 RAL 19.02 RAD 6648.3 VEL 12.379 PTH 7.30 VHP 5.613 DPA 10.17 RAP 47.21 ECC 1.5485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 24 1 3486.05 -46.03 126.84 259.84 103.65 10 22 7 2486.0 -35.67 97.72  
 60.00 9 51 12 3413.89 -39.48 122.10 261.62 98.85 10 48 5 2413.7 -31.74 93.94  
 70.00 10 29 27 3301.11 -33.80 113.85 262.50 95.25 11 24 28 2301.1 -28.16 86.59  
 80.00 11 24 49 3127.70 -29.73 101.04 262.84 92.89 12 16 56 2127.7 -25.53 74.41  
 90.00 12 40 32 2883.34 -28.21 83.16 262.91 92.03 13 28 35 1883.3 -24.53 56.75  
 100.00 14 7 40 2602.17 -29.73 62.41 262.84 92.89 14 51 3 1602.2 -25.53 35.77  
 110.00 15 28 54 2347.93 -33.80 42.77 262.50 95.25 16 8 2 1347.9 -28.16 15.51

Differential Corrections: TDE -.3028 TRA -.6411 TC3 .6009 BAV .2843 SGT 996.4 SGR 700.8 SG3 293.1 ST 17.9 SR 31.1 SS 5.8  
 RDE -.6241 RRA .2124 RC3 -.2143 FAU .11101 RRT -.1791 RRF .2620 RTF -.5698 CRT .7764 CRS .5027 CST -.0534  
 FDE .1029 FRA -.6321 FC3-2.8839 BSP 1340 SGB 1218.1 R23 -.0716 R13 .5882 LSA 34.5 MSA 11.2 SSA 2.6  
 BDE .6937 BRA .6754 BC3 .6380 FSP 412 SGI 1011.0 SG2 679.5 THA 186.75 EL1 34.5 EL2 10.2 ALF 63.39

LAUNCH DATE AUG 29 1973 FLIGHT TIME 120.00 ARRIVAL DATE DEC 27 1973

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 33.781 GAL 6.09 AZL 89.45 HCA 91.15 SMA 215.54 ECC .31574 INC .5506 V1 29.491  
 RP 226.37 LAP .55 LOP 66.66 VP 23.597 GAP 18.19 AZP 90.01 TAL 25.73 TAP 116.88 RCA 147.49 APO 283.60 V2 24.297  
 RC 119.633 GL 3.23 GP -7.33 ZAL 45.92 ZAP 159.44 ETS 201.92 ZAE 161.22 ETE 333.99 ZAC 75.22 ETC 282.33 LVI -8.44

Planetocentric Conic: C3 32.778 VHL 5.725 DLA 11.32 RAL 18.49 RAD 6648.1 VEL 12.357 PTH 7.28 VHP 5.450 DPA 9.99 RAP 47.28 ECC 1.5394  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 21 50 3482.21 -45.97 126.49 258.93 103.92 10 19 52 2482.2 -35.52 97.47  
 60.00 9 49 0 3409.91 -39.44 121.78 260.74 99.06 10 45 49 2409.9 -31.62 93.69  
 70.00 10 27 14 3297.39 -33.77 113.57 261.64 95.42 11 22 11 2297.4 -28.07 86.34  
 80.00 11 22 34 3124.06 -29.72 100.77 261.99 93.03 12 14 38 2124.1 -25.46 74.16  
 90.00 12 38 16 2879.73 -28.20 82.89 262.07 92.17 13 26 16 1879.7 -24.47 56.50  
 100.00 14 5 26 2598.53 -29.72 62.14 261.99 93.03 14 48 44 1598.5 -25.46 35.53  
 110.00 15 26 40 2344.21 -33.77 42.48 261.64 95.42 16 5 44 1344.2 -28.07 15.26

Differential Corrections: TDE -.3041 TRA -.6337 TC3 .6160 BAV .2884 SGT 1004.9 SGR 707.1 SG3 311.5 ST 18.1 SR 31.2 SS 6.1  
 RDE -.6206 RRA .2082 RC3 -.2295 FAU .11682 RRT -.1886 RRF .2787 RTF -.5712 CRT .7818 CRS .4896 CST -.0652  
 FDE .1080 FRA -.6951 FC3-3.0856 BSP 1367 SGB 1228.7 R23 -.0767 R13 .5919 LSA 34.7 MSA 11.3 SSA 2.7  
 BDE .6911 BRA .6671 BC3 .6581 FSP 442 SGI 1021.2 SG2 683.3 THA 186.14 EL1 34.6 EL2 10.2 ALF 63.14

LAUNCH DATE AUG 29 1973 FLIGHT TIME 122.00 ARRIVAL DATE DEC 29 1973

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 33.717 GAL 6.10 AZL 89.42 HCA 92.20 SMA 214.05 ECC .31123 INC .5833 V1 29.491  
 RP 226.76 LAP .58 LOP 67.72 VP 23.463 GAP 17.82 AZP 90.02 TAL 26.08 TAP 118.29 RCA 147.43 APO 280.67 V2 24.255  
 RC 122.241 GL 3.45 GP -7.53 ZAL 45.48 ZAP 158.37 ETS 201.33 ZAE 161.71 ETE 332.38 ZAC 75.03 ETC 282.34 LVI -8.28

Planetocentric Conic: C3 32.272 VHL 5.681 DLA 11.35 RAL 17.98 RAD 6647.9 VEL 12.337 PTH 7.26 VHP 5.292 DPA 9.60 RAP 47.33 ECC 1.5311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 19 41 3478.79 -45.92 126.18 258.07 104.15 10 17 40 2478.8 -35.39 97.25  
 60.00 9 46 50 3406.56 -39.40 121.51 259.90 99.25 10 43 36 2406.6 -31.52 93.46  
 70.00 10 25 2 3294.15 -33.75 113.31 260.82 95.57 11 19 56 2294.2 -28.00 86.12  
 80.00 11 20 20 3120.91 -29.71 100.54 261.18 93.15 12 12 21 2120.9 -25.40 73.94  
 90.00 12 36 1 2876.63 -28.20 82.67 261.26 92.28 13 23 58 1876.6 -24.42 56.29  
 100.00 14 3 12 2595.38 -29.71 61.91 261.18 93.15 14 46 27 1595.4 -25.40 35.31  
 110.00 15 24 26 2340.97 -33.75 42.23 260.82 95.57 16 3 29 1341.0 -28.00 15.04

Differential Corrections: TDE -.3054 TRA -.6286 TC3 .6314 BAV .2923 SGT 1012.5 SGR 713.8 SG3 330.9 ST 18.2 SR 31.3 SS 6.5  
 RDE -.6172 RRA .2037 RC3 -.2454 FAU .12293 RRT -.1984 RRF .2961 RTF -.5720 CRT .7870 CRS .4765 CST -.0765  
 FDE .1131 FRA -.7823 FC3-3.2878 BSP 1388 SGB 1238.6 R23 -.0883 R13 .5953 LSA 34.8 MSA 11.4 SSA 2.8  
 BDE .6886 BRA .6589 BC3 .6775 FSP 474 SGI 1030.6 SG2 687.0 THA 185.47 EL1 34.8 EL2 10.1 ALF 62.90

LAUNCH DATE AUG 29 1973 FLIGHT TIME 124.00 ARRIVAL DATE DEC 31 1973

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 33.657 GAL 6.12 AZL 89.38 HCA 93.25 SMA 212.67 ECC .30701 INC .6161 V1 29.491  
 RP 227.15 LAP .62 LOP 68.77 VP 23.334 GAP 17.46 AZP 90.04 TAL 26.42 TAP 119.88 RCA 147.37 APO 277.96 V2 24.214  
 RC 124.878 GL 3.66 GP -7.73 ZAL 45.05 ZAP 157.29 ETS 200.79 ZAE 162.21 ETE 330.60 ZAC 74.63 ETC 282.35 LVI -8.08

Planetocentric Conic: C3 31.805 VHL 5.640 DLA 11.38 RAL 17.48 RAD 6647.7 VEL 12.318 PTH 7.25 VHP 5.140 DPA 9.60 RAP 47.36 ECC 1.5234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 36 3475.77 -45.86 125.90 257.26 104.35 10 15 31 2475.8 -35.27 97.06  
 60.00 9 44 42 3403.65 -39.37 121.27 259.12 99.41 10 41 25 2403.6 -31.43 93.27  
 70.00 10 22 51 3291.36 -33.73 113.10 260.05 95.70 11 17 43 2291.4 -27.93 85.93  
 80.00 11 18 7 3118.26 -29.70 100.34 260.42 93.25 12 10 5 2118.3 -25.35 73.76  
 90.00 12 33 47 2874.04 -28.19 82.48 260.50 92.37 13 21 41 1874.0 -24.37 56.11  
 100.00 14 0 59 2592.73 -29.70 61.71 260.42 93.25 14 44 11 1592.7 -25.35 35.13  
 110.00 15 22 18 2338.18 -33.73 42.02 260.05 95.70 16 1 16 1338.2 -27.93 14.85

Differential Corrections: TDE -.3065 TRA -.6199 TC3 .6445 BAV .2959 SGT 1018.9 SGR 720.3 SG3 351.3 ST 18.3 SR 31.3 SS 6.9  
 RDE -.6138 RRA .1989 RC3 -.2622 FAU .12934 RRT -.2088 RRF .3144 RTF -.5721 CRT .7919 CRS .4659 CST -.0848  
 FDE .1191 FRA -.8332 FC3-3.5208 BSP 1405 SGB 1247.8 R23 -.0940 R13 .5985 LSA 35.0 MSA 11.6 SSA 2.9  
 BDE .6861 BRA .6510 BC3 .6958 FSP 508 SGI 1039.2 SG2 690.6 THA 184.73 EL1 34.9 EL2 10.1 ALF 62.67

LAUNCH DATE AUG 29 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC

DISTANCE 303.034

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.001 GAL 6.13 AZL 89.35 HCA 94.30 SMA 211.38 ECC .30306 INC .6488 V1 29.491
RP 227.54 LAP .65 LOP 69.82 VP 23.210 GAP 17.11 AZP 90.05 TAL 26.75 TAP 121.05 RCA 147.32 APO 275.44 V2 24.172
RC 127.544 GL 3.87 GP -7.94 ZAL 44.65 ZAP 156.19 ETS 200.29 ZAE 162.74 ETE 326.60 ZAC 74.64 ETC 282.37 LVI -7.89

PLANETOCENTRIC CONIC

C3 31.373 VHL 5.801 DLA 11.42 RAL 17.01 RAD 6647.5 VEL 12.300 PTH 7.24 VHP 4.995 DPA 9.39 RAP 47.38 ECC 1.5183
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 15 33 3473.15 -45.82 125.66 256.90 104.53 10 13 26 2473.1 -35.17 96.89
60.00 9 42 36 3401.15 -39.34 121.06 258.37 99.55 10 39 17 2401.1 -31.36 93.10
70.00 10 20 42 3289.02 -33.72 112.92 259.32 95.80 11 15 31 2289.0 -27.88 85.77
80.00 11 15 55 3116.08 -29.69 100.18 259.70 93.34 12 7 51 2116.1 -25.31 73.61
90.00 12 31 33 2871.94 -28.18 82.32 259.78 92.45 13 19 25 1871.9 -24.34 55.97
100.00 13 58 46 2590.55 -29.69 61.55 259.70 93.34 14 41 57 1590.6 -25.31 34.98
110.00 15 20 9 2335.84 -33.72 41.84 259.32 95.80 15 59 4 1335.8 -27.88 14.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3081 TRA -.6140 TC3 .6557 BAU .2990 SGT 1024.4 SGR 727.3 SG3 372.6 ST 18.5 SR 31.4 SS 7.3
RDE -.6103 RRA .1939 RC3 -.2797 FAU .13606 RRT -.2188 RRF .3332 RTF -.5711 CRT .7970 CRS .4594 CST -.0877
FDE .1269 FRA -.9074 FC3-3.7544 B8P 1423 SGB 1256.3 R23 -.1028 R13 .6010 LSA 35.1 MSA 11.7 SSA 2.9
BDE .6837 BRA .6439 BC3 .7128 B8P 544 SG1 1047.0 SG2 694.3 THA 163.97 EL1 35.0 EL2 10.0 ALF 62.39

LAUNCH DATE AUG 29 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC

DISTANCE 306.623

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.548 GAL 6.14 AZL 89.32 HCA 95.35 SMA 210.19 ECC .29936 INC .6815 V1 29.491
RP 227.93 LAP .68 LOP 70.86 VP 23.090 GAP 16.75 AZP 90.06 TAL 27.06 TAP 122.41 RCA 147.27 APO 273.11 V2 24.131
RC 130.237 GL 4.09 GP -8.15 ZAL 44.28 ZAP 155.07 ETS 199.83 ZAE 163.28 ETE 326.38 ZAC 74.44 ETC 282.39 LVI -7.71

PLANETOCENTRIC CONIC

C3 30.973 VHL 5.565 DLA 11.47 RAL 16.55 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 4.854 DPA 9.16 RAP 47.37 ECC 1.5097
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 13 33 3470.89 -45.78 125.46 255.78 104.69 10 11 24 2470.9 -35.09 96.74
60.00 9 40 32 3399.04 -39.32 120.89 257.68 99.66 10 37 11 2399.0 -31.29 92.96
70.00 10 18 35 3287.11 -33.70 112.77 256.63 95.89 11 13 22 2287.1 -27.83 85.64
80.00 11 13 43 3114.37 -29.68 100.05 259.01 93.40 12 5 38 2114.4 -25.28 73.50
90.00 12 29 20 2870.32 -28.18 82.21 259.10 92.51 13 17 11 1870.3 -24.31 55.86
100.00 13 56 35 2588.84 -29.68 61.42 259.01 93.40 14 39 44 1588.8 -25.28 34.87
110.00 15 18 1 2333.93 -33.70 41.69 258.63 95.89 15 56 55 1333.9 -27.83 14.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3095 TRA -.6085 TC3 .6650 BAU .3018 SGT 1028.4 SGR 734.6 SG3 395.1 ST 18.6 SR 31.4 SS 7.7
RDE -.6069 RRA .1884 RC3 -.2982 FAU .14310 RRT -.2290 RRF .3530 RTF -.5892 CRT .8018 CRS .4519 CST -.0818
FDE .1346 FRA -.9887 FC3-3.9999 B8P 1437 SGB 1263.9 R23 -.1121 R13 .6031 LSA 35.2 MSA 11.9 SSA 3.0
BDE .6813 BRA .6368 BC3 .7288 B8P 582 SG1 1033.6 SG2 698.0 THA 163.13 EL1 35.1 EL2 9.9 ALF 62.12

LAUNCH DATE AUG 29 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC

DISTANCE 310.233

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.498 GAL 6.15 AZL 89.29 HCA 96.39 SMA 209.09 ECC .29588 INC .7141 V1 29.491
RP 228.32 LAP .71 LOP 71.91 VP 22.974 GAP 16.41 AZP 90.08 TAL 27.36 TAP 123.75 RCA 147.22 APO 270.95 V2 24.090
RC 132.954 GL 4.30 GP -8.38 ZAL 43.92 ZAP 153.93 ETS 199.39 ZAE 163.83 ETE 323.90 ZAC 74.23 ETC 282.42 LVI -7.53

PLANETOCENTRIC CONIC

C3 30.802 VHL 5.532 DLA 11.52 RAL 16.12 RAD 6647.2 VEL 12.269 PTH 7.21 VHP 4.719 DPA 8.92 RAP 47.35 ECC 1.8036
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 11 35 3469.00 -45.75 125.29 255.11 104.81 10 9 24 2469.0 -35.01 96.62
60.00 9 38 31 3397.33 -39.30 120.74 257.02 99.76 10 35 8 2397.3 -31.24 92.84
70.00 10 18 29 3285.62 -33.69 112.66 257.98 95.96 11 11 14 2285.6 -27.79 85.54
80.00 11 11 33 3113.11 -29.68 99.96 258.37 93.45 12 3 26 2113.1 -25.25 73.41
90.00 12 27 8 2869.16 -28.17 82.12 258.46 92.53 13 14 57 1869.2 -24.29 55.78
100.00 13 54 24 2587.58 -29.68 61.33 258.37 93.45 14 37 32 1587.6 -25.25 34.78
110.00 15 15 55 2332.44 -33.69 41.57 257.98 95.96 15 54 47 1332.4 -27.79 14.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3111 TRA -.6034 TC3 .6723 BAU .3042 SGT 1031.4 SGR 742.5 SG3 418.7 ST 18.8 SR 31.4 SS 8.1
RDE -.6034 RRA .1826 RC3 -.3175 FAU .15048 RRT -.2390 RRF .3734 RTF -.5582 CRT .8065 CRS .4462 CST -.0932
FDE .1435 FRA -1.0698 FC3-4.2371 B8P 1448 SGB 1270.9 R23 -.1223 R13 .6047 LSA 35.3 MSA 12.1 SSA 3.0
BDE .6789 BRA .6304 BC3 .7435 B8P 622 SG1 1059.5 SG2 701.9 THA 162.24 EL1 35.2 EL2 9.9 ALF 61.83

LAUNCH DATE AUG 29 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC

DISTANCE 313.860

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.492 GAL 6.16 AZL 89.25 HCA 97.43 SMA 208.08 ECC .29263 INC .7467 V1 29.491
RP 228.70 LAP .74 LOP 72.94 VP 22.863 GAP 16.08 AZP 90.10 TAL 27.65 TAP 125.08 RCA 147.18 APO 268.95 V2 24.049
RC 135.894 GL 4.52 GP -8.61 ZAL 43.58 ZAP 152.77 ETS 198.98 ZAE 164.37 ETE 321.13 ZAC 74.03 ETC 282.45 LVI -7.34

PLANETOCENTRIC CONIC

C3 30.258 VHL 5.501 DLA 11.59 RAL 15.70 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 4.589 DPA 8.66 RAP 47.31 ECC 1.4980
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 9 40 3467.46 -45.72 125.15 254.49 104.92 10 7 27 2467.5 -34.95 96.52
60.00 9 36 31 3395.98 -39.28 120.63 256.40 99.83 10 33 7 2396.0 -31.20 92.76
70.00 10 14 24 3284.54 -33.69 112.57 257.37 96.00 11 9 8 2284.5 -27.77 85.47
80.00 11 9 23 3112.29 -29.67 99.90 257.76 93.48 12 1 15 2112.3 -25.24 73.36
90.00 12 24 56 2868.47 -28.17 82.07 257.85 92.58 13 12 44 1868.5 -24.28 55.73
100.00 13 52 15 2586.76 -29.67 61.27 257.76 93.48 14 35 21 1586.8 -25.24 34.72
110.00 15 13 50 2331.35 -33.69 41.49 257.37 96.00 15 52 41 1331.4 -27.77 14.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3127 TRA -.5992 TC3 .6775 BAU .3063 SGT 1033.3 SGR 750.8 SG3 443.4 ST 18.9 SR 31.4 SS 8.5
RDE -.5999 RRA .1784 RC3 -.3378 FAU .15820 RRT -.2488 RRF .3945 RTF -.5620 CRT .8110 CRS .4419 CST -.0933
FDE .1535 FRA -1.1574 FC3-4.5265 B8P 1456 SGB 1277.2 R23 -.1333 R13 .6060 LSA 35.4 MSA 12.3 SSA 3.1
BDE .6765 BRA .6246 BC3 .7571 B8P 663 SG1 1064.4 SG2 705.9 THA 161.27 EL1 35.3 EL2 9.8 ALF 61.53



LAUNCH DATE AUG 29 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 10 1974

Heliocentric Conic Data: RL 151.08 LAL .00 LOL 335.92 VL 33.408 GAL 6.18 AZL 89.22 HCA 98.48 SMA 207.11 ECC .28959 INC .7794 V1 29.491  
 RP 229.08 LAP .77 LOP 73.98 VP 22.756 GAP 15.72 AZP 90.11 TAL 27.92 TAP 126.38 RCA 147.13 APO 267.08 V2 24.008  
 RC 138.457 GL 4.74 GP -8.85 ZAL 43.27 ZAP 151.59 ETS 190.60 ZAE 164.91 ETE 318.04 ZAC 73.82 ETC 282.48 LVI -7.16

PLANETOCENTRIC CONIC Data: C3 29.930 VHL 5.472 DLA 11.66 RAL 15.30 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 4.465 DPA 8.39 RAP 47.25 ECC 1.4927  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 7 47 3466.25 -45.70 125.04 253.90 105.00 10 5 34 2466.2 -34.91 96.44  
 60.00 9 34 34 3395.00 -39.27 120.55 255.83 99.88 10 31 9 2395.0 -31.17 92.69  
 70.00 10 12 20 3283.85 -33.68 112.52 256.80 96.04 11 7 4 2283.8 -27.75 85.42  
 80.00 11 7 13 3111.89 -29.67 99.87 257.19 93.50 11 59 5 2111.9 -25.23 73.33  
 90.00 12 22 44 2868.22 -26.17 82.05 257.28 92.59 13 10 32 1868.2 -24.27 55.72  
 100.00 13 50 5 2586.37 -29.67 61.24 257.19 93.50 14 33 12 1586.4 -25.23 34.70  
 110.00 15 11 46 2330.66 -33.68 41.44 256.80 96.04 15 50 37 1330.7 -27.75 14.34

DIFFERENTIAL CORRECTIONS: TDE -.3146 TRA -.5959 TC3 .6799 BAU .3077 SGT 1033.5 SGR 759.7 S63 469.2 ST 19.1 SR 31.3 SS 8.9  
 RDE -.5962 RRA .1698 RC3 -.3590 FAU .16623 RRT -.2577 RRF .4161 RTF -.5559 CRT .8154 CRS .4389 CST -.0919  
 FDE .1647 FRA -1.2493 FC3 -4.8069 BSP 1464 SGB 1282.7 R23 -.1456 R13 .6063 LSA 35.5 MSA 12.5 S8A 3.1  
 BDE .6742 BRA .6197 BC3 .7689 F8P 708 S61 1068.0 S62 710.3 THA 160.25 EL1 35.4 EL2 9.6 ALF 61.10

LAUNCH DATE AUG 29 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 12 1974

Heliocentric Conic Data: RL 151.08 LAL .00 LOL 335.52 VL 33.368 GAL 6.17 AZL 89.19 HCA 99.49 SMA 206.22 ECC .28673 INC .8122 V1 29.491  
 RP 229.48 LAP .80 LOP 75.01 VP 22.652 GAP 15.39 ZAP 90.13 TAL 28.18 TAP 127.67 RCA 147.09 APO 265.35 V2 23.967  
 RC 141.241 GL 4.96 GP -9.09 ZAL 42.97 ZAP 150.39 ETS 198.23 ZAE 165.42 ETE 314.59 ZAC 73.61 ETC 282.51 LVI -8.97

PLANETOCENTRIC CONIC Data: C3 29.640 VHL 5.444 DLA 11.74 RAL 14.91 RAD 6646.9 VEL 12.230 PTH 7.18 VHP 4.345 DPA 8.11 RAP 47.17 ECC 1.4878  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 57 3465.36 -45.69 124.96 253.36 105.06 10 3 43 2465.4 -34.87 96.39  
 60.00 9 32 38 3394.37 -39.26 120.50 255.29 99.92 10 29 12 2394.4 -31.15 92.65  
 70.00 10 10 18 3283.54 -33.68 112.49 256.26 96.05 11 5 1 2283.5 -27.74 85.40  
 80.00 11 5 4 3111.92 -29.67 99.87 256.65 93.50 11 56 56 2111.9 -25.23 73.33  
 90.00 12 20 32 2868.40 -26.17 82.07 256.75 92.58 13 8 20 1868.4 -24.28 55.73  
 100.00 13 47 56 2586.39 -29.67 61.24 256.65 93.50 14 31 3 1586.4 -25.23 34.70  
 110.00 15 9 44 2330.36 -33.68 41.41 256.26 96.05 15 48 34 1330.4 -27.74 14.32

DIFFERENTIAL CORRECTIONS: TDE -.3165 TRA -.5932 TC3 .6801 BAU .3090 SGT 1032.4 SGR 769.3 S63 496.1 ST 19.2 SR 31.3 SS 9.4  
 RDE -.5925 RRA .1628 RC3 -.3813 FAU .17461 RRT -.2661 RRF .4383 RTF -.5487 CRT .8196 CRS .4389 CST -.0885  
 FDE .1775 FRA -1.3453 FC3 -5.1001 BSP 1470 SGB 1287.5 R23 -.1585 R13 .6065 LSA 35.6 MSA 12.8 S8A 3.2  
 BDE .6717 BRA .6152 BC3 .7797 F8P 754 S61 1070.7 S62 715.0 THA 159.14 EL1 35.4 EL2 9.7 ALF 60.84

LAUNCH DATE AUG 29 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 14 1974

Heliocentric Conic Data: RL 151.08 LAL .00 LOL 335.52 VL 33.328 GAL 6.17 AZL 89.15 HCA 100.52 SMA 205.40 ECC .28405 INC .8451 V1 29.491  
 RP 229.88 LAP .83 LOP 76.04 VP 22.552 GAP 15.05 AZP 90.15 TAL 28.42 TAP 128.94 RCA 147.05 APO 263.74 V2 23.927  
 RC 144.046 GL 5.18 GP -9.35 ZAL 42.70 ZAP 149.17 ETS 197.88 ZAE 165.90 ETE 310.75 ZAC 73.39 ETC 282.55 LVI -8.79

PLANETOCENTRIC CONIC Data: C3 29.362 VHL 5.419 DLA 11.83 RAL 14.55 RAD 6646.8 VEL 12.219 PTH 7.17 VHP 4.230 DPA 7.81 RAP 47.07 ECC 1.4832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 9 3484.79 -45.67 124.91 252.86 105.10 10 1 54 2464.8 -34.85 96.35  
 60.00 9 30 44 3394.08 -39.26 120.48 254.79 99.93 10 27 18 2394.1 -31.14 92.63  
 70.00 10 8 16 3283.61 -33.68 112.50 255.76 96.05 11 3 0 2283.6 -27.74 85.40  
 80.00 11 2 56 3112.36 -29.67 99.90 256.15 93.48 11 54 48 2112.4 -25.24 73.36  
 90.00 12 18 20 2869.01 -26.17 82.11 256.24 92.56 13 6 9 1869.0 -24.29 55.77  
 100.00 13 45 48 2586.83 -29.67 61.27 256.15 93.48 14 28 35 1586.8 -25.24 34.73  
 110.00 15 7 43 2330.43 -33.68 41.42 255.76 96.05 15 46 33 1330.4 -27.74 14.32

DIFFERENTIAL CORRECTIONS: TDE -.3184 TRA -.5913 TC3 .6779 BAU .3099 SGT 1030.1 SGR 779.8 S63 524.2 ST 19.4 SR 31.2 SS 9.9  
 RDE -.5888 RRA .1554 RC3 -.4046 FAU .18335 RRT -.2738 RRF .4610 RTF -.5599 CRT .8236 CRS .4389 CST -.0848  
 FDE .1916 FRA -1.4464 FC3 -5.4060 BSP 1470 SGB 1291.9 R23 -.1724 R13 .6065 LSA 35.6 MSA 13.1 S8A 3.2  
 BDE .6892 BRA .6114 BC3 .7893 F8P 803 S61 1072.5 S62 720.2 THA 157.94 EL1 35.5 EL2 9.7 ALF 60.48

LAUNCH DATE AUG 29 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 16 1974

Heliocentric Conic Data: RL 151.08 LAL .00 LOL 335.52 VL 33.291 GAL 6.18 AZL 89.12 HCA 101.54 SMA 204.83 ECC .28155 INC .8780 V1 29.491  
 RP 230.25 LAP .86 LOP 77.06 VP 22.456 GAP 14.73 AZP 90.18 TAL 28.65 TAP 130.19 RCA 147.02 APO 262.24 V2 23.887  
 RC 146.870 GL 5.40 GP -9.61 ZAL 42.45 ZAP 147.92 ETS 197.54 ZAE 166.33 ETE 306.30 ZAC 73.18 ETC 282.59 LVI -8.60

PLANETOCENTRIC CONIC Data: C3 29.103 VHL 5.395 DLA 11.92 RAL 14.20 RAD 6646.7 VEL 12.208 PTH 7.16 VHP 4.119 DPA 7.50 RAP 46.95 ECC 1.4790  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 24 3464.53 -45.67 124.89 252.39 105.12 10 0 8 2464.5 -34.84 96.33  
 60.00 9 28 51 3394.12 -39.26 120.48 254.32 99.93 10 25 25 2394.1 -31.14 92.63  
 70.00 10 6 16 3284.04 -33.68 112.53 255.29 96.03 11 1 0 2284.0 -27.76 85.43  
 80.00 11 0 48 3113.19 -29.68 99.97 255.68 93.45 11 52 41 2113.2 -25.25 73.42  
 90.00 12 16 8 2870.03 -26.18 82.18 255.77 92.52 13 3 58 1870.0 -24.30 55.84  
 100.00 13 43 40 2587.66 -29.68 61.33 255.68 93.45 14 26 47 1587.7 -25.25 34.79  
 110.00 15 5 42 2330.86 -33.68 41.45 255.29 96.03 15 44 33 1330.9 -27.76 14.35

DIFFERENTIAL CORRECTIONS: TDE -.3205 TRA -.5903 TC3 .6729 BAU .3105 SGT 1026.4 SGR 790.9 S63 553.4 ST 19.6 SR 31.1 SS 10.3  
 RDE -.5846 RRA .1476 RC3 -.4290 FAU .19243 RRT -.2801 RRF .4841 RTF -.5292 CRT .8274 CRS .4389 CST -.0803  
 FDE .2070 FRA -1.5517 FC3 -5.7244 BSP 1469 SGB 1295.8 R23 -.1873 R13 .6061 LSA 35.7 MSA 13.4 S8A 3.2  
 BDE .6667 BRA .6085 BC3 .7980 F8P 854 S61 1073.2 S62 726.1 THA 156.64 EL1 35.5 EL2 9.6 ALF 60.09

LAUNCH DATE AUG 29 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC

DISTANCE 332.219

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.257 GAL 6.18 AZL 89.09 HCA 102.56 SMA 203.92 ECC .27919 INC .9112 V1 29.491
RP 230.63 LAP .89 LOP 78.08 VP 22.362 GAP 14.40 AZP 90.20 TAL 28.87 TAP 131.43 RCA 146.98 APO 260.85 V2 23.847
RC 149.713 GL 5.82 GP -9.87 ZAL 42.21 ZAP 146.66 ETS 197.22 ZAE 166.70 ETE 301.82 ZAC 72.96 ETC 282.64 LVI -6.42

PLANETOCENTRIC CONIC

C3 28.861 VHL 5.372 DLA 12.03 RAL 13.87 RAD 6646.6 VEL 12.199 PTH 7.16 VHP 4.013 DPA 7.17 RAP 46.81 ECC 1.4750
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 0 40 3484.54 -45.67 124.89 251.96 105.11 9 58 25 2464.5 -34.84 96.33
60.00 9 27 0 3394.46 -39.27 120.51 253.88 99.81 10 23 34 2394.5 -31.15 92.65
70.00 10 4 16 3284.81 -33.69 112.59 254.85 95.99 10 59 1 2264.8 -27.77 85.48
80.00 10 58 39 3114.40 -29.68 100.06 255.24 93.40 11 50 34 2114.4 -25.28 73.50
90.00 12 13 56 2871.45 -28.18 82.29 255.33 92.47 13 1 48 1871.4 -24.33 55.94
100.00 13 41 31 2588.87 -29.68 61.42 255.24 93.40 14 24 40 1588.9 -25.28 34.87
110.00 15 3 42 2331.63 -33.69 41.51 254.85 95.99 15 42 34 1331.6 -27.77 14.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3139 TRA -.5817 TC3 .6772 BAU .3148 SGT 1021.7 SGR 803.7 SCS 585.0 ST 19.3 SR 31.1 SS 10.8
RDE -.5809 RRA .1389 RC3 -.4551 FAU .20220 RRT -.2976 RRF .5087 RTF -.5298 CRT .8280 CRS .4260 CST -.0920
FDE .2170 FRA-1.6669 FC3-6.0655 B8P 1368 SGB 1209.9 R23 -.1880 R13 .6189 LSA 35.5 MSA 13.6 S8A 3.3
BDE .6603 BRA .5980 BC3 .8159 F8P 898 SGI 1077.0 SGI 727.8 THA 154.57 EL1 35.3 EL2 9.5 ALF 60.44

LAUNCH DATE AUG 29 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC

DISTANCE 335.926

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.225 GAL 6.18 AZL 89.06 HCA 103.58 SMA 203.25 ECC .27899 INC .9445 V1 29.491
RP 231.01 LAP .92 LOP 79.10 VP 22.272 GAP 14.08 AZP 90.22 TAL 29.07 TAP 132.65 RCA 146.95 APO 259.55 V2 23.807
RC 152.572 GL 5.84 GP -10.15 ZAL 42.00 ZAP 145.37 ETS 196.90 ZAE 166.99 ETE 296.74 ZAC 72.73 ETC 282.69 LVI -6.24

PLANETOCENTRIC CONIC

C3 28.633 VHL 5.351 DLA 12.14 RAL 13.56 RAD 6646.5 VEL 12.189 PTH 7.15 VHP 3.911 DPA 6.83 RAP 46.64 ECC 1.4712
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 58 59 3464.86 -45.68 124.92 251.56 105.09 9 56 44 2464.9 -34.85 96.35
60.00 9 25 10 3395.14 -39.27 120.56 253.48 99.88 10 21 46 2395.1 -31.17 92.70
70.00 10 2 17 3285.94 -33.70 112.68 254.45 95.94 10 57 3 2285.9 -27.80 85.56
80.00 10 56 31 3116.01 -29.69 100.18 254.83 93.34 11 48 27 2116.0 -25.31 73.61
90.00 12 11 44 2873.29 -28.19 82.42 254.92 92.40 12 59 37 1873.3 -24.36 56.06
100.00 13 39 23 2590.49 -29.69 61.54 254.83 93.34 14 22 34 1590.5 -25.31 34.98
110.00 15 1 43 2332.76 -33.70 41.60 254.45 95.94 15 40 36 1332.8 -27.80 14.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3188 TRA -.5863 TC3 .8812 BAU .3131 SGT 1015.1 SGR 816.6 SCS 616.1 ST 19.7 SR 30.9 SS 11.3
RDE -.5764 RRA .1303 RC3 -.4815 FAU .21181 RRT -.2955 RRF .5316 RTF -.5092 CRT .8327 CRS .4335 CST -.0781
FDE .2392 FRA-1.7799 FC3-6.4042 B8P 1405 SGB 1302.8 R23 -.2108 R13 .6116 LSA 35.6 MSA 14.0 S8A 3.3
BDE .6592 BRA .6007 BC3 .8180 F8P 956 SGI 1074.1 SGI 737.3 THA 153.29 EL1 35.4 EL2 9.5 ALF 59.88

LAUNCH DATE AUG 29 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC

DISTANCE 339.842

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.195 GAL 6.18 AZL 89.02 HCA 104.59 SMA 202.64 ECC .27493 INC .9779 V1 29.491
RP 231.39 LAP .95 LOP 80.11 VP 22.185 GAP 13.76 AZP 90.25 TAL 29.25 TAP 133.84 RCA 146.93 APO 258.35 V2 23.767
RC 155.447 GL 6.07 GP -10.43 ZAL 41.81 ZAP 144.08 ETS 196.59 ZAE 167.19 ETE 291.28 ZAC 72.51 ETC 282.74 LVI -6.05

PLANETOCENTRIC CONIC

C3 28.419 VHL 5.331 DLA 12.26 RAL 13.26 RAD 6646.4 VEL 12.181 PTH 7.14 VHP 3.813 DPA 6.48 RAP 46.46 ECC 1.4677
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 57 19 3485.44 -45.69 124.97 251.20 105.05 9 55 5 2465.4 -34.88 96.39
60.00 9 23 22 3396.11 -39.28 120.64 253.12 99.82 10 19 58 2396.1 -31.20 92.76
70.00 10 0 18 3287.42 -33.71 112.79 254.07 95.87 10 55 6 2287.4 -27.84 85.66
80.00 10 54 23 3118.00 -29.70 100.32 254.45 93.26 11 46 21 2118.0 -25.35 73.74
90.00 12 9 31 2875.52 -28.19 82.59 254.53 92.32 12 57 26 1875.5 -24.40 56.21
100.00 13 37 15 2592.47 -29.70 61.69 254.45 93.26 14 20 27 1592.5 -25.35 35.11
110.00 14 59 45 2334.24 -33.71 41.71 254.07 95.87 15 38 39 1334.2 -27.84 14.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3245 TRA -.5909 TC3 .8439 BAU .3119 SGT 1007.6 SGR 830.6 SCS 648.3 ST 20.0 SR 30.8 SS 11.8
RDE -.5717 RRA .1213 RC3 -.5091 FAU .22177 RRT -.2927 RRF .5547 RTF -.4578 CRT .8366 CRS .4406 CST -.0654
FDE .2632 FRA-1.8959 FC3-6.7558 B8P 1428 SGB 1305.9 R23 -.2324 R13 .6079 LSA 35.7 MSA 14.3 S8A 3.3
BDE .6574 BRA .6032 BC3 .8208 F8P 1017 SGI 1070.9 SGI 747.3 THA 151.80 EL1 35.5 EL2 9.5 ALF 59.00

LAUNCH DATE AUG 29 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

DISTANCE 343.388

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 33.187 GAL 6.18 AZL 88.99 HCA 105.81 SMA 202.07 ECC .27299 INC 1.0115 V1 29.491
RP 231.77 LAP .97 LOP 81.12 VP 22.101 GAP 13.45 AZP 90.27 TAL 29.42 TAP 135.03 RCA 146.90 APO 257.23 V2 23.728
RC 158.336 GL 6.29 GP -10.72 ZAL 41.83 ZAP 142.73 ETS 196.29 ZAE 167.27 ETE 285.53 ZAC 72.28 ETC 282.80 LVI -5.86

PLANETOCENTRIC CONIC

C3 28.218 VHL 5.312 DLA 12.39 RAL 12.98 RAD 6646.3 VEL 12.172 PTH 7.13 VHP 3.720 DPA 6.10 RAP 46.26 ECC 1.4644
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 55 41 3466.30 -45.70 125.05 250.88 105.00 9 53 28 2466.3 -34.91 96.45
60.00 9 21 35 3397.38 -39.30 120.75 252.78 99.75 10 18 13 2397.4 -31.24 92.85
70.00 9 58 20 3289.22 -33.72 112.93 253.73 95.79 10 53 10 2289.2 -27.88 85.78
80.00 10 52 14 3120.33 -29.70 100.50 254.10 93.17 11 44 15 2120.4 -25.39 73.90
90.00 12 7 17 2878.13 -28.20 82.78 254.18 92.22 12 55 16 1878.1 -24.44 56.59
100.00 13 35 8 2594.83 -29.70 61.86 254.10 93.17 14 18 21 1594.8 -25.39 35.27
110.00 14 57 47 2336.04 -33.72 41.85 253.73 95.79 15 36 43 1336.0 -27.88 14.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3283 TRA -.5956 TC3 .8248 BAU .3110 SGT 999.3 SGR 846.0 SCS 681.9 ST 20.3 SR 30.6 SS 12.4
RDE -.5668 RRA .1118 RC3 -.5380 FAU .23212 RRT -.2887 RRF .5780 RTF -.4650 CRT .8398 CRS .4463 CST -.0552
FDE .2680 FRA-2.0163 FC3-7.1215 B8P 1435 SGB 1309.3 R23 -.2928 R13 .6059 LSA 35.7 MSA 14.7 S8A 3.3
BDE .6551 BRA .6060 BC3 .8245 F8P 1077 SGI 1067.3 SGI 758.3 THA 150.05 EL1 35.5 EL2 9.5 ALF 58.39

LAUNCH DATE AUG 29 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 33.141 GAL 6.18 AZL 88.95 HCA 106.61 SMA 201.53 ECC .27118 INC 1.0454 V1 29.491  
 RP 232.14 LAP 1.00 LOP 82.13 VP 22.020 GAP 13.14 AZP 90.30 TAL 29.58 TAP 136.19 RCA 146.88 APO 256.19 V2 23.689  
 RC 161.258 GL 6.52 GP -11.02 ZAL 41.48 ZAP 141.37 ETS 195.99 ZAE 167.23 ETE 279.57 ZAC 72.05 ETC 282.86 LVI -5.60

PLANETOCENTRIC CONIC  
 C3 28.028 VHL 5.294 DLA 12.53 RAL 12.71 RAD 6646.2 VEL 12.165 PTH 7.13 VHP 3.630 DPA 5.72 RAP 46.04 ECC 1.4613  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 5 3467.41 -45.72 125.15 250.58 104.92 9 51 53 2467.4 -34.95 96.52  
 60.00 9 19 49 3398.93 -39.32 120.88 252.47 99.67 10 16 28 2398.9 -31.29 92.95  
 70.00 9 56 23 3291.34 -33.73 113.10 253.41 95.70 10 51 14 2291.3 -27.93 85.93  
 80.00 10 50 5 3123.07 -29.71 100.70 253.77 93.07 11 42 8 2123.1 -25.44 74.09  
 90.00 12 5 3 2881.13 -28.21 82.99 253.85 92.12 12 53 4 1881.1 -24.50 56.60  
 100.00 13 32 57 2597.54 -29.71 62.07 253.77 93.07 14 16 15 1597.5 -25.44 35.46  
 110.00 14 55 49 2338.16 -33.73 42.02 253.41 95.70 15 34 47 1338.2 -27.93 14.85

DIFFERENTIAL CORRECTIONS  
 TDE -.3317 TRA -.6008 TC3 .6029 BAU .3104  
 RDE -.5617 RRA .1017 RC3 -.5680 FAU .24275  
 FDE .3152 FRA-2.1415 FC3-7.4980 BSP 1438  
 BDE .6524 BRA .6094 BC3 .8284 FSP 1140

MID-COURSE EXECUTION ACCURACY  
 SGT 990.0 SGR 862.6 SG3 716.6  
 RRT -.2820 RRF .6011 RTF -.4396  
 SGB 1313.1 R23 -.2721 R13 .6054  
 SGI 1063.1 S2 770.7 THA 148.06

ORBIT DETERMINATION ACCURACY  
 ST 20.6 SR 30.5 SS 12.9  
 CRT .8427 CRS .4521 CST -.0451  
 LSA 35.8 HSA 15.1 SSA 3.3  
 EL1 35.5 EL2 9.5 ALF 57.77

LAUNCH DATE AUG 29 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 33.117 GAL 6.18 AZL 88.92 HCA 107.62 SMA 201.04 ECC .26948 INC 1.0795 V1 29.491  
 RP 232.51 LAP 1.03 LOP 83.13 VP 21.941 GAP 12.83 AZP 90.33 TAL 29.72 TAP 137.33 RCA 146.86 APO 255.22 V2 23.650  
 RC 164.150 GL 6.75 GP -11.32 ZAL 41.34 ZAP 140.00 ETS 195.69 ZAE 167.04 ETE 273.54 ZAC 71.82 ETC 282.92 LVI -5.49

PLANETOCENTRIC CONIC  
 C3 27.849 VHL 5.277 DLA 12.67 RAL 12.46 RAD 6646.2 VEL 12.157 PTH 7.12 VHP 3.544 DPA 5.32 RAP 45.79 ECC 1.4563  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 31 3468.78 -45.74 125.27 250.31 104.83 9 50 20 2468.8 -35.01 96.61  
 60.00 9 18 4 3400.76 -39.34 121.03 252.19 99.57 10 14 45 2400.8 -31.34 93.07  
 70.00 9 54 25 3293.78 -33.75 113.29 253.12 95.59 10 49 19 2293.8 -27.99 86.09  
 80.00 10 47 56 3126.14 -29.73 100.93 253.47 92.95 11 40 2 2126.1 -25.50 74.30  
 90.00 12 2 48 2884.50 -28.22 83.24 253.54 91.99 12 50 52 1884.5 -24.55 56.83  
 100.00 13 30 48 2600.61 -29.73 62.29 253.47 92.95 14 14 8 1600.6 -25.50 35.67  
 110.00 14 53 52 2340.60 -33.75 42.20 253.12 95.59 15 32 52 1340.6 -27.99 15.01

DIFFERENTIAL CORRECTIONS  
 TDE -.3349 TRA -.6072 TC3 .5779 BAU .3100  
 RDE -.5564 RRA .0912 RC3 -.5994 FAU .25368  
 FDE .3448 FRA-2.2701 FC3-7.8860 BSP 1436  
 BDE .6494 BRA .6140 BC3 .8328 FSP 1205

MID-COURSE EXECUTION ACCURACY  
 SGT 980.3 SGR 880.6 SG3 752.2  
 RRT -.2721 RRF .6239 RTF -.4108  
 SGB 1317.7 R23 -.2902 R13 .6064  
 SGI 1058.6 S2 784.6 THA 145.78

ORBIT DETERMINATION ACCURACY  
 ST 20.8 SR 30.3 SS 13.5  
 CRT .8452 CRS .4583 CST -.0353  
 LSA 35.8 HSA 15.5 SSA 3.3  
 EL1 35.5 EL2 9.5 ALF 57.16

LAUNCH DATE AUG 29 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 33.094 GAL 6.17 AZL 88.89 HCA 108.62 SMA 200.58 ECC .26789 INC 1.1138 V1 29.491  
 RP 232.89 LAP 1.06 LOP 84.14 VP 21.865 GAP 12.53 AZP 90.36 TAL 29.85 TAP 138.46 RCA 146.85 APO 254.32 V2 23.612  
 RC 167.073 GL 6.98 GP -11.64 ZAL 41.22 ZAP 138.60 ETS 195.39 ZAE 166.72 ETE 267.56 ZAC 71.59 ETC 282.99 LVI -5.31

PLANETOCENTRIC CONIC  
 C3 27.680 VHL 5.261 DLA 12.83 RAL 12.22 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 3.463 DPA 4.90 RAP 45.53 ECC 1.4859  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 58 3470.39 -45.77 125.42 250.08 104.72 9 48 48 2470.4 -35.07 96.71  
 60.00 9 16 20 3402.87 -39.36 121.20 251.94 99.45 10 13 3 2402.9 -31.41 93.22  
 70.00 9 52 28 3296.54 -33.77 113.50 252.85 95.46 10 47 24 2296.5 -26.05 86.28  
 80.00 10 43 45 3129.56 -29.74 101.18 253.19 92.81 11 37 55 2129.6 -25.56 74.53  
 90.00 12 0 32 2888.24 -28.22 83.51 253.26 91.86 12 48 40 1888.2 -24.62 57.08  
 100.00 13 28 37 2604.04 -29.74 62.55 253.19 92.81 14 12 1 1604.0 -25.56 35.90  
 110.00 14 51 54 2343.36 -33.77 42.42 252.85 95.46 15 30 57 1343.4 -26.05 15.20

DIFFERENTIAL CORRECTIONS  
 TDE -.3376 TRA -.6145 TC3 .5500 BAU .3101  
 RDE -.5508 RRA .0802 RC3 -.6321 FAU .26496  
 FDE .3798 FRA-2.4029 FC3-8.2871 BSP 1432  
 BDE .6461 BRA .6187 BC3 .8379 FSP 1270

MID-COURSE EXECUTION ACCURACY  
 SGT 970.1 SGR 900.2 SG3 789.1  
 RRT -.2586 RRF .6464 RTF -.3.87  
 SGB 1323.4 R23 -.3055 R13 .6103  
 SGI 1054.0 S2 800.4 THA 143.08

ORBIT DETERMINATION ACCURACY  
 ST 21.1 SR 30.0 SS 14.1  
 CRT .8472 CRS .4636 CST -.0272  
 LSA 35.8 HSA 15.9 SSA 3.3  
 EL1 35.5 EL2 9.5 ALF 56.55

LAUNCH DATE AUG 29 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 33.073 GAL 6.17 AZL 88.85 HCA 109.61 SMA 200.18 ECC .26640 INC 1.1485 V1 29.491  
 RP 233.25 LAP 1.08 LOP 85.13 VP 21.792 GAP 12.23 AZP 90.39 TAL 29.96 TAP 139.57 RCA 146.83 APO 253.48 V2 23.573  
 RC 170.003 GL 7.22 GP -11.96 ZAL 41.12 ZAP 137.19 ETS 195.09 ZAE 166.25 ETE 261.78 ZAC 71.35 ETC 283.06 LVI -5.12

PLANETOCENTRIC CONIC  
 C3 27.519 VHL 5.246 DLA 12.99 RAL 12.00 RAD 6646.0 VEL 12.144 PTH 7.11 VHP 3.385 DPA 4.47 RAP 45.25 ECC 1.4829  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 26 3472.24 -45.80 125.58 249.87 104.59 9 47 18 2472.2 -35.14 96.83  
 60.00 9 14 36 3405.25 -39.39 121.40 251.71 99.32 10 11 21 2405.3 -31.48 93.38  
 70.00 9 50 30 3299.60 -33.79 113.74 252.61 95.32 10 45 30 2299.6 -28.13 86.49  
 80.00 10 43 34 3133.34 -29.75 101.46 252.94 92.67 11 35 47 2133.3 -25.64 74.79  
 90.00 11 58 14 2892.35 -28.23 83.81 253.01 91.71 12 46 26 1892.4 -24.69 57.36  
 100.00 13 26 26 2607.81 -29.75 62.83 252.94 92.67 14 9 54 1607.8 -25.64 36.16  
 110.00 14 49 56 2346.42 -33.79 42.65 252.61 95.32 15 29 3 1346.4 -28.13 15.41

DIFFERENTIAL CORRECTIONS  
 TDE -.3402 TRA -.6229 TC3 .5184 BAU .3105  
 RDE -.5448 RRA .0687 RC3 -.6680 FAU .27640  
 FDE .4116 FRA-2.5380 FC3-8.6954 BSP 1429  
 BDE .6424 BRA .6267 BC3 .8440 FSP 1338

MID-COURSE EXECUTION ACCURACY  
 SGT 959.9 SGR 921.0 SG3 826.6  
 RRT -.2405 RRF .6682 RTF -.3422  
 SGB 1330.3 R23 -.3166 R13 .6175  
 SGI 1049.1 S2 818.0 THA 139.88

ORBIT DETERMINATION ACCURACY  
 ST 21.3 SR 29.8 SS 14.7  
 CRT .8489 CRS .4711 CST -.0169  
 LSA 35.8 HSA 16.4 SSA 3.3  
 EL1 35.4 EL2 9.5 ALF 55.91

LAUNCH DATE AUG 29 1973

FLIGHT TIME 150.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 33.053 GAL 6.18 AZL 88.82 HCA 110.61 SMA 199.78 ECC .26501 INC 1.1035 V1 29.491
RP 233.62 LAP 1.11 LOP 86.13 VP 21.721 GAP 11.93 AZP 90.42 TAL 30.06 TAP 140.67 RCA 146.82 APO 252.70 V2 23.936
RC 172.941 GL 7.48 GP -12.28 ZAL 41.03 ZAP 135.75 ETS 194.80 ZAE 165.64 ETE 256.28 ZAC 71.12 ETC 263.14 LVI -4.93

DISTANCE 362.101

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.367 VHL 5.231 DLA 13.18 RAL 11.79 RAD 6646.0 VEL 12.138 PTH 7.11 VHP 3.310 DPA 4.03 RAP 44.84 ECC 1.4504
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 47 55 3474.33 -45.84 125.77 249.69 104.45 9 45 49 2474.3 -35.22 96.96
60.00 9 12 53 3407.90 -39.42 121.62 251.51 99.17 10 9 41 2407.9 -31.56 93.55
70.00 9 48 32 3302.97 -33.81 114.00 252.39 95.17 10 43 35 2303.0 -28.21 86.72
80.00 10 41 22 3137.46 -29.76 101.76 252.71 92.51 11 33 39 2137.5 -25.71 75.07
90.00 11 55 55 2896.83 -28.24 84.14 252.77 91.54 12 44 12 1896.8 -24.76 57.67
100.00 13 24 13 2611.93 -29.76 63.13 252.71 92.51 14 7 45 1611.9 -25.71 36.44
110.00 14 47 58 2349.79 -33.81 42.91 252.39 95.17 15 27 8 1349.8 -26.21 15.64

DIFFERENTIAL CORRECTIONS

TDE -.3430 TRA -.6327 TC3 .4831 BAU .3115
RDE -.5367 RRA .0567 RC3 -.7011 FAU .28809
FDE .4483 FRA -2.6764 FC3 -9.1137 B5P 1430
BDE .6386 BRA .6353 BC3 .8515 F5P 1408

MID-COURSE EXECUTION ACCURACY

SGT 950.3 SGR 943.5 SG3 865.0
RRR -.2170 RRF .6895 RTF -.3008
SGB 1339.2 R23 -.3208 R13 .6297
SG1 1044.7 SG2 837.9 THA 135.95

ORBIT DETERMINATION ACCURACY

ST 21.6 SR 29.5 S8 15.3
CRT .8505 CR8 .4770 C8T -.0088
LSA 35.8 MSA 16.8 SSA 3.3
EL1 35.3 EL2 9.5 ALF 55.22

LAUNCH DATE AUG 29 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 33.035 GAL 6.15 AZL 88.78 HCA 111.60 SMA 199.40 ECC .26370 INC 1.2188 V1 29.491
RP 233.99 LAP 1.13 LOP 87.12 VP 21.652 GAP 11.63 AZP 90.45 TAL 30.15 TAP 141.75 RCA 146.82 APO 251.98 V2 23.498
RC 175.886 GL 7.70 GP -12.61 ZAL 40.96 ZAP 134.29 ETS 194.49 ZAE 164.89 ETE 251.14 ZAC 70.88 ETC 285.21 LVI -4.74

DISTANCE 365.865

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.222 VHL 5.217 DLA 13.34 RAL 11.59 RAD 6645.9 VEL 12.132 PTH 7.10 VHP 3.239 DPA 3.57 RAP 44.62 ECC 1.4480
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 46 25 3476.66 -45.88 125.98 249.53 104.29 9 44 22 2476.7 -35.31 97.11
60.00 9 11 10 3410.80 -39.45 121.86 251.33 99.01 10 8 1 2410.8 -31.65 93.75
70.00 9 46 34 3306.64 -33.83 114.28 252.19 95.00 10 41 40 2306.6 -28.29 86.97
80.00 10 39 8 3141.92 -29.77 102.10 252.50 92.33 11 31 30 2141.9 -25.79 75.38
90.00 11 53 34 2901.68 -28.25 84.50 252.56 91.36 12 41 56 1901.7 -24.84 58.00
100.00 13 22 0 2616.40 -29.77 63.46 252.50 92.33 14 5 36 1616.4 -25.79 36.75
110.00 14 46 0 2353.46 -33.83 43.20 252.19 95.00 15 25 13 1353.5 -28.29 15.89

DIFFERENTIAL CORRECTIONS

TDE -.3455 TRA -.6439 TC3 .4440 BAU .3133
RDE -.5321 RRA .0444 RC3 -.7375 FAU .29995
FDE .4895 FRA -2.8166 FC3 -9.5393 B5P 1433
BDE .6344 BRA .6454 BC3 .8608 F5P 1479

MID-COURSE EXECUTION ACCURACY

SGT 941.6 SGR 967.5 SG3 904.0
RRR -.1879 RRF .7100 RTF -.2543
SGB 1350.1 R23 -.3127 R13 .6492
SG1 1041.4 SG2 859.3 THA 130.89

ORBIT DETERMINATION ACCURACY

ST 21.9 SR 29.2 S8 15.9
CRT .8516 CR8 .4844 C8T .0004
LSA 35.7 MSA 17.3 SSA 3.3
EL1 35.3 EL2 9.5 ALF 54.92

LAUNCH DATE AUG 29 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 33.018 GAL 6.15 AZL 88.75 HCA 112.59 SMA 199.08 ECC .26248 INC 1.2548 V1 29.491
RP 234.35 LAP 1.16 LOP 88.11 VP 21.585 GAP 11.34 AZP 90.48 TAL 30.22 TAP 142.81 RCA 146.81 APO 251.31 V2 23.461
RC 178.836 GL 7.94 GP -12.95 ZAL 40.91 ZAP 132.81 ETS 194.18 ZAE 164.03 ETE 246.39 ZAC 70.64 ETC 283.29 LVI -4.93

DISTANCE 369.633

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.084 VHL 5.204 DLA 13.53 RAL 11.40 RAD 6645.8 VEL 12.126 PTH 7.10 VHP 3.172 DPA 3.09 RAP 44.28 ECC 1.4457
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 57 3479.21 -45.92 126.21 249.40 104.12 9 42 56 2479.2 -35.41 97.28
60.00 9 9 27 3413.97 -39.48 122.12 251.18 98.84 10 6 21 2414.0 -31.73 93.96
70.00 9 44 35 3310.61 -33.85 114.59 252.02 94.82 10 39 45 2310.8 -28.38 87.24
80.00 10 36 53 3146.73 -29.79 102.45 252.31 92.15 11 29 20 2146.7 -25.88 75.71
90.00 11 51 11 2906.89 -28.26 84.88 252.36 91.17 12 39 38 1906.9 -24.93 58.36
100.00 13 19 45 2621.21 -29.79 63.82 252.31 92.15 14 3 26 1621.2 -25.88 37.08
110.00 14 44 1 2357.42 -33.85 43.51 252.02 94.82 15 23 18 1357.4 -28.38 16.16

DIFFERENTIAL CORRECTIONS

TDE -.3480 TRA -.6586 TC3 .4008 BAU .3159
RDE -.5251 RRA .0315 RC3 -.7750 FAU .31192
FDE .5338 FRA -2.9588 FC3 -9.9705 B5P 1444
BDE .6300 BRA .6573 BC3 .8724 F5P 1552

MID-COURSE EXECUTION ACCURACY

SGT 934.6 SGR 993.1 SG3 943.6
RRR -.1923 RRF .7296 RTF -.2119
SGB 1363.7 R23 -.2838 R13 .6784
SG1 1040.2 SG2 881.8 THA 124.13

ORBIT DETERMINATION ACCURACY

ST 22.2 SR 28.9 S8 16.3
CRT .8525 CR8 .4917 C8T .0091
LSA 35.7 MSA 17.8 SSA 3.3
EL1 35.2 EL2 9.5 ALF 53.78

LAUNCH DATE AUG 29 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 33.002 GAL 6.14 AZL 88.71 HCA 113.57 SMA 198.75 ECC .26133 INC 1.2907 V1 29.491
RP 234.71 LAP 1.18 LOP 89.09 VP 21.521 GAP 11.05 AZP 90.52 TAL 30.28 TAP 143.88 RCA 146.81 APO 250.89 V2 23.424
RC 181.791 GL 8.19 GP -13.29 ZAL 40.87 ZAP 131.31 ETS 193.87 ZAE 163.05 ETE 242.05 ZAC 70.41 ETC 283.37 LVI -4.38

DISTANCE 373.408

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.933 VHL 5.192 DLA 13.72 RAL 11.23 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 3.108 DPA 2.61 RAP 43.92 ECC 1.4438
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 28 3481.98 -45.97 126.47 249.30 103.93 9 41 30 2482.0 -35.51 97.46
60.00 9 7 45 3417.38 -39.52 122.40 251.05 98.65 10 4 42 2417.4 -31.85 94.19
70.00 9 42 35 3314.86 -33.88 114.92 251.87 94.63 10 37 50 2314.9 -28.48 87.54
80.00 10 34 36 3151.87 -29.80 102.83 252.14 91.95 11 27 8 2151.9 -25.97 76.06
90.00 11 48 47 2912.45 -28.26 85.28 252.19 90.97 12 37 19 1912.5 -25.02 58.74
100.00 13 17 28 2626.34 -29.80 64.20 252.14 91.95 14 1 14 1626.3 -25.97 37.43
110.00 14 42 1 2361.68 -33.88 43.84 251.87 94.63 15 21 23 1361.7 -28.48 16.45

DIFFERENTIAL CORRECTIONS

TDE -.3428 TRA -.6632 TC3 .3648 BAU .3220
RDE -.5191 RRA .0170 RC3 -.8157 FAU .32493
FDE .5611 FRA -3.1211 FC3 -10.4369 B5P 1408
BDE .6221 BRA .6634 BC3 .8936 F5P 1603

MID-COURSE EXECUTION ACCURACY

SGT 924.3 SGR 1022.7 SG3 986.6
RRR -.1256 RRF .7497 RTF -.1581
SGB 1378.5 R23 -.2225 R13 .7188
SG1 1050.1 SG2 893.1 THA 115.53

ORBIT DETERMINATION ACCURACY

ST 22.0 SR 28.7 S8 17.1
CRT .8510 CR8 .4830 C8T -.0044
LSA 35.4 MSA 18.3 SSA 3.3
EL1 34.9 EL2 9.5 ALF 53.68

LAUNCH DATE AUG 29 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC

DISTANCE 377.181

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.92 VL 32.987 GAL 6.13 AZL 88.67 HCA 114.56 SMA 198.48 ECC .26026 INC 1.3273 V1 29.491
RP 235.06 LAP 1.21 LOP 90.08 VP 21.459 GAP 10.77 AZP 90.55 TAL 30.33 TAP 144.88 RCA 146.81 APO 250.12 V2 23.387
RC 184.790 GL 8.44 GP -13.84 ZAL 40.85 ZAP 129.80 ETS 193.56 ZAE 161.97 ETE 238.11 ZAC 70.17 ETC 283.45 LVI -4.17

PLANETOCENTRIC CONIC

C3 26.826 VHL 5.179 DLA 13.93 RAL 11.06 RAD 6645.7 VEL 12.115 PTH 7.09 VHP 3.047 DPA 2.11 RAP 43.55 ECC 1.4415
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 42 1 3484.99 -46.02 126.74 249.22 103.73 9 40 6 2485.0 -35.83 97.66
60.00 9 6 2 3421.07 -39.55 122.71 250.94 98.44 10 3 3 2421.1 -31.96 94.45
70.00 9 40 34 3319.44 -33.90 115.27 251.74 94.42 10 35 53 2319.4 -28.59 87.85
80.00 10 32 17 3157.38 -29.81 103.24 252.00 91.73 11 24 55 2157.4 -26.07 76.44
90.00 11 46 20 2918.42 -28.27 85.72 252.03 90.75 12 34 58 1918.4 -25.11 59.15
100.00 13 15 9 2631.86 -29.81 64.61 252.00 91.73 13 59 1 1631.9 -26.07 37.81
110.00 14 40 0 2386.25 -33.90 44.19 251.74 94.42 15 19 27 1366.3 -28.59 16.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

YDE -.3507 TRA -.6845 TC3 .3052 BAU .3254 SGT 926.8 SGR 1049.8 SG3 1025.0 ST 22.7 SR 28.3 SS 17.8
RDE -.5103 RRA .0042 RC3 -.8544 FAU .33649 RRT -.0664 RRF .7665 RTF -.0851 CRT .8528 CRS .5024 CST .0198
FDE .6270 FRA -3.2512 FC-10.8591 BSP 1474 SGB 1400.4 R23 -.1287 R13 .7364 LSA 35.6 MSA 18.8 SSA 3.3
BDE .6192 BRA .6845 BC3 .9073 FSP 1693 SG1 1057.5 SG2 918.1 THA 104.00 EL1 34.9 EL2 9.6 ALF 52.32

LAUNCH DATE AUG 29 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC

DISTANCE 380.960

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.92 VL 32.974 GAL 6.11 AZL 88.64 HCA 115.34 SMA 198.20 ECC .25926 INC 1.3643 V1 29.491
RP 235.42 LAP 1.23 LOP 91.06 VP 21.398 GAP 10.49 AZP 90.59 TAL 30.36 TAP 143.90 RCA 146.82 APO 249.59 V2 23.351
RC 187.714 GL 8.69 GP -14.00 ZAL 40.85 ZAP 128.28 ETS 193.23 ZAE 160.80 ETE 234.55 ZAC 69.93 ETC 283.54 LVI -3.98

PLANETOCENTRIC CONIC

C3 26.705 VHL 5.168 DLA 14.14 RAL 10.91 RAD 6645.7 VEL 12.110 PTH 7.08 VHP 2.989 DPA 1.60 RAP 43.16 ECC 1.4395
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 40 34 3486.22 -46.07 127.03 249.16 103.50 9 38 42 2486.2 -35.75 97.87
60.00 9 4 19 3425.01 -39.59 123.04 250.86 98.23 10 1 24 2425.0 -32.08 94.71
70.00 9 38 32 3324.30 -33.93 115.65 251.63 94.20 10 33 56 2324.3 -28.70 88.19
80.00 10 29 56 3163.24 -29.82 103.68 251.87 91.50 11 22 40 2163.2 -26.18 76.85
90.00 11 43 50 2924.75 -28.28 86.18 251.90 90.52 12 32 35 1924.7 -25.21 59.59
100.00 13 12 48 2637.71 -29.82 65.05 251.87 91.50 13 56 46 1637.7 -26.18 38.22
110.00 14 37 58 2371.12 -33.93 44.57 251.63 94.20 15 17 30 1371.1 -28.70 17.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3545 TRA -.7033 TC3 .2473 BAU .3316 SGT 930.9 SGR 1079.6 SG3 1065.0 ST 23.1 SR 27.9 SS 18.5
RDE -.5018 RRA -.0095 RC3 -.8952 FAU .34848 RRT -.0090 RRF .7831 RTF -.0145 CRT .8533 CRS .5133 CST .0320
FDE .6862 FRA -3.3904 FC-11.2971 BSP 1522 SGB 1425.5 R23 -.0130 R13 .7830 LSA 35.6 MSA 19.3 SSA 3.3
BDE .6144 BRA .7034 BC3 .9287 FSP 1773 SG1 1079.8 SG2 930.7 THA 91.73 EL1 34.9 EL2 9.6 ALF 51.27

LAUNCH DATE AUG 29 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC

DISTANCE 384.742

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.92 VL 32.961 GAL 6.10 AZL 88.60 HCA 116.51 SMA 197.96 ECC .25833 INC 1.4018 V1 29.491
RP 235.77 LAP 1.25 LOP 92.03 VP 21.340 GAP 10.21 AZP 90.63 TAL 30.39 TAP 146.90 RCA 146.82 APO 249.10 V2 23.313
RC 190.680 GL 8.95 GP -14.36 ZAL 40.86 ZAP 126.73 ETS 192.90 ZAE 159.55 ETE 231.32 ZAC 69.69 ETC 283.63 LVI -3.78

PLANETOCENTRIC CONIC

C3 26.590 VHL 5.157 DLA 14.36 RAL 10.77 RAD 6645.6 VEL 12.106 PTH 7.08 VHP 2.935 DPA 1.07 RAP 42.76 ECC 1.4376
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 39 8 3491.67 -46.12 127.35 249.13 103.27 9 37 19 2491.7 -35.88 98.09
60.00 9 2 36 3429.19 -39.63 123.39 250.79 97.99 9 59 45 2429.2 -32.20 95.00
70.00 9 36 29 3329.47 -33.95 116.05 251.53 93.96 10 31 58 2329.5 -28.81 88.54
80.00 10 27 33 3169.44 -29.83 104.14 251.75 91.26 11 20 23 2169.4 -26.28 77.28
90.00 11 41 17 2931.45 -28.28 86.67 251.78 90.27 12 30 9 1931.4 -25.31 60.05
100.00 13 10 25 2643.91 -29.83 65.51 251.75 91.26 13 54 29 1643.9 -26.28 38.65
110.00 14 35 53 2376.28 -33.95 44.97 251.53 93.96 15 15 31 1376.3 -28.81 17.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3564 TRA -.7222 TC3 .1874 BAU .3398 SGT 938.2 SGR 1111.5 SG3 1105.6 ST 23.4 SR 27.4 SS 19.2
RDE -.4931 RRA -.0238 RC3 -.9374 FAU .36083 RRT .0307 RRF .7990 RTF .0173 CRT .8530 CRS .5206 CST .0390
FDE .7445 FRA -3.5333 FC-11.7419 BSP 1571 SGB 1454.6 R23 -.0800 R13 .7951 LSA 35.5 MSA 19.9 SSA 3.2
BDE .8084 BRA .7226 BC3 .9559 FSP 1849 SG1 1115.0 SG2 934.1 THA 81.71 EL1 34.7 EL2 9.6 ALF 50.34

LAUNCH DATE AUG 29 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

DISTANCE 388.527

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.92 VL 32.950 GAL 6.08 AZL 88.56 HCA 117.48 SMA 197.74 ECC .25746 INC 1.4398 V1 29.491
RP 236.12 LAP 1.28 LOP 93.01 VP 21.283 GAP 9.93 AZP 90.66 TAL 30.40 TAP 147.88 RCA 146.83 APO 248.65 V2 23.279
RC 193.649 GL 9.21 GP -14.72 ZAL 40.88 ZAP 125.17 ETS 192.56 ZAE 158.22 ETE 228.40 ZAC 69.45 ETC 283.71 LVI -3.59

PLANETOCENTRIC CONIC

C3 26.479 VHL 5.146 DLA 14.59 RAL 10.64 RAD 6645.6 VEL 12.101 PTH 7.08 VHP 2.884 DPA .54 RAP 42.34 ECC 1.4358
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 37 41 3495.33 -46.18 127.68 249.12 103.01 9 35 56 2495.3 -36.02 98.34
60.00 9 0 52 3433.64 -39.68 123.76 250.75 97.74 9 58 5 2433.6 -32.33 95.30
70.00 9 34 24 3334.93 -33.98 116.48 251.46 93.71 10 29 59 2334.9 -28.93 88.92
80.00 10 25 7 3175.99 -29.84 104.63 251.66 91.00 11 18 3 2176.0 -26.40 77.73
90.00 11 38 42 2938.53 -28.28 87.19 251.68 90.02 12 27 40 1938.5 -25.42 60.54
100.00 13 7 59 2650.46 -29.84 65.99 251.66 91.00 13 52 10 1650.5 -26.40 39.10
110.00 14 33 50 2381.75 -33.98 45.39 251.46 93.71 15 13 32 1381.7 -28.93 17.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3579 TRA -.7424 TC3 .1235 BAU .3498 SGT 951.1 SGR 1144.9 SG3 1146.0 ST 23.7 SR 27.0 SS 19.9
RDE -.4841 RRA -.0388 RC3 -.9805 FAU .37266 RRT .1145 RRF .8138 RTF .1317 CRT .8525 CRS .5271 CST .0445
FDE .8056 FRA -3.6762 FC-12.1843 BSP 1631 SGB 1488.4 R23 -.1423 R13 .8022 LSA 35.5 MSA 20.4 SSA 3.2
BDE .6020 BRA .7434 BC3 .9882 FSP 1923 SG1 1160.2 SG2 932.4 THA 74.23 EL1 34.6 EL2 9.7 ALF 49.38

LAUNCH DATE AUG 29 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 32.940 GAL 6.07 AZL 88.52 HCA 118.46 SMA 197.94 ECC .25664 INC 1.4784 V1 29.481  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.228 GAP 9.65 AZP 90.70 TAL 30.40 TAP 148.85 RCA 146.84 APO 248.23 V2 23.244  
 RC 196.619 GL 9.47 GP -15.09 ZAL 40.92 ZAP 123.61 ETS 192.21 ZAE 156.84 ETE 225.76 ZAC 69.21 ETC 283.80 LVI -3.39

PLANETOCENTRIC CONIC  
 C3 26.372 VHL 5.135 DLA 14.83 RAL 10.52 RAD 6645.6 VEL 12.097 PTH 7.07 VHP 2.836 DPA -.00 RAP 41.91 ECC 1.4340  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 15 3499.22 -46.24 128.04 249.13 102.74 9 34 34 2499.2 -36.16 98.59  
 60.00 8 59 7 3438.35 -39.72 124.15 250.72 97.48 9 56 25 2438.3 -32.47 95.62  
 70.00 9 32 17 3340.70 -34.00 116.93 251.40 93.45 10 27 58 2340.7 -29.06 89.32  
 80.00 10 22 39 3182.90 -29.85 105.14 251.58 90.73 11 15 42 2182.9 -26.51 78.21  
 90.00 11 36 3 2946.00 -28.20 87.74 251.99 89.74 12 25 9 1946.0 -25.53 61.06  
 100.00 13 5 31 2657.38 -29.85 66.51 251.58 90.73 13 49 48 1657.4 -26.51 39.58  
 110.00 14 31 44 2367.52 -34.00 45.84 251.40 93.45 15 11 31 1387.5 -29.06 18.24

DIFFERENTIAL CORRECTIONS  
 TDE -.3587 TRA -.7637 TC3 .0365 BAU .3619 SGT 969.8 SGR 1179.9 SG3 1186.6 ST 24.0 SR 26.5 SS 20.7  
 RDE -.4744 RRA -.0540 RC3-1.0250 FAU .38470 RRT .1797 RRF .8278 RTF .2059 CRT .8515 CR8 .5339 C8T .0499  
 FDE .8717 FRA-3.8179 FC-12.6290 B8P 1704 SGB 1527.4 R23 .1793 R13 .8102 LSA 35.4 M8A 21.0 S8A 3.2  
 BDE .5948 BRA .7857 BC3 1.0265 B8P 1997 SGI 1213.2 SG2 927.9 THA 68.84 EL1 34.4 EL2 9.7 ALF 48.38

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 29 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 32.930 GAL 6.05 AZL 88.48 HCA 119.42 SMA 197.35 ECC .25588 INC 1.5176 V1 29.491  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.175 GAP 9.38 AZP 90.75 TAL 30.39 TAP 149.81 RCA 146.85 APO 247.85 V2 23.209  
 RC 199.589 GL 9.74 GP -15.46 ZAL 40.97 ZAP 122.02 ETS 191.85 ZAE 155.40 ETE 223.35 ZAC 68.97 ETC 283.89 LVI -3.19

PLANETOCENTRIC CONIC  
 C3 26.270 VHL 5.125 DLA 15.08 RAL 10.41 RAD 6645.5 VEL 12.093 PTH 7.07 VHP 2.790 DPA -.56 RAP 41.46 ECC 1.4323  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 34 48 3503.33 -46.30 128.42 249.16 102.46 9 33 11 2503.3 -36.32 98.87  
 60.00 8 57 21 3443.28 -39.76 124.56 250.71 97.20 9 54 45 2443.3 -32.61 95.97  
 70.00 9 30 9 3346.77 -34.02 117.40 251.36 93.17 10 25 55 2346.8 -29.19 89.75  
 80.00 10 20 7 3190.18 -29.85 105.68 251.52 90.45 11 13 17 2190.2 -26.63 78.72  
 90.00 11 33 20 2953.87 -28.28 88.31 251.52 89.45 12 22 34 1953.9 -25.65 61.61  
 100.00 13 2 59 2664.65 -29.85 67.03 251.52 90.45 13 47 24 1664.6 -26.63 40.09  
 110.00 14 29 35 2393.59 -34.02 46.32 251.36 93.17 15 9 29 1393.6 -29.19 18.66

DIFFERENTIAL CORRECTIONS  
 TDE -.3583 TRA -.7837 TC3 -.0108 BAU .3763 SGT 991.0 SGR 1217.9 SG3 1228.2 ST 24.1 SR 26.1 SS 21.4  
 RDE -.4852 RRA -.0703 RC3-1.0714 FAU .39701 RRT .2429 RRF .8412 RTF .2772 CRT .8495 CR8 .5331 C8T .0444  
 FDE .9282 FRA-3.8692 FC-13.0837 B8P 1783 SGB 1570.1 R23 .1847 R13 .8218 LSA 35.2 M8A 21.6 S8A 3.2  
 BDE .5880 BRA .7889 BC3 1.0714 B8P 2056 SGI 1272.1 SG2 920.3 THA 65.27 EL1 34.2 EL2 9.7 ALF 47.63

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 29 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 32.921 GAL 6.03 AZL 88.44 HCA 120.39 SMA 197.19 ECC .25517 INC 1.5575 V1 29.491  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.124 GAP 9.11 AZP 90.79 TAL 30.36 TAP 150.75 RCA 146.87 APO 247.50 V2 23.174  
 RC 202.557 GL 10.02 GP -15.63 ZAL 41.03 ZAP 120.44 ETS 191.48 ZAE 153.91 ETE 221.16 ZAC 68.74 ETC 283.98 LVI -2.99

PLANETOCENTRIC CONIC  
 C3 26.170 VHL 5.116 DLA 15.33 RAL 10.31 RAD 6645.5 VEL 12.089 PTH 7.07 VHP 2.748 DPA -1.12 RAP 41.01 ECC 1.4307  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 21 3507.67 -46.36 128.82 249.22 102.16 9 31 49 2507.7 -36.48 99.15  
 60.00 8 55 35 3448.50 -39.80 125.00 250.73 96.91 9 53 3 2448.5 -32.78 96.33  
 70.00 9 27 58 3353.17 -34.05 117.90 251.34 92.88 10 23 51 2353.2 -29.33 90.19  
 80.00 10 17 32 3197.84 -29.86 106.25 251.47 90.15 11 10 50 2197.8 -26.76 79.25  
 90.00 11 30 33 2962.16 -28.27 88.92 251.46 89.15 12 19 55 1962.2 -25.77 62.19  
 100.00 13 0 24 2672.32 -29.86 67.62 251.47 90.15 13 44 56 1672.3 -26.76 40.62  
 110.00 14 27 24 2399.98 -34.05 46.81 251.34 92.88 15 7 24 1400.0 -29.33 19.11

DIFFERENTIAL CORRECTIONS  
 TDE -.3608 TRA -.8125 TC3 -.0929 BAU .3917 SGT 1030.8 SGR 1253.2 SG3 1264.9 ST 24.7 SR 25.5 SS 22.2  
 RDE -.4534 RRA -.0847 RC3-1.1157 FAU .40781 RRT .3146 RRF .8527 RTF .3032 CRT .8492 CR8 .5482 C8T .0609  
 FDE 1.0178 FRA-4.0861 FC-13.4907 B8P 1893 SGB 1622.7 R23 .2181 R13 .8291 LSA 35.3 M8A 22.2 S8A 3.1  
 BDE .5793 BRA .8189 BC3 1.1196 B8P 2145 SGI 1340.1 SG2 915.0 THA 61.01 EL1 34.1 EL2 9.7 ALF 46.12

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 29 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.52 VL 32.914 GAL 6.02 AZL 88.40 HCA 121.35 SMA 197.03 ECC .25432 INC 1.5980 V1 29.491  
 RP 237.48 LAP 1.36 LOP 96.88 VP 21.075 GAP 8.84 AZP 90.83 TAL 30.33 TAP 151.68 RCA 146.89 APO 247.18 V2 23.140  
 RC 205.523 GL 10.30 GP -16.21 ZAL 41.11 ZAP 118.84 ETS 191.10 ZAE 152.38 ETE 219.16 ZAC 68.50 ETC 284.07 LVI -2.79

PLANETOCENTRIC CONIC  
 C3 26.075 VHL 5.106 DLA 15.60 RAL 10.21 RAD 6645.4 VEL 12.085 PTH 7.06 VHP 2.709 DPA -1.69 RAP 40.55 ECC 1.4291  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 31 53 3512.23 -46.43 129.24 249.29 101.84 9 30 26 2512.2 -36.65 99.46  
 60.00 8 53 46 3453.98 -39.85 125.46 250.76 96.60 9 51 20 2454.0 -32.92 96.71  
 70.00 9 25 45 3359.87 -34.07 118.42 251.34 92.57 10 21 45 2359.9 -29.47 90.66  
 80.00 10 14 53 3205.88 -29.86 106.85 251.44 89.84 11 8 19 2205.9 -26.89 79.82  
 90.00 11 27 42 2970.85 -28.26 89.55 251.42 88.83 12 17 13 1970.9 -25.89 62.79  
 100.00 12 57 45 2680.35 -29.86 68.21 251.44 89.84 13 42 25 1680.4 -26.89 41.18  
 110.00 14 25 11 2406.69 -34.07 47.34 251.34 92.57 15 5 18 1406.7 -29.47 19.58

DIFFERENTIAL CORRECTIONS  
 TDE -.3604 TRA -.8387 TC3 -.1733 BAU .4097 SGT 1072.1 SGR 1292.0 SG3 1303.3 ST 25.0 SR 24.9 SS 23.0  
 RDE -.4422 RRA -.1007 RC3-1.1624 FAU .41902 RRT .3793 RRF .8638 RTF .4217 CRT .8477 CR8 .5531 C8T .0632  
 FDE 1.0942 FRA-4.2186 FC-13.9120 B8P 2007 SGB 1678.9 R23 .2256 R13 .8400 LSA 35.2 M8A 22.9 S8A 3.1  
 BDE .5704 BRA .8447 BC3 1.1753 B8P 2216 SGI 1412.6 SG2 907.3 THA 58.16 EL1 33.9 EL2 9.7 ALF 44.94

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 29 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC

DISTANCE 407.479

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.907 GAL 6.00 AZL 88.36 HCA 122.31 SMA 196.90 ECC .25390 INC 1.6392 V1 29.491  
 RP 237.81 LAP 1.39 LOP 87.84 VP 21.026 GAP 8.58 AZP 90.88 TAL 30.29 TAP 152.60 RCA 146.91 APO 246.89 V2 23.106  
 RC 208.485 GL 10.58 GP -16.59 ZAL 41.20 ZAP 117.24 ETS 190.71 ZAE 150.81 ETE 217.31 ZAC 68.27 ETC 284.16 LVI -2.58

PLANETOCENTRIC CONIC

C3 25.983 VHL 5.097 DLA 15.87 RAL 10.12 RAD 6645.4 VEL 12.081 PTH 7.06 VHP 2.672 DPA -2.27 RAP 40.08 ECC 1.4276  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 25 3517.02 -46.49 129.68 249.39 101.50 9 29 2 2517.0 -36.82 99.78  
 60.00 8 51 37 3489.72 -39.89 125.94 250.80 96.28 9 49 36 2459.7 -33.08 97.11  
 70.00 9 23 29 3366.90 -34.09 118.97 251.34 92.24 10 19 36 2366.9 -29.62 91.16  
 80.00 10 12 10 3214.32 -29.85 107.47 251.42 89.51 11 5 45 2214.3 -27.02 80.41  
 90.00 11 24 46 2979.98 -28.24 90.22 251.39 88.50 12 14 26 1980.0 -26.02 63.43  
 100.00 12 35 2 2688.79 -29.85 68.84 251.42 89.51 13 39 51 1688.8 -27.02 41.78  
 110.00 14 22 55 2413.72 -34.09 47.88 251.34 92.24 15 3 9 1413.7 -29.62 20.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3600 TRA -.8666 TC3 -.2579 BAU .4297 SGT 1121.7 SGR 1331.9 SG3 1340.6 ST 25.3 SR 24.3 SS 23.8  
 RDE -.4303 RRA -.1168 RC3-1.2098 FAU .4298 RRT .4405 RRF .8741 RTF .4852 CRT .8461 CRS .5581 CST .0657  
 FDE 1.1798 FRA-4.3447 FC-14.3231 BSP 2134 SGB 1741.3 R23 .2296 R13 .8508 LSA 35.2 MSA 23.5 SSA 3.1  
 BDE .5610 BRA .8744 BC3 1.2370 FSP 2285 SG1 1490.9 SG2 899.6 THA 55.70 EL1 33.7 EL2 9.7 ALF 43.69

LAUNCH DATE AUG 29 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

DISTANCE 411.273

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.900 GAL 5.97 AZL 88.32 HCA 123.27 SMA 196.78 ECC .25333 INC 1.6812 V1 29.491  
 RP 238.14 LAP 1.41 LOP 98.79 VP 20.980 GAP 8.32 AZP 90.92 TAL 30.23 TAP 153.50 RCA 146.93 APO 246.63 V2 23.073  
 RC 211.443 GL 10.87 GP -16.97 ZAL 41.31 ZAP 115.64 ETS 190.30 ZAE 149.21 ETE 215.61 ZAC 68.03 ETC 284.25 LVI -2.37

PLANETOCENTRIC CONIC

C3 25.895 VHL 5.089 DLA 16.16 RAL 10.04 RAD 6645.4 VEL 12.077 PTH 7.06 VHP 2.638 DPA -2.85 RAP 39.61 ECC 1.4262  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 56 3522.03 -46.56 130.15 249.50 101.15 9 27 39 2522.0 -37.00 100.12  
 60.00 8 50 5 3465.74 -39.94 126.45 250.87 95.93 9 47 51 2465.7 -33.25 97.53  
 70.00 9 21 10 3374.27 -34.11 119.54 251.37 91.90 10 17 24 2374.3 -29.77 91.68  
 80.00 10 9 23 3223.16 -29.85 108.13 251.42 89.16 11 3 6 2223.2 -27.16 81.03  
 90.00 11 21 45 2989.56 -28.22 90.92 251.37 88.15 12 11 35 1989.6 -26.15 64.10  
 100.00 12 32 15 2697.63 -29.85 69.50 251.42 89.16 13 37 12 1697.6 -27.16 42.40  
 110.00 14 20 36 2421.09 -34.11 48.46 251.37 91.90 15 0 57 1421.1 -29.77 20.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3587 TRA -.8958 TC3 -.3462 BAU .4516 SGT 1178.9 SGR 1372.5 SG3 1376.5 ST 25.6 SR 23.7 SS 24.7  
 RDE -.4178 RRA -.1329 RC3-1.2576 FAU .44027 RRT .4972 RRF .8836 RTF .5431 CRT .8441 CRS .5623 CST .0666  
 FDE 1.2803 FRA-4.4640 FC-14.7192 BSP 2274 SGB 1809.4 R23 .2310 R13 .8612 LSA 35.1 MSA 24.2 SSA 3.1  
 BDE .5507 BRA .9036 BC3 1.3044 FSP 2353 SG1 1574.3 SG2 891.8 THA 53.53 EL1 33.5 EL2 9.7 ALF 42.39

LAUNCH DATE AUG 29 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

DISTANCE 415.069

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.895 GAL 5.95 AZL 88.28 HCA 124.22 SMA 196.67 ECC .25281 INC 1.7240 V1 29.491  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.935 GAP 8.06 AZP 90.97 TAL 30.17 TAP 154.09 RCA 146.95 APO 246.39 V2 23.040  
 RC 214.394 GL 11.17 GP -17.35 ZAL 41.43 ZAP 114.03 ETS 189.89 ZAE 147.58 ETE 214.04 ZAC 67.80 ETC 284.34 LVI -2.16

PLANETOCENTRIC CONIC

C3 25.810 VHL 5.080 DLA 16.45 RAL 9.97 RAD 6645.3 VEL 12.074 PTH 7.05 VHP 2.607 DPA -3.44 RAP 39.13 ECC 1.4248  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 27 3527.29 -46.63 130.64 249.64 100.78 9 26 14 2527.3 -37.20 100.48  
 60.00 8 48 12 3472.03 -39.98 126.98 250.95 95.58 9 46 4 2472.0 -33.42 97.97  
 70.00 9 18 47 3381.97 -34.12 120.14 251.41 91.55 10 15 9 2382.0 -29.93 92.22  
 80.00 10 6 31 3232.42 -29.84 108.82 251.42 88.80 11 0 23 2232.4 -27.30 81.68  
 90.00 11 18 39 2999.60 -28.20 91.65 251.37 87.78 12 8 38 1999.6 -26.28 64.81  
 100.00 12 49 23 2706.89 -29.84 70.19 251.42 88.80 13 34 30 1706.9 -27.30 43.05  
 110.00 14 18 14 2428.79 -34.12 49.08 251.41 91.55 14 58 43 1428.8 -29.93 21.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3566 TRA -.9260 TC3 -.4379 BAU .4754 SGT 1243.1 SGR 1414.5 SG3 1411.4 ST 25.9 SR 23.1 SS 25.5  
 RDE -.4050 RRA -.1494 RC3-1.3082 FAU .45031 RRT .5491 RRF .8924 RTF .5951 CRT .8422 CRS .5641 CST .0648  
 FDE 1.3451 FRA-4.5813 FC-15.1044 BSP 2426 SGB 1883.2 R23 .2302 R13 .8713 LSA 35.0 MSA 24.8 SSA 3.0  
 BDE .5396 BRA .9380 BC3 1.3776 FSP 2416 SG1 1662.9 SG2 883.8 THA 51.64 EL1 33.3 EL2 9.7 ALF 41.07

LAUNCH DATE AUG 29 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

DISTANCE 418.865

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.890 GAL 5.93 AZL 88.23 HCA 125.17 SMA 196.58 ECC .25232 INC 1.7677 V1 29.491  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.891 GAP 7.80 AZP 91.02 TAL 30.10 TAP 155.27 RCA 146.98 APO 246.18 V2 23.008  
 RC 217.340 GL 11.48 GP -17.73 ZAL 41.55 ZAP 112.43 ETS 189.47 ZAE 145.93 ETE 212.57 ZAC 67.57 ETC 284.43 LVI -1.95

PLANETOCENTRIC CONIC

C3 25.728 VHL 5.072 DLA 16.75 RAL 9.90 RAD 6645.3 VEL 12.070 PTH 7.05 VHP 2.578 DPA -4.04 RAP 38.65 ECC 1.4234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 55 3532.78 -46.70 131.15 249.79 100.39 9 24 48 2532.8 -37.39 100.86  
 60.00 8 46 16 3478.61 -40.02 127.53 251.05 95.20 9 44 15 2478.6 -33.60 98.43  
 70.00 9 16 22 3390.03 -34.14 120.77 251.46 91.18 10 12 52 2390.0 -30.09 92.79  
 80.00 10 3 34 3242.11 -29.82 109.54 251.44 88.42 10 57 36 2242.1 -27.44 82.37  
 90.00 11 15 26 3010.12 -28.17 92.42 251.37 87.40 12 5 36 2010.1 -26.41 65.55  
 100.00 12 46 25 2716.59 -29.82 70.91 251.44 88.42 13 31 42 1716.6 -27.44 43.74  
 110.00 14 15 48 2436.85 -34.14 49.69 251.46 91.18 14 56 25 1436.8 -30.09 21.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3535 TRA -.9573 TC3 -.5328 BAU .5009 SGT 1314.1 SGR 1457.4 SG3 1444.9 ST 26.2 SR 22.4 SS 26.4  
 RDE -.3916 RRA -.1662 RC3-1.3552 FAU .45986 RRT .5958 RRF .9005 RTF .6411 CRT .8400 CRS .5649 CST .0615  
 FDE 1.4336 FRA-4.6932 FC-15.4739 BSP 2589 SGB 1962.4 R23 .2283 R13 .8808 LSA 34.9 MSA 25.5 SSA 3.0  
 BDE .5275 BRA .9716 BC3 1.4562 FSP 2473 SG1 1756.0 SG2 875.9 THA 49.94 EL1 33.1 EL2 9.6 ALF 39.71

LAUNCH DATE AUG 29 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 355.52 VL 32.885 GAL 5.91 AZL 88.19 HCA 126.12 SMA 196.49 ECC .25186 INC 1.8123 V1 29.491
RP 239.10 LAP 1.48 LOP 101.65 VP 20.849 GAP 7.54 AZP 91.07 TAL 30.02 TAP 156.14 RCA 147.00 APO 245.98 V2 22.975
RC 220.278 GL 11.79 GP -18.12 ZAL 41.70 ZAP 110.83 ETS 189.03 ZAE 144.26 ETE 211.20 ZAC 67.34 ETC 284.52 LVI -1.73

DISTANCE 422.662

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.650 VHL 5.065 DLA 17.07 RAL 9.84 RAD 8645.3 VEL 12.067 PTH 7.05 VHP 2.551 DPA -4.63 RAP 38.17 ECC 1.4221
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 24 23 3838.52 -46.77 131.69 249.97 99.88 9 23 21 2538.5 -37.60 101.23
60.00 8 44 18 3485.48 -40.06 128.11 251.17 94.81 9 42 23 2485.5 -33.79 98.92
70.00 9 13 52 3398.45 -34.15 121.43 251.53 90.79 10 10 30 2398.4 -30.26 93.39
80.00 10 0 31 3252.26 -29.80 110.29 251.47 88.03 10 54 43 2252.3 -27.58 83.09
90.00 11 12 7 3021.14 -28.13 93.23 251.39 87.00 12 2 28 2021.1 -26.54 66.33
100.00 12 43 22 2726.73 -29.80 71.66 251.47 88.03 13 28 49 1726.7 -27.58 44.45
110.00 14 13 18 2445.27 -34.15 50.35 251.53 90.79 14 54 3 1445.3 -30.26 22.31

DIFFERENTIAL CORRECTIONS

TDE -.3488 TRA -.9893 TC3 -.6301 BAU .5281
RDE -.3782 RRA -.1833 RC3-1.4053 FAU .46917
FDE 1.5161 FRA-4.8030 FC-15.8357 BSP 2763
BDE .5145 BRA 1.0061 BC3 1.5401 FSP 2520

MID-COURSE EXECUTION ACCURACY

SGT 1390.5 SGR 1902.1 SG3 1477.8
RRT .6374 RRF .9081 RTF .6818
SG8 2046.9 R23 .2248 R13 .8900
SG1 1853.6 SG2 860.3 THA 48.45

ORBIT DETERMINATION ACCURACY

ST 26.4 SR 21.7 SS 27.2
CRT .8374 CRS .5616 CST .0527
LSA 34.8 MSA 26.3 SSA 3.0
EL1 32.9 EL2 9.6 ALF 38.40

LAUNCH DATE AUG 29 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 355.52 VL 32.882 GAL 5.88 AZL 88.14 HCA 127.07 SMA 196.42 ECC .25145 INC 1.8579 V1 29.491
RP 239.42 LAP 1.48 LOP 102.60 VP 20.808 GAP 7.29 AZP 91.12 TAL 29.93 TAP 156.99 RCA 147.03 APO 245.81 V2 22.944
RC 223.209 GL 12.10 GP -18.50 ZAL 41.85 ZAP 109.23 ETS 188.58 ZAE 142.57 ETE 209.91 ZAC 67.11 ETC 284.60 LVI -1.51

DISTANCE 426.460

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.575 VHL 5.057 DLA 17.39 RAL 9.78 RAD 8645.2 VEL 12.064 PTH 7.05 VHP 2.528 DPA -5.23 RAP 37.69 ECC 1.4209
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 22 48 3544.50 -46.84 132.25 230.16 99.55 9 21 53 2544.5 -37.81 101.66
60.00 8 42 17 3492.85 -40.10 128.72 251.30 94.40 9 40 30 2492.6 -33.98 99.43
70.00 9 11 18 3407.24 -34.15 122.11 251.61 90.38 10 8 5 2407.2 -30.43 94.02
80.00 9 57 21 3262.87 -29.77 111.08 251.52 87.61 10 51 44 2262.9 -27.73 83.84
90.00 11 8 40 3032.68 -28.09 94.07 251.42 86.58 11 59 13 2032.7 -26.68 67.15
100.00 12 40 13 2737.34 -29.77 72.45 251.52 87.61 13 25 51 1737.3 -27.73 45.21
110.00 14 10 44 2454.05 -34.15 51.03 251.61 90.38 14 51 38 1454.1 -30.43 22.94

DIFFERENTIAL CORRECTIONS

TDE -.3415 TRA-1.0205 TC3 -.7276 BAU .5570
RDE -.3654 RRA -.2019 RC3-1.4574 FAU .47857
FDE 1.5856 FRA-4.9227 FC-16.2003 BSP 2946
BDE .5002 BRA 1.0403 BC3 1.6290 FSP 2545

MID-COURSE EXECUTION ACCURACY

SGT 1469.5 SGR 1549.8 SG3 1511.1
RRT .6742 RRF .9154 RTF .7177
SG8 2135.7 R23 .2188 R13 .8992
SG1 1954.7 SG2 880.4 THA 47.26

ORBIT DETERMINATION ACCURACY

ST 26.6 SR 21.1 SS 27.9
CRT .8343 CRS .5514 CST .0345
LSA 34.5 MSA 27.0 SSA 2.9
EL1 32.6 EL2 9.5 ALF 37.26

LAUNCH DATE AUG 29 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 355.52 VL 32.879 GAL 5.85 AZL 88.10 HCA 128.01 SMA 196.36 ECC .25106 INC 1.9044 V1 29.491
RP 239.73 LAP 1.50 LOP 103.54 VP 20.769 GAP 7.03 AZP 91.17 TAL 29.83 TAP 157.84 RCA 147.07 APO 245.66 V2 22.912
RC 226.132 GL 12.43 GP -18.89 ZAL 42.02 ZAP 107.64 ETS 188.12 ZAE 140.88 ETE 208.70 ZAC 66.88 ETC 284.69 LVI -1.29

DISTANCE 430.257

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.501 VHL 5.050 DLA 17.73 RAL 9.74 RAD 8645.2 VEL 12.061 PTH 7.04 VHP 2.506 DPA -5.83 RAP 37.22 ECC 1.4197
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 21 12 3550.76 -46.90 132.84 230.37 99.10 9 20 23 2550.8 -38.03 102.10
60.00 8 40 13 3500.14 -40.14 129.35 251.44 93.97 9 38 33 2500.1 -34.18 99.97
70.00 9 8 39 3416.44 -34.15 122.83 251.70 89.96 10 9 35 2416.4 -30.60 94.68
80.00 9 54 6 3274.02 -29.74 111.91 251.57 87.18 10 48 40 2274.0 -27.68 84.84
90.00 11 5 6 3044.83 -28.04 94.95 251.46 86.14 11 55 50 2044.8 -26.82 68.01
100.00 12 36 57 2748.49 -29.74 73.27 251.57 87.18 13 22 46 1748.5 -27.68 46.00
110.00 14 8 5 2463.26 -34.15 51.75 251.70 89.96 14 49 9 1463.3 -30.60 23.60

DIFFERENTIAL CORRECTIONS

TDE -.3420 TRA-1.0619 TC3 -.8429 BAU .5870
RDE -.3464 RRA -.2150 RC3-1.5013 FAU .48421
FDE 1.7278 FRA-4.9659 FC-16.4381 BSP 3139
BDE .4868 BRA 1.0834 BC3 1.7217 FSP 2643

MID-COURSE EXECUTION ACCURACY

SGT 1573.2 SGR 1587.2 SG3 1532.1
RRT .7078 RRF .9209 RTF .7775
SG8 2234.7 R23 .2227 R13 .9037
SG1 2065.1 SG2 854.2 THA 45.36

ORBIT DETERMINATION ACCURACY

ST 27.2 SR 20.2 SS 29.1
CRT .8349 CRS .5638 CST .0511
LSA 34.9 MSA 27.7 SSA 2.9
EL1 32.5 EL2 9.3 ALF 35.02

LAUNCH DATE AUG 29 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 355.52 VL 32.876 GAL 5.83 AZL 88.05 HCA 128.95 SMA 196.32 ECC .25071 INC 1.9521 V1 29.491
RP 240.03 LAP 1.52 LOP 104.48 VP 20.731 GAP 6.78 AZP 91.23 TAL 29.72 TAP 158.67 RCA 147.10 APO 245.53 V2 22.882
RC 229.048 GL 12.76 GP -19.27 ZAL 42.20 ZAP 106.07 ETS 187.65 ZAE 139.18 ETE 207.58 ZAC 66.65 ETC 284.77 LVI -1.06

DISTANCE 434.054

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.432 VHL 5.043 DLA 18.07 RAL 9.69 RAD 8645.2 VEL 12.058 PTH 7.04 VHP 2.487 DPA -6.43 RAP 36.75 ECC 1.4185
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 19 34 3557.28 -46.97 133.45 230.81 98.63 9 18 52 2557.3 -38.26 102.56
60.00 8 38 6 3507.93 -40.17 130.01 251.81 93.53 9 36 34 2507.9 -34.39 100.53
70.00 9 5 55 3426.04 -34.15 123.58 251.81 89.52 10 3 1 2426.0 -30.78 95.37
80.00 9 50 42 3285.66 -29.69 112.77 251.63 86.73 10 45 28 2285.7 -28.03 85.47
90.00 11 1 23 3057.53 -27.97 95.88 251.50 85.68 11 52 20 2057.5 -26.95 68.91
100.00 12 33 34 2760.13 -29.69 74.14 251.63 86.73 13 19 34 1760.1 -28.03 46.84
110.00 14 5 22 2472.85 -34.15 52.50 251.81 89.52 14 46 34 1472.9 -30.78 24.29

DIFFERENTIAL CORRECTIONS

TDE -.3359 TRA-1.0984 TC3 -.9517 BAU .6185
RDE -.3303 RRA -.2315 RC3-1.5502 FAU .49109
FDE 1.8271 FRA-5.0429 FC-16.7171 BSP 3339
BDE .4711 BRA 1.1226 BC3 1.8190 FSP 2688

MID-COURSE EXECUTION ACCURACY

SGT 1670.4 SGR 1631.6 SG3 1557.4
RRT .7365 RRF .9266 RTF .7739
SG8 2335.0 R23 .2201 R13 .9102
SG1 2175.9 SG2 847.3 THA 44.09

ORBIT DETERMINATION ACCURACY

ST 27.5 SR 19.4 SS 30.1
CRT .8336 CRS .5585 CST .0427
LSA 34.9 MSA 28.4 SSA 2.8
EL1 32.3 EL2 9.1 ALF 33.42



LAUNCH DATE AUG 29 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 15 1974

Heliocentric Conic

DISTANCE 437.852

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.874 GAL 5.80 AZL 88.00 HCA 129.89 SMA 196.28 ECC .25036 INC 2.0010 V1 29.491  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.694 GAP 6.54 AZP 91.28 TAL 29.80 TAP 159.49 RCA 147.13 APO 245.42 V2 22.831  
 RC 231.955 GL 13.11 GP -19.68 ZAL 42.39 ZAP 104.50 ETS 187.17 ZAE 137.47 ETE 206.47 ZAC 66.42 ETC 284.85 LVI -.63

PLANETOCENTRIC CONIC

C3 25.366 VHL 5.036 DLA 18.43 RAL 9.65 RAD 6645.1 VEL 12.055 PTH 7.04 VHP 2.470 DPA -7.03 RAP 36.28 ECC 1.4175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 54 3584.07 -47.04 134.09 250.86 98.14 9 17 18 2564.1 -38.50 103.04  
 60.00 8 35 53 3516.09 -40.20 130.70 251.78 93.06 9 34 31 2516.1 -34.60 101.11  
 70.00 9 3 6 3436.06 -34.14 124.36 251.92 89.05 10 0 22 2436.1 -30.96 96.09  
 80.00 9 47 11 3297.86 -29.64 113.67 251.71 86.26 10 42 9 2297.9 -28.18 86.34  
 90.00 10 57 30 3070.87 -27.90 96.84 251.56 85.20 11 48 41 2070.9 -27.09 69.87  
 100.00 12 30 3 2772.33 -29.64 75.04 251.71 86.26 13 16 16 1772.3 -28.18 47.71  
 110.00 14 2 32 2482.88 -34.14 53.28 251.92 89.05 14 43 55 1482.9 -30.96 25.01

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3289 TRA-1.1363 TC3-1.0638 BAU .6512 SGT 1773.3 SGR 1676.0 SG3 1580.3 ST 27.8 SR 10.5 SS 31.0  
 RDE -.3133 RRA -.2476 RC3-1.5989 FAU .49720 RRT .7616 RRF .9318 RTF .7967 CRT .8330 CRS .5515 CST .0337  
 FDE 1.9314 FRA-5.1084 FC-16.9694 BSP 3549 SGB 2440.0 R23 .2178 R13 .9159 LSA 34.9 MSA 29.2 SSA 2.8  
 BDE .4542 BRA 1.1630 BC3 1.9204 FSP 2732 SG1 2290.6 SG2 840.8 THA 42.88 EL1 32.2 EL2 8.8 ALF 31.75

LAUNCH DATE AUG 29 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 17 1974

Heliocentric Conic

DISTANCE 441.650

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.873 GAL 5.77 AZL 87.95 HCA 130.83 SMA 196.25 ECC .25009 INC 2.0511 V1 29.491  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.659 GAP 6.29 AZP 91.34 TAL 29.48 TAP 160.31 RCA 147.17 APO 245.33 V2 22.821  
 RC 234.892 GL 13.46 GP -20.05 ZAL 42.59 ZAP 102.95 ETS 186.68 ZAE 135.77 ETE 205.43 ZAC 66.19 ETC 284.93 LVI -.59

PLANETOCENTRIC CONIC

C3 25.303 VHL 5.030 DLA 18.79 RAL 9.61 RAD 6645.1 VEL 12.053 PTH 7.04 VHP 2.455 DPA -7.63 RAP 35.83 ECC 1.4164  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 11 3571.14 -47.11 134.77 251.13 97.63 9 15 42 2571.1 -38.74 103.54  
 60.00 8 33 40 3524.57 -40.23 131.42 251.97 92.57 9 32 25 2524.6 -34.81 101.73  
 70.00 9 0 10 3446.53 -34.13 125.18 252.05 88.57 9 57 37 2446.5 -31.14 96.85  
 80.00 9 43 32 3310.84 -29.58 114.62 251.79 85.76 10 38 42 2310.6 -28.33 87.26  
 90.00 10 53 28 3084.87 -27.82 97.86 251.62 84.70 11 44 53 2084.9 -27.23 70.87  
 100.00 12 26 23 2785.11 -29.58 75.98 251.79 85.76 13 12 49 1785.1 -28.33 48.63  
 110.00 13 59 37 2493.34 -34.13 54.10 252.05 88.57 14 41 10 1493.3 -31.14 25.77

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3206 TRA-1.1749 TC3-1.1778 BAU .6850 SGT 1880.3 SGR 1720.4 SG3 1600.7 ST 28.0 SR 17.7 SS 32.1  
 RDE -.2955 RRA -.2639 RC3-1.6471 FAU .50253 RRT .7837 RRF .9367 RTF .8163 CRT .8332 CRS .5410 CST .0226  
 FDE 2.0376 FRA-5.1671 FC-17.1935 BSP 3768 SGB 2548.6 R23 .2154 R13 .9211 LSA 35.0 MSA 29.8 SSA 2.8  
 BDE .4380 BRA 1.2041 BC3 2.0249 FSP 2771 SG1 2408.2 SG2 834.4 THA 41.76 EL1 32.0 EL2 8.6 ALF 30.06

LAUNCH DATE AUG 29 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 19 1974

Heliocentric Conic

DISTANCE 445.448

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.871 GAL 5.74 AZL 87.90 HCA 131.76 SMA 196.23 ECC .24982 INC 2.1024 V1 29.491  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.624 GAP 6.05 AZP 91.40 TAL 29.35 TAP 161.11 RCA 147.21 APO 245.25 V2 22.792  
 RC 237.739 GL 13.82 GP -20.43 ZAL 42.80 ZAP 101.41 ETS 186.18 ZAE 134.06 ETE 204.44 ZAC 65.95 ETC 285.00 LVI -.34

PLANETOCENTRIC CONIC

C3 25.244 VHL 5.024 DLA 19.17 RAL 9.58 RAD 6645.1 VEL 12.050 PTH 7.04 VHP 2.442 DPA -8.22 RAP 35.38 ECC 1.4159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 25 3578.52 -47.17 133.47 251.42 97.09 9 14 3 2578.5 -38.99 104.07  
 60.00 8 31 21 3533.42 -40.26 132.17 252.18 92.06 9 30 14 2533.4 -35.03 102.38  
 70.00 8 57 9 3457.46 -34.11 126.03 252.19 88.07 9 54 46 2457.5 -31.33 97.65  
 80.00 9 39 42 3324.04 -29.51 115.61 251.87 85.25 10 35 6 2324.0 -28.48 88.23  
 90.00 10 49 14 3099.58 -27.72 98.92 251.69 84.17 11 40 54 2099.6 -27.36 71.82  
 100.00 12 22 34 2798.51 -29.51 76.97 251.87 85.25 13 9 13 1798.5 -28.48 49.80  
 110.00 13 56 35 2504.28 -34.11 54.95 252.19 88.07 14 38 19 1504.3 -31.33 26.97

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3112 TRA-1.2144 TC3-1.2945 BAU .7200 SGT 1991.9 SGR 1765.8 SG3 1619.4 ST 28.3 SR 18.8 SS 33.0  
 RDE -.2776 RRA -.2804 RC3-1.6996 FAU .50730 RRT .8032 RRF .9412 RTF .8335 CRT .8345 CRS .5254 CST .0075  
 FDE 2.1384 FRA-5.2209 FC-17.3973 BSP 3986 SGB 2661.9 R23 .2129 R13 .9260 LSA 35.2 MSA 30.5 SSA 2.7  
 BDE .4171 BRA 1.2463 BC3 2.1333 FSP 2799 SG1 2529.7 SG2 828.2 THA 40.72 EL1 31.9 EL2 8.2 ALF 28.42

LAUNCH DATE AUG 29 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic

DISTANCE 449.245

EARTH TO MARS

RL 151.08 LAL .00 LOL 335.52 VL 32.871 GAL 5.71 AZL 87.84 HCA 132.69 SMA 196.21 ECC .24957 INC 2.1552 V1 29.491  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.591 GAP 5.80 AZP 91.46 TAL 29.21 TAP 161.90 RCA 147.24 APO 245.18 V2 22.763  
 RC 240.615 GL 14.19 GP -20.82 ZAL 43.03 ZAP 99.89 ETS 185.66 ZAE 132.38 ETE 203.49 ZAC 65.72 ETC 285.08 LVI -.10

PLANETOCENTRIC CONIC

C3 25.189 VHL 5.019 DLA 19.56 RAL 9.54 RAD 6645.1 VEL 12.048 PTH 7.03 VHP 2.432 DPA -8.82 RAP 34.94 ECC 1.4146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 35 3586.20 -47.23 136.20 251.72 96.53 9 12 22 2586.2 -39.25 104.62  
 60.00 8 28 57 3542.64 -40.28 132.96 252.40 91.53 9 27 59 2542.6 -35.26 103.05  
 70.00 8 54 0 3468.89 -34.08 126.93 252.34 87.54 9 51 48 2468.9 -31.52 98.49  
 80.00 9 35 43 3336.10 -29.43 116.64 251.97 84.71 10 31 21 2338.1 -28.64 89.25  
 90.00 10 44 48 3115.06 -27.61 100.04 251.76 83.62 11 36 43 2115.1 -27.49 73.04  
 100.00 12 18 35 2812.57 -29.43 78.01 251.97 84.71 13 5 27 1812.6 -28.64 50.61  
 110.00 13 53 26 2515.70 -34.08 55.84 252.34 87.54 14 35 22 1515.7 -31.52 27.41

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2997 TRA-1.2537 TC3-1.4115 BAU .7580 SGT 2105.1 SGR 1813.3 SG3 1637.5 ST 28.6 SR 16.0 SS 33.9  
 RDE -.2599 RRA -.2976 RC3-1.7455 FAU .51189 RRT .8204 RRF .9454 RTF .8486 CRT .8365 CRS .5030 CST -.0135  
 FDE 2.2305 FRA-5.2748 FC-17.5932 BSP 4213 SGB 2778.4 R23 .2097 R13 .9307 LSA 35.4 MSA 31.0 SSA 2.7  
 BDE .3967 BRA 1.2885 BC3 2.2448 FSP 2813 SG1 2653.9 SG2 822.4 THA 39.83 EL1 31.8 EL2 7.9 ALF 26.90

LAUNCH DATE AUG 29 1973 FLIGHT TIME 206.00 ARRIVAL DATE MAR 23 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT, INJ ASC, INJ AZMTH, INJ TIME, PO, CST, TIM, INJ 2, LAT, INJ 2, LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1).

LAUNCH DATE AUG 29 1973 FLIGHT TIME 206.00 ARRIVAL DATE MAR 25 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT, INJ ASC, INJ AZMTH, INJ TIME, PO, CST, TIM, INJ 2, LAT, INJ 2, LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1).

LAUNCH DATE AUG 29 1973 FLIGHT TIME 210.00 ARRIVAL DATE MAR 27 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT, INJ ASC, INJ AZMTH, INJ TIME, PO, CST, TIM, INJ 2, LAT, INJ 2, LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1).

LAUNCH DATE AUG 29 1973 FLIGHT TIME 212.00 ARRIVAL DATE MAR 29 1974

Table with columns for Heliocentric Conic (RL, RP, RC), Planetocentric Conic (C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT, INJ ASC, INJ AZMTH, INJ TIME, PO, CST, TIM, INJ 2, LAT, INJ 2, LONG), Differential Corrections (TDE, RDE, FDE, BDE), Mid-Course Execution Accuracy (SGT, RRT, SGB, SGI), and Orbit Determination Accuracy (ST, CRT, LSA, EL1).

LAUNCH DATE AUG 29 1973

FLIGHT TIME 214.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC										DISTANCE 468.225										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	32.873	GAL	5.55	AZL	87.56	HCA	137.32	SMA	196.26	ECC	.24868	INC	2.4432	V1	29.491	RP	242.60	LAP	1.66	LOP	112.86	VP	20.443	GAP	4.62	AZP	91.80	TAL	28.41	TAP	165.74	RCA	147.46	APO	245.07	V2	22.625	RC	254.795	GL	16.21	GP	-22.78	ZAL	44.33	ZAP	92.62	ET8	182.95	ZAE	123.99	ETE	199.24	ZAC	64.49	ETC	285.43	LVI	1.25
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.974	VHL	4.997	DLA	21.72	RAL	9.41	RAD	6645.0	VEL	12.039	PTH	7.03	VHP	2.408	DPA	-11.74	RAP	33.00	ECC	1.4110	SGT	2732.3	SGR	2031.4	SG3	1674.2	ST	30.3	SR	11.5	SS	39.4																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGR	.8794	RRF	.9614	RTF	.8968	CRT	.8914	CRS	.2889	CST	-.1161																												
50.00	8	2	29	3629.74	-47.49	140.38	253.55	93.33	9	2	59	2629.7	-40.66	107.84	SGB	3404.7	R23	.2052	R13	.9454	LSA	39.8	MSA	31.6	SSA	2.4																																							
60.00	8	15	29	3595.14	-40.28	137.42	253.71	88.50	9	15	24	2595.1	-36.47	106.99	SG1	3309.8	SG2	798.4	THA	35.56	EL1	32.0	EL2	4.9	ALF	19.20																																							
70.00	8	36	2	3534.58	-33.77	132.03	253.22	84.54	9	34	57	2534.6	-32.49	103.36																																																			
80.00	9	12	28	3420.34	-28.78	122.66	252.50	81.61	10	9	29	2420.3	-29.35	95.25																																																			
90.00	10	18	39	3206.70	-28.74	106.61	252.14	80.45	11	12	5	2206.7	-28.07	79.68																																																			
100.00	11	55	20	2894.81	-28.76	84.03	252.50	81.61	12	43	35	1894.8	-29.35	56.62																																																			
110.00	13	35	29	2581.40	-33.77	60.95	253.22	84.54	14	18	30	1581.4	-32.49	32.28																																																			

LAUNCH DATE AUG 29 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC										DISTANCE 472.019										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	32.875	GAL	5.51	AZL	87.49	HCA	138.24	SMA	196.29	ECC	.24857	INC	2.5063	V1	29.491	RP	242.86	LAP	1.67	LOP	113.78	VP	20.417	GAP	4.38	AZP	91.87	TAL	28.24	TAP	166.48	RCA	147.50	APO	245.09	V2	22.599	RC	257.584	GL	16.65	GP	-23.18	ZAL	44.62	ZAP	91.24	ET5	182.38	ZAE	122.36	ETE	196.46	ZAC	64.22	ETC	285.49	LVI	1.55
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.945	VHL	4.995	DLA	22.19	RAL	9.38	RAD	6645.0	VEL	12.038	PTH	7.03	VHP	2.409	DPA	-12.32	RAP	32.67	ECC	1.4105	SGT	2864.7	SGR	2075.7	SG3	1674.9	ST	30.7	SR	10.8	SS	40.6																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGR	.8876	RRF	.9640	RTF	.9032	CRT	.9123	CRS	.2035	CST	-.1446																												
50.00	8	0	13	3639.60	-47.52	141.33	253.98	92.59	9	0	53	2639.6	-40.96	108.59	SGB	3537.7	R23	.2047	R13	.9476	LSA	41.1	MSA	31.8	SSA	2.3																																							
60.00	8	12	26	3607.09	-40.25	138.44	254.01	87.81	9	12	33	2607.1	-36.72	107.90	SG1	3447.3	SG2	794.6	THA	34.87	EL1	32.3	EL2	4.2	ALF	18.04																																							
70.00	8	31	54	3549.71	-33.66	133.20	253.41	83.85	9	31	4	2549.7	-32.69	104.50																																																			
80.00	9	6	59	3439.69	-28.56	124.06	252.61	80.90	10	4	19	2439.7	-29.47	96.68																																																			
90.00	10	12	22	3228.60	-26.49	108.16	252.21	79.71	11	6	11	2228.6	-28.15	81.27																																																			
100.00	11	49	51	2914.16	-28.56	85.43	252.61	80.90	12	38	25	1914.2	-29.47	58.04																																																			
110.00	13	31	21	2596.53	-33.66	62.11	253.41	83.85	14	14	37	1596.5	-32.69	33.42																																																			

LAUNCH DATE AUG 29 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC										DISTANCE 475.812										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	32.877	GAL	5.47	AZL	87.43	HCA	139.16	SMA	196.33	ECC	.24847	INC	2.5717	V1	29.491	RP	243.12	LAP	1.68	LOP	114.70	VP	20.391	GAP	4.15	AZP	91.95	TAL	28.05	TAP	167.21	RCA	147.55	APO	245.11	V2	22.573	RC	260.356	GL	17.11	GP	-23.58	ZAL	44.93	ZAP	89.89	ETS	181.80	ZAE	120.75	ETE	197.70	ZAC	63.95	ETC	285.56	LVI	1.86
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.923	VHL	4.992	DLA	22.68	RAL	9.35	RAD	6645.0	VEL	12.037	PTH	7.02	VHP	2.411	DPA	-12.89	RAP	32.36	ECC	1.4102	SGT	2998.1	SGR	2119.3	SG3	1672.4	ST	31.2	SR	10.1	SS	41.7																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGR	.8949	RRF	.9663	RTF	.9080	CRT	.9343	CRS	.0988	CST	-.1758																												
50.00	7	57	51	3649.90	-47.55	142.32	254.42	91.83	8	58	41	2649.9	-41.27	109.38	SGB	3671.5	R23	.2044	R13	.9496	LSA	42.4	MSA	31.7	SSA	2.3																																							
60.00	8	9	14	3619.59	-40.21	139.90	254.32	87.09	9	9	33	2619.6	-38.98	108.88	SG1	3585.3	SG2	790.9	THA	34.21	EL1	32.6	EL2	3.5	ALF	17.07																																							
70.00	8	27	33	3585.83	-33.54	134.42	253.61	83.14	9	28	58	2585.6	-32.88	108.70																																																			
80.00	9	1	9	3480.28	-28.33	125.55	252.72	80.15	9	58	49	2480.3	-29.58	98.19																																																			
90.00	10	5	37	3252.05	-28.19	109.81	252.27	78.93	10	59	50	2252.1	-28.22	82.98																																																			
100.00	11	44	0	2934.73	-28.33	86.92	252.72	80.15	12	32	55	1934.7	-29.58	59.58																																																			
110.00	13	28	59	2612.45	-33.54	63.34	253.61	83.14	14	10	31	1612.4	-32.88	34.62																																																			

LAUNCH DATE AUG 29 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC										DISTANCE 479.805										EARTH TO MARS																																													
RL	151.08	LAL	.00	LOL	335.52	VL	32.879	GAL	5.44	AZL	87.38	HCA	140.07	SMA	196.37	ECC	.24838	INC	2.6394	V1	29.491	RP	243.37	LAP	1.69	LOP	115.62	VP	20.367	GAP	3.92	AZP	92.02	TAL	27.86	TAP	167.94	RCA	147.60	APO	245.15	V2	22.546	RC	263.112	GL	17.58	GP	-23.99	ZAL	45.23	ZAP	88.57	ETS	181.21	ZAE	119.15	ETE	196.97	ZAC	63.67	ETC	285.62	LVI	2.17
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	24.908	VHL	4.991	DLA	23.19	RAL	9.32	RAD	6645.0	VEL	12.037	PTH	7.02	VHP	2.415	DPA	-13.45	RAP	32.07	ECC	1.4099	SGT	3133.2	SGR	2163.0	SG3	1667.9	ST	31.7	SR	9.6	SS	42.8																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGR	.9014	RRF	.9685	RTF	.9137	CRT	.9548	CRS	-.0281	CST	-.2080																												
50.00	7	55	22	3660.65	-47.57	143.36	254.88	91.03	8	56	23	2660.6	-41.59	110.21	SGB	3807.3	R23	.2044	R13	.9514	LSA	43.9	MSA	31.6	SSA	2.2																																							
60.00	8	5	52	3632.68	-40.16	140.61	254.65	86.34	9	6	25	2632.7	-37.24	109.88	SG1	3724.9	SG2	787.8	THA	33.60	EL1	33.0	EL2	2.7	ALF	16.27																																							
70.00	8	22	56	3582.40	-33.40	135.71	253.81	82.39	9	22	38	2582.4	-33.06	106.97																																																			
80.00	8	54	53	3482.18	-28.06	127.12	252.82	79.36	9	52	55	2482.2	-29.68	99.82																																																			
90.00	9	58	20	3277.29	-25.85	111.58	252.32	78.11	10	52	58	2277.3	-28.26	84.83																																																			
100.00	11	37	45	2956.65	-28.06	88.49	252.82	79.36	12	27	2	1956.7	-29.68	61.18																																																			
110.00	13	22	22	2629.22	-33.40	64.63	253.81	82.39	14	6	12	1629.2	-33.06	35.89																																																			

LAUNCH DATE AUG 29 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.882 GAL 5.40 AZL 87.29 HCA 140.99 SMA 196.42 ECC .24831 INC 2.7095 V1 29.491
RP 243.62 LAP 1.71 LOP 116.53 VP 20.343 GAP 3.69 AZP 92.11 TAL 27.87 TAP 168.86 RCA 147.85 APO 245.19 V2 22.323
RC 265.950 GL 18.07 GP -24.40 ZAL 45.58 ZAP 87.28 ETS 180.61 ZAE 117.56 ETE 196.25 ZAC 63.37 ETC 285.68 LVI 2.50

DISTANCE 483.397

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.896 VHL 4.990 DLA 23.71 RAL 9.29 RAD 6644.9 VEL 12.036 PTH 7.02 VHP 2.421 DPA -14.02 RAP 31.81 ECC 1.4097
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 48 3671.89 -47.98 144.45 255.36 90.19 0 53 58 2671.9 -41.92 111.10
60.00 8 2 20 3646.40 -40.10 141.77 254.98 85.58 9 3 6 2646.4 -37.50 110.98
70.00 8 18 3 3600.10 -33.23 137.06 254.01 81.60 9 18 3 2600.1 -33.25 108.32
80.00 8 48 9 3505.65 -27.76 128.00 252.90 78.53 9 46 35 2505.6 -29.76 101.56
90.00 9 50 25 3304.61 -25.45 113.48 252.35 77.24 10 45 29 2304.6 -28.28 86.83
100.00 11 31 1 2980.12 -27.76 90.17 252.90 76.53 12 20 41 1980.1 -29.76 62.92
110.00 13 17 29 2646.92 -33.23 65.98 254.01 81.60 14 1 36 1646.9 -33.25 37.24

DIFFERENTIAL CORRECTIONS

TDE -.1418 TRA-1.6449 TC3-2.5360 BAU 1.1048
RDE -.0523 RRA -.4353 RC3-2.1417 FAU .50991
FDE 3.2043 FRA-5.2205 FC-17.7313 BSP 6441
BDE .1512 BRA 1.7015 BC3 3.3194 FSP 2871

MID-COURSE EXECUTION ACCURACY

SGT 3269.1 SGR 2206.7 SG3 1660.8
RRT .9072 RRF .9706 RTF .9180
SGB 3944.2 R23 .2045 R13 .9530
SG1 3865.3 S62 785.0 THA 33.02

ORBIT DETERMINATION ACCURACY

ST 32.2 SR 9.3 SS 44.0
CRT .9686 CR8 -.1723 CST -.2424
LSA 45.4 MSA 31.5 SSA 2.1
EL1 33.5 EL2 2.2 ALF 15.68

LAUNCH DATE AUG 29 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.884 GAL 5.38 AZL 87.22 HCA 141.90 SMA 196.47 ECC .24826 INC 2.7824 V1 29.491
RP 243.86 LAP 1.72 LOP 117.45 VP 20.321 GAP 3.47 AZP 92.19 TAL 27.47 TAP 169.37 RCA 147.69 APO 245.25 V2 22.499
RC 268.970 GL 18.58 GP -24.82 ZAL 45.93 ZAP 86.03 ETS 180.00 ZAE 116.03 ETE 195.54 ZAC 63.07 ETC 285.75 LVI 2.84

DISTANCE 487.188

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.894 VHL 4.989 DLA 24.25 RAL 9.25 RAD 6644.9 VEL 12.036 PTH 7.02 VHP 2.428 DPA -14.58 RAP 31.97 ECC 1.4097
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 50 2 3683.64 -47.57 145.59 255.86 89.32 8 51 26 2683.6 -42.25 112.03
60.00 7 56 36 3660.81 -40.01 142.99 255.32 84.73 8 59 37 2660.8 -37.77 112.08
70.00 8 12 51 3618.82 -33.03 138.49 254.22 80.78 9 13 10 2618.8 -33.42 109.76
80.00 8 40 53 3530.88 -27.40 130.59 252.98 77.66 9 39 44 2530.9 -29.82 103.43
90.00 9 41 43 3334.42 -24.99 115.54 252.35 76.31 10 37 18 2334.4 -28.26 89.01
100.00 11 23 45 3005.35 -27.40 91.96 252.98 77.66 12 13 50 2005.3 -29.82 64.80
110.00 13 12 17 2665.64 -33.03 67.41 254.22 80.78 13 56 43 1665.6 -33.42 36.67

DIFFERENTIAL CORRECTIONS

TDE -.1155 TRA-1.6898 TC3-2.6607 BAU 1.1451
RDE -.0250 RRA -.4502 RC3-2.1814 FAU .50586
FDE 3.3051 FRA-5.1742 FC-17.5924 BSP 6703
BDE .1182 BRA 1.7488 BC3 3.4408 FSP 2855

MID-COURSE EXECUTION ACCURACY

SGT 3405.4 SGR 2249.6 SG3 1650.8
RRT .9125 RRF .9725 RTF .9218
SGB 4081.3 R23 .2050 R13 .9544
SG1 4005.6 S62 782.5 THA 32.47

ORBIT DETERMINATION ACCURACY

ST 32.8 SR 9.2 SS 45.1
CRT .9706 CR8 -.3290 CST -.2784
LSA 47.1 MSA 31.3 SSA 2.1
EL1 34.1 EL2 2.1 ALF 15.31

LAUNCH DATE AUG 29 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.887 GAL 5.32 AZL 87.14 HCA 142.81 SMA 196.53 ECC .24822 INC 2.8581 V1 29.491
RP 244.10 LAP 1.73 LOP 118.36 VP 20.300 GAP 3.24 AZP 92.28 TAL 27.26 TAP 170.07 RCA 147.74 APO 245.31 V2 22.475
RC 271.273 GL 19.10 GP -25.25 ZAL 46.29 ZAP 84.81 ETS 179.38 ZAE 114.51 ETE 194.85 ZAC 62.75 ETC 285.81 LVI 3.19

DISTANCE 490.978

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.899 VHL 4.990 DLA 24.81 RAL 9.21 RAD 6645.0 VEL 12.036 PTH 7.02 VHP 2.437 DPA -15.14 RAP 31.36 ECC 1.4098
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 9 3695.95 -47.56 146.78 256.38 88.40 8 48 45 2695.9 -42.59 113.01
60.00 7 54 40 3675.94 -39.91 144.26 255.67 83.87 8 55 56 2675.9 -38.03 113.28
70.00 8 7 19 3638.67 -32.81 139.99 254.41 79.92 9 7 57 2638.7 -33.59 111.28
80.00 8 32 58 3558.16 -28.99 132.51 253.03 76.73 9 32 16 2558.2 -29.86 105.46
90.00 9 32 4 3367.26 -24.44 117.79 252.32 75.31 10 28 12 2367.3 -28.20 91.40
100.00 11 15 30 3032.64 -26.99 93.88 253.03 76.73 12 6 22 2032.6 -29.86 66.82
110.00 13 6 45 2685.48 -32.81 68.91 254.41 79.92 13 51 30 1685.5 -33.59 40.20

DIFFERENTIAL CORRECTIONS

TDE -.0873 TRA-1.7351 TC3-2.7849 BAU 1.1857
RDE .0033 RRA -.4655 RC3-2.2208 FAU .50131
FDE 3.4042 FRA-5.1236 FC-17.4303 BSP 6963
BDE .0874 BRA 1.7984 BC3 3.5820 FSP 2833

MID-COURSE EXECUTION ACCURACY

SGT 3542.9 SGR 2293.3 SG3 1639.0
RRT .9172 RRF .9743 RTF .9282
SGB 4220.3 R23 .2055 R13 .9557
SG1 4147.5 S62 780.5 THA 31.96

ORBIT DETERMINATION ACCURACY

ST 33.6 SR 9.4 SS 46.3
CRT .9386 CR8 -.4737 CST -.3158
LSA 48.8 MSA 31.2 SSA 2.0
EL1 34.8 EL2 2.6 ALF 15.18

LAUNCH DATE AUG 29 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.890 GAL 5.28 AZL 87.08 HCA 143.72 SMA 196.59 ECC .24820 INC 2.9369 V1 29.491
RP 244.34 LAP 1.74 LOP 119.27 VP 20.279 GAP 3.02 AZP 92.37 TAL 27.05 TAP 170.77 RCA 147.79 APO 245.38 V2 22.452
RC 273.957 GL 19.85 GP -25.69 ZAL 46.66 ZAP 83.62 ETS 178.75 ZAE 113.01 ETE 194.17 ZAC 62.42 ETC 285.88 LVI 3.56

DISTANCE 494.767

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 24.914 VHL 4.991 DLA 25.39 RAL 9.16 RAD 6645.0 VEL 12.037 PTH 7.02 VHP 2.448 DPA -15.70 RAP 31.18 ECC 1.4100
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 44 7 3708.85 -47.52 148.02 256.92 87.44 8 45 56 2708.8 -42.94 114.06
60.00 7 50 29 3691.87 -39.79 145.60 256.02 82.98 8 52 1 2691.9 -38.29 114.55
70.00 8 1 22 3659.76 -32.54 141.58 254.60 79.01 9 2 22 2659.8 -33.74 112.91
80.00 8 24 17 3587.89 -26.51 134.59 253.05 75.73 9 24 4 2587.9 -29.85 107.66
90.00 9 21 13 3403.97 -23.78 120.28 252.24 74.23 10 17 57 2404.0 -28.07 94.08
100.00 11 7 8 3062.36 -26.51 95.96 253.05 75.73 11 58 11 2062.4 -29.85 69.03
110.00 13 0 49 2706.58 -32.54 70.50 254.60 79.01 13 45 55 1706.6 -33.74 41.83

DIFFERENTIAL CORRECTIONS

TDE -.0571 TRA-1.7805 TC3-2.9079 BAU 1.2288
RDE .0326 RRA -.4812 RC3-2.2596 FAU .49617
FDE 3.4991 FRA-5.0691 FC-17.2416 BSP 7221
BDE .0657 BRA 1.8444 BC3 3.6826 FSP 2804

MID-COURSE EXECUTION ACCURACY

SGT 3680.9 SGR 2337.4 SG3 1625.3
RRT .9216 RRF .9760 RTF .9282
SGB 4360.4 R23 .2061 R13 .9568
SG1 4290.3 S62 778.6 THA 31.49

ORBIT DETERMINATION ACCURACY

ST 34.4 SR 10.0 SS 47.4
CRT .9350 CR8 -.6041 CST -.3544
LSA 50.7 MSA 31.0 SSA 1.9
EL1 35.6 EL2 3.4 ALF 15.29

LAUNCH DATE AUG 29 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 16 1974

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 32.894 GAL 5.24 AZL 86.98 HCA 144.62 SMA 196.65 ECC .24819 INC 3.0190 V1 29.491  
 RP 244.56 LAP 1.76 LOP 120.18 VP 20.260 GAP 2.80 AZP 92.46 TAL 26.84 TAP 171.46 RCA 147.85 APO 245.46 V2 22.430  
 RC 276.823 GL 20.21 GP -26.14 ZAL 47.05 ZAP 82.46 ETS 170.12 ZAE 111.53 ETE 193.50 ZAC 62.08 ETC 285.94 LVI 3.94

Planetary Centric Conic: C3 24.938 VHL 4.994 DLA 25.99 RAL 9.10 RAD 6645.0 VEL 12.038 PTH 7.03 VHP 2.460 DPA -16.26 RAP 31.03 ECC 1.4104  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 40 54 3722.36 -47.47 149.33 257.48 86.44 8 42 56 2722.4 -43.29 115.17  
 60.00 7 46 3 3706.65 -39.64 147.00 256.38 82.03 8 47 51 2708.7 -38.56 115.90  
 70.00 7 55 0 3682.27 -32.24 143.27 254.78 78.06 8 56 22 2682.3 -33.88 114.65  
 80.00 8 14 38 3620.60 -25.94 136.85 253.04 74.67 9 14 59 2620.6 -29.80 110.09  
 90.00 9 8 45 3445.82 -22.98 123.08 252.09 73.05 10 6 10 2445.8 -27.86 97.12  
 100.00 10 57 30 3095.07 -25.94 98.22 253.04 74.67 11 49 5 2095.1 -29.80 71.46  
 110.00 12 54 26 2729.09 -32.24 72.19 254.78 78.06 13 39 55 1729.1 -33.88 43.57

Differential Corrections: TDE -.0251 TRA-1.8265 TC3-3.0296 BAU 1.2676 SGT 3820.0 SGR 2381.7 SG3 1609.2 ST 35.3 SR 10.7 SS 48.6  
 RDE .0630 RRA -.4969 RC3-2.2974 FAU .49037 RRT .9254 RRF .9775 RTF .9308 CRT .9050 CR3 -.7099 CST -.3929  
 FDE 3.5918 FRA-5.0073 FC-17.0234 BSP 7480 SGB 4501.6 R23 .2070 R13 .9579 LSA 52.6 MSA 30.9 SSA 1.9  
 BDE .0678 BRA 1.8929 BC3 3.8022 FSP 2774 SG1 4434.0 SG2 777.4 THA 31.05 EL1 36.6 EL2 4.4 ALF 15.63

LAUNCH DATE AUG 29 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 18 1974

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 32.897 GAL 5.20 AZL 86.90 HCA 145.53 SMA 196.72 ECC .24819 INC 3.1047 V1 29.491  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.241 GAP 2.58 AZP 92.56 TAL 26.62 TAP 172.14 RCA 147.90 APO 245.55 V2 22.407  
 RC 279.268 GL 20.80 GP -26.60 ZAL 47.45 ZAP 81.35 ETS 177.47 ZAE 110.08 ETE 192.84 ZAC 61.71 ETC 286.01 LVI 4.34

Planetary Centric Conic: C3 24.972 VHL 4.997 DLA 26.61 RAL 9.04 RAD 6645.0 VEL 12.039 PTH 7.03 VHP 2.474 DPA -16.82 RAP 30.90 ECC 1.4110  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 29 3736.59 -47.41 150.69 258.05 85.39 8 39 46 2736.6 -43.65 118.35  
 60.00 7 41 19 3726.37 -39.46 148.48 256.75 81.05 8 43 25 2726.4 -38.81 117.33  
 70.00 7 48 6 3706.36 -31.89 145.06 254.95 77.06 8 49 53 2706.4 -33.99 116.52  
 80.00 8 3 49 3657.04 -25.26 139.35 252.97 73.53 9 4 46 2657.0 -29.68 112.80  
 90.00 8 53 55 3495.13 -21.96 126.34 251.84 71.73 9 52 10 2495.1 -27.51 100.69  
 100.00 10 46 40 3131.51 -25.26 100.72 252.97 73.53 11 38 52 2131.5 -29.68 74.16  
 110.00 12 47 32 2753.18 -31.89 73.97 254.95 77.06 13 33 26 1753.2 -33.99 45.44

Differential Corrections: TDE .0097 TRA-1.8719 TC3-3.1483 BAU 1.3084 SGT 3957.8 SGR 2425.7 SG3 1590.7 ST 36.3 SR 11.8 SS 49.8  
 RDE .0948 RRA -.5126 RC3-2.3337 FAU .46381 RRT .9290 RRF .9790 RTF .9332 CRT .8748 CR3 -.7910 CST -.4322  
 FDE 3.6832 FRA-4.9382 FC-16.7727 BSP 7749 SGB 4642.0 R23 .2080 R13 .9588 LSA 54.7 MSA 30.7 SSA 1.8  
 BDE .0953 BRA 1.9408 BC3 3.9189 FSP 2743 SG1 4576.6 SG2 776.5 THA 30.63 EL1 37.8 EL2 5.5 ALF 16.20

LAUNCH DATE AUG 29 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 20 1974

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 32.901 GAL 5.16 AZL 86.81 HCA 146.43 SMA 196.79 ECC .24820 INC 3.1943 V1 29.491  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.223 GAP 2.36 AZP 92.66 TAL 26.39 TAP 172.82 RCA 147.95 APO 245.64 V2 22.386  
 RC 281.893 GL 21.41 GP -27.07 ZAL 47.86 ZAP 80.27 ETS 176.81 ZAE 108.66 ETE 192.19 ZAC 61.33 ETC 286.06 LVI 4.76

Planetary Centric Conic: C3 25.019 VHL 5.002 DLA 27.26 RAL 8.97 RAD 6645.0 VEL 12.041 PTH 7.03 VHP 2.490 DPA -17.38 RAP 30.81 ECC 1.4117  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 52 3751.93 -47.31 152.13 259.63 84.29 8 36 23 2751.5 -44.01 117.60  
 60.00 7 36 16 3745.11 -39.25 150.03 257.11 80.02 8 38 41 2745.1 -39.06 118.86  
 70.00 7 40 37 3732.28 -31.47 146.97 255.08 76.00 8 42 49 2732.3 -34.08 118.54  
 80.00 7 51 24 3698.43 -24.43 142.14 252.82 72.28 8 53 2 2698.4 -29.47 115.85  
 90.00 8 39 12 3556.82 -20.59 130.34 251.41 70.18 9 34 29 2556.8 -26.93 105.11  
 100.00 10 34 15 3172.90 -24.43 103.51 252.82 72.28 11 27 8 2172.9 -29.47 77.22  
 110.00 12 40 3 2779.10 -31.47 75.88 255.08 76.00 13 26 22 1779.1 -34.08 47.46

Differential Corrections: TDE .0469 TRA-1.9177 TC3-3.2851 BAU 1.3493 SGT 4096.1 SGR 2470.5 SG3 1570.3 ST 37.5 SR 13.1 SS 51.0  
 RDE .1282 RRA -.5286 RC3-2.3693 FAU .47675 RRT .9322 RRF .9804 RTF .9352 CRT .8485 CR3 -.8508 CST -.4713  
 FDE 3.7739 FRA-4.8642 FC-16.4970 BSP 8010 SGB 4783.5 R23 .2093 R13 .9596 LSA 56.9 MSA 30.5 SSA 1.7  
 BDE .1365 BRA 1.9892 BC3 4.0341 FSP 2705 SG1 4720.1 SG2 776.2 THA 30.25 EL1 39.1 EL2 6.6 ALF 16.99

LAUNCH DATE AUG 29 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 22 1974

Heliocentric Conic: RL 151.08 LAL .00 LOL 335.52 VL 32.905 GAL 5.12 AZL 86.71 HCA 147.33 SMA 196.87 ECC .24823 INC 3.2880 V1 29.491  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.206 GAP 2.14 AZP 92.77 TAL 26.17 TAP 173.50 RCA 148.00 APO 245.74 V2 22.365  
 RC 284.497 GL 22.05 GP -27.56 ZAL 48.29 ZAP 79.22 ETS 176.15 ZAE 107.26 ETE 191.54 ZAC 60.93 ETC 286.16 LVI 5.20

Planetary Centric Conic: C3 25.078 VHL 5.008 DLA 27.93 RAL 8.89 RAD 6645.0 VEL 12.044 PTH 7.03 VHP 2.507 DPA -17.95 RAP 30.74 ECC 1.4127  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 0 3767.26 -47.20 153.63 259.23 83.13 8 32 47 2767.3 -44.37 118.94  
 60.00 7 30 51 3764.98 -39.00 151.66 257.47 78.94 8 33 36 2765.0 -39.30 120.50  
 70.00 7 32 26 3760.31 -31.00 149.01 255.19 74.88 8 35 6 2760.3 -34.14 120.73  
 80.00 7 36 43 3746.83 -23.39 145.36 252.56 70.90 8 39 10 2746.8 -29.13 119.41  
 90.00 8 7 25 3647.55 -18.39 136.08 250.57 68.13 9 8 12 2647.5 -25.81 111.51  
 100.00 10 19 35 3221.30 -23.39 106.73 252.56 70.90 11 13 17 2221.3 -29.13 80.78  
 110.00 12 31 52 2807.13 -30.99 77.93 255.19 74.88 13 18 40 1807.1 -34.14 49.65

Differential Corrections: TDE .0861 TRA-1.9638 TC3-3.3793 BAU 1.3904 SGT 4234.5 SGR 2516.1 SG3 1548.1 ST 38.8 SR 14.6 SS 52.1  
 RDE .1628 RRA -.5454 RC3-2.4040 FAU .46915 RRT .9351 RRF .9817 RTF .9371 CRT .8294 CR3 -.8923 CST -.5096  
 FDE 3.8578 FRA-4.7880 FC-16.1956 BSP 8277 SGB 4925.6 R23 .2105 R13 .9604 LSA 59.3 MSA 30.3 SSA 1.7  
 BDE .1840 BRA 2.0381 BC3 4.1471 FSP 2665 SG1 4864.1 SG2 776.1 THA 29.90 EL1 40.7 EL2 7.7 ALF 17.95

LAUNCH DATE AUG 29 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.900 GAL 5.07 AZL 86.61 HCA 148.23 SMA 196.95 ECC .24827 INC 3.3863 V1 29.491
RP 245.43 LAP 1.78 LOP 123.79 VP 20.190 GAP 1.92 AZP 92.68 TAL 25.93 TAP 174.16 RCA 148.06 APO 245.65 V2 22.344
RC 267.079 GL 22.71 GP -28.07 ZAL 48.74 ZAP 78.22 ETS 175.47 ZAE 105.89 ETE 190.90 ZAC 60.50 ETC 286.24 LVI 5.66

PLANETOCENTRIC CONIC

C3 25.152 VHL 5.015 DLA 28.62 RAL 8.79 RAD 6645.1 VEL 12.047 PTH 7.03 VHP 2.526 DPA -18.52 RAP 30.71 ECC 1.4139
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 25 52 3783.85 -47.05 155.21 259.85 81.93 8 28 56 2783.8 -44.73 120.37
60.00 7 25 2 3786.10 -38.71 153.38 257.61 77.80 8 28 8 2786.1 -39.53 122.25
70.00 7 23 25 3790.85 -30.43 151.21 255.26 73.69 8 26 36 2790.8 -34.15 123.11
80.00 7 18 27 3806.50 -22.01 149.25 252.12 69.30 8 21 53 2806.5 -28.56 123.75
85.41 6 49 24 3900.16 -15.13 153.12 249.10 65.42 7 54 25 2900.2 -23.98 129.50
100.00 10 1 18 3280.97 -22.01 110.62 252.12 69.30 10 55 59 2281.0 -28.56 85.12
110.00 12 22 51 2837.67 -30.43 80.13 255.26 73.69 13 10 9 1837.7 -34.15 52.03

DIFFERENTIAL CORRECTIONS

TDE .1278 TRA-2.0101 TC3-3.4902 BAU 1.4315
RDE .1983 RRA -.5625 RC3-2.4375 FAU .46096
FDE 3.9367 FRA-4.7070 FC-15.8663 BSP 8536
BDE .2358 BRA 2.0873 BC3 4.2571 F8P 2619

MID-COURSE EXECUTION ACCURACY

SGT 4372.7 SGR 2562.2 SG3 1523.7
RRT .9378 RRF .9829 RTF .9388
SGB 5068.1 R23 .2118 R13 .9610
SG1 8008.3 SG2 776.4 THA 29.57

ORBIT DETERMINATION ACCURACY

ST 40.3 SR 16.2 SS 53.3
CRT .8173 CR8 -.9216 CST -.5468
LSA 61.7 M8A 30.2 S8A 1.6
EL1 42.5 EL2 8.8 ALF 19.06

LAUNCH DATE AUG 29 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.914 GAL 5.03 AZL 86.51 HCA 149.13 SMA 197.04 ECC .24831 INC 3.4895 V1 29.491
RP 245.63 LAP 1.79 LOP 124.69 VP 20.175 GAP 1.70 AZP 93.00 TAL 25.70 TAP 174.83 RCA 148.11 APO 245.96 V2 22.324
RC 289.637 GL 23.40 GP -28.59 ZAL 49.20 ZAP 77.28 ETS 174.77 ZAE 104.55 ETE 190.26 ZAC 60.06 ETC 286.32 LVI 6.14

PLANETOCENTRIC CONIC

C3 25.242 VHL 5.024 DLA 29.34 RAL 8.68 RAD 6645.1 VEL 12.050 PTH 7.04 VHP 2.547 DPA -19.10 RAP 30.71 ECC 1.4154
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 21 27 3801.37 -46.87 156.86 260.47 80.66 8 24 49 2801.4 -45.10 121.90
60.00 7 19 44 3808.61 -38.37 155.19 258.15 76.61 8 22 13 2808.6 -39.74 124.12
70.00 7 13 23 3824.42 -29.77 153.60 255.27 72.42 8 17 7 2824.4 -34.11 125.73
80.00 6 52 31 3890.16 -19.90 154.57 251.29 67.27 7 57 21 2890.2 -27.52 129.75
81.84 6 20 9 3993.90 -15.47 160.18 249.22 64.75 7 26 43 2993.9 -24.55 136.58
100.00 9 35 23 3364.63 -19.90 115.94 251.29 67.27 10 31 27 2364.6 -27.52 91.12
110.00 12 12 49 2871.24 -29.77 82.51 255.27 72.42 13 0 40 1871.2 -34.11 54.65

DIFFERENTIAL CORRECTIONS

TDE .1720 TRA-2.0568 TC3-3.5979 BAU 1.4728
RDE .2356 RRA -.5805 RC3-2.4704 FAU .45236
FDE 4.0121 FRA-4.6245 FC-15.5148 BSP 8796
BDE .2917 BRA 2.1371 BC3 4.3844 F8P 2571

MID-COURSE EXECUTION ACCURACY

SGT 4511.0 SGR 2609.8 SG3 1497.9
RRT .9404 RRF .9840 RTF .9403
SGB 5211.5 R23 .2131 R13 .9617
SG1 5153.2 SG2 777.2 THA 29.28

ORBIT DETERMINATION ACCURACY

ST 41.9 SR 18.0 SS 54.4
CRT .8112 CR8 -.9424 CST -.5828
LSA 64.3 M8A 30.0 S8A 1.5
EL1 44.5 EL2 9.9 ALF 20.27

LAUNCH DATE AUG 29 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.918 GAL 4.98 AZL 86.40 HCA 150.02 SMA 197.12 ECC .24837 INC 3.5981 V1 29.491
RP 245.83 LAP 1.80 LOP 125.59 VP 20.181 GAP 1.49 AZP 93.12 TAL 25.46 TAP 175.48 RCA 148.16 APO 246.08 V2 22.305
RC 292.172 GL 24.13 GP -29.13 ZAL 49.68 ZAP 76.33 ETS 174.07 ZAE 103.24 ETE 189.63 ZAC 59.59 ETC 286.41 LVI 6.64

PLANETOCENTRIC CONIC

C3 25.350 VHL 5.035 DLA 30.09 RAL 8.56 RAD 6645.1 VEL 12.055 PTH 7.04 VHP 2.569 DPA -19.68 RAP 30.73 ECC 1.4172
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 16 42 3819.90 -46.65 158.60 261.09 79.34 8 20 22 2819.9 -45.45 123.53
60.00 7 11 55 3832.67 -37.98 157.12 258.46 75.36 8 15 48 2832.7 -39.93 126.14
70.00 7 2 4 3861.78 -28.97 156.21 255.21 71.06 8 6 28 2861.8 -33.98 128.64
79.27 5 59 52 4058.25 -15.80 165.12 249.34 64.05 7 7 30 3058.2 -25.13 141.55
79.27 5 59 52 4058.25 -15.80 165.12 249.34 64.05 7 7 30 3058.2 -25.13 141.55
79.27 5 59 52 4058.25 -15.80 165.12 249.34 64.05 7 7 30 3058.2 -25.13 141.55
110.00 12 1 30 2908.60 -28.97 85.13 255.21 71.06 12 49 59 1908.6 -33.98 57.58

DIFFERENTIAL CORRECTIONS

TDE .2193 TRA-2.1031 TC3-3.7011 BAU 1.5139
RDE .2750 RRA -.5985 RC3-2.5016 FAU .44313
FDE 4.0854 FRA-4.5338 FC-15.1338 BSP 9069
BDE .3518 BRA 2.1866 BC3 4.4672 F8P 2524

MID-COURSE EXECUTION ACCURACY

SGT 4847.9 SGR 2657.7 SG3 1469.8
RRT .9426 RRF .9851 RTF .9416
SGB 5354.1 R23 .2147 R13 .9622
SG1 5297.1 SG2 778.8 THA 29.01

ORBIT DETERMINATION ACCURACY

ST 43.7 SR 20.0 SS 55.9
CRT .8098 CR8 -.9573 CST -.6168
LSA 67.1 M8A 29.8 S8A 1.5
EL1 46.8 EL2 10.9 ALF 21.55

LAUNCH DATE AUG 29 1973

FLIGHT TIME 244.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.923 GAL 4.94 AZL 86.29 HCA 150.92 SMA 197.21 ECC .24844 INC 3.7125 V1 29.491
RP 246.02 LAP 1.80 LOP 126.48 VP 20.148 GAP 1.28 AZP 93.25 TAL 25.21 TAP 176.13 RCA 148.22 APO 246.21 V2 22.286
RC 294.682 GL 24.88 GP -29.70 ZAL 50.18 ZAP 75.45 ETS 173.35 ZAE 101.96 ETE 189.00 ZAC 59.09 ETC 286.50 LVI 7.17

PLANETOCENTRIC CONIC

C3 25.477 VHL 5.048 DLA 30.87 RAL 8.41 RAD 6645.2 VEL 12.060 PTH 7.04 VHP 2.594 DPA -20.27 RAP 30.82 ECC 1.4193
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 11 36 3839.55 -46.39 160.42 261.71 77.96 8 15 35 2839.5 -45.81 125.31
60.00 7 4 29 3858.51 -37.51 159.15 258.74 74.05 8 8 48 2858.5 -40.09 128.32
70.00 6 49 4 3904.09 -28.00 159.12 255.03 69.59 7 54 8 2904.1 -33.75 131.92
77.07 5 43 12 4110.57 -16.14 169.21 249.47 63.33 6 51 43 3110.6 -25.74 145.68
77.07 5 43 12 4110.57 -16.14 169.21 249.47 63.33 6 51 43 3110.6 -25.74 145.68
77.07 5 43 12 4110.57 -16.14 169.21 249.47 63.33 6 51 43 3110.6 -25.74 145.68
110.00 11 48 30 2950.91 -28.00 88.04 255.03 69.59 12 37 41 1950.9 -33.75 60.84

DIFFERENTIAL CORRECTIONS

TDE .2696 TRA-2.1499 TC3-3.7998 BAU 1.5551
RDE .3166 RRA -.6173 RC3-2.5312 FAU .43335
FDE 4.1556 FRA-4.4394 FC-14.7255 BSP 9333
BDE .4158 BRA 2.2368 BC3 4.5657 F8P 2471

MID-COURSE EXECUTION ACCURACY

SGT 4784.6 SGR 2706.5 SG3 1439.8
RRT .9447 RRF .9861 RTF .9426
SGB 5497.0 R23 .2165 R13 .9626
SG1 5441.3 SG2 780.6 THA 28.77

ORBIT DETERMINATION ACCURACY

ST 45.7 SR 22.1 SS 56.6
CRT .8123 CR8 -.9680 CST -.6491
LSA 70.0 M8A 29.6 S8A 1.4
EL1 49.3 EL2 11.9 ALF 22.65

LAUNCH DATE AUG 28 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.928 GAL 4.89 AZL 86.17 HCA 151.81 SMA 197.30 ECC .24852 INC 3.8534 V1 29.491  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.135 GAP 1.06 AZP 93.38 TAL 24.97 TAP 178.78 RCA 148.27 APO 246.34 V2 22.267  
 RC 297.167 GL 25.68 GP -30.29 ZAL 50.70 ZAP 74.61 ETS 172.62 ZAE 100.71 ETE 188.38 ZAC 58.56 ETC 286.60 LVI 7.73

DISTANCE 528.824

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.828 VHL 5.062 DLA 31.68 RAL 8.25 RAD 6645.3 VEL 12.066 PTH 7.05 VHP 2.620 DPA -20.87 RAP 30.93 ECC 1.4218  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 6 4 3860.41 -46.07 162.34 262.33 76.51 8 10 25 2860.4 -46.15 127.21  
 60.00 6 56 20 3886.38 -36.97 161.32 258.98 72.66 8 1 7 2886.4 -40.22 130.68  
 70.00 6 33 42 3953.34 -26.78 162.43 254.70 67.97 7 39 35 2953.3 -33.38 135.71  
 75.09 5 28 35 4155.98 -16.49 172.82 249.61 62.56 6 37 51 3156.0 -26.36 149.33  
 75.09 5 28 35 4155.98 -16.49 172.82 249.61 62.56 6 37 51 3156.0 -26.36 149.33  
 75.09 5 28 35 4155.98 -16.49 172.82 249.61 62.56 6 37 51 3156.0 -26.36 149.33  
 110.00 11 33 8 3000.16 -26.78 91.35 254.70 67.97 12 23 8 2000.2 -33.36 64.63

DIFFERENTIAL CORRECTIONS

TDE .3225 TRA-2.1971 TC3-3.8933 BAU 1.5964  
 RDE .3599 RRA -.6373 RC3-2.5997 FAU .42313  
 FDE 4.2187 FRA-4.3445 FC-14.2940 BSP 9592  
 BDE .4832 BRA 2.2877 BC3 4.6594 FSP 2413

MID-COURSE EXECUTION ACCURACY

SGT 4920.5 SGR 2756.9 SG3 1408.2  
 RRT .9466 RRF .9870 RTF .9437  
 SGB 5640.2 R23 .2181 R13 .9630  
 SGI 5585.6 SG2 782.9 THA 28.55

ORBIT DETERMINATION ACCURACY

ST 47.8 SR 24.3 SS 57.7  
 CRT .8180 CRS -.9756 CST -.8792  
 LSA 73.1 MSA 29.5 S8A 1.3  
 EL1 52.1 EL2 12.8 ALF 24.14

LAUNCH DATE AUG 29 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.933 GAL 4.85 AZL 86.04 HCA 152.70 SMA 197.40 ECC .24860 INC 3.9613 V1 29.491  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.124 GAP .85 AZP 93.52 TAL 24.72 TAP 177.42 RCA 148.33 APO 246.47 V2 22.249  
 RC 299.628 GL 26.51 GP -30.90 ZAL 51.24 ZAP 73.81 ETS 171.88 ZAE 99.50 ETE 187.75 ZAC 58.01 ETC 286.71 LVI 8.31

DISTANCE 532.603

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 25.803 VHL 5.080 DLA 32.53 RAL 8.06 RAD 6645.3 VEL 12.073 PTH 7.05 VHP 2.649 DPA -21.49 RAP 31.07 ECC 1.4247  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 0 4 3862.64 -45.70 164.35 262.93 75.00 8 4 47 2882.6 -46.47 129.25  
 60.00 6 47 21 3916.61 -36.33 163.63 259.17 71.21 7 52 38 2916.6 -40.29 133.25  
 70.00 6 14 38 4013.47 -25.19 166.38 254.12 66.13 7 21 32 3013.5 -32.71 140.29  
 73.22 5 15 20 4196.65 -16.84 176.11 249.75 61.75 6 25 17 3196.7 -27.00 152.67  
 73.22 5 15 20 4196.65 -16.84 176.11 249.75 61.75 6 25 17 3196.7 -27.00 152.67  
 73.22 5 15 20 4196.65 -16.84 176.11 249.75 61.75 6 25 17 3196.7 -27.00 152.67  
 110.00 11 14 4 3060.29 -25.19 95.29 254.12 66.13 12 5 5 2060.3 -32.71 69.20

DIFFERENTIAL CORRECTIONS

TDE .3778 TRA-2.2458 TC3-3.9824 BAU 1.6382  
 RDE .4052 RRA -.6589 RC3-2.5871 FAU .41252  
 FDE 4.2748 FRA-4.2501 FC-13.8407 BSP 9845  
 BDE .5540 BRA 2.3405 BC3 4.7489 FSP 2352

MID-COURSE EXECUTION ACCURACY

SGT 5057.4 SGR 2809.6 SG3 1375.1  
 RRT .9485 RRF .9879 RTF .9446  
 SGB 5785.4 R23 .2198 R13 .9634  
 SGI 5731.8 SG2 785.6 THA 28.37

ORBIT DETERMINATION ACCURACY

ST 50.2 SR 26.7 SS 58.7  
 CRT .8256 CRS -.9811 CST -.7069  
 LSA 76.3 MSA 29.3 S8A 1.3  
 EL1 55.2 EL2 13.7 ALF 25.37

LAUNCH DATE AUG 29 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.938 GAL 4.80 AZL 85.90 HCA 153.59 SMA 197.50 ECC .24870 INC 4.0970 V1 29.491  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.113 GAP .64 AZP 93.67 TAL 24.46 TAP 178.06 RCA 148.38 APO 246.61 V2 22.232  
 RC 302.085 GL 27.38 GP -31.54 ZAL 51.80 ZAP 73.06 ETS 171.12 ZAE 98.31 ETE 187.12 ZAC 57.41 ETC 286.82 LVI 8.93

DISTANCE 536.381

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.008 VHL 5.100 DLA 33.41 RAL 7.85 RAD 6645.4 VEL 12.082 PTH 7.06 VHP 2.681 DPA -22.12 RAP 31.26 ECC 1.4280  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 53 33 3906.36 -45.26 166.47 263.52 73.42 7 58 39 2906.4 -46.77 131.46  
 60.00 6 37 21 3949.63 -35.58 166.11 259.28 69.67 7 43 10 2949.8 -40.29 138.06  
 70.00 5 48 12 4095.46 -22.83 171.57 253.03 63.88 6 56 28 3095.5 -31.54 146.39  
 71.42 5 3 0 4234.06 -17.19 179.19 249.89 60.90 6 13 34 3234.1 -27.66 155.80  
 71.42 5 3 0 4234.06 -17.19 179.19 249.89 60.90 6 13 34 3234.1 -27.66 155.80  
 71.42 5 3 0 4234.06 -17.19 179.19 249.89 60.90 6 13 34 3234.1 -27.66 155.80  
 110.00 10 47 38 3142.28 -22.83 100.49 253.03 63.88 11 40 1 2142.3 -31.54 75.31

DIFFERENTIAL CORRECTIONS

TDE .4368 TRA-2.2940 TC3-4.0839 BAU 1.6798  
 RDE .4529 RRA -.6815 RC3-2.6128 FAU .40143  
 FDE 4.3247 FRA-4.1915 FC-13.3627 BSP 10111  
 BDE .6292 BRA 2.3931 BC3 4.8313 FSP 2290

MID-COURSE EXECUTION ACCURACY

SGT 5191.8 SGR 2863.7 SG3 1340.1  
 RRT .9502 RRF .9887 RTF .9454  
 SGB 5929.2 R23 .2214 R13 .9638  
 SGI 5876.5 SG2 788.8 THA 28.21

ORBIT DETERMINATION ACCURACY

ST 52.8 SR 29.2 SS 59.7  
 CRT .8347 CRS -.9851 CST -.7327  
 LSA 79.7 MSA 29.2 S8A 1.2  
 EL1 58.5 EL2 14.5 ALF 26.54

LAUNCH DATE AUG 29 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.943 GAL 4.75 AZL 85.76 HCA 154.48 SMA 197.80 ECC .24880 INC 4.2412 V1 29.491  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.103 GAP .43 AZP 93.83 TAL 24.20 TAP 178.89 RCA 148.44 APO 246.76 V2 22.215  
 RC 304.476 GL 28.29 GP -32.21 ZAL 52.38 ZAP 72.36 ETS 170.35 ZAE 97.16 ETE 186.49 ZAC 56.79 ETC 286.95 LVI 9.58

DISTANCE 540.158

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.245 VHL 5.123 DLA 34.33 RAL 7.60 RAD 6645.5 VEL 12.092 PTH 7.07 VHP 2.714 DPA -22.77 RAP 31.48 ECC 1.4319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 46 24 3931.77 -44.74 168.70 264.06 71.77 7 51 56 2931.8 -47.04 135.86  
 60.00 6 26 6 3986.04 -34.60 168.79 259.28 68.04 7 32 32 2986.0 -40.22 139.16  
 69.68 4 51 23 4268.79 -17.54 182.10 250.04 60.01 6 2 32 3268.8 -28.33 158.78  
 69.68 4 51 23 4268.79 -17.54 182.10 250.04 60.01 6 2 32 3268.8 -28.33 158.78  
 69.68 4 51 23 4268.79 -17.54 182.10 250.04 60.01 6 2 32 3268.8 -28.33 158.78  
 69.68 4 51 23 4268.79 -17.54 182.10 250.04 60.01 6 2 32 3268.8 -28.33 158.78  
 69.68 4 51 23 4268.79 -17.54 182.10 250.04 60.01 6 2 32 3268.8 -28.33 158.78

DIFFERENTIAL CORRECTIONS

TDE .4995 TRA-2.3426 TC3-4.1382 BAU 1.7214  
 RDE .5037 RRA -.7049 RC3-2.6355 FAU .38976  
 FDE 4.3705 FRA-4.0473 FC-12.8570 BSP 10378  
 BDE .7094 BRA 2.4464 BC3 4.9062 FSP 2226

MID-COURSE EXECUTION ACCURACY

SGT 5324.9 SGR 2919.0 SG3 1303.1  
 RRT .9517 RRF .9894 RTF .9460  
 SGB 6072.5 R23 .2232 R13 .9640  
 SGI 6020.6 SG2 792.6 THA 28.08

ORBIT DETERMINATION ACCURACY

ST 55.5 SR 31.9 SS 60.6  
 CRT .8443 CRS -.9882 CST -.7564  
 LSA 83.3 MSA 29.0 S8A 1.1  
 EL1 62.2 EL2 15.2 ALF 27.64

LAUNCH DATE AUG 29 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.948 GAL 4.71 AZL 85.61 HCA 155.37 SMA 197.70 ECC .24891 INC 4.3949 V1 29.491
RP 246.90 LAP 1.83 LOP 130.95 VP 20.093 GAP .23 AZP 94.00 TAL 23.95 TAP 179.32 RCA 148.49 APO 246.91 V2 22.199
RC 306.863 GL 29.25 GP -32.92 ZAL 52.98 ZAP 71.70 ETS 169.56 ZAE 98.04 ETE 185.86 ZAC 56.13 ETC 287.08 LVI 10.27

DISTANCE 543.935

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.520 VHL 5.150 DLA 35.29 RAL 7.31 RAD 6645.6 VEL 12.103 PTH 7.08 VHP 2.751 DPA -23.43 RAP 31.74 ECC 1.4365
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 38 34 3959.05 -44.14 171.04 264.95 70.05 7 44 33 2959.0 -47.27 136.46
60.00 6 13 17 4026.65 -33.61 171.70 259.15 66.32 7 20 23 3026.7 -40.02 142.59
67.96 4 40 16 4301.58 -17.89 184.90 250.19 59.07 5 51 58 3301.6 -29.02 161.66
67.96 4 40 16 4301.58 -17.89 184.90 250.19 59.07 5 51 58 3301.6 -29.02 161.66
67.96 4 40 16 4301.58 -17.89 184.90 250.19 59.07 5 51 58 3301.6 -29.02 161.66
67.96 4 40 16 4301.58 -17.89 184.90 250.19 59.07 5 51 58 3301.6 -29.02 161.66
67.96 4 40 16 4301.58 -17.89 184.90 250.19 59.07 5 51 58 3301.6 -29.02 161.66

DIFFERENTIAL CORRECTIONS

TDE .3586 TRA-2.3988 TC3-4.2138 BAU 1.7693
RDE .5472 RRA -.7414 RC3-2.6732 FAU .38045
FDE 4.3938 FRA-4.0028 FC-12.4195 B8P 10502
BDE .7819 BRA 2.5108 BC3 4.9902 F8P 2097

MID-COURSE EXECUTION ACCURACY

SGT 5469.2 SGR 2995.4 SG3 1272.3
RRT .9542 RRF .9903 RTF .9482
SGB 6235.7 R23 .2205 R13 .9655
SG1 6185.1 SG2 792.6 THA 28.09

ORBIT DETERMINATION ACCURACY

ST 58.4 SR 34.3 SS 60.9
CRT .8975 CRS -.9898 CST -.7788
LSA 86.5 MSA 28.6 S8A 1.1
EL1 65.9 EL2 15.6 ALF 28.44

LAUNCH DATE AUG 29 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.953 GAL 4.66 AZL 85.44 HCA 156.26 SMA 197.80 ECC .24903 INC 4.5591 V1 29.491
RP 247.06 LAP 1.83 LOP 131.84 VP 20.085 GAP .02 AZP 94.17 TAL 23.68 TAP 179.94 RCA 148.54 APO 247.06 V2 22.183
RC 309.224 GL 30.26 GP -33.66 ZAL 53.61 ZAP 71.10 ETS 168.76 ZAE 94.96 ETE 185.22 ZAC 55.42 ETC 287.23 LVI 11.00

DISTANCE 547.713

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 26.837 VHL 5.180 DLA 36.29 RAL 6.99 RAD 6645.7 VEL 12.116 PTH 7.09 VHP 2.791 DPA -24.12 RAP 32.08 ECC 1.4417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 29 33 3988.52 -43.42 173.51 264.97 68.25 7 36 22 2988.5 -47.45 139.28
60.00 5 58 22 4072.89 -32.30 174.91 258.82 64.46 7 6 15 3072.9 -39.67 146.47
66.25 4 29 32 4332.76 -18.24 187.61 250.34 58.07 5 41 44 3332.8 -29.74 164.47
66.25 4 29 32 4332.76 -18.24 187.61 250.34 58.07 5 41 44 3332.8 -29.74 164.47
66.25 4 29 32 4332.76 -18.24 187.61 250.34 58.07 5 41 44 3332.8 -29.74 164.47
66.25 4 29 32 4332.76 -18.24 187.61 250.34 58.07 5 41 44 3332.8 -29.74 164.47
66.25 4 29 32 4332.76 -18.24 187.61 250.34 58.07 5 41 44 3332.8 -29.74 164.47

DIFFERENTIAL CORRECTIONS

TDE .6289 TRA-2.4481 TC3-4.2701 BAU 1.8102
RDE .6067 RRA -.7659 RC3-2.6872 FAU .36709
FDE 4.3994 FRA-3.8790 FC-11.8419 B8P 10797
BDE .8739 BRA 2.5651 BC3 5.0453 F8P 2044

MID-COURSE EXECUTION ACCURACY

SGT 5598.3 SGR 3050.7 SG3 1229.6
RRT .9553 RRF .9909 RTF .9482
SGB 6375.5 R23 .2236 R13 .9653
SG1 6325.4 SG2 798.3 THA 27.98

ORBIT DETERMINATION ACCURACY

ST 61.6 SR 37.3 SS 61.9
CRT .8658 CRS -.9918 CST -.7974
LSA 90.5 MSA 28.6 S8A 1.0
EL1 70.1 EL2 16.4 ALF 29.44

LAUNCH DATE AUG 29 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.959 GAL 4.61 AZL 85.26 HCA 157.14 SMA 197.91 ECC .24916 INC 4.7351 V1 29.491
RP 247.22 LAP 1.84 LOP 132.73 VP 20.077 GAP -.18 AZP 94.36 TAL 23.42 TAP 180.56 RCA 148.60 APO 247.22 V2 22.188
RC 311.599 GL 31.33 GP -34.44 ZAL 54.27 ZAP 70.54 ETS 167.94 ZAE 93.92 ETE 184.58 ZAC 54.68 ETC 287.39 LVI 11.77

DISTANCE 551.482

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.204 VHL 5.216 DLA 37.34 RAL 6.82 RAD 6645.9 VEL 12.131 PTH 7.10 VHP 2.834 DPA -24.83 RAP 32.41 ECC 1.4477
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 20 14 4020.48 -42.58 176.13 265.30 66.38 7 27 15 3020.5 -47.56 142.37
60.00 5 40 29 4126.98 -30.65 178.55 258.20 62.44 6 49 16 3127.0 -39.07 150.95
64.54 4 19 2 4362.71 -18.59 190.26 250.48 57.02 5 31 45 3362.7 -30.46 167.23
64.54 4 19 2 4362.71 -18.59 190.26 250.48 57.02 5 31 45 3362.7 -30.46 167.23
64.54 4 19 2 4362.71 -18.59 190.26 250.48 57.02 5 31 45 3362.7 -30.46 167.23
64.54 4 19 2 4362.71 -18.59 190.26 250.48 57.02 5 31 45 3362.7 -30.46 167.23
64.54 4 19 2 4362.71 -18.59 190.26 250.48 57.02 5 31 45 3362.7 -30.46 167.23

DIFFERENTIAL CORRECTIONS

TDE .7024 TRA-2.4989 TC3-4.3172 BAU 1.8519
RDE .6688 RRA -.7934 RC3-2.7000 FAU .35359
FDE 4.4301 FRA-3.7983 FC-11.2526 B8P 11083
BDE .9698 BRA 2.6218 BC3 5.0920 F8P 1982

MID-COURSE EXECUTION ACCURACY

SGT 5728.8 SGR 3110.3 SG3 1186.0
RRT .9564 RRF .9914 RTF .9483
SGB 6516.9 R23 .2262 R13 .9652
SG1 6467.1 SG2 804.5 THA 27.92

ORBIT DETERMINATION ACCURACY

ST 64.9 SR 40.5 SS 62.7
CRT .8743 CRS -.9932 CST -.8143
LSA 94.7 MSA 28.5 S8A 1.0
EL1 74.6 EL2 17.1 ALF 30.35

LAUNCH DATE AUG 29 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.964 GAL 4.58 AZL 85.08 HCA 158.02 SMA 198.02 ECC .24929 INC 4.9242 V1 29.491
RP 247.37 LAP 1.84 LOP 133.61 VP 20.070 GAP -.39 AZP 94.57 TAL 23.15 TAP 181.17 RCA 148.65 APO 247.38 V2 22.154
RC 313.669 GL 32.48 GP -35.26 ZAL 54.96 ZAP 70.05 ETS 167.10 ZAE 92.92 ETE 183.94 ZAC 53.89 ETC 287.57 LVI 12.58

DISTANCE 555.253

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.627 VHL 5.256 DLA 38.43 RAL 6.20 RAD 6646.1 VEL 12.148 PTH 7.12 VHP 2.881 DPA -25.56 RAP 32.82 ECC 1.4547
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 25 4055.34 -41.59 178.89 265.50 64.43 7 17 0 3055.3 -47.57 146.74
60.00 5 17 51 4193.76 -28.47 182.86 257.12 60.18 6 27 45 3193.8 -38.08 156.35
62.81 4 8 42 4391.67 -18.92 192.87 250.62 55.90 5 21 54 3391.7 -31.20 169.98
62.81 4 8 42 4391.67 -18.92 192.87 250.62 55.90 5 21 54 3391.7 -31.20 169.98
62.81 4 8 42 4391.67 -18.92 192.87 250.62 55.90 5 21 54 3391.7 -31.20 169.98
62.81 4 8 42 4391.67 -18.92 192.87 250.62 55.90 5 21 54 3391.7 -31.20 169.98
62.81 4 8 42 4391.67 -18.92 192.87 250.62 55.90 5 21 54 3391.7 -31.20 169.98

DIFFERENTIAL CORRECTIONS

TDE .7785 TRA-2.5516 TC3-4.3541 BAU 1.8942
RDE .7344 RRA -.8241 RC3-2.7098 FAU .33968
FDE 4.4486 FRA-3.6397 FC-10.6443 B8P 11364
BDE 1.0703 BRA 2.6814 BC3 5.1285 F8P 1915

MID-COURSE EXECUTION ACCURACY

SGT 5854.8 SGR 3173.4 SG3 1140.9
RRT .9575 RRF .9919 RTF .9483
SGB 6659.5 R23 .2288 R13 .9651
SG1 6610.0 SG2 810.8 THA 27.88

ORBIT DETERMINATION ACCURACY

ST 68.4 SR 43.8 SS 63.4
CRT .8824 CRS -.9943 CST -.8291
LSA 99.0 MSA 28.5 S8A .9
EL1 79.3 EL2 17.8 ALF 31.18



LAUNCH DATE AUG 29 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 339.82 VL 32.970 GAL 4.31 AZL 84.87 HCA 158.91 SMA 198.13 ECC .24943 INC 5.1280 V1 29.491
RP 247.51 LAP 1.84 LOP 134.90 VP 20.064 GAP -.58 AZP 94.79 TAL 22.88 TAP 181.78 RCA 148.71 APO 247.55 V2 22.140
RC 316.151 GL 33.64 GP -36.13 ZAL 55.68 ZAP 69.81 ETS 166.25 ZAE 91.96 ETE 183.29 ZAC 53.04 ETC 287.77 LVI 13.44

DISTANCE 559.023

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.117 VHL 5.303 DLA 39.58 RAL 5.71 RAD 6646.3 VEL 12.166 PTH 7.13 VHP 2.932 DPA -26.32 RAP 33.28 ECC 1.4627
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 57 10 4093.88 -40.43 181.82 265.52 62.40 7 5 24 3093.7 -47.46 149.44
60.00 4 44 58 4288.26 -25.13 188.63 255.03 57.40 5 96 26 3288.3 -36.23 163.69
61.07 3 58 26 4419.86 -19.24 195.46 250.75 54.72 5 12 6 3419.9 -31.94 172.72
61.07 3 58 26 4419.86 -19.24 195.46 250.75 54.72 5 12 6 3419.9 -31.94 172.72
61.07 3 58 26 4419.86 -19.24 195.46 250.75 54.72 5 12 6 3419.9 -31.94 172.72
61.07 3 58 26 4419.86 -19.24 195.46 250.75 54.72 5 12 6 3419.9 -31.94 172.72

DIFFERENTIAL CORRECTIONS

TDE .8578 TRA-2.6059 TC3-4.3794 BAU 1.9372
RDE .8040 RRA -.8578 RC3-2.7163 FAU .32540
FDE 4.4538 FRA-3.5201 FC-10.0193 BSP 11640
BDE 1.1757 BRA 2.7434 BC3 5.1534 FSP 1842

MID-COURSE EXECUTION ACCURACY

SGT 5981.3 SGR 3240.2 SG3 1094.3
RRT .9585 RRF .9923 RTF .9483
SG8 6802.6 R23 .2313 R13 .9650
SG1 6753.3 SG2 817.7 THA 27.89

ORBIT DETERMINATION ACCURACY

ST 72.1 SR 47.2 SS 63.9
CRT .8902 CRS -.9951 CST -.8422
LSA 103.5 MSA 28.4 SSA .8
EL1 84.2 EL2 18.4 ALF 31.96

LAUNCH DATE AUG 29 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.976 GAL 4.46 AZL 84.65 HCA 159.79 SMA 198.24 ECC .24958 INC 5.3486 V1 29.491
RP 247.65 LAP 1.85 LOP 135.38 VP 20.059 GAP -.79 AZP 95.02 TAL 22.60 TAP 182.39 RCA 148.76 APO 247.72 V2 22.126
RC 318.408 GL 34.90 GP -37.04 ZAL 56.44 ZAP 69.23 ETS 165.39 ZAE 91.04 ETE 182.63 ZAC 52.15 ETC 287.99 LVI 14.35

DISTANCE 562.793

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.685 VHL 5.356 DLA 40.78 RAL 5.15 RAD 6646.5 VEL 12.191 PTH 7.15 VHP 2.988 DPA -27.12 RAP 33.79 ECC 1.4721
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 43 8 4136.28 -39.04 184.95 265.31 60.28 6 92 4 3136.3 -47.18 193.52
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49
59.30 3 48 10 4447.46 -19.54 198.03 250.87 53.47 5 2 18 3447.5 -32.70 175.49

DIFFERENTIAL CORRECTIONS

TDE .9394 TRA-2.6629 TC3-4.3928 BAU 1.9812
RDE .8079 RRA -.8954 RC3-2.7192 FAU .31076
FDE 4.4447 FRA-3.4009 FC3-9.3791 BSP 11906
BDE 1.2858 BRA 2.8094 BC3 5.1663 FSP 1765

MID-COURSE EXECUTION ACCURACY

SGT 6107.7 SGR 3311.5 SG3 1046.2
RRT .9596 RRF .9927 RTF .9482
SG8 6947.7 R23 .2337 R13 .9649
SG1 6898.5 SG2 825.0 THA 27.92

ORBIT DETERMINATION ACCURACY

ST 75.9 SR 50.8 SS 64.3
CRT .8972 CRS -.9957 CST -.8533
LSA 108.0 MSA 28.5 SSA .8
EL1 89.3 EL2 19.1 ALF 32.68

LAUNCH DATE AUG 29 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.982 GAL 4.41 AZL 84.41 HCA 160.67 SMA 198.36 ECC .24974 INC 5.5881 V1 29.491
RP 247.78 LAP 1.85 LOP 136.27 VP 20.054 GAP -1.00 AZP 95.28 TAL 22.32 TAP 182.99 RCA 148.82 APO 247.89 V2 22.113
RC 320.632 GL 36.24 GP -38.01 ZAL 57.23 ZAP 68.92 ETS 164.52 ZAE 90.17 ETE 181.97 ZAC 51.20 ETC 288.23 LVI 15.32

DISTANCE 566.561

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.345 VHL 5.417 DLA 42.04 RAL 4.50 RAD 6646.7 VEL 12.218 PTH 7.17 VHP 3.050 DPA -27.95 RAP 34.38 ECC 1.4829
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 26 47 4184.25 -37.38 188.32 264.78 58.08 6 36 31 3184.3 -46.69 158.05
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29
57.50 3 37 48 4474.70 -19.81 200.61 250.96 52.13 4 92 23 3474.7 -33.45 178.29

DIFFERENTIAL CORRECTIONS

TDE 1.0242 TRA-2.7209 TC3-4.3902 BAU 2.0252
RDE .9372 RRA -.9363 RC3-2.7158 FAU .29549
FDE 4.4217 FRA-3.2770 FC3-8.7175 BSP 12195
BDE 1.4018 BRA 2.8775 BC3 5.1623 FSP 1686

MID-COURSE EXECUTION ACCURACY

SGT 6229.8 SGR 3385.3 SG3 995.9
RRT .9608 RRF .9930 RTF .9480
SG8 7090.1 R23 .2363 R13 .9647
SG1 7041.1 SG2 832.7 THA 27.99

ORBIT DETERMINATION ACCURACY

ST 79.8 SR 54.8 SS 84.4
CRT .9036 CRS -.9961 CST -.8632
LSA 112.8 MSA 28.5 SSA .7
EL1 94.6 EL2 19.7 ALF 33.38

LAUNCH DATE AUG 29 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

RL 151.08 LAL .00 LOL 335.52 VL 32.988 GAL 4.36 AZL 84.15 HCA 161.55 SMA 198.47 ECC .24990 INC 5.8493 V1 29.491
RP 247.91 LAP 1.85 LOP 137.15 VP 20.050 GAP -1.20 AZP 95.95 TAL 22.05 TAP 183.59 RCA 148.87 APO 248.07 V2 22.101
RC 322.829 GL 37.65 GP -39.03 ZAL 58.08 ZAP 68.68 ETS 163.63 ZAE 89.35 ETE 181.30 ZAC 50.19 ETC 288.50 LVI 16.33

DISTANCE 570.327

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.114 VHL 5.488 DLA 43.35 RAL 3.78 RAD 6647.0 VEL 12.249 PTH 7.20 VHP 3.118 DPA -28.81 RAP 34.99 ECC 1.4956
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 7 14 4239.55 -35.31 192.01 263.80 55.76 6 17 54 3239.6 -45.88 163.14
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15
55.66 3 27 16 4501.63 -20.06 203.20 251.02 50.72 4 42 18 3501.6 -34.21 181.15

DIFFERENTIAL CORRECTIONS

TDE 1.1100 TRA-2.7820 TC3-4.3728 BAU 2.0708
RDE 1.0407 RRA -.9829 RC3-2.7086 FAU .27998
FDE 4.3782 FRA-3.1543 FC3-8.0491 BSP 12464
BDE 1.5216 BRA 2.9505 BC3 5.1437 FSP 1599

MID-COURSE EXECUTION ACCURACY

SGT 6350.8 SGR 3465.5 SG3 944.3
RRT .9616 RRF .9933 RTF .9478
SG8 7234.8 R23 .2386 R13 .9646
SG1 7185.8 SG2 840.5 THA 28.11

ORBIT DETERMINATION ACCURACY

ST 83.7 SR 58.5 SS 64.3
CRT .9093 CRS -.9964 CST -.8714
LSA 117.2 MSA 28.6 SSA .7
EL1 100.0 EL2 20.4 ALF 34.04

LAUNCH DATE		AUG 29 1973		FLIGHT TIME		270.00		ARRIVAL DATE		MAY 26 1974															
HELIOCENTRIC CONIC				DISTANCE 574.093				EARTH TO MARS																	
RL	151.08	LAL	.00	LOL	335.52	VL	32.994	GAL	4.30	AZL	83.86	HCA	162.42	SMA	198.59	ECC	.25007	INC	6.1353	V1	29.491				
RP	248.03	LAP	1.85	LOP	138.03	VP	20.047	GAP	-1.39	AZP	95.85	TAL	21.77	TAP	184.19	RCA	148.93	APO	248.25	V2	22.089				
RC	324.997	GL	39.19	GP	-40.12	ZAL	58.93	ZAP	68.50	ETS	162.74	ZAE	88.58	ETE	180.63	ZAC	49.11	ETC	288.80	LVI	17.44				
PLANETOCENTRIC CONIC				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY																	
C3	31.015	VHL	5.589	DLA	44.73	RAL	2.90	RAD	6647.4	VEL	12.286	PTH	7.22	VHP	3.194	DPA	-29.71	RAP	35.69	ECC	1.5104				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
	50.00		4 42 54		4305.83		-32.68		196.16		262.13			53.28		5 54 40		3305.8		-44.60					169.01
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22		4 31 55		3528.6		-34.94					184.09
	53.78		3 16 27		4528.57		-20.26		205.82		251.04			49.22											

LAUNCH DATE AUG 29 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 339.32 VL 33.018 GAL 4.09 AZL 82.38 MCA 165.92 SNA 199.07 ECC .23081 INC 7.6200 V1 29.481  
 RP 248.43 LAP 1.85 LOP 141.56 VP 20.041 GAP -2.18 AZP 97.39 TAL 20.63 TAP 106.53 RCA 149.14 APO 248.99 V2 22.048  
 RC 333.364 GL 48.20 GP -45.12 ZAL 82.92 ZAP 88.63 ETS 159.22 ZAE 88.12 ETE 177.97 ZAC 44.10 ETC 290.43 LVI 22.50

DISTANCE 589.138 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 36.810 VHL 6.051 DLA 50.88 RAL 357.73 RAD 8649.3 VEL 12.510 PTH 7.39 VHP 3.602 DPA -33.75 RAP 39.29 ECC 1.6025  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89  
 45.76 2 28 8 4639.11 -20.34 216.63 250.20 42.29 3 45 27 3639.1 -37.46 196.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.4855 TRA-3.1525 TC3-3.9993 BAU 2.3232 SGT 6913.1 SGR 3957.6 SG3 658.8 ST 100.2 SR 78.8 SS 58.9  
 RDE 1.5391 RRA-1.3268 RC3-2.5567 FAU .19491 RRT .9667 RRF .9931 RTF .9440 CRT .9210 CRB -.9980 CST -.8828  
 PDE 3.8162 FRA-2.4897 FC3-4.6092 BSP 13770 SGB 7965.8 R23 .2545 R13 .9619 LSA 137.2 MSA 30.4 SSA .4  
 BDE 2.1390 BRA 3.4203 BC3 4.7467 FSP 1103 SGI 7916.4 SG2 885.0 THA 29.36 EL1 125.1 EL2 24.6 ALF 37.66

LAUNCH DATE AUG 29 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC  
 RL 151.08 LAL .00 LOL 335.92 VL 33.024 GAL 4.04 AZL 81.89 MCA 166.79 SNA 199.18 ECC .25101 INC 8.1096 V1 29.481  
 RP 248.54 LAP 1.85 LOP 142.43 VP 20.042 GAP -2.38 AZP 97.90 TAL 20.34 TAP 107.13 RCA 149.19 APO 249.19 V2 22.039  
 RC 333.380 GL 48.27 GP -46.56 ZAL 84.06 ZAP 88.92 ETS 158.39 ZAE 85.70 ETE 177.34 ZAC 42.65 ETC 290.99 LVI 23.97

DISTANCE 592.896 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.779 VHL 6.227 DLA 52.58 RAL 355.82 RAD 8650.2 VEL 12.598 PTH 7.46 VHP 3.743 DPA -34.87 RAP 40.43 ECC 1.6382  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41  
 43.64 2 13 59 4668.50 -20.09 219.43 249.58 40.32 3 31 47 3668.5 -37.87 200.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.5108 TRA-3.2516 TC3-3.8628 BAU 2.3866 SGT 7022.3 SGR 4092.3 SG3 598.1 ST 101.7 SR 82.5 SS 56.3  
 RDE 1.6432 RRA-1.4370 RC3-2.5042 FAU .17711 RRT .9680 RRF .9926 RTF .9429 CRT .9181 CRB -.9954 CST -.8759  
 PDE 3.6006 FRA-2.3531 FC3-3.9540 BSP 13902 SGB 8127.7 R23 .2580 R13 .9612 LSA 139.0 MSA 31.2 SSA .4  
 BDE 2.2322 BRA 3.5550 BC3 4.6035 FSP 978 SGI 8078.5 SG2 893.0 THA 29.83 EL1 128.3 EL2 25.9 ALF 38.54

LAUNCH DATE AUG 30 1973

FLIGHT TIME 104.00

ARRIVAL DATE DEC 12 1973

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 34.408 GAL 6.29 AZL 89.70 HCA 82.14 SMA 231.48 ECC .36233 INC .3007 V1 29.498  
 RP 223.44 LAP .30 LOP 58.63 VP 24.791 GAP 21.13 AZP 89.96 TAL 23.88 TAP 106.03 RCA 147.61 APO 315.35 V2 24.611  
 RC 101.244 GL 1.84 GP -6.01 ZAL 48.48 ZAP 166.78 ETS 208.47 ZAE 198.81 ETE 342.13 ZAC 76.02 ETC 282.33 LVI -9.88

Distance 264.246 Earth to Mars

Planeto-centric Conic: C3 39.578 VHL 6.291 DLA 11.17 RAL 22.48 RAD 6650.5 VEL 12.627 PTH 7.48 VHP 6.682 DPA 11.08 RAP 46.32 ECC 1.6513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 34 23 3526.85 -46.62 130.60 267.36 100.81 10 33 10 2526.9 -37.18 100.45  
 60.00 10 1 43 3454.09 -39.85 125.47 268.78 96.99 10 59 17 2454.1 -32.92 96.71  
 70.00 10 40 9 3340.99 -34.00 116.95 269.43 93.43 11 35 50 2341.0 -29.07 89.34  
 80.00 11 35 41 3167.05 -29.83 103.96 269.63 91.35 12 28 28 2167.1 -26.24 77.11  
 90.00 12 51 28 2922.44 -28.27 86.01 269.66 90.60 13 40 11 1922.4 -25.17 59.43  
 100.00 14 18 33 2641.52 -29.83 65.33 269.63 91.35 15 2 34 1641.5 -26.24 38.48  
 110.00 15 39 36 2367.81 -34.00 45.87 269.43 93.43 16 19 24 1387.8 -29.07 18.26

Differential Corrections: TDE -.2996 TRA -.6988 TC3 .4495 BAV .2472 SGT 902.9 SGR 659.4 S63 191.0 ST 16.8 SR 30.2 SS 3.8  
 RDE -.6598 RRA .2362 RC3 -.1273 FAV .07946 RRT -.1157 RRF .1675 RTF -.5252 CRT .7447 CRS .5390 CST -.0171  
 FDE .0669 FRA -.3409 FC3-1.7381 B8P 1138 SGB 1118.1 R23 -.0413 R13 .5345 LSA 33.1 MSA 10.6 SSA 2.1  
 BDE .7247 BRA .7377 BC3 .4672 F8P 249 S61 909.6 S62 650.2 THA 170.05 EL1 33.0 EL2 10.3 ALF 64.96

Mid-course Execution Accuracy: SGT 902.9 SGR 659.4 S63 191.0  
 RRT -.1157 RRF .1675 RTF -.5252  
 SGB 1118.1 R23 -.0413 R13 .5345  
 S61 909.6 S62 650.2 THA 170.05

Orbit Determination Accuracy: ST 16.8 SR 30.2 SS 3.8  
 CRT .7447 CRS .5390 CST -.0171  
 LSA 33.1 MSA 10.6 SSA 2.1  
 EL1 33.0 EL2 10.3 ALF 64.96

LAUNCH DATE AUG 30 1973

FLIGHT TIME 106.00

ARRIVAL DATE DEC 14 1973

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 34.307 GAL 6.30 AZL 89.66 HCA 83.23 SMA 228.70 ECC .35487 INC .3348 V1 29.498  
 RP 223.83 LAP .33 LOP 59.71 VP 24.608 GAP 20.75 AZP 89.96 TAL 24.31 TAP 107.54 RCA 147.54 APO 309.86 V2 24.569  
 RC 103.560 GL 1.84 GP -6.15 ZAL 47.88 ZAP 165.85 ETS 207.18 ZAE 159.01 ETE 341.36 ZAC 76.46 ETC 282.33 LVI -9.70

Distance 267.454 Earth to Mars

Planeto-centric Conic: C3 38.600 VHL 6.213 DLA 11.15 RAL 21.84 RAD 6650.2 VEL 12.589 PTH 7.45 VHP 6.670 DPA 10.98 RAP 46.48 ECC 1.6353  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 31 57 3519.93 -46.53 129.95 266.08 101.30 10 30 37 2519.9 -36.93 99.98  
 60.00 9 59 20 3447.08 -39.79 124.88 267.57 96.99 10 56 47 2447.1 -32.72 96.23  
 70.00 10 37 49 3333.86 -33.97 116.39 268.25 93.76 11 33 22 2333.9 -28.91 88.85  
 80.00 11 33 22 3159.80 -29.82 103.42 268.48 91.64 12 26 2 2159.8 -26.11 76.61  
 90.00 12 49 11 2915.13 -28.27 85.48 268.52 90.87 13 37 46 1915.1 -25.06 58.93  
 100.00 14 16 14 2634.27 -29.82 64.79 268.48 91.64 15 0 8 1634.3 -26.11 37.98  
 110.00 15 37 15 2380.68 -33.97 45.31 268.25 93.76 16 16 58 1380.7 -28.91 17.77

Differential Corrections: TDE -.3000 TRA -.6894 TC3 .4718 BAV .2535 SGT 916.4 SGR 665.8 S63 203.8 ST 16.9 SR 30.4 SS 4.1  
 RDE -.6558 RRA .2336 RC3 -.1377 FAV .08360 RRT -.1232 RRF .1791 RTF -.5317 CRT .7497 CRS .5156 CST -.0475  
 FDE .0685 FRA -.3834 FC3-1.8750 B8P 1168 SGB 1132.7 R23 -.0450 R13 .5420 LSA 33.3 MSA 10.7 SSA 2.2  
 BDE .7212 BRA .7279 BC3 .4913 F8P 269 S61 923.9 S62 655.3 THA 169.62 EL1 33.3 EL2 10.2 ALF 64.80

Mid-course Execution Accuracy: SGT 916.4 SGR 665.8 S63 203.8  
 RRT -.1232 RRF .1791 RTF -.5317  
 SGB 1132.7 R23 -.0450 R13 .5420  
 S61 923.9 S62 655.3 THA 169.62

Orbit Determination Accuracy: ST 16.9 SR 30.4 SS 4.1  
 CRT .7497 CRS .5156 CST -.0475  
 LSA 33.3 MSA 10.7 SSA 2.2  
 EL1 33.3 EL2 10.2 ALF 64.80

LAUNCH DATE AUG 30 1973

FLIGHT TIME 108.00

ARRIVAL DATE DEC 16 1973

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 34.211 GAL 6.31 AZL 89.63 HCA 84.31 SMA 226.14 ECC .34789 INC .3685 V1 29.498  
 RP 224.22 LAP .37 LOP 60.79 VP 24.432 GAP 20.35 AZP 89.96 TAL 24.73 TAP 109.04 RCA 147.47 APO 304.82 V2 24.527  
 RC 105.921 GL 2.04 GP -6.31 ZAL 47.31 ZAP 164.90 ETS 206.04 ZAE 159.26 ETE 340.51 ZAC 76.29 ETC 282.32 LVI -9.53

Distance 270.718 Earth to Mars

Planeto-centric Conic: C3 37.706 VHL 6.140 DLA 11.12 RAL 21.22 RAD 6649.9 VEL 12.553 PTH 7.43 VHP 6.465 DPA 10.86 RAP 46.62 ECC 1.6205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 29 34 3513.51 -46.45 129.36 264.86 101.75 10 28 8 2513.5 -36.69 99.55  
 60.00 9 56 58 3440.57 -39.74 124.34 266.41 97.35 10 54 19 2440.6 -32.53 93.78  
 70.00 10 35 29 3327.26 -33.94 115.88 267.13 94.06 11 30 56 2327.3 -28.76 88.39  
 80.00 11 31 5 3153.10 -29.80 102.93 267.38 91.90 12 23 38 2153.1 -26.00 76.15  
 90.00 12 46 54 2908.38 -28.26 84.99 267.43 91.12 13 35 23 1908.4 -24.95 58.46  
 100.00 14 13 56 2627.57 -29.80 64.29 267.38 91.90 14 57 44 1627.6 -26.00 37.52  
 110.00 15 34 55 2374.08 -33.94 44.80 267.13 94.06 16 14 29 1374.1 -28.76 17.31

Differential Corrections: TDE -.2919 TRA -.6715 TC3 .5022 BAV .2640 SGT 928.6 SGR 671.8 S63 217.0 ST 16.7 SR 30.6 SS 4.4  
 RDE -.6519 RRA .2309 RC3 -.1485 FAV .08780 RRT -.1394 RRF .1906 RTF -.5119 CRT .7495 CRS .5036 CST -.0684  
 FDE .0723 FRA -.4272 FC3-2.0179 B8P 1090 SGB 1146.1 R23 -.0357 R13 .5625 LSA 33.4 MSA 10.7 SSA 2.3  
 BDE .7142 BRA .7100 BC3 .5237 F8P 292 S61 938.0 S62 658.6 THA 168.52 EL1 33.3 EL2 10.1 ALF 65.35

Mid-course Execution Accuracy: SGT 928.6 SGR 671.8 S63 217.0  
 RRT -.1394 RRF .1906 RTF -.5119  
 SGB 1146.1 R23 -.0357 R13 .5625  
 S61 938.0 S62 658.6 THA 168.52

Orbit Determination Accuracy: ST 16.7 SR 30.6 SS 4.4  
 CRT .7495 CRS .5036 CST -.0684  
 LSA 33.4 MSA 10.7 SSA 2.3  
 EL1 33.3 EL2 10.1 ALF 65.35

LAUNCH DATE AUG 30 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 18 1973

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 34.122 GAL 6.32 AZL 89.60 HCA 85.38 SMA 223.81 ECC .34137 INC .4022 V1 29.498  
 RP 224.61 LAP .40 LOP 61.87 VP 24.264 GAP 19.96 AZP 89.97 TAL 25.14 TAP 110.53 RCA 147.40 APO 300.21 V2 24.485  
 RC 108.328 GL 2.25 GP -6.47 ZAL 46.76 ZAP 163.94 ETS 205.03 ZAE 159.55 ETE 339.57 ZAC 76.12 ETC 282.32 LVI -9.35

Distance 274.034 Earth to Mars

Planeto-centric Conic: C3 36.885 VHL 6.073 DLA 11.10 RAL 20.62 RAD 6649.6 VEL 12.521 PTH 7.40 VHP 6.269 DPA 10.74 RAP 46.75 ECC 1.6070  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 27 14 3507.60 -46.36 128.81 263.70 102.16 10 25 41 2507.6 -36.47 99.15  
 60.00 9 54 39 3434.61 -39.68 123.84 265.30 97.69 10 51 54 2434.6 -32.36 95.37  
 70.00 10 33 11 3321.23 -33.91 115.41 266.08 94.34 11 28 32 2321.2 -28.63 87.97  
 80.00 11 28 48 3147.00 -29.79 102.47 266.33 92.14 12 21 15 2147.0 -25.89 75.73  
 90.00 12 44 38 2902.25 -28.25 84.54 266.39 91.34 13 33 0 1902.3 -24.85 58.04  
 100.00 14 11 40 2621.47 -29.79 63.84 266.33 92.14 14 55 21 1621.5 -25.89 37.10  
 110.00 15 32 37 2368.05 -33.91 44.33 266.06 94.34 16 12 5 1368.0 -28.63 16.89

Differential Corrections: TDE -.2953 TRA -.6655 TC3 .5198 BAV .2682 SGT 941.1 SGR 678.1 S63 231.4 ST 16.9 SR 30.8 SS 4.7  
 RDE -.6483 RRA .2277 RC3 -.1600 FAV .09252 RRT -.1448 RRF .2039 RTF -.5520 CRT .7565 CRS .4770 CST -.0988  
 FDE .0731 FRA -.4769 FC3-2.1716 B8P 1153 SGB 1159.9 R23 -.0448 R13 .5643 LSA 33.7 MSA 10.8 SSA 2.3  
 BDE .7124 BRA .7034 BC3 .5439 F8P 314 S61 951.2 S62 663.8 THA 168.27 EL1 33.6 EL2 10.1 ALF 64.94

Mid-course Execution Accuracy: SGT 941.1 SGR 678.1 S63 231.4  
 RRT -.1448 RRF .2039 RTF -.5520  
 SGB 1159.9 R23 -.0448 R13 .5643  
 S61 951.2 S62 663.8 THA 168.27

Orbit Determination Accuracy: ST 16.9 SR 30.8 SS 4.7  
 CRT .7565 CRS .4770 CST -.0988  
 LSA 33.7 MSA 10.8 SSA 2.3  
 EL1 33.6 EL2 10.1 ALF 64.94

LAUNCH DATE AUG 30 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC										DISTANCE 277.396										EARTH TO MARS																																													
RL	151.05	LAL	.00	LCL	336.48	VL	34.037	GAL	6.33	AZL	89.96	HCA	86.46	SMA	221.65	ECC	.33527	INC	.4354	V1	29.498	RP	225.00	LAP	.43	LOP	62.94	VP	24.103	GAP	19.57	AZP	89.97	TAL	25.55	TAP	112.00	RCA	147.34	APO	295.97	V2	24.443	RC	110.773	GL	2.45	GP	-6.63	ZAL	46.23	ZAP	162.95	ETS	204.13	ZAE	159.89	ETE	338.55	ZAC	75.94	ETC	282.32	LVI	-9.17
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.132	VHL	6.011	DLA	11.09	RAL	20.03	RAD	6649.3	VEL	12.491	PTH	7.38	VHP	6.060	DPA	10.60	RAP	46.87	ECC	1.5946	SGT	952.7	SGR	684.2	SG3	246.5	ST	17.2	SR	30.9	SS	5.0	CR1	.7620	CR8	.4556	CST	-.1185																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	-.1514	RRF	.2177	RTF	-.5532	CR2	.7620	CR8	.4556	CST	-.1185	LSA	33.9	MSA	10.9	SSA	2.4																						
50.00	9 24 56	3502.17	-46.28	128.31	262.60	102.54	10 23 18	2502.2	-36.27	98.79	SG2	668.6	THA	167.91	EL1	33.9	EL2	10.1	ALF	64.60	CR3	.7620	CR8	.4556	CST	-.1185	LSA	33.9	MSA	10.9	SSA	2.4																																	
60.00	9 52 22	3429.15	-39.63	123.38	264.25	97.99	10 49 31	2429.2	-32.20	95.00	SG6	963.7	SG2	668.6	THA	167.91	EL1	33.9	EL2	10.1	ALF	64.60																																											
70.00	10 30 55	3315.72	-33.88	114.99	265.04	94.59	11 26 10	2315.7	-28.50	87.60																																																							
80.00	11 26 33	3141.45	-29.77	102.06	265.33	92.35	12 18 54	2141.5	-25.79	75.35																																																							
90.00	12 42 23	2896.68	-26.24	84.13	265.39	91.55	13 30 40	1896.7	-24.76	57.66																																																							
100.00	14 9 24	2615.92	-29.77	63.43	265.33	92.35	14 53 0	1615.9	-25.79	36.72																																																							
110.00	15 30 21	2362.54	-33.88	43.90	265.04	94.59	16 9 44	1362.5	-28.50	16.51																																																							

LAUNCH DATE AUG 30 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 22 1973

HELIOCENTRIC CONIC										DISTANCE 280.800										EARTH TO MARS																																													
RL	151.05	LAL	.00	LCL	336.48	VL	33.958	GAL	6.35	AZL	89.53	HCA	87.52	SMA	219.67	ECC	.32957	INC	.4684	V1	29.498	RP	225.39	LAP	.47	LOP	64.01	VP	23.948	GAP	19.19	AZP	89.98	TAL	25.94	TAP	113.47	RCA	147.27	APO	292.07	V2	24.401	RC	113.259	GL	2.66	GP	-6.80	ZAL	45.72	ZAP	161.95	ETS	203.32	ZAE	160.26	ETE	337.41	ZAC	75.77	ETC	282.32	LVI	-8.99
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	35.440	VHL	5.953	DLA	11.09	RAL	19.46	RAD	6649.1	VEL	12.463	PTH	7.36	VHP	5.899	DPA	10.45	RAP	46.97	ECC	1.5833	SGT	963.4	SGR	690.4	SG3	262.5	ST	17.4	SR	31.0	SS	5.3	CR1	.7687	CR8	.4365	CST	-.1370																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	-.1588	RRF	.2322	RTF	-.5546	CR2	.7687	CR8	.4365	CST	-.1370	LSA	34.1	MSA	11.0	SSA	2.5																						
50.00	9 22 40	3497.21	-46.21	127.86	261.56	102.88	10 20 58	2497.2	-36.09	98.46	SG2	673.2	THA	167.47	EL1	34.1	EL2	10.1	ALF	64.30	CR3	.7687	CR8	.4365	CST	-.1370	LSA	34.1	MSA	11.0	SSA	2.5																																	
60.00	9 50 7	3424.18	-39.59	122.97	263.25	98.27	10 47 11	2424.2	-32.05	94.66																																																							
70.00	10 28 40	3310.73	-33.85	114.60	264.07	94.82	11 23 51	2310.7	-28.39	87.25																																																							
80.00	11 24 18	3136.45	-29.76	101.69	264.38	92.55	12 16 35	2136.4	-25.69	75.00																																																							
90.00	12 40 9	2891.67	-28.23	83.78	264.45	91.73	13 28 20	1891.7	-24.68	57.32																																																							
100.00	14 7 10	2610.92	-29.76	63.06	264.38	92.55	14 50 41	1610.9	-25.69	36.37																																																							
110.00	15 28 6	2357.55	-33.85	43.52	264.07	94.82	16 7 24	1357.6	-28.39	16.17																																																							

LAUNCH DATE AUG 30 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 24 1973

HELIOCENTRIC CONIC										DISTANCE 284.240										EARTH TO MARS																																													
RL	151.05	LAL	.00	LCL	336.48	VL	33.883	GAL	6.36	AZL	89.50	HCA	88.59	SMA	217.84	ECC	.32423	INC	.5014	V1	29.498	RP	225.78	LAP	.50	LOP	65.07	VP	23.799	GAP	18.81	AZP	89.99	TAL	26.33	TAP	114.92	RCA	147.21	APO	288.47	V2	24.359	RC	115.782	GL	2.86	GP	-6.98	ZAL	45.23	ZAP	160.95	ETS	202.59	ZAE	160.68	ETE	336.16	ZAC	75.59	ETC	282.33	LVI	-8.82
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	34.803	VHL	5.899	DLA	11.09	RAL	18.91	RAD	6648.8	VEL	12.438	PTH	7.34	VHP	5.724	DPA	10.29	RAP	47.05	ECC	1.5728	SGT	973.3	SGR	696.5	SG3	279.3	ST	17.5	SR	31.2	SS	5.6	CR1	.7743	CR8	.4213	CST	-.1508																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	-.1670	RRF	.2474	RTF	-.5582	CR2	.7743	CR8	.4213	CST	-.1508	LSA	34.4	MSA	11.1	SSA	2.6																						
50.00	9 20 28	3492.89	-46.14	127.44	260.58	103.20	10 18 41	2492.7	-35.92	98.16	SG2	677.4	THA	166.95	EL1	34.3	EL2	10.1	ALF	64.05	CR3	.7743	CR8	.4213	CST	-.1508	LSA	34.4	MSA	11.1	SSA	2.6																																	
60.00	9 47 54	3419.67	-39.54	122.59	262.30	98.32	10 44 54	2419.7	-31.92	94.35																																																							
70.00	10 26 27	3306.24	-33.83	114.25	263.15	95.02	11 21 33	2306.2	-28.28	86.94																																																							
80.00	11 22 5	3131.97	-29.74	101.36	263.47	92.72	12 14 17	2132.0	-25.61	74.70																																																							
90.00	12 37 55	2887.20	-28.22	83.44	263.54	91.89	13 26 3	1887.2	-24.60	57.01																																																							
100.00	14 4 57	2606.44	-29.74	62.73	263.47	92.72	14 48 23	1606.4	-25.61	36.07																																																							
110.00	15 25 53	2353.06	-33.83	43.17	263.15	95.02	16 5 6	1353.1	-28.28	15.86																																																							

LAUNCH DATE AUG 30 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC										DISTANCE 287.714										EARTH TO MARS																																													
RL	151.05	LAL	.00	LCL	336.48	VL	33.813	GAL	6.37	AZL	89.47	HCA	89.65	SMA	216.15	ECC	.31923	INC	.5342	V1	29.498	RP	226.17	LAP	.53	LOP	66.13	VP	23.658	GAP	18.43	AZP	90.00	TAL	26.70	TAP	116.35	RCA	147.15	APO	285.16	V2	24.318	RC	118.341	GL	3.07	GP	-7.16	ZAL	44.76	ZAP	159.89	ETS	201.92	ZAE	161.12	ETE	334.78	ZAC	75.40	ETC	282.33	LVI	-8.64
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	34.217	VHL	5.850	DLA	11.10	RAL	18.38	RAD	6648.6	VEL	12.415	PTH	7.32	VHP	5.556	DPA	10.12	RAP	47.12	ECC	1.5631	SGT	982.1	SGR	702.8	SG3	297.0	ST	17.7	SR	31.3	SS	6.0	CR1	.7796	CR8	.4073	CST	-.1625																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	-.1758	RRF	.2633	RTF	-.5576	CR2	.7796	CR8	.4073	CST	-.1625	LSA	34.5	MSA	11.2	SSA	2.6																						
50.00	9 18 18	3488.62	-46.08	127.07	259.64	103.48	10 16 27	2488.6	-35.76	97.89	SG2	681.5	THA	166.36	EL1	34.5	EL2	10.0	ALF	63.81	CR3	.7796	CR8	.4073	CST	-.1625	LSA	34.5	MSA	11.2	SSA	2.6																																	
60.00	9 45 43	3415.63	-39.50	122.26	261.40	98.75	10 42 39	2415.6	-31.80	94.08																																																							
70.00	10 24 16	3302.24	-33.80	113.94	262.27	95.20	11 19 18	2302.2	-28.19	86.67																																																							
80.00	11 19 53	3128.01	-29.73	101.06	262.61	92.87	12 12 1	2128.0	-25.54	74.43																																																							
90.00	12 35 43	2883.26	-28.21	83.15	262.68	92.04	13 23 46	1883.3	-24.53	56.74																																																							
100.00	14 2 44	2602.48	-29.73	62.43	262.61	92.87	14 46 7	1602.5	-25.54	35.80																																																							
110.00	15 23 42	2349.06	-33.80	42.86	262.27	95.20	16 2 51	1349.1	-28.19	15.59																																																							

LAUNCH DATE AUG 30 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC										DISTANCE 291.219		EARTH TO MARS													
RL	151.05	LAL	.00	LOL	336.48	VL	33.746	GAL	6.38	AZL	89.43	HCA	90.71	SMA	214.59	ECC	.31456	INC	.5668	V1	29.498				
RP	226.56	LAP	.57	LOP	67.19	VP	23.518	GAP	18.06	AZP	90.01	TAL	27.06	TAP	117.77	RCA	147.09	APO	282.09	V2	24.276				
RC	120.933	GL	3.28	GP	-7.35	ZAL	44.32	ZAP	156.83	ETS	201.31	ZAE	161.60	ETE	333.24	ZAC	75.22	ETC	282.34	LVI	-6.46				
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY													
C3	33.677	VHL	5.803	DLA	11.12	RAL	17.87	RAD	6648.4	VEL	12.393	PTH	7.31	VHP	5.394	DPA	9.94	RAP	47.17	ECC	1.5542				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		9	16	11	3484.96		-46.02		126.74		258.77		103.73		10	14	16	2485.0		-35.63					97.65
60.00		9	43	35	3412.03		-39.46		121.96		260.55		98.95		10	40	27	2412.0		-31.69					93.63
70.00		10	22	6	3298.71		-33.78		113.67		261.44		95.36		11	17	5	2298.7		-28.11					86.43
80.00		11	17	41	3124.55		-29.72		100.81		261.79		93.01		12	9	46	2124.6		-25.47					74.19
90.00		12	33	31	2879.84		-28.20		82.90		261.87		92.16		13	21	31	1879.8		-24.47					56.51
100.00		14	0	33	2599.02		-29.72		62.18		261.79		93.01		14	43	52	1599.0		-25.47					35.56
110.00		15	21	32	2345.53		-33.78		42.59		261.44		95.36		16	0	38	1345.5		-28.11					15.35
TDE	-.3048	TRA	-.6311	TC3	.6010	BAU	.2893		SGT	990.1	SGR	709.2	SG3	315.6				ST	17.8	SR	31.3	SS			6.3
RDE	-.6318	RRA	.2086	RC3	-.2275	FAU	.11958		RRT	-.1849	RRF	.2798	RTF	-.5583				CRT	.7848	CRS	.3972	CST	-.1698		
FDE	.0871	FRA	-.7750	FC3	-3.0742	BSP	1329		SGB	1217.9	R23	-.0818	R13	.5808				LSA	34.7	MSA	11.4	SSA	2.7		
BDE	.7015	BRA	.6647	BC3	.6428	FSP	450		SG1	1006.7	SG2	885.5	THA	165.73				EL1	34.7	EL2	10.0	ALF	63.57		

LAUNCH DATE AUG 30 1973

FLIGHT TIME 122.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC										DISTANCE 294.752		EARTH TO MARS													
RL	151.05	LAL	.00	LOL	336.48	VL	33.684	GAL	6.39	AZL	89.40	HCA	91.76	SMA	213.14	ECC	.31018	INC	.5993	V1	29.498				
RP	226.95	LAP	.60	LOP	68.24	VP	23.386	GAP	17.70	AZP	90.02	TAL	27.41	TAP	119.17	RCA	147.03	APO	279.26	V2	24.234				
RC	123.556	GL	3.49	GP	-7.54	ZAL	43.89	ZAP	157.75	ETS	200.75	ZAE	162.10	ETE	331.53	ZAC	75.03	ETC	282.36	LVI	-6.28				
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY													
C3	33.178	VHL	5.760	DLA	11.15	RAL	17.37	RAD	6648.2	VEL	12.373	PTH	7.29	VHP	5.238	DPA	9.75	RAP	47.21	ECC	1.5460				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		9	14	7	3481.71		-45.96		126.44		257.94		103.95		10	12	8	2481.7		-35.50					97.44
60.00		9	41	29	3408.06		-39.43		121.70		259.75		99.12		10	38	18	2408.9		-31.59					93.62
70.00		10	19	58	3295.84		-33.78		113.43		260.66		95.50		11	14	53	2295.6		-28.03					86.22
80.00		11	15	31	3121.59		-29.71		100.59		261.02		93.12		12	7	33	2121.6		-25.41					73.99
90.00		12	31	20	2876.92		-28.20		82.69		261.10		92.27		13	19	17	1876.9		-24.42					58.31
100.00		13	58	23	2596.06		-29.71		61.96		261.02		93.12		14	41	39	1596.1		-25.41					35.36
110.00		15	19	24	2342.46		-33.76		42.35		260.66		95.50		15	58	26	1342.5		-28.03					15.14
TDE	-.3059	TRA	-.6244	TC3	.6142	BAU	.2930		SGT	997.0	SGR	715.8	SG3	335.3				ST	18.0	SR	31.4	SS			6.7
RDE	-.6287	RRA	.2040	RC3	-.2432	FAU	.12587		RRT	-.1946	RRF	.2974	RTF	-.5587				CRT	.7897	CRS	.3851	CST	-.1788		
FDE	.0908	FRA	-.8464	FC3	-3.2844	BSP	1347		SGB	1227.3	R23	-.0894	R13	.5840				LSA	34.9	MSA	11.5	SSA	2.8		
BDE	.6992	BRA	.6569	BC3	.6606	FSP	482		SG1	1015.4	SG2	889.3	THA	165.02				EL1	34.8	EL2	10.0	ALF	63.36		

LAUNCH DATE AUG 30 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC										DISTANCE 298.309		EARTH TO MARS													
RL	151.05	LAL	.00	LOL	336.48	VL	33.626	GAL	6.40	AZL	89.37	HCA	92.81	SMA	211.81	ECC	.30608	INC	.6319	V1	29.498				
RP	227.34	LAP	.63	LOP	69.30	VP	23.258	GAP	17.34	AZP	90.03	TAL	27.75	TAP	120.56	RCA	146.98	APO	276.63	V2	24.193				
RC	126.208	GL	3.69	GP	-7.75	ZAL	43.49	ZAP	156.85	ETS	200.24	ZAE	162.63	ETE	329.63	ZAC	74.84	ETC	282.37	LVI	-6.11				
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY													
C3	32.716	VHL	5.720	DLA	11.18	RAL	16.90	RAD	6648.0	VEL	12.354	PTH	7.28	VHP	5.088	DPA	9.54	RAP	47.22	ECC	1.5384				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		9	12	5	3478.85		-45.92		126.18		257.16		104.15		10	10	4	2478.9		-35.39					97.26
60.00		9	39	25	3406.10		-39.40		121.47		258.99		99.27		10	36	11	2406.1		-31.51					93.43
70.00		10	17	51	3293.02		-33.74		113.23		259.91		95.62		11	12	44	2293.0		-27.97					86.04
80.00		11	13	22	3119.10		-29.70		100.40		260.28		93.22		12	5	21	2119.1		-25.37					73.82
90.00		12	29	10	2874.49		-28.19		82.51		260.36		92.36		13	17	4	1874.5		-24.38					56.14
100.00		13	56	14	2593.57		-29.70		61.77		260.28		93.22		14	39	28	1593.6		-25.37					35.19
110.00		15	17	17	2339.84		-33.74		42.14		259.91		95.62		15	56	17	1339.8		-27.97					14.98
TDE	-.3073	TRA	-.6183	TC3	.6259	BAU	.2962		SGT	1002.7	SGR	722.6	SG3	355.9				ST	18.1	SR	31.5	SS			7.1
RDE	-.6258	RRA	.1990	RC3	-.2595	FAU	.13243		RRT	-.2040	RRF	.3154	RTF	-.5579				CRT	.7947	CRS	.3776	CST	-.1825		
FDE	.0981	FRA	-.9217	FC3	-3.5044	BSP	1364		SGB	1235.9	R23	-.0978	R13	.5866				LSA	35.0	MSA	11.7	SSA	2.8		
BDE	.6970	BRA	.6493	BC3	.6772	FSP	516		SG1	1023.2	SG2	893.2	THA	164.27				EL1	34.9	EL2	9.9	ALF	63.11		

LAUNCH DATE AUG 30 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC										DISTANCE 301.890		EARTH TO MARS													
RL	151.05	LAL	.00	LOL	336.48	VL	33.571	GAL	6.41	AZL	89.34	HCA	93.86	SMA	210.56	ECC	.30224	INC	.6643	V1	29.498				
RP	227.73	LAP	.66	LOP	70.34	VP	23.135	GAP	16.98	AZP	90.04	TAL	28.07	TAP	121.93	RCA	146.92	APO	274.20	V2	24.152				
RC	128.887	GL	3.90	GP	-7.95	ZAL	43.10	ZAP	155.54	ETS	199.76	ZAE	163.17	ETE	327.51	ZAC	74.65	ETC	282.39	LVI	-7.93				
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY													
C3	32.289	VHL	5.682	DLA	11.22	RAL	16.44	RAD	6647.9	VEL	12.337	PTH	7.26	VHP	4.944	DPA	9.32	RAP	47.22	ECC	1.5314				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		9	10	6	3476.37		-45.87		125.98		256.43		104.31		10	8	3	2476.4		-35.30					97.10
60.00		9	37	24	3403.75		-39.37		121.27		258.28		99.40		10	34	7	2403.7		-31.44					93.28
70.00		10	15	46	3290.83		-33.73		113.06		259.21		95.72		11	10	37	2290.8		-27.92					85.89
80.00		11	11	14	3117.07		-29.69		100.25		259.59		93.30		12	3	11	2117.1		-25.33					73.68
90.00		12	27	0	2872.55		-28.18		82.37		259.67		92.43		13	14	52	1872.5		-24.33					56.01
100.00		13	54	6	2591.54		-29.69		61.62		259.59		93.30		14	37	17								

LAUNCH DATE AUG 30 1973 FLIGHT TIME 126.00 ARRIVAL DATE JAN 5 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 33.519 GAL 6.41 AZL 89.30 HCA 94.90 SMA 209.41 ECC .29865 INC .6986 V1 29.498  
 RP 226.12 LAP .69 LOP 71.39 VP 23.017 GAP 16.63 AZP 90.06 TAL 26.38 TAP 123.28 RCA 146.87 APO 271.95 V2 24.110  
 RC 131.592 GL 4.11 GP -0.17 ZAL 42.74 ZAP 154.40 ETS 199.31 ZAE 163.72 ETE 325.14 ZAC 74.45 ETC 282.42 LVI -7.75

Distance 305.491 Earth to Mars

Planetary Conic: C3 31.894 VHL 5.647 DLA 11.27 RAL 16.00 RAD 6647.7 VEL 12.321 PTH 7.25 VHP 4.806 DPA 9.09 RAP 47.20 ECC 1.5249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 8 10 3474.25 -45.84 125.76 255.74 104.46 10 6 4 2474.3 -35.22 96.96  
 60.00 9 35 24 3401.78 -39.35 121.11 257.61 99.51 10 32 6 2401.8 -31.38 93.14  
 70.00 10 13 43 3289.06 -33.72 112.92 258.55 95.80 11 8 32 2289.1 -27.80 85.77  
 80.00 11 9 7 3115.50 -29.69 100.14 258.93 93.36 12 1 2 2115.5 -25.30 73.57  
 90.00 12 24 51 2871.07 -28.18 82.26 259.02 92.48 13 12 42 1871.1 -24.32 55.91  
 100.00 13 51 98 2589.97 -29.69 61.51 258.93 93.36 14 35 8 1590.0 -25.30 34.94  
 110.00 15 13 9 2335.88 -33.72 41.84 258.55 95.80 15 52 5 1335.9 -27.88 14.69

Differential Corrections: TDE -.3104 TRA -.6083 TC3 .6427 BAU .3015 SGT 1011.0 SGR 737.2 SG3 400.2 ST 18.4 SR 31.6 SS 7.9  
 RDE -.6193 RRA .1880 RC3 -.2948 FAU .14656 RRT -.2230 RRF .3540 RTF -.5531 CRT .8040 CRS .3636 CST -.1862  
 FDE .1084 FRA -1.0842 FC3 -3.9782 BSP 1391 SGB 1231.2 R23 -.1169 R13 .5901 LSA 35.2 MSA 12.1 S8A 3.0  
 BDE .6927 BRA .6367 BC3 .7071 F8P 591 SGI 1036.4 SG2 701.0 THA 162.61 EL1 35.2 EL2 9.8 ALF 62.58

Mid-Course Execution Accuracy: SGT 1011.0 SGR 737.2 SG3 400.2 ST 18.4 SR 31.6 SS 7.9  
 RRT -.2230 RRF .3540 RTF -.5531 CRT .8040 CRS .3636 CST -.1862  
 SGB 1231.2 R23 -.1169 R13 .5901 LSA 35.2 MSA 12.1 S8A 3.0  
 SGI 1036.4 SG2 701.0 THA 162.61 EL1 35.2 EL2 9.8 ALF 62.58

Orbit Determination Accuracy: ST 18.4 SR 31.6 SS 7.9  
 CRT .8040 CRS .3636 CST -.1862  
 LSA 35.2 MSA 12.1 S8A 3.0  
 EL1 35.2 EL2 9.8 ALF 62.58

LAUNCH DATE AUG 30 1973 FLIGHT TIME 130.00 ARRIVAL DATE JAN 7 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 33.470 GAL 6.42 AZL 89.27 HCA 95.94 SMA 208.34 ECC .29528 INC .7291 V1 29.498  
 RP 226.51 LAP .73 LOP 72.42 VP 22.903 GAP 16.28 AZP 90.08 TAL 26.68 TAP 124.62 RCA 146.82 APO 269.86 V2 24.069  
 RC 134.321 GL 4.32 GP -0.39 ZAL 42.40 ZAP 153.25 ETS 198.89 ZAE 164.27 ETE 322.46 ZAC 74.26 ETC 282.44 LVI -7.57

Distance 309.111 Earth to Mars

Planetary Conic: C3 31.526 VHL 5.615 DLA 11.33 RAL 15.58 RAD 6647.6 VEL 12.307 PTH 7.24 VHP 4.672 DPA 8.84 RAP 47.16 ECC 1.5186  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 6 17 3472.48 -45.81 125.60 255.10 104.58 10 4 9 2472.5 -35.15 96.84  
 60.00 9 33 26 3400.19 -39.33 120.98 256.98 99.60 10 30 7 2400.2 -31.33 93.04  
 70.00 10 11 40 3287.69 -33.71 112.82 257.93 95.86 11 6 28 2287.7 -27.84 85.68  
 80.00 11 7 0 3114.37 -29.68 100.05 258.31 93.40 11 58 54 2114.4 -25.28 73.50  
 90.00 12 22 42 2870.04 -28.18 82.19 258.40 92.52 13 10 32 1870.0 -24.30 55.84  
 100.00 13 49 52 2588.84 -29.68 61.42 258.31 93.40 14 33 1 1588.8 -25.28 34.87  
 110.00 15 11 7 2334.51 -33.71 41.73 257.93 95.86 15 50 1 1334.5 -27.84 14.60

Differential Corrections: TDE -.3121 TRA -.6042 TC3 .6481 BAU .3035 SGT 1013.2 SGR 745.0 SG3 424.0 ST 18.5 SR 31.6 SS 8.3  
 RDE -.6160 RRA .1819 RC3 -.3137 FAU .15410 RRT -.2321 RRF .3742 RTF -.5489 CRT .8085 CRS .3626 CST -.1848  
 FDE .1163 FRA -1.1720 FC3 -4.2318 BSP 1402 SGB 1237.6 R23 -.1276 R13 .5911 LSA 35.3 MSA 12.3 S8A 3.0  
 BDE .6906 BRA .6310 BC3 .7200 F8P 631 SGI 1041.4 SG2 705.1 THA 161.69 EL1 35.3 EL2 9.8 ALF 62.30

Mid-Course Execution Accuracy: SGT 1013.2 SGR 745.0 SG3 424.0 ST 18.5 SR 31.6 SS 8.3  
 RRT -.2321 RRF .3742 RTF -.5489 CRT .8085 CRS .3626 CST -.1848  
 SGB 1237.6 R23 -.1276 R13 .5911 LSA 35.3 MSA 12.3 S8A 3.0  
 SGI 1041.4 SG2 705.1 THA 161.69 EL1 35.3 EL2 9.8 ALF 62.30

Orbit Determination Accuracy: ST 18.5 SR 31.6 SS 8.3  
 CRT .8085 CRS .3626 CST -.1848  
 LSA 35.3 MSA 12.3 S8A 3.0  
 EL1 35.3 EL2 9.8 ALF 62.30

LAUNCH DATE AUG 30 1973 FLIGHT TIME 132.00 ARRIVAL DATE JAN 9 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 33.425 GAL 6.43 AZL 89.24 HCA 96.98 SMA 207.35 ECC .29212 INC .7615 V1 29.498  
 RP 226.90 LAP .78 LOP 73.46 VP 22.793 GAP 15.93 AZP 90.09 TAL 26.96 TAP 125.94 RCA 146.78 APO 267.92 V2 24.028  
 RC 137.073 GL 4.53 GP -0.82 ZAL 42.08 ZAP 152.07 ETS 196.49 ZAE 164.82 ETE 319.52 ZAC 74.05 ETC 282.48 LVI -7.40

Distance 312.749 Earth to Mars

Planetary Conic: C3 31.185 VHL 5.584 DLA 11.39 RAL 15.18 RAD 6647.5 VEL 12.293 PTH 7.23 VHP 4.544 DPA 8.58 RAP 47.10 ECC 1.5132  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 4 26 3471.05 -45.78 125.48 254.50 104.68 10 2 17 2471.1 -35.09 96.75  
 60.00 9 31 31 3398.96 -39.32 120.88 256.39 99.67 10 28 10 2399.0 -31.29 92.93  
 70.00 10 9 40 3286.72 -33.70 112.74 257.35 95.91 11 4 26 2286.7 -27.82 85.61  
 80.00 11 4 54 3113.66 -29.68 100.00 257.73 93.43 11 56 48 2113.7 -25.26 73.45  
 90.00 12 20 34 2869.46 -28.18 82.14 257.82 92.54 13 8 23 1869.5 -24.29 55.80  
 100.00 13 47 46 2588.13 -29.68 61.37 257.73 93.43 14 30 54 1588.1 -25.26 34.82  
 110.00 15 9 6 2333.54 -33.70 41.66 257.35 95.91 15 48 0 1333.5 -27.82 14.53

Differential Corrections: TDE -.3139 TRA -.6009 TC3 .6513 BAU .3050 SGT 1014.1 SGR 753.4 SG3 448.8 ST 18.7 SR 31.6 SS 8.7  
 RDE -.6128 RRA .1755 RC3 -.3334 FAU .18197 RRT -.2407 RRF .3931 RTF -.5333 CRT .8129 CRS .3602 CST -.1828  
 FDE .1250 FRA -1.2642 FC3 -4.4865 BSP 1409 SGB 1263.3 R23 -.1394 R13 .5915 LSA 35.4 MSA 12.5 S8A 3.1  
 BDE .6885 BRA .6260 BC3 .7316 F8P 674 SGI 1045.3 SG2 709.4 THA 160.70 EL1 35.4 EL2 9.7 ALF 61.99

Mid-Course Execution Accuracy: SGT 1014.1 SGR 753.4 SG3 448.8 ST 18.7 SR 31.6 SS 8.7  
 RRT -.2407 RRF .3931 RTF -.5333 CRT .8129 CRS .3602 CST -.1828  
 SGB 1263.3 R23 -.1394 R13 .5915 LSA 35.4 MSA 12.5 S8A 3.1  
 SGI 1045.3 SG2 709.4 THA 160.70 EL1 35.4 EL2 9.7 ALF 61.99

Orbit Determination Accuracy: ST 18.7 SR 31.6 SS 8.7  
 CRT .8129 CRS .3602 CST -.1828  
 LSA 35.4 MSA 12.5 S8A 3.1  
 EL1 35.4 EL2 9.7 ALF 61.99

LAUNCH DATE AUG 30 1973 FLIGHT TIME 134.00 ARRIVAL DATE JAN 11 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 33.382 GAL 6.43 AZL 89.21 HCA 98.01 SMA 206.43 ECC .28917 INC .7938 V1 29.498  
 RP 229.28 LAP .79 LOP 74.49 VP 22.688 GAP 15.59 AZP 90.11 TAL 29.23 TAP 127.24 RCA 146.73 APO 266.12 V2 23.988  
 RC 139.847 GL 4.75 GP -0.86 ZAL 41.78 ZAP 150.88 ETS 198.12 ZAE 165.35 ETE 316.20 ZAC 73.85 ETC 282.51 LVI -7.22

Distance 316.402 Earth to Mars

Planetary Conic: C3 30.867 VHL 5.558 DLA 11.46 RAL 14.80 RAD 6647.3 VEL 12.280 PTH 7.22 VHP 4.421 DPA 8.31 RAP 47.03 ECC 1.5080  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 2 37 3469.94 -45.77 125.38 253.94 104.75 10 0 27 2469.9 -35.05 96.68  
 60.00 9 29 37 3396.08 -39.31 120.81 255.84 99.72 10 26 19 2398.1 -31.26 92.90  
 70.00 10 7 40 3286.14 -33.70 112.70 256.80 95.93 11 2 26 2286.1 -27.81 85.57  
 80.00 11 2 49 3113.37 -29.68 99.98 257.19 93.44 11 54 42 2113.4 -25.26 73.43  
 90.00 12 18 26 2869.31 -28.17 82.13 257.28 92.55 13 6 15 1869.3 -24.29 55.79  
 100.00 13 45 41 2587.85 -29.68 61.35 257.19 93.44 14 28 49 1587.8 -25.26 34.80  
 110.00 15 7 6 2332.95 -33.70 41.61 256.80 95.93 15 45 59 1333.0 -27.81 14.49

Differential Corrections: TDE -.3159 TRA -.5984 TC3 .6522 BAU .3063 SGT 1013.8 SGR 762.4 SG3 474.8 ST 18.9 SR 31.5 SS 9.1  
 RDE -.6094 RRA .1687 RC3 -.3541 FAU .17019 RRT -.2486 RRF .4166 RTF -.5361 CRT .8171 CRS .3594 CST -.1788  
 FDE .1351 FRA -1.3613 FC3 -4.7735 BSP 1414 SGB 1268.5 R23 -.1521 R13 .5915 LSA 35.5 MSA 12.8 S8A 3.1  
 BDE .6864 BRA .6217 BC3 .7421 F8P 718 SGI 1048.4 SG2 714.1 THA 159.64 EL1 35.5 EL2 9.7 ALF 61.66

Mid-Course Execution Accuracy: SGT 1013.8 SGR 762.4 SG3 474.8 ST 18.9 SR 31.5 SS 9.1  
 RRT -.2486 RRF .4166 RTF -.5361 CRT .8171 CRS .3594 CST -.1788  
 SGB 1268.5 R23 -.1521 R13 .5915 LSA 35.5 MSA 12.8 S8A 3.1  
 SGI 1048.4 SG2 714.1 THA 159.64 EL1 35.5 EL2 9.7 ALF 61.66

Orbit Determination Accuracy: ST 18.9 SR 31.5 SS 9.1  
 CRT .8171 CRS .3594 CST -.1788  
 LSA 35.5 MSA 12.8 S8A 3.1  
 EL1 35.5 EL2 9.7 ALF 61.66

LAUNCH DATE AUG 30 1973 FLIGHT TIME 136.00 ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC										DISTANCE 320.070										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.342	GAL	6.44	AZL	89.17	HCA	99.04	SMA	205.87	ECC	.28640	INC	.8263	V1	29.498	RP	229.67	LAP	.82	LOP	75.52	VP	22.585	GAP	15.25	AZP	90.13	TAL	29.48	TAP	129.52	RCA	146.69	APO	264.44	V2	23.947	RC	142.641	GL	4.96	GP	-9.10	ZAL	41.51	ZAP	149.68	ETS	197.76	ZAE	168.86	ETE	312.80	ZAC	73.84	ETC	282.95	LVI	-7.04
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.570	VHL	5.529	DLA	11.54	RAL	14.43	RAD	6847.2	VEL	12.268	PTH	7.21	VHP	4.303	DPA	8.02	RAP	46.93	ECC	1.5031	ST	19.0	SR	31.5	SS	9.6	LNCH	AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG	CR1	.8211	CR8	.3591	CST	-.1748																			
50.00	9	0	51	3469.15	-45.75	125.30	253.42	104.80	9	56	40	2469.2	-35.02	96.63	SGT	1012.5	SGR	772.1	SG3	502.1	50.00	9	27	48	3397.54	-39.30	120.76	255.33	99.74	10	24	23	2397.5	-31.25	92.86	RR1	-.2560	RRF	-.4987	RTF	-.8277																								
60.00	10	5	42	3285.92	-33.69	112.68	256.29	95.94	11	0	28	2285.9	-27.80	85.56	SG8	1273.3	R23	-.1658	R13	.5913	70.00	10	1	48	3288.94	-33.70	112.69	255.81	93.44	11	52	38	2113.5	-25.26	73.44	SG1	1050.7	SG2	719.2	THA	158.50																								
80.00	11	0	44	3113.49	-29.68	99.99	256.67	92.54	13	4	8	1869.6	-24.30	55.81	EL1	35.5	EL2	9.6	ALF	61.31	90.00	12	16	18	2869.59	-28.18	82.15	256.78	93.44	14	26	44	1588.0	-25.26	34.81																														
100.00	13	43	36	2587.96	-29.68	61.36	256.67	93.44	15	44	1	1332.7	-27.80	14.48																																																			
110.00	15	5	8	2332.74	-33.69	41.60	256.29	95.94	15	44	1	1332.7	-27.80	14.48																																																			

LAUNCH DATE AUG 30 1973 FLIGHT TIME 138.00 ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC										DISTANCE 323.750										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.304	GAL	6.44	AZL	89.14	HCA	100.07	SMA	204.77	ECC	.28381	INC	.8589	V1	29.498	RP	230.05	LAP	.85	LOP	76.55	VP	22.487	GAP	14.92	AZP	90.15	TAL	29.72	TAP	129.78	RCA	146.66	APO	262.89	V2	23.907	RC	145.456	GL	5.17	GP	-9.35	ZAL	41.25	ZAP	148.42	ETS	197.41	ZAE	166.32	ETE	308.39	ZAC	73.44	ETC	282.59	LVI	-6.88
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.293	VHL	5.504	DLA	11.63	RAL	14.08	RAD	6847.1	VEL	12.257	PTH	7.20	VHP	4.189	DPA	7.72	RAP	46.81	ECC	1.4985	ST	19.2	SR	31.5	SS	10.1	LNCH	AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG	CR1	.8248	CR8	.3591	CST	-.1703																			
50.00	8	59	7	3468.66	-45.74	125.26	252.94	104.84	9	56	56	2468.7	-35.00	96.60	SGT	1009.4	SGR	782.5	SG3	530.3	50.00	9	25	56	3397.33	-39.30	120.74	254.85	99.76	10	22	33	2397.3	-31.24	92.85	RR1	-.2621	RRF	-.4612	RTF	-.5171																								
60.00	9	25	56	3397.33	-39.30	120.74	254.85	99.76	10	22	33	2286.1	-27.80	85.57	SG8	1277.2	R23	-.1806	R13	.5905	70.00	10	3	44	3286.07	-33.70	112.69	255.81	93.42	11	50	34	2114.0	-25.27	73.47	SG1	1051.8	SG2	724.9	THA	157.24																								
80.00	10	58	40	3114.00	-29.68	100.03	256.20	93.42	11	50	34	1870.3	-24.31	55.86	EL1	35.6	EL2	9.6	ALF	60.95	90.00	12	14	11	2870.27	-28.18	82.20	256.28	92.51	13	2	1	1588.5	-25.27	34.84																														
100.00	13	41	31	2588.48	-29.68	61.39	256.20	93.42	14	24	40	1332.9	-27.80	14.49																																																			
110.00	15	3	11	2332.68	-33.70	41.61	255.81	95.93	15	42	4	1332.9	-27.80	14.49																																																			

LAUNCH DATE AUG 30 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC										DISTANCE 327.444										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.269	GAL	6.44	AZL	89.11	HCA	101.09	SMA	204.03	ECC	.28137	INC	.8916	V1	29.498	RP	230.44	LAP	.87	LOP	77.57	VP	22.391	GAP	14.59	AZP	90.17	TAL	29.94	TAP	131.03	RCA	146.62	APO	261.44	V2	23.867	RC	148.289	GL	5.39	GP	-9.61	ZAL	41.01	ZAP	147.16	ETS	197.08	ZAE	166.73	ETE	303.83	ZAC	73.23	ETC	282.63	LVI	-6.89
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.035	VHL	5.480	DLA	11.73	RAL	13.75	RAD	6847.0	VEL	12.246	PTH	7.19	VHP	4.080	DPA	7.40	RAP	46.67	ECC	1.4943	ST	18.7	SR	31.4	SS	10.5	LNCH	AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG	CR1	.8239	CR8	.3427	CST	-.1891																			
50.00	8	57	26	3468.45	-45.74	125.24	252.50	104.85	9	55	14	2468.4	-34.99	96.58	SGT	1003.6	SGR	784.6	SG3	561.1	50.00	9	24	7	3397.42	-39.30	120.75	254.40	99.75	10	20	44	2397.4	-31.24	92.85	RR1	-.2847	RRF	-.4858	RTF	-.5238																								
60.00	9	24	7	3397.42	-39.30	120.75	254.40	99.75	10	20	44	2286.5	-27.82	85.60	SG8	1281.7	R23	-.1745	R13	.6060	70.00	10	1	48	3288.94	-33.70	112.73	255.36	95.91	10	56	34	2286.5	-27.82	85.60	SG1	1057.2	SG2	724.6	THA	154.93																								
80.00	10	56	35	3114.88	-29.68	100.09	255.74	93.38	11	48	30	2114.9	-25.29	73.53	EL1	35.3	EL2	9.4	ALF	61.64	90.00	12	12	3	2871.33	-28.18	82.28	255.83	92.47	12	59	54	1871.3	-24.33	55.93																														
100.00	13	39	27	2589.35	-29.68	61.46	255.74	93.38	14	22	37	1589.3	-25.29	34.90																																																			
110.00	15	1	14	2333.36	-33.70	41.64	255.36	95.91	15	40	7	1333.4	-27.82	14.52																																																			

LAUNCH DATE AUG 30 1973 FLIGHT TIME 142.00 ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC										DISTANCE 331.147										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.238	GAL	6.44	AZL	89.08	HCA	102.11	SMA	203.34	ECC	.27910	INC	.9243	V1	29.498	RP	230.82	LAP	.90	LOP	78.59	VP	22.300	GAP	14.27	AZP	90.19	TAL	30.15	TAP	132.25	RCA	146.59	APO	260.09	V2	23.827	RC	151.140	GL	5.60	GP	-9.88	ZAL	40.79	ZAP	145.87	ETS	196.76	ZAE	167.06	ETE	298.66	ZAC	73.01	ETC	282.68	LVI	-6.91
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.791	VHL	5.458	DLA	11.83	RAL	13.44	RAD	6846.9	VEL	12.236	PTH	7.19	VHP	3.976	DPA	7.08	RAP	46.51	ECC	1.4903	ST	19.2	SR	31.3	SS	11.0	LNCH	AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO	CST TIM	INJ 2 LAT	INJ 2 LONG	CR1	.8291	CR8	.3524	CST	-.1727																			
50.00	8	55	46	3468.54	-45.74	125.25	252.09	104.85	9	53	35	2468.5	-35.00	96.59	SGT	1000.0	SGR	806.5	SG3	591.1	50.00	9	22	20	3397.84	-39.30	120.79	253.99	99.73	10	18	58	2397.8	-31.25	92.86	RR1	-.2808	RRF	-.5082	RTF	-.5013																								
60.00	9	22	20	3397.84	-39.30	120.79	253.99	99.73	10	18	58	2287.4	-27.84	85.66	SG8	1284.6	R23	-.1998	R13	.5983	70.00	9	59	32	3287.39	-33.71	112.79	254.95	95.88	10	54	40	2287.4	-27.84	85.66	SG1	1054.1	SG2	734.2	THA	153.83																								
80.00	10	54	31	3116.16	-29.69	100.19	255.33	93.33	11	46	28	2116.2	-25.31	73.62	EL1	35.5	EL2	9.5	ALF	60.79	90.00	12	9	55	2872.82	-28.18	82.39	255.41	92.42	12	57	48	1872.8	-24.35	56.03																														
100.00	13	37	23	2590.63	-29.69	61.95	255.33	93.33	14	20	34	1590.6	-25.31	34.99																																																			
110.00	14	59	18	2334.21	-33.71	41.71	254.95	95.88	15	38	13	1334.2	-27.84	14.58																																																			



LAUNCH DATE AUG 30 1973 FLIGHT TIME 144.00 ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC										DISTANCE 334.861										EARTH TO MARS																																																																																																																																												
RL	151.05	LAL	.00	LOL	336.48	VL	33.205	GAL	6.44	AZL	89.04	HCA	103.12	SMA	202.70	ECC	.27696	INC	.9573	V1	29.498	RP	231.20	LAP	.93	LOP	79.61	VP	22.211	GAP	13.95	AZP	90.22	TAL	30.34	TAP	133.46	RCA	146.56	APO	258.84	V2	23.787	RC	154.008	GL	5.82	GP	-10.15	ZAL	40.60	ZAP	144.37	ETS	196.45	ZAE	167.30	ETE	293.48	ZAC	72.80	ETC	282.73	LVI	-6.33																																																																																															
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
C3	29.563	VHL	5.437	DLA	11.94	RAL	13.14	RAD	6646.0	VEL	12.227	PTH	7.18	VHP	3.875	DPA	6.73	RAP	46.33	ECC	1.4865	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
50.00		8	54	9	3468.90		-45.75		125.28		251.72		104.82		9	51	58	2468.9		-35.01		96.61	60.00		9	20	35	3398.56		-39.31		120.85		253.61		99.69		10	17	13	2398.6		-31.28		92.93	70.00		9	57	57	3288.57		-33.71		112.88		254.56		95.82		10	52	46	2288.6		-27.86		85.74	80.00		10	52	28	3117.81		-29.69		100.31		254.94		93.27		11	44	25	2117.8		-25.34		73.73	90.00		12	7	47	2874.70		-28.19		82.53		255.02		92.35		12	55	42	1874.7		-24.39		56.16	100.00		13	35	19	2592.29		-29.69		61.68		254.94		93.27		14	18	32	1592.3		-25.34		35.10	110.00		14	57	24	2335.39		-33.71		41.80		254.56		95.82		15	36	19	1335.4		-27.86		14.66
TDE	-.3228	TRA	-.5951	TC3	.6240	BAU	.3095	SGT	993.5	SGR	819.4	SG3	622.5	ST	19.6	SR	31.2	SS	11.5	RDE	-.5907	RRA	.1278	RC3	-.4733	FAU	.21664	RRT	-.2772	RRF	.5310	RTF	-.4792	CRT	.8334	CRS	.3610	CST	-.1583	FDE	.2018	FRA	-1.9175	FC3	-6.3443	BSP	1356	SGB	1287.8	R23	-.2229	R13	.5930	LSA	35.7	MSA	14.3	SSA	3.2	BDE	.6732	BRA	.6087	BC3	.7832	FSP	969	SG1	1051.0	SG2	744.2	THA	152.48	EL1	35.6	EL2	9.5	ALF	60.07																																																																																	

LAUNCH DATE AUG 30 1973 FLIGHT TIME 146.00 ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC										DISTANCE 338.583										EARTH TO MARS																																																																																																																																												
RL	151.05	LAL	.00	LOL	336.48	VL	33.176	GAL	6.44	AZL	89.01	HCA	104.13	SMA	202.11	ECC	.27497	INC	.9903	V1	29.498	RP	231.58	LAP	.96	LOP	80.62	VP	22.125	GAP	13.63	AZP	90.24	TAL	30.52	TAP	134.65	RCA	146.53	APO	257.68	V2	23.748	RC	156.890	GL	6.04	GP	-10.43	ZAL	40.42	ZAP	143.25	ETS	196.14	ZAE	167.44	ETE	287.76	ZAC	72.58	ETC	282.79	LVI	-6.16																																																																																															
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
C3	29.348	VHL	5.417	DLA	12.07	RAL	12.86	RAD	6646.8	VEL	12.218	PTH	7.17	VHP	3.779	DPA	6.37	RAP	46.13	ECC	1.4830	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
50.00		8	52	33	3469.52		-45.76		125.34		251.38		104.78		9	50	23	2469.5		-35.03		96.65	60.00		9	18	50	3399.56		-39.32		120.93		253.27		99.63		10	15	30	2399.6		-31.31		92.99	70.00		9	56	3	3290.07		-33.72		113.00		254.21		95.75		10	50	53	2290.1		-27.90		85.84	80.00		10	50	23	3119.83		-29.70		100.46		254.58		93.19		11	42	23	2119.8		-25.38		73.87	90.00		12	5	39	2876.95		-28.20		82.69		254.66		92.27		12	53	36	1877.0		-24.42		56.31	100.00		13	33	15	2594.30		-29.70		61.83		254.58		93.19		14	16	30	1594.3		-25.38		35.24	110.00		14	55	29	2336.89		-33.72		41.92		254.21		95.75		15	34	26	1336.9		-27.90		14.76
TDE	-.3274	TRA	-.6008	TC3	.6056	BAU	.3082	SGT	986.1	SGR	833.4	SG3	654.9	ST	19.9	SR	31.1	SS	12.0	RDE	-.5863	RRA	.1184	RC3	-.5002	FAU	.22679	RRT	-.2726	RRF	.5539	RTF	-.4556	CRT	.8369	CRS	.3682	CST	-.1465	FDE	.2232	FRA	-2.0388	FC3	-6.6900	BSP	1371	SGB	1291.1	R23	-.2449	R13	.5891	LSA	35.8	MSA	14.7	SSA	3.2	BDE	.6715	BRA	.6121	BC3	.7854	FSP	1029	SG1	1047.4	SG2	754.9	THA	150.90	EL1	35.7	EL2	9.5	ALF	59.42																																																																																	

LAUNCH DATE AUG 30 1973 FLIGHT TIME 148.00 ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC										DISTANCE 342.314										EARTH TO MARS																																																																																																																																												
RL	151.05	LAL	.00	LOL	336.48	VL	33.148	GAL	6.44	AZL	88.98	HCA	105.14	SMA	201.55	ECC	.27309	INC	1.0236	V1	29.498	RP	231.95	LAP	.99	LOP	81.63	VP	22.042	GAP	13.32	AZP	90.27	TAL	30.68	TAP	135.82	RCA	146.51	APO	256.60	V2	23.708	RC	159.785	GL	6.26	GP	-10.72	ZAL	40.26	ZAP	141.90	ETS	195.84	ZAE	167.45	ETE	281.78	ZAC	72.36	ETC	282.84	LVI	-5.98																																																																																															
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
C3	29.145	VHL	5.399	DLA	12.19	RAL	12.59	RAD	6646.7	VEL	12.210	PTH	7.16	VHP	3.687	DPA	6.00	RAP	45.91	ECC	1.4797	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
50.00		8	51	0	3470.40		-45.77		125.42		251.07		104.72		9	48	50	2470.4		-35.07		96.71	60.00		9	17	7	3400.85		-39.34		121.03		252.95		99.56		10	13	48	2400.9		-31.35		93.08	70.00		9	54	9	3291.89		-33.74		113.14		253.88		95.67		10	49	1	2291.9		-27.94		85.97	80.00		10	48	19	3122.19		-29.71		100.63		254.24		93.10		11	40	21	2122.2		-25.43		74.03	90.00		12	3	30	2879.57		-28.20		82.88		254.32		92.17		12	51	29	1879.6		-24.47		56.49	100.00		13	31	11	2596.66		-29.71		62.00		254.24		93.10		14	14	28	1596.7		-25.43		35.40	110.00		14	53	35	2338.71		-33.74		42.06		253.88		95.67		15	32	34	1338.7		-27.94		14.88
TDE	-.3313	TRA	-.6063	TC3	.5851	BAU	.3072	SGT	977.8	SGR	848.7	SG3	688.6	ST	20.2	SR	30.9	SS	12.5	RDE	-.5817	RRA	.1085	RC3	-.5282	FAU	.23730	RRT	-.2662	RRF	.5769	RTF	-.4402	CRT	.8399	CRS	.3752	CST	-.1356	FDE	.2464	FRA	-2.1652	FC3	-7.0487	BSP	1376	SGB	1294.8	R23	-.2655	R13	.5871	LSA	35.8	MSA	15.0	SSA	3.2	BDE	.6894	BRA	.6159	BC3	.7883	FSP	1090	SG1	1043.4	SG2	766.7	THA	149.05	EL1	35.7	EL2	9.5	ALF	58.82																																																																																	

LAUNCH DATE AUG 30 1973 FLIGHT TIME 150.00 ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC										DISTANCE 346.053										EARTH TO MARS																																																																																																																																												
RL	151.05	LAL	.00	LOL	336.48	VL	33.123	GAL	6.43	AZL	88.94	HCA	106.15	SMA	201.04	ECC	.27134	INC	1.0571	V1	29.498	RP	232.33	LAP	1.02	LOP	82.63	VP	21.962	GAP	13.00	AZP	90.29	TAL	30.83	TAP	136.98	RCA	146.49	APO	255.59	V2	23.670	RC	162.893	GL	6.48	GP	-11.01	ZAL	40.12	ZAP	140.53	ETS	195.54	ZAE	167.33	ETE	275.67	ZAC	72.14	ETC	282.91	LVI	-5.80																																																																																															
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
C3	28.953	VHL	5.381	DLA	12.33	RAL	12.34	RAD	6646.6	VEL	12.202	PTH	7.16	VHP	3.599	DPA	5.61	RAP	45.67	ECC	1.4765	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
50.00		8	49	27	3471.53		-45.79		125.52		250.79		104.64		9	47	19	2471.5		-35.11		96.78	60.00		9	15	25	3402.42		-39.36		121.16		252.66		99.48		10	12	8	2402.4		-31.39		93.19	70.00		9	52	16	3294.02		-33.75		113.30		253.58		95.58		10	47	10	2294.0		-27.99		86.11	80.00		10	46	14	3124.90		-29.72		100.85		253.93		92.99		11	38	19	2124.9		-25.48		74.21	90.00		12	1	20	2882.56		-28.21		83.10		254.01		92.06		12	49	22	1882.6		-24.52		56.69	100.00		13	29	6	2599.37		-29.72		62.20		253.93		92.99		14	12	26	1599.4		-25.48		35.58	110.00		14	51	42	2340.84		-33.75		42.22		253.58		95.58		15	30	43	1340.8		-27.99		15.03
TDE	-.3348	TRA	-.6130	TC3	.5620	BAU	.3064	SGT	969.2	SGR	865.2	SG3	723.3	ST	20.5	SR	30.8	SS	13.0	RDE	-.5768	RRA	.0982	RC3	-.5575	FAU	.24811	RRT	-.2569	RRF	.5998	RTF	-.4018	CRT	.8424	CRS	.3822	CST	-.1254	FDE	.2714	FRA	-2.2950	FC3	-7.4188	BSP	1376	SGB	1299.2	R23	-.2832	R13	.5866	LSA	35.9	MSA	15.4	SSA	3.2	BDE	.6669	BRA	.6209	BC3	.7916	FSP	1153	SG1	1039.0	SG2	780.0	THA	146.93	EL1	35.7	EL2	9.5	ALF	58.22																																																																																	

LAUNCH DATE AUG 30 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 29 1974

DISTANCE 349.798

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 33.099 GAL 6.43 AZL 88.91 HCA 107.15 SMA 200.97 ECC .26970 INC 1.0908 V1 29.498  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.885 GAP 12.70 AZP 90.32 TAL 30.96 TAP 138.11 RCA 146.47 APO 254.66 V2 23.631  
 RC 165.610 GL 6.70 GP -11.31 ZAL 39.99 ZAP 139.14 ETS 195.25 ZAE 167.06 ETE 269.56 ZAC 71.91 ETC 282.97 LVI -5.62

PLANETOCENTRIC CONIC

C3 28.772 VHL 5.384 DLA 12.48 RAL 12.11 RAD 6646.5 VEL 12.195 PTH 7.15 VHP 3.815 DPA 5.21 RAP 45.41 ECC 1.4738  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 57 3472.80 -45.82 125.64 250.54 104.55 9 45 50 2472.9 -35.16 96.87  
 60.00 9 13 44 3404.25 -39.38 121.32 252.39 99.38 10 10 28 2404.3 -31.45 93.31  
 70.00 9 50 22 3296.45 -33.77 113.49 253.30 95.47 10 45 19 2296.5 -26.05 86.20  
 80.00 10 44 9 3127.96 -29.73 101.06 253.65 82.88 11 36 17 2128.0 -25.53 74.42  
 90.00 11 59 9 2885.91 -26.22 83.34 253.72 61.94 12 47 15 1885.9 -24.58 56.92  
 100.00 13 27 1 2602.43 -29.73 62.43 253.65 42.41 14 10 23 1602.4 -23.53 35.79  
 110.00 14 49 49 2343.27 -33.77 42.41 253.30 25.47 15 28 52 1343.3 -20.05 15.19

DIFFERENTIAL CORRECTIONS

TDE -.3380 TRA -.6206 TC3 .5359 BAU .3060 SGT 960.1 SGR 883.1 SG3 758.9 ST 20.7 SR 30.6 SS 13.6  
 RDE -.5717 RRA .0874 RC3 -.5879 FAU .25919 RRT -.2441 RRF .6223 RTF -.3700 CRT .8445 CR3 .3892 CST -.1155  
 FDE .2987 FRA-2.4287 FC3-7.7987 BSP 1373 SGB 1304.5 R23 -.3029 R13 .5884 LSA 35.9 MSA 15.9 S3A 3.3  
 BDE .6642 BRA .6268 BC3 .7954 FSP 1218 SG1 1034.2 SG2 795.0 THA 144.47 EL1 35.7 EL2 9.5 ALF 57.62

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 30 1973

FLIGHT TIME 154.00

ARRIVAL DATE JAN 31 1974

DISTANCE 353.550

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 33.077 GAL 6.42 AZL 88.88 HCA 108.15 SMA 200.13 ECC .26816 INC 1.1248 V1 29.488  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.810 GAP 12.39 AZP 90.35 TAL 31.08 TAP 139.23 RCA 146.46 APO 253.79 V2 23.593  
 RC 168.537 GL 6.93 GP -11.62 ZAL 39.89 ZAP 137.73 ETS 194.95 ZAE 166.85 ETE 263.80 ZAC 71.69 ETC 283.04 LVI -5.48

PLANETOCENTRIC CONIC

C3 28.600 VHL 5.348 DLA 12.63 RAL 11.88 RAD 6646.5 VEL 12.188 PTH 7.15 VHP 3.435 DPA 4.79 RAP 45.13 ECC 1.4707  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 46 27 3474.51 -45.84 125.79 250.32 104.44 9 44 22 2474.5 -35.23 96.97  
 60.00 9 12 4 3406.35 -39.40 121.49 252.16 99.26 10 8 50 2406.4 -31.51 93.45  
 70.00 9 48 29 3299.19 -33.78 113.70 253.05 95.34 10 43 28 2299.2 -26.12 86.46  
 80.00 10 42 3 3131.35 -29.74 101.31 253.39 82.74 11 34 14 2131.4 -25.60 74.66  
 90.00 11 56 57 2889.62 -26.23 83.61 253.46 61.81 12 45 7 1889.6 -24.64 57.18  
 100.00 13 24 55 2603.82 -29.74 62.68 253.39 42.62 14 8 21 1603.8 -25.60 36.02  
 110.00 14 47 55 2346.01 -33.78 42.62 253.05 25.34 15 27 1 1346.0 -26.12 15.38

DIFFERENTIAL CORRECTIONS

TDE -.3411 TRA -.6296 TC3 .5063 BAU .3059 SGT 951.1 SGR 902.3 SG3 795.5 ST 21.0 SR 30.4 SS 14.1  
 RDE -.5663 RRA .0762 RC3 -.6194 FAU .27054 RRT -.2271 RRF .6445 RTF -.3341 CRT .8463 CR3 .3972 CST -.1052  
 FDE .3290 FRA-2.5649 FC3-8.1892 BSP 1372 SGB 1311.0 R23 -.3174 R13 .5931 LSA 35.9 MSA 16.3 S3A 3.3  
 BDE .6611 BRA .6342 BC3 .8001 FSP 1285 SG1 1029.3 SG2 812.0 THA 141.54 EL1 35.7 EL2 9.5 ALF 56.99

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 30 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 2 1974

DISTANCE 357.308

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 33.057 GAL 6.42 AZL 88.84 HCA 109.15 SMA 199.72 ECC .26872 INC 1.1590 V1 29.488  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.758 GAP 12.09 AZP 90.38 TAL 31.19 TAP 140.33 RCA 146.45 APO 252.99 V2 23.534  
 RC 171.472 GL 7.16 GP -11.93 ZAL 39.80 ZAP 136.30 ETS 194.65 ZAE 166.09 ETE 257.91 ZAC 71.46 ETC 283.11 LVI -5.27

PLANETOCENTRIC CONIC

C3 28.437 VHL 5.333 DLA 12.79 RAL 11.67 RAD 6646.4 VEL 12.181 PTH 7.14 VHP 3.358 DPA 4.36 RAP 44.83 ECC 1.4680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 59 3476.35 -45.87 125.95 250.13 104.32 9 42 56 2476.4 -35.30 97.09  
 60.00 9 10 24 3408.71 -39.43 121.69 251.95 99.13 10 7 13 2408.7 -31.59 93.61  
 70.00 9 46 35 3302.22 -33.80 113.94 252.83 95.20 10 41 38 2302.2 -26.19 86.67  
 80.00 10 39 56 3135.08 -29.75 101.59 253.15 82.60 11 32 11 2135.1 -25.67 74.91  
 90.00 11 54 44 2893.68 -26.24 83.91 253.22 61.66 12 42 58 1893.7 -24.71 57.45  
 100.00 13 22 48 2609.56 -29.75 62.96 253.15 42.86 14 6 18 1609.6 -25.67 36.28  
 110.00 14 46 2 2349.04 -33.80 42.86 252.83 25.20 15 25 11 1349.0 -26.19 15.59

DIFFERENTIAL CORRECTIONS

TDE -.3440 TRA -.6394 TC3 .4736 BAU .3084 SGT 942.3 SGR 922.9 SG3 833.0 ST 21.3 SR 30.2 SS 14.7  
 RDE -.5606 RRA .0843 RC3 -.6522 FAU .28211 RRT -.2033 RRF .6661 RTF -.2339 CRT .8478 CR3 .4046 CST -.0957  
 FDE .3614 FRA-2.7037 FC3-8.5886 BSP 1369 SGB 1319.0 R23 -.3255 R13 .6029 LSA 35.9 MSA 16.7 S3A 3.2  
 BDE .6578 BRA .6426 BC3 .8060 FSP 1352 SG1 1024.4 SG2 830.9 THA 137.90 EL1 35.7 EL2 9.6 ALF 56.33

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 30 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 4 1974

DISTANCE 361.070

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 33.038 GAL 6.41 AZL 88.81 HCA 110.14 SMA 199.34 ECC .26537 INC 1.1936 V1 29.488  
 RP 233.80 LAP 1.12 LOP 86.62 VP 21.668 GAP 11.79 AZP 90.41 TAL 31.28 TAP 141.42 RCA 146.44 APO 252.24 V2 23.517  
 RC 174.413 GL 7.39 GP -12.25 ZAL 39.72 ZAP 134.85 ETS 194.35 ZAE 165.40 ETE 252.56 ZAC 71.24 ETC 283.18 LVI -5.09

PLANETOCENTRIC CONIC

C3 28.281 VHL 5.318 DLA 12.98 RAL 11.48 RAD 6646.3 VEL 12.175 PTH 7.14 VHP 3.285 DPA 3.91 RAP 44.51 ECC 1.4654  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 33 3478.42 -45.91 126.14 249.96 104.17 9 41 31 2478.4 -35.38 97.23  
 60.00 9 8 45 3411.33 -39.45 121.90 251.76 98.98 10 5 36 2411.3 -31.67 93.79  
 70.00 9 44 42 3305.55 -33.82 114.20 252.62 95.05 10 39 47 2305.5 -26.27 86.90  
 80.00 10 37 48 3138.15 -29.77 101.89 252.94 82.44 11 30 8 2139.1 -25.74 75.19  
 90.00 11 52 30 2898.10 -26.24 84.23 253.00 61.50 12 40 48 1898.1 -24.78 57.76  
 100.00 13 20 40 2613.62 -29.77 63.26 252.94 43.11 14 4 14 1613.6 -25.74 36.86  
 110.00 14 44 8 2352.36 -33.82 43.11 252.62 25.20 15 23 20 1352.4 -26.27 15.81

DIFFERENTIAL CORRECTIONS

TDE -.3470 TRA -.6509 TC3 .4371 BAU .3076 SGT 934.7 SGR 948.0 SG3 871.2 ST 21.6 SR 29.9 SS 15.3  
 RDE -.5546 RRA .0521 RC3 -.6862 FAU .29391 RRT -.1781 RRF .6871 RTF -.2486 CRT .8490 CR3 .4128 CST -.0860  
 FDE .3971 FRA-2.8483 FC3-8.9972 BSP 1372 SGB 1329.2 R23 -.3234 R13 .6196 LSA 35.9 MSA 17.2 S3A 3.2  
 BDE .6542 BRA .6530 BC3 .8136 FSP 1421 SG1 1020.3 SG2 851.9 THA 133.24 EL1 35.6 EL2 9.6 ALF 55.66

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 30 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC										DISTANCE 364.837										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.020	GAL	6.40	AZL	88.77	HCA	111.13	SMA	198.09	ECC	.28410	INC	1.2284	V1	29.498	RP	234.17	LAP	1.15	LOP	87.62	VP	21.600	GAP	11.50	AZP	90.44	TAL	31.36	TAP	142.49	RCA	146.44	APO	251.93	V2	23.479	RC	177.360	GL	7.62	GP	-12.57	ZAL	39.67	ZAP	133.37	ETS	194.03	ZAE	164.57	ETE	247.61	ZAC	71.01	ETC	283.26	LVI	-4.91

PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																				
C3	28.133	VHL	5.304	DLA	13.14	RAL	11.29	RAD	8646.3	VEL	12.169	PTH	7.13	VHP	3.216	DPA	3.45	RAP	44.17	ECC	1.4630	SGT	928.4	SGR	968.6	SG3	910.0	ST	21.9	SR	29.6	SS	15.9							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-1.448	RRF	.7073	RTF	-.1978	CRT	.8499	CRS	.4202	CST	-.0775			
50.00	0	42	7	3480.71	-45.95	126.35	249.82	104.02	9	40	7	2480.7	-35.46	97.38	SGB	1341.7	R23	-.3018	R13	.6470	L8A	35.9	MSA	17.7	SSA	3.2														
60.00	9	7	6	3414.19	-39.48	122.14	251.60	98.83	10	4	0	2414.2	-31.75	93.98	SG1	1017.8	SG2	874.3	THA	126.84	EL1	35.6	EL2	9.6	ALF	54.95														
70.00	9	42	48	3309.16	-33.84	114.48	252.44	94.89	10	37	57	2309.2	-28.35	87.14																										
80.00	10	35	39	3143.54	-29.78	102.22	252.74	92.27	11	28	3	2143.5	-25.82	75.49																										
90.00	11	50	13	2902.87	-28.25	84.58	252.80	91.32	12	38	36	1902.9	-24.86	58.08																										
100.00	13	18	31	2618.02	-29.78	63.58	252.74	92.27	14	2	9	1618.0	-25.82	36.86																										
110.00	14	42	14	2355.98	-33.84	43.39	252.44	94.89	15	21	30	1356.0	-28.35	16.06																										

LAUNCH DATE AUG 30 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC										DISTANCE 368.609										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.004	GAL	6.39	AZL	88.74	HCA	112.12	SMA	198.67	ECC	.26292	INC	1.2637	V1	29.498	RP	234.53	LAP	1.17	LOP	88.60	VP	21.535	GAP	11.21	AZP	90.48	TAL	31.42	TAP	143.54	RCA	146.43	APO	250.90	V2	23.442	RC	180.313	GL	7.86	GP	-12.91	ZAL	39.62	ZAP	131.89	ETS	193.74	ZAE	163.63	ETE	243.08	ZAC	70.78	ETC	283.34	LVI	-4.73

PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																				
C3	27.991	VHL	5.291	DLA	13.32	RAL	11.12	RAD	8646.2	VEL	12.163	PTH	7.13	VHP	3.150	DPA	2.98	RAP	43.82	ECC	1.4807	SGT	924.5	SGR	993.8	SG3	949.4	ST	22.2	SR	29.4	SS	16.5							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.1057	RRF	.7269	RTF	-.1421	CRT	.8505	CRS	.4285	CST	-.0685			
50.00	0	40	42	3483.22	-45.99	126.58	249.70	103.85	9	38	45	2483.2	-35.56	97.54	SGB	1357.4	R23	-.2465	R13	.6869	L8A	35.9	MSA	18.2	SSA	3.2														
60.00	9	5	28	3417.31	-39.52	122.40	251.46	98.65	10	2	25	2417.3	-31.85	94.19	SG1	1019.3	SG2	896.4	THA	117.82	EL1	35.5	EL2	9.7	ALF	54.19														
70.00	9	40	53	3313.06	-33.87	114.78	252.28	94.71	10	36	6	2313.1	-28.44	87.41																										
80.00	10	33	29	3148.27	-29.79	102.57	252.57	92.09	11	25	57	2148.3	-25.91	75.82																										
90.00	11	47	56	2907.99	-28.26	84.96	252.62	91.13	12	36	24	1908.0	-24.94	58.44																										
100.00	13	16	21	2622.74	-29.79	63.93	252.57	92.09	14	0	3	1622.7	-25.91	37.18																										
110.00	14	40	19	2359.88	-33.87	43.70	252.28	94.71	15	19	39	1359.9	-28.44	16.33																										

LAUNCH DATE AUG 30 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC										DISTANCE 372.385										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.989	GAL	6.38	AZL	88.70	HCA	113.10	SMA	198.37	ECC	.26182	INC	1.2993	V1	29.498	RP	234.89	LAP	1.20	LOP	89.59	VP	21.471	GAP	10.92	AZP	90.51	TAL	31.48	TAP	144.58	RCA	146.43	APO	250.31	V2	23.405	RC	183.270	GL	8.10	GP	-13.24	ZAL	39.60	ZAP	130.38	ETS	193.43	ZAE	162.58	ETE	238.95	ZAC	70.55	ETC	283.42	LVI	-4.55

PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																				
C3	27.855	VHL	5.278	DLA	13.51	RAL	10.98	RAD	8646.2	VEL	12.158	PTH	7.12	VHP	3.087	DPA	2.50	RAP	43.44	ECC	1.4584	SGT	918.6	SGR	1022.1	SG3	991.3	ST	22.2	SR	29.1	SS	17.0							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.0709	RRF	.7464	RTF	-.1006	CRT	.8493	CRS	.4250	CST	-.0755			
50.00	0	39	17	3485.94	-46.03	126.83	249.61	103.66	9	37	23	2485.9	-35.66	97.72	SGB	1374.2	R23	-.1546	R13	.7312	L8A	35.7	MSA	18.7	SSA	3.2														
60.00	9	3	49	3420.66	-39.55	122.68	251.34	98.47	10	0	50	2420.7	-31.93	94.42	SG1	1031.9	SG2	907.6	THA	108.76	EL1	35.3	EL2	9.7	ALF	53.90														
70.00	9	38	57	3317.24	-33.89	115.10	252.14	94.52	10	34	15	2317.2	-28.54	87.70																										
80.00	10	31	17	3153.31	-29.80	102.94	252.41	91.89	11	23	50	2153.3	-26.00	76.16																										
90.00	11	45	36	2913.44	-28.27	85.36	252.45	90.93	12	34	9	1913.4	-25.03	58.81																										
100.00	13	14	8	2627.79	-29.80	64.31	252.41	91.89	13	57	56	1627.8	-26.00	37.53																										
110.00	14	38	24	2364.06	-33.89	44.02	252.14	94.52	15	17	48	1364.1	-28.54	16.62																										

LAUNCH DATE AUG 30 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC										DISTANCE 376.163										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.975	GAL	6.38	AZL	88.68	HCA	114.08	SMA	198.10	ECC	.26078	INC	1.3354	V1	29.498	RP	235.24	LAP	1.22	LOP	90.87	VP	21.410	GAP	10.83	AZP	90.85	TAL	31.52	TAP	145.80	RCA	146.44	APO	249.78	V2	23.369	RC	188.232	GL	8.34	GP	-13.88	ZAL	39.59	ZAP	128.85	ETS	193.11	ZAE	161.44	ETE	235.24	ZAC	70.33	ETC	283.50	LVI	-4.37

PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																				
C3	27.725	VHL	5.265	DLA	13.72	RAL	10.81	RAD	8646.1	VEL	12.152	PTH	7.12	VHP	3.028	DPA	2.00	RAP	43.05	ECC	1.4583	SGT	924.8	SGR	1048.8	SG3	1029.8	ST	22.8	SR	28.7	SS	17.7							
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	-.0114	RRF	.7632	RTF	-.0175	CRT	.8506	CRS	.4438	CST	-.0538			
50.00	0	37	54	3488.89	-46.08	127.09	249.54	103.46	9	36	3	2488.9	-35.77	97.81	SGB	1398.3	R23	-.0216	R13	.7629	L8A	35.8	MSA	19.2	SSA	3.2														
60.00	9	2	10	3424.27	-39.59	122.98	251.24	98.27	9	59	15	2424.3	-32.05	94.86	SG1	1049.1	SG2	924.5	THA	92.59	EL1	35.3	EL2	9.7	ALF	52.66														
70.00	9	37	1	3321.73	-33.91	115.45	252.02	94.32	10	32	23	2321.7	-28.64	88.01																										
80.00	10	29	3	3158.71	-29.81	103.34	252.27	91.68	11	21	41	2158.7	-26.10	76.54																										
90.00	11	43	14	2919.28	-28.27	85.78	252.31	90.72	12	31	53	1919.3	-25.13	59.21																										
100.00	13	11	55	2																																				

LAUNCH DATE AUG 30 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC												DISTANCE 379.944			EARTH TO MARS										
RL	151.05	LAL	.00	LOL	336.48	VL	32.962	GAL	6.35	AZL	88.63	HCA	115.06	SMA	197.88	ECC	.25982	INC	1.3719	V1	29.488				
RP	235.59	LAP	1.24	LOP	91.55	VP	21.351	GAP	10.35	AZP	90.58	TAL	31.54	TAP	146.60	RCA	146.44	APO	249.25	V2	23.332				
RC	189.197	GL	8.59	GP	-13.93	ZAL	39.59	ZAP	127.32	ETS	192.78	ZAE	160.22	ETE	231.87	ZAC	70.10	ETC	283.59	LVI	-4.19				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	27.599	VHL	5.253	DLA	13.93	RAL	10.67	RAD	6646.1	VEL	12.147	PTH	7.11	VHP	2.972	DPA	1.49	RAP	42.65	ECC	1.4542				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	36	31	3492.05	-46.13		127.38	249.50	103.24	9	34	43	2492.0	-35.89	98.12									
60.00		9	0	32	3428.12	-39.62		123.30	251.16	98.05	9	57	40	2428.1	-32.17	94.93									
70.00		9	35	4	3326.49	-33.94		115.82	251.92	94.10	10	30	30	2326.5	-28.75	88.34									
80.00		10	26	47	3164.44	-29.83		103.77	252.15	91.46	11	19	31	2164.4	-26.20	76.93									
90.00		11	40	49	2925.47	-28.28		86.24	252.18	90.49	12	29	35	1925.5	-25.22	59.64									
100.00		13	9	39	2638.91	-29.83		65.14	252.15	91.46	13	53	38	1638.9	-26.20	38.30									
110.00		14	34	30	2373.31	-33.94		44.74	251.92	94.10	15	14	3	1373.3	-28.75	17.26									
TDE	-.3605	TRA	-.7304	TC3	.1984	BAU	.3301	SGT	933.1	SGR	1077.9	SG3	1069.1	ST	23.2	SR	28.3	SS	18.3						
RDE	-.5191	RRA	-.0153	RC3	-.8729	FAU	.35446	RRT	.0472	RRF	.7797	RTF	.0540	CRT	.8506	CRS	.4553	CST	-.0421						
FDE	.6228	FRA	-3.5797	FC	-11.1186	BSP	1491	SGB	1425.7	R23	.0885	R13	.7748	LSA	35.8	MSA	19.7	SSA	3.2						
BDE	.6320	BRA	.7306	BC3	.8947	FSP	1784	SG1	1081.4	SG2	929.1	THA	80.97	EL1	35.3	EL2	9.8	ALF	51.66						

LAUNCH DATE AUG 30 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC												DISTANCE 383.729			EARTH TO MARS										
RL	151.05	LAL	.00	LOL	336.48	VL	32.950	GAL	6.33	AZL	88.59	HCA	116.03	SMA	197.62	ECC	.25891	INC	1.4088	V1	29.488				
RP	235.94	LAP	1.27	LOP	92.52	VP	21.293	GAP	10.07	AZP	90.62	TAL	31.56	TAP	147.59	RCA	146.45	APO	248.78	V2	23.297				
RC	192.165	GL	8.84	GP	-14.28	ZAL	39.61	ZAP	125.76	ETS	192.45	ZAE	158.92	ETE	228.84	ZAC	69.87	ETC	283.67	LVI	-4.00				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	27.479	VHL	5.242	DLA	14.14	RAL	10.54	RAD	6646.0	VEL	12.142	PTH	7.11	VHP	2.919	DPA	.97	RAP	42.23	ECC	1.4522				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	35	8	3495.41	-46.18		127.69	249.47	103.01	9	33	23	2495.4	-36.02	98.34									
60.00		8	58	52	3432.22	-39.66		123.64	251.11	97.82	9	56	4	2432.2	-32.29	95.21									
70.00		9	33	5	3331.53	-33.96		116.21	251.84	93.87	10	28	36	2331.5	-28.86	88.69									
80.00		10	24	29	3170.49	-29.84		104.22	252.05	91.22	11	17	19	2170.5	-26.30	77.35									
90.00		11	38	22	2932.01	-28.28		86.71	252.08	90.25	12	27	14	1932.0	-25.32	60.09									
100.00		13	7	21	2644.96	-29.84		65.58	252.05	91.22	13	51	26	1645.0	-26.30	38.72									
110.00		14	32	31	2378.35	-33.96		45.13	251.84	93.87	15	12	10	1378.4	-28.86	17.60									
TDE	-.3613	TRA	-.7494	TC3	.1384	BAU	.3396	SGT	943.7	SGR	1109.7	SG3	1110.0	ST	23.5	SR	28.0	SS	19.0						
RDE	-.5111	RRA	-.0304	RC3	-.9139	FAU	.36685	RRT	.1055	RRF	.7957	RTF	.1241	CRT	.8497	CRS	.4598	CST	-.0397						
FDE	.6723	FRA	-3.7317	FC	-11.5577	BSP	1540	SGB	1456.7	R23	.1492	R13	.7826	LSA	35.7	MSA	20.3	SSA	3.2						
BDE	.6259	BRA	.7501	BC3	.9244	FSP	1852	SG1	1124.3	SG2	926.2	THA	73.52	EL1	35.2	EL2	9.8	ALF	50.88						

LAUNCH DATE AUG 30 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC												DISTANCE 387.516			EARTH TO MARS										
RL	151.05	LAL	.00	LOL	336.48	VL	32.939	GAL	6.32	AZL	88.55	HCA	117.00	SMA	197.41	ECC	.25807	INC	1.4463	V1	29.498				
RP	236.29	LAP	1.29	LOP	93.49	VP	21.238	GAP	9.79	AZP	90.66	TAL	31.56	TAP	148.57	RCA	146.46	APO	248.35	V2	23.281				
RC	195.134	GL	9.09	GP	-14.63	ZAL	39.64	ZAP	124.20	ETS	192.10	ZAE	157.55	ETE	226.09	ZAC	69.65	ETC	283.76	LVI	-3.82				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	27.363	VHL	5.231	DLA	14.37	RAL	10.42	RAD	6646.0	VEL	12.137	PTH	7.11	VHP	2.869	DPA	.44	RAP	41.80	ECC	1.4503				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	33	45	3498.99	-46.24		126.02	249.47	102.76	9	32	4	2499.0	-36.15	98.56									
60.00		8	57	13	3436.55	-39.70		124.00	251.07	97.58	9	54	29	2436.6	-32.41	95.50									
70.00		9	31	5	3336.87	-33.98		116.63	251.77	93.62	10	26	42	2336.9	-28.98	89.06									
80.00		10	22	8	3176.89	-29.84		104.69	251.97	90.97	11	15	5	2176.9	-26.41	77.79									
90.00		11	35	52	2938.93	-28.28		87.22	251.98	90.00	12	24	51	1938.9	-25.43	60.57									
100.00		13	5	0	2651.36	-29.84		66.06	251.97	90.97	13	49	11	1651.4	-26.41	39.16									
110.00		14	30	31	2383.69	-33.98		45.55	251.77	93.62	15	10	15	1383.7	-28.98	17.87									
TDE	-.3648	TRA	-.7731	TC3	.0718	BAU	.3502	SGT	964.1	SGR	1141.2	SG3	1148.9	ST	23.9	SR	27.5	SS	19.7						
RDE	-.5018	RRA	-.0449	RC3	-.9548	FAU	.37858	RRT	.1718	RRF	.8012	RTF	.1198	CRT	.8494	CRS	.4726	CST	-.0270						
FDE	.7377	FRA	-3.8697	FC	-11.9781	BSP	1616	SGB	1494.0	R23	.1941	R13	.7890	LSA	35.7	MSA	20.8	SSA	3.2						
BDE	.6204	BRA	.7744	BC3	.9575	FSP	1933	SG1	1175.4	SG2	922.2	THA	67.31	EL1	35.1	EL2	9.9	ALF	49.75						

LAUNCH DATE AUG 30 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC												DISTANCE 391.305			EARTH TO MARS										
RL	151.05	LAL	.00	LOL	336.48	VL	32.929	GAL	6.30	AZL	88.52	HCA	117.97	SMA	197.22	ECC	.25728	INC	1.4843	V1	29.498				
RP	236.63	LAP	1.31	LOP	94.46	VP	21.184	GAP	9.52	AZP	90.70	TAL	31.55	TAP	149.53	RCA	146.48	APO	247.96	V2	23.226				
RC	198.104	GL	9.35	GP	-14.99	ZAL	39.69	ZAP	122.62	ETS	191.75	ZAE	156.13	ETE	223.60	ZAC	69.42	ETC	283.85	LVI	-3.63				
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY			ORBIT DETERMINATION ACCURACY										
C3	27.251	VHL	5.220	DLA	14.60	RAL	10.31	RAD	6645.9	VEL	12.133	PTH	7.10	VHP	2.822	DPA	-.10	RAP	41.38	ECC	1.4488				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	32	22	3502.78	-46.29		128.37	249.49	102.50	9	30	45	2502.8	-36.30	98.83									
60.00		8	55	32	3441.13	-39.74		124.38	251.05	97.32	9	52	53	2441.1	-32.55	95.82									
70.00		9	29	3	3342.50	-34.01		117.07	251.72	93.37	10	24	45	2342.5	-29.10	89.45									
80.00		10	19	45	3183.63	-29.85		105.19	251.90	90.71	11	12	49	2183.6	-26.52	78.26									
90.00		11	33	19	2946.21	-28.28		87.75	251.90	89.73	12	22	25	1946.2	-25.54	61.08									
100.00		13	2	37	2658.10	-29.85		66.86	251.90	90.71	13	46	55	1658.1	-26.52	39.63									
110.00		14	28	29	2389.32	-34.01		45.98	251.72	93.37	15	8	18	1389.3	-29.10	18.37									
TDE	-.3656	TRA	-.7980	TC3	.0049	BAU	.3634	SGT	988.0	SGR	1175.5	SG3	1189.0	ST	24.2	SR	27.1	SS	20.3						
RDE	-.4928	RRA	-.0804	RC3	-.9975	FAU	.39063	RRT	.2358	RRF	.8242	RTF	.2718	CRT	.8481	CRS	.4786	CST	-.0235						
FDE	.7970	FRA	-4.0154	FC	-12.4100	BSP	1694	SGB	1535.5	R23	.2139	R13	.7999	LSA	35.6	MSA	21.4	SSA	3.1						
BDE	.6138	BRA	.7982	BC3	.9975	FSP	2000	SG1	1232.7	SG2	915.6	THA	63.28	EL1	35.0	EL2	9.9	ALF	48.81						

LAUNCH DATE AUG 30 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC										DISTANCE 395.096										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.920	GAL	6.28	AZL	88.48	HCA	118.94	SMA	197.04	ECC	.25655	INC	1.5229	V1	29.498	RP	236.98	LAP	1.33	LOP	95.43	VP	21.132	GAP	9.24	AZP	90.74	TAL	31.53	TAP	130.47	RCA	146.49	APO	247.60	V2	23.191	RC	201.073	GL	9.61	GP	-15.35	ZAL	39.75	ZAP	121.03	ETS	191.39	ZAE	154.66	ETE	221.34	ZAC	69.20	ETC	263.93	LVI	-3.44
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.143	VHL	5.210	DLA	14.85	RAL	10.21	RAD	6645.9	VEL	12.128	PTH	7.10	VHP	2.778	DPA	-0.65	RAP	40.90	ECC	1.4467	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	8	31	0	3506.78	-46.35	128.74	249.53	102.22	9	29	26	2506.8	-36.44	99.10	SGT	1013.5	SGR	1212.9	SG3	1230.7	ST	24.3	SR	26.7	SS	21.0																																							
60.00	8	53	51	3445.95	-39.78	124.79	251.05	97.05	9	51	16	2446.0	-32.69	96.15	RRT	.2955	RRF	.8378	RTF	.3391	CRT	.8456	CRS	.4758	CST	-.0321																																							
70.00	9	26	59	3348.41	-34.03	117.53	251.69	93.09	10	22	47	2348.4	-29.23	89.86	SG8	1580.6	R23	.2174	R13	.8147	LSA	35.4	MSA	22.0	SSA	3.1																																							
80.00	10	17	19	3190.71	-29.85	105.72	251.84	90.43	11	10	29	2190.7	-26.64	78.76	SG1	1294.2	SG2	907.4	THA	60.72	EL1	34.7	EL2	10.0	ALF	48.15																																							
90.00	11	30	42	2953.86	-28.28	88.31	251.84	89.45	12	19	56	1953.9	-25.65	61.61																																																			
100.00	13	0	11	2665.18	-29.85	67.09	251.84	90.43	13	44	36	1665.2	-26.64	40.12																																																			
110.00	14	26	25	2395.23	-34.03	46.44	251.69	93.09	15	6	21	1395.2	-29.23	18.78																																																			

LAUNCH DATE AUG 30 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC										DISTANCE 398.888										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.912	GAL	6.26	AZL	88.44	HCA	119.90	SMA	196.89	ECC	.25587	INC	1.5621	V1	29.498	RP	237.31	LAP	1.35	LOP	96.39	VP	21.081	GAP	8.98	AZP	90.78	TAL	31.50	TAP	131.41	RCA	146.51	APO	247.26	V2	23.157	RC	204.040	GL	9.88	GP	-15.71	ZAL	39.82	ZAP	119.44	ETS	191.02	ZAE	153.14	ETE	219.28	ZAC	66.97	ETC	284.02	LVI	-3.25
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.038	VHL	5.200	DLA	15.10	RAL	10.12	RAD	6645.8	VEL	12.124	PTH	7.10	VHP	2.737	DPA	-1.20	RAP	40.44	ECC	1.4450	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	8	29	37	3511.00	-46.41	129.13	249.59	101.92	9	28	8	2511.0	-36.60	99.38	SGT	1061.2	SGR	1246.0	SG3	1265.5	ST	25.0	SR	26.1	SS	21.8																																							
60.00	8	52	8	3451.04	-39.82	125.21	251.07	96.77	9	49	39	2451.0	-32.83	96.50	RRT	.3649	RRF	.8489	RTF	.4115	CRT	.8496	CRS	.4984	CST	-.0095																																							
70.00	9	24	53	3354.64	-34.05	118.01	251.68	92.81	10	20	48	2354.6	-29.36	90.30	SG8	1636.7	R23	.2346	R13	.8231	LSA	35.3	MSA	22.8	SSA	3.1																																							
80.00	10	14	49	3198.17	-29.86	106.27	251.80	90.14	11	8	7	2198.2	-26.76	79.28	SG1	1366.3	SG2	901.0	THA	56.92	EL1	34.7	EL2	10.0	ALF	48.82																																							
90.00	11	28	1	2961.92	-28.27	88.90	251.79	89.16	12	17	23	1961.9	-25.77	62.17																																																			
100.00	12	57	41	2672.64	-29.86	67.64	251.80	90.14	13	42	14	1672.6	-26.76	40.64																																																			
110.00	14	24	20	2401.46	-34.05	46.93	251.68	92.81	15	4	21	1401.5	-29.36	19.21																																																			

LAUNCH DATE AUG 30 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC										DISTANCE 402.682										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.905	GAL	6.24	AZL	88.40	HCA	120.86	SMA	198.75	ECC	.25523	INC	1.6020	V1	29.498	RP	237.65	LAP	1.38	LOP	97.38	VP	21.033	GAP	8.71	AZP	90.82	TAL	31.46	TAP	132.33	RCA	146.53	APO	246.96	V2	23.123	RC	207.005	GL	10.15	GP	-16.07	ZAL	39.91	ZAP	117.84	ETS	190.64	ZAE	151.58	ETE	217.38	ZAC	68.75	ETC	284.11	LVI	-3.06
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.937	VHL	5.190	DLA	15.36	RAL	10.03	RAD	6645.8	VEL	12.120	PTH	7.09	VHP	2.699	DPA	-1.76	RAP	39.97	ECC	1.4433	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	8	28	13	3515.43	-46.47	129.54	249.67	101.61	9	26	49	2515.4	-36.76	99.68	SGT	1108.6	SGR	1283.1	SG3	1302.8	ST	25.3	SR	25.6	SS	22.5																																							
60.00	8	50	24	3456.36	-39.87	125.68	251.11	96.47	9	48	1	2456.4	-32.98	96.87	RRT	.4252	RRF	.8800	RTF	.446	CRT	.8439	CRS	.5042	CST	-.0043																																							
70.00	9	22	45	3361.16	-34.07	118.92	251.68	92.51	10	18	46	2361.2	-29.50	90.75	SG8	1695.7	R23	.2374	R13	.8353	LSA	35.4	MSA	23.2	SSA	3.1																																							
80.00	10	12	16	3205.99	-29.86	106.85	251.78	89.83	11	5	42	2206.0	-26.89	79.82	SG1	1441.4	SG2	893.2	THA	54.52	EL1	34.6	EL2	10.1	ALF	45.33																																							
90.00	11	25	16	2970.37	-28.26	89.52	251.76	88.85	12	14	47	1970.4	-25.88	62.76																																																			
100.00	12	55	8	2680.46	-29.86	68.22	251.78	89.83	13	39	49	1680.5	-26.89	41.19																																																			
110.00	14	22	11	2407.98	-34.07	47.44	251.68	92.51	15	2	19	1408.0	-29.50	19.67																																																			

LAUNCH DATE AUG 30 1973

FLIGHT TIME 182.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC										DISTANCE 406.477										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	32.898	GAL	6.22	AZL	88.36	HCA	121.82	SMA	198.82	ECC	.25464	INC	1.6425	V1	29.498	RP	237.98	LAP	1.40	LOP	98.31	VP	20.985	GAP	8.44	AZP	90.87	TAL	31.41	TAP	133.23	RCA	146.55	APO	246.69	V2	23.090	RC	209.964	GL	10.43	GP	-16.44	ZAL	40.01	ZAP	116.24	ETS	190.24	ZAE	149.99	ETE	215.64	ZAC	68.53	ETC	284.20	LVI	-2.87
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.839	VHL	5.181	DLA	15.63	RAL	9.98	RAD	6645.7	VEL	12.116	PTH	7.09	VHP	2.663	DPA	-2.33	RAP	39.49	ECC	1.4417	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																		
50.00	8	28	49	3520.08	-46.53	129.97	249.77	101.29	9	25	29	2520.1	-36.93	99.99	SGT	1163.6	SGR	1321.4	SG3	1339.0	ST	25.7	SR	25.0	SS	23.3																																							
60.00	8	48	39	3461.95	-39.91	126.13	251.16	96.15	9	46	21	2461.9	-33.14	97.26	RRT	.4815	RRF	.8703	RTF	.5324	CRT	.8420	CRS	.5106	CST	-.0011																																							
70.00	9	20	34	3368.00	-34.09	119.05	251.69	92.19	10	16	42	2368.0	-29.64	91.23	SG8	1760.7	R23	.2377	R13	.8472	LSA	35.4	MSA	23.9	SSA	3.0																																							
80.00	10	9	40	3214.18	-29.85	107.46	251.77	89.51	11	3	14	2214.2	-27.02	80.40	SG1	1521.8	SG2	885.5	THA	52.42	EL1	34.4	EL2	10.1	ALF	44.10																																							
90.00	11	22	27	2979.23	-28.24	90.17	251.73	88.53	12	12	6	1979.2	-26.01	63.38																																																			
100.00	12	52	31	2688.65	-29.85	68.83	251.77	89.51	13	37	20	1688.7	-27.02	41.77																																																			
110.00	14	20	1	2414.82	-34.09	47.97	251.69	92.19	15	0	15	1414.8	-29.64	20.15																																																			

LAUNCH DATE AUG 30 1973 FLIGHT TIME 184.00 ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.05	LAL	.00	LOL	336.48	VL	32.892	GAL	8.20	AZL	88.32	HCA	122.78	SMA	196.51	ECC	.25409	INC	1.6838	V1	29.498				
RP	238.30	LAP	1.42	LOP	99.27	VP	20.940	GAP	8.18	AZP	90.91	TAL	31.35	TAP	154.13	RCA	146.58	APO	246.44	V2	23.056				
RC	212.919	GL	10.71	GP	-16.81	ZAL	40.12	ZAP	114.64	ETS	189.84	ZAE	146.37	ETE	214.03	ZAC	68.31	ETC	284.28	LVI	-2.67				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	26.745	VHL	5.172	DLA	15.91	RAL	9.89	RAD	6645.7	VEL	12.112	PTH	7.09	VHP	2.630	DPA	-2.91	RAP	39.01	ECC	1.4401				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	25	24	3524.95	-46.60		130.42		249.89		100.94		9	24	9	2524.9		-37.11			100.32			
60.00		8	46	52	3467.79	-39.95		126.62		251.23		95.82		9	44	40	2467.0		-33.31			97.67			
70.00		9	18	21	3375.15	-34.11		119.61		251.72		91.86		10	14	36	2375.1		-29.79			91.74			
80.00		10	6	59	3222.76	-29.85		108.10		251.77		89.18		11	0	41	2222.8		-27.15			81.00			
90.00		11	19	33	2988.52	-28.23		90.84		251.72		88.19		12	9	21	1988.5		-26.13			64.03			
100.00		12	49	50	2697.23	-29.85		69.47		251.77		89.18		13	34	48	1697.2		-27.15			42.37			
110.00		14	17	47	2421.97	-34.11		48.53		251.72		91.86		14	58	9	1422.0		-29.79			20.66			
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY															
TDE	-.3686	TRA	-.9379	TC3	-.3970	BAU	.4583	SGT	1225.9	SGR	1360.2	SG3	1373.8	ST	26.1	SR	24.4	SS	24.1						
RDE	-.4378	RRA	-.1395	RC3	-1.2188	FAU	.44531	RRT	.5333	RRF	.8798	RTF	.5846	CRT	.8400	CRS	.5172	CST	.0024						
FDE	1.1723	FRA	-4.6616	FC	-14.4149	BSP	2306	SGB	1831.1	R23	.2365	R13	.8583	LSA	35.3	M8A	24.5	S8A	3.0						
BDE	.5723	BRA	.9482	BC3	1.2818	FSP	2352	SG1	1607.1	SG2	877.7	THA	50.53	EL1	34.3	EL2	10.1	ALF	42.80						

LAUNCH DATE AUG 30 1973 FLIGHT TIME 186.00 ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.05	LAL	.00	LOL	336.48	VL	32.887	GAL	6.18	AZL	88.27	HCA	123.73	SMA	196.41	ECC	.25358	INC	1.7259	V1	29.498				
RP	238.63	LAP	1.44	LOP	100.22	VP	20.896	GAP	7.92	AZP	90.96	TAL	31.28	TAP	155.01	RCA	146.61	APO	246.22	V2	23.024				
RC	215.868	GL	11.00	GP	-17.18	ZAL	40.24	ZAP	113.03	ETS	189.43	ZAE	146.73	ETE	212.53	ZAC	68.10	ETC	284.33	LVI	-2.47				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	26.653	VHL	5.163	DLA	16.20	RAL	9.82	RAD	6645.7	VEL	12.108	PTH	7.08	VHP	2.600	DPA	-3.48	RAP	38.53	ECC	1.4386				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	23	58	3530.04	-46.66		130.89		250.02		100.58		9	22	48	2530.0		-37.30			100.67			
60.00		8	45	4	3473.90	-39.99		127.14		251.32		95.47		9	42	57	2473.9		-33.48			98.10			
70.00		9	16	4	3382.62	-34.12		120.19		251.76		91.52		10	12	27	2382.6		-29.94			92.27			
80.00		10	4	13	3231.73	-29.84		108.77		251.78		88.83		10	58	5	2231.7		-27.29			81.63			
90.00		11	16	33	2998.24	-28.20		91.55		251.73		87.83		12	6	32	1998.2		-26.26			64.71			
100.00		12	47	5	2706.20	-29.84		70.14		251.78		88.83		13	32	11	1706.2		-27.29			43.00			
110.00		14	15	30	2429.44	-34.12		49.11		251.76		91.52		14	56	0	1429.4		-29.94			21.18			
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY															
TDE	-.3670	TRA	-.9701	TC3	-.4879	BAU	.4831	SGT	1294.9	SGR	1400.6	SG3	1407.7	ST	26.4	SR	23.9	SS	24.8						
RDE	-.4256	RRA	-.1560	RC3	-1.2650	FAU	.45517	RRT	.5804	RRF	.8887	RTF	.6312	CRT	.8377	CRS	.5203	CST	.0014						
FDE	1.2514	FRA	-4.7784	FC	-14.7846	BSP	2462	SGB	1907.4	R23	.2339	R13	.8690	LSA	35.2	M8A	25.2	S8A	3.0						
BDE	.5620	BRA	.9826	BC3	1.3558	FSP	2409	SG1	1697.4	SG2	870.1	THA	48.85	EL1	34.1	EL2	10.1	ALF	41.51						

LAUNCH DATE AUG 30 1973 FLIGHT TIME 188.00 ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.05	LAL	.00	LOL	336.48	VL	32.883	GAL	6.15	AZL	88.23	HCA	124.68	SMA	196.33	ECC	.25310	INC	1.7688	V1	29.498				
RP	238.95	LAP	1.45	LOP	101.17	VP	20.853	GAP	7.66	AZP	91.01	TAL	31.20	TAP	155.88	RCA	146.63	APO	246.02	V2	22.991				
RC	218.810	GL	11.29	GP	-17.54	ZAL	40.37	ZAP	111.43	ETS	189.00	ZAE	145.07	ETE	211.14	ZAC	67.88	ETC	284.45	LVI	-2.27				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	26.565	VHL	5.154	DLA	16.50	RAL	9.77	RAD	6645.6	VEL	12.105	PTH	7.08	VHP	2.572	DPA	-4.07	RAP	38.04	ECC	1.4372				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	22	31	3535.37	-46.73		131.39		250.18		100.20		9	21	27	2535.4		-37.49			101.03			
60.00		8	43	13	3480.27	-40.03		127.67		251.42		95.11		9	41	13	2480.3		-33.65			98.55			
70.00		9	13	44	3390.43	-34.14		120.80		251.82		91.16		10	10	14	2390.4		-30.10			92.82			
80.00		10	1	23	3241.12	-29.82		109.48		251.80		88.46		10	55	24	2241.1		-27.42			82.30			
90.00		11	13	28	3008.42	-28.18		92.30		251.74		87.46		12	3	37	2008.4		-26.39			65.43			
100.00		12	44	14	2715.99	-29.82		70.83		251.80		88.46		13	29	30	1715.6		-27.42			43.87			
110.00		14	13	10	2437.25	-34.14		49.72		251.82		91.16		14	53	48	1437.3		-30.10			21.74			
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY															
TDE	-.3646	TRA	-1.0034	TC3	-.5821	BAU	.5098	SGT	1370.2	SGR	1441.5	SG3	1440.1	ST	26.8	SR	23.2	SS	25.6						
RDE	-.4127	RRA	-.1726	RC3	-1.3114	FAU	.46451	RRT	.8227	RRF	.8968	RTF	.1.23	CRT	.8353	CRS	.5228	CST	-.0003						
FDE	1.3350	FRA	-4.8887	FC	-15.1380	BSP	2630	SGB	1988.9	R23	.2306	R13	.8788	LSA	35.1	M8A	25.9	S8A	3.0						
BDE	.5506	BRA	1.0181	BC3	1.4348	FSP	2463	SG1	1792.1	SG2	862.4	THA	47.33	EL1	34.0	EL2	10.1	ALF	40.17						

LAUNCH DATE AUG 30 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC										EARTH TO MARS															
RL	151.05	LAL	.00	LOL	336.48	VL	32.879	GAL	6.13	AZL	88.19	HCA	125.63	SMA	196.25	ECC	.25267	INC	1.8125	V1	29.498				
RP	239.26	LAP	1.47	LOP	102.12	VP	20.812	GAP	7.40	AZP	91.06	TAL	31.11	TAP	156.74	RCA	146.66	APO	245.84	V2	22.960				
RC	221.744	GL	11.59	GP	-17.91	ZAL	40.52	ZAP	109.83	ETS	188.57	ZAE	143.39	ETE	209.83	ZAC	67.66	ETC	284.54	LVI	-2.07				
PLANETOCENTRIC CONIC										ORBIT DETERMINATION ACCURACY															
C3	26.480	VHL	5.146	DLA	16.80	RAL	9.72	RAD	6645.6	VEL	12.101	PTH	7.08	VHP	2.547	DPA	-4.65	RAP	37.56	ECC	1.4358				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	21	3	3540.92	-46.79		131.91		250.35		99.81		9	20	4	2540.9		-37.69			101.42			
60.00		8	41	19	3486.93	-40.07		128.24		251.53		94.73		9	39	26	2486.9		-33.83			99.02			
70.00		9	11	20	3390.59	-34.15		121.44		251.89		90.78		10	7	59	2398.6		-30.26			93.40			
80.00		9	58	27	3250.94	-29.80		110.19		251.84		88.08		10	52	38	2250.9		-27.56			82.99			
90.00		11	10	17	3019.08	-28.14		93.08		251.76		87.07		12	0	36	2019.1		-26.52			66.18			
100.00		12	41	19	2725.41	-29.80		71.56		251.84		88.08		13	26	44	1725.4		-27.56			44.36			
110.00		14	10	46	2445.41	-34.15		50.36		251.89		90.78		14	51	32	1445.4		-30.26			22.32			
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY															
TDE	-.3604	TRA	-1.0369	TC3	-.6779	BAU	.5377	SGT	1449.9	SGR	1484.5	SG3	1472.3	ST	27.0	SR	22.8	SS	26.4						
RDE	-.3998	RRA	-.1899	RC3	-1.3592	FAU	.47372	RRT	.6602	RRF</															

LAUNCH DATE AUG 30 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 10 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.876 GAL 6.10 AZL 88.14 MCA 128.57 SMA 196.19 ECC .25226 INC 1.8972 V1 29.498  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.772 GAP 7.15 AZP 91.11 TAL 31.01 TAP 157.59 RCA 146.70 APO 245.66 V2 22.926  
 RC 224.672 GL 11.90 GP -18.28 ZAL 40.68 ZAP 108.24 ETS 188.12 ZAE 141.70 ETE 208.60 ZAC 67.45 ETC 284.62 LVI -1.86

PLANETOCENTRIC CONIC: C3 26.398 VHL 5.138 DLA 17.12 RAL 9.67 RAD 6645.6 VEL 12.098 PTH 7.07 VHP 2.524 DPA -5.23 RAP 37.07 ECC 1.4344  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 33 3546.71 -46.86 132.46 250.55 99.39 9 18 39 2546.7 -37.89 101.82  
 60.00 8 39 24 3493.87 -40.11 128.82 251.67 94.33 9 37 38 2493.9 -34.02 99.52  
 70.00 9 8 52 3407.09 -34.15 122.10 251.97 90.39 10 5 39 2407.1 -30.42 94.01  
 80.00 9 55 25 3261.20 -29.78 110.96 251.89 87.68 10 49 47 2261.2 -27.71 83.72  
 90.00 11 6 59 3030.23 -28.10 93.89 251.79 86.67 11 37 29 2030.2 -26.65 66.97  
 100.00 12 38 17 2735.67 -29.78 72.32 251.89 87.68 13 23 53 1735.7 -27.71 45.09  
 110.00 14 8 19 2453.91 -34.15 51.02 251.97 90.39 14 49 13 1453.9 -30.42 22.93

Differential Corrections: TDE -.3533 TRA-1.0694 TC3 -.7735 BAU .3673 SGT 1531.0 SGR 1830.9 SG3 1905.2 ST 27.2 SR 22.1 S8 27.0  
 RDE -.3882 RRA -.2087 RC3-1.4092 FAU .48312 RRT .6935 RRF .9120 RTF .7406 CRT .8290 CRS .5101 CST -.0271  
 FDE 1.4709 FRA-5.1223 FC-15.8443 BSP 3000 SGB 2165.1 R23 .2190 R13 .8979 LSA 34.6 MSA 27.4 S5A 2.9  
 BDE .5249 BRA 1.0896 BC3 1.6075 FSP 2523 SG1 1992.3 SG2 847.6 THA 45.00 EL1 33.6 EL2 10.0 ALF 37.86

LAUNCH DATE AUG 30 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 12 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.873 GAL 6.07 AZL 88.10 MCA 127.52 SMA 196.14 ECC .25189 INC 1.9029 V1 29.498  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.733 GAP 6.90 AZP 91.16 TAL 30.90 TAP 158.42 RCA 146.73 APO 245.54 V2 22.897  
 RC 227.591 GL 12.22 GP -18.65 ZAL 40.85 ZAP 106.86 ETS 187.66 ZAE 140.00 ETE 207.45 ZAC 67.23 ETC 284.70 LVI -1.65

PLANETOCENTRIC CONIC: C3 26.317 VHL 5.130 DLA 17.45 RAL 9.63 RAD 6645.5 VEL 12.095 PTH 7.07 VHP 2.504 DPA -5.82 RAP 36.60 ECC 1.4331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 1 3552.77 -46.93 133.03 250.76 98.96 9 17 14 2552.8 -38.10 102.24  
 60.00 8 37 25 3501.12 -40.14 129.44 251.81 93.92 9 35 46 2501.1 -34.21 100.04  
 70.00 9 6 20 3416.00 -34.15 122.80 252.07 89.98 10 3 16 2416.0 -30.59 94.65  
 80.00 9 52 17 3271.96 -29.74 111.75 251.94 87.26 10 46 49 2272.0 -27.85 84.49  
 90.00 11 3 33 3041.94 -28.05 94.74 251.83 86.24 11 54 15 2041.9 -26.78 67.80  
 100.00 12 35 9 2746.44 -29.74 73.12 251.94 87.26 13 20 56 1746.4 -27.85 45.86  
 110.00 14 5 46 2462.82 -34.15 51.72 252.07 89.98 14 46 49 1462.8 -30.59 23.57

Differential Corrections: TDE -.3595 TRA-1.1135 TC3 -.8883 BAU .5981 SGT 1639.4 SGR 1864.7 SG3 1923.6 ST 27.9 SR 21.1 S8 28.2  
 RDE -.3689 RRA -.2209 RC3-1.4494 FAU .48804 RRT .7236 RRF .9173 RTF .7664 CRT .8295 CRS .5305 CST -.0021  
 FDE 1.6196 FRA-5.1517 FC-16.0548 BSP 3192 SGB 2266.2 R23 .2230 R13 .9021 LSA 34.9 MSA 28.1 S5A 2.9  
 BDE .5123 BRA 1.1352 BC3 1.7000 FSP 2630 SG1 2104.2 SG2 841.4 THA 43.16 EL1 33.6 EL2 9.8 ALF 35.56

LAUNCH DATE AUG 30 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 14 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.871 GAL 6.04 AZL 88.05 MCA 128.46 SMA 196.10 ECC .25155 INC 1.9497 V1 29.498  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.696 GAP 6.65 AZP 91.21 TAL 30.79 TAP 159.24 RCA 146.77 APO 245.42 V2 22.866  
 RC 230.502 GL 12.54 GP -19.02 ZAL 41.03 ZAP 105.09 ETS 187.20 ZAE 138.30 ETE 206.35 ZAC 67.02 ETC 284.78 LVI -1.43

PLANETOCENTRIC CONIC: C3 26.241 VHL 5.123 DLA 17.79 RAL 9.59 RAD 6645.5 VEL 12.091 PTH 7.07 VHP 2.485 DPA -6.40 RAP 36.13 ECC 1.4319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 20 3559.07 -46.99 133.62 250.99 98.51 9 15 47 2559.1 -38.32 102.68  
 60.00 8 35 23 3508.67 -40.18 130.07 251.98 93.49 9 33 52 2508.7 -34.41 100.58  
 70.00 9 3 43 3425.27 -34.15 123.52 252.18 89.55 10 0 48 2425.3 -30.77 95.32  
 80.00 9 49 3 3283.20 -29.70 112.59 252.01 86.82 10 43 46 2283.2 -28.00 85.29  
 90.00 11 0 0 3054.19 -27.99 95.63 251.88 85.80 11 50 54 2054.2 -26.92 68.68  
 100.00 12 31 55 2757.67 -29.70 75.95 252.01 86.82 13 17 52 1757.7 -28.00 46.66  
 110.00 14 3 9 2472.09 -34.15 52.44 252.18 89.55 14 44 21 1472.1 -30.77 24.23

Differential Corrections: TDE -.3500 TRA-1.1519 TC3 -.9956 BAU .6302 SGT 1739.1 SGR 1806.3 SG3 1947.4 ST 28.2 SR 20.3 S8 29.1  
 RDE -.3531 RRA -.2370 RC3-1.4952 FAU .49452 RRT .7495 RRF .9231 RTF .7664 CRT .8277 CRS .5293 CST -.0065  
 FDE 1.7190 FRA-5.2242 FC-16.3153 BSP 3399 SGB 2367.4 R23 .2202 R13 .9086 LSA 34.8 MSA 28.9 S5A 2.8  
 BDE .4972 BRA 1.1760 BC3 1.7964 FSP 2676 SG1 2215.3 SG2 834.7 THA 41.97 EL1 33.4 EL2 9.6 ALF 33.97

LAUNCH DATE AUG 30 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 16 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.869 GAL 6.02 AZL 88.00 MCA 129.39 SMA 196.06 ECC .25124 INC 1.9975 V1 29.498  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.660 GAP 6.40 AZP 91.27 TAL 30.67 TAP 160.06 RCA 146.81 APO 245.32 V2 22.836  
 RC 233.405 GL 12.87 GP -19.39 ZAL 41.23 ZAP 103.53 ETS 186.72 ZAE 136.59 ETE 205.31 ZAC 66.80 ETC 284.85 LVI -1.21

PLANETOCENTRIC CONIC: C3 26.187 VHL 5.115 DLA 18.13 RAL 9.58 RAD 6645.5 VEL 12.088 PTH 7.07 VHP 2.469 DPA -6.98 RAP 35.66 ECC 1.4306  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 52 3565.63 -47.06 134.24 251.24 98.03 9 14 17 2565.6 -38.55 103.15  
 60.00 8 33 18 3516.53 -40.21 130.74 252.15 93.03 9 31 55 2516.5 -34.61 101.15  
 70.00 9 1 1 3434.95 -34.14 124.28 252.29 89.10 9 58 16 2435.0 -30.94 96.01  
 80.00 9 45 41 3294.96 -29.66 113.46 252.09 86.37 10 40 36 2295.0 -28.14 86.13  
 90.00 10 56 17 3067.02 -27.92 96.56 251.94 85.34 11 47 24 2067.0 -27.05 69.59  
 100.00 12 28 32 2769.43 -29.66 74.82 252.09 86.37 13 14 42 1769.4 -28.14 47.50  
 110.00 14 0 27 2481.77 -34.14 53.20 252.29 89.10 14 41 49 1481.8 -30.94 24.93

Differential Corrections: TDE -.3439 TRA-1.1914 TC3-1.1057 BAU .6635 SGT 1843.9 SGR 1648.5 SG3 1969.3 ST 28.6 SR 19.5 S8 30.0  
 RDE -.3369 RRA -.2532 RC3-1.5411 FAU .50038 RRT .7725 RRF .9284 RTF .8101 CRT .8267 CRS .5248 CST -.0133  
 FDE 1.8165 FRA-5.2903 FC-16.5550 BSP 3609 SGB 2473.3 R23 .2174 R13 .9144 LSA 34.8 MSA 29.7 S5A 2.8  
 BDE .4814 BRA 1.2180 BC3 1.8960 FSP 2714 SG1 2330.5 SG2 828.2 THA 40.87 EL1 33.3 EL2 9.4 ALF 32.36

LAUNCH DATE AUG 30 1973 FLIGHT TIME 200.00 ARRIVAL DATE MAR 10 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.866 GAL 5.99 AZL 87.95 HCA 130.33 SMA 196.04 ECC .25095 INC 2.0465 V1 29.498  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.825 GAP 6.15 AZP 91.32 TAL 30.94 TAP 180.86 RCA 146.84 APO 245.24 V2 22.807  
 RC 236.297 GL 13.21 GP -19.76 ZAL 41.43 ZAP 101.99 ETS 186.23 ZAE 134.89 ETE 204.31 ZAC 66.59 ETC 284.92 LVI -.98

Distance 440.658 Earth to Mars

Planetocentric Conic: C3 26.097 VHL 5.109 DLA 18.49 RAL 9.53 RAD 6645.4 VEL 12.086 PTH 7.06 VHP 2.455 DPA -7.57 RAP 35.21 ECC 1.4295  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 14 3572.46 -47.12 134.89 251.50 97.54 9 12 46 2572.5 -38.78 103.63  
 60.00 8 31 9 3524.73 -40.23 131.44 252.34 92.56 9 29 54 2524.7 -34.82 101.74  
 70.00 8 58 13 3445.05 -34.13 125.07 252.42 88.64 9 55 38 2445.1 -31.12 96.75  
 80.00 9 42 10 3307.26 -29.60 114.37 252.17 85.89 10 37 18 2307.3 -28.29 87.02  
 90.00 10 52 26 3080.48 -27.85 97.54 252.01 84.85 11 43 46 2080.5 -27.16 70.55  
 100.00 12 25 2 2781.73 -29.60 75.74 252.17 85.89 13 11 24 1781.7 -28.29 48.39  
 110.00 13 57 39 2491.87 -34.13 53.98 252.42 88.64 14 39 11 1491.9 -31.12 25.67

Differential Corrections: TDE -.3367 TRA-1.2318 TC3-1.2182 BAU .6980 SGT 1952.9 SGR 1690.9 SG3 1589.0 ST 28.9 SR 18.7 SB 30.9  
 RDE -.3199 RRA -.2692 RC3-1.5670 FAU .50558 RRT .7926 RRF .9334 RTF .8278 CRT .8261 CRS .5184 CBT -.0213  
 FDE 1.9176 FRA-5.3454 FC-16.7720 B8P 3826 SGB 2583.2 R23 .2149 R13 .9198 L8A 34.7 M8A 30.5 S8A 2.7  
 BDE .4644 BRA 1.2609 BC3 2.0008 F8P 2751 SG1 2448.9 SG2 822.2 THA 39.83 EL1 33.2 EL2 9.2 ALF 30.73

LAUNCH DATE AUG 30 1973 FLIGHT TIME 202.00 ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.867 GAL 5.95 AZL 87.90 HCA 131.26 SMA 196.03 ECC .25069 INC 2.0968 V1 29.498  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.592 GAP 5.91 AZP 91.38 TAL 30.40 TAP 181.86 RCA 146.88 APO 245.17 V2 22.777  
 RC 239.179 GL 13.56 GP -20.13 ZAL 41.65 ZAP 100.46 ETS 185.73 ZAE 133.19 ETE 203.36 ZAC 66.37 ETC 285.00 LVI -.78

Distance 444.456 Earth to Mars

Planetocentric Conic: C3 26.030 VHL 5.102 DLA 18.86 RAL 9.51 RAD 6645.4 VEL 12.083 PTH 7.06 VHP 2.443 DPA -8.15 RAP 34.76 ECC 1.4284  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 32 3579.58 -47.18 135.57 251.79 97.02 9 11 12 2579.6 -39.03 104.14  
 60.00 8 28 56 3533.27 -40.26 132.16 252.55 92.07 9 27 49 2533.3 -35.03 102.37  
 70.00 8 55 19 3455.60 -34.11 125.89 252.56 88.15 9 52 54 2455.6 -31.30 97.52  
 80.00 9 38 31 3320.15 -29.53 115.32 252.26 85.40 10 33 52 2320.1 -28.44 87.95  
 90.00 10 48 23 3094.61 -27.76 98.56 252.08 84.35 11 39 58 2094.6 -27.32 71.57  
 100.00 12 21 23 2794.62 -29.53 76.69 252.26 85.40 13 7 58 1794.6 -28.44 49.32  
 110.00 13 54 45 2502.41 -34.11 54.81 252.56 88.15 14 36 27 1502.4 -31.30 26.43

Differential Corrections: TDE -.3280 TRA-1.2728 TC3-1.3323 BAU .7334 SGT 2065.3 SGR 1734.0 SG3 1606.9 ST 29.3 SR 17.9 SB 31.8  
 RDE -.3028 RRA -.2855 RC3-1.6329 FAU .51017 RRT .8104 RRF .9380 RTF .8430 CRT .8262 CRS .5071 CBT -.0335  
 FDE 2.0132 FRA-5.3966 FC-16.9678 B8P 4046 SGB 2696.7 R23 .2123 R13 .9245 L8A 34.6 M8A 31.3 S8A 2.7  
 BDE .4484 BRA 1.3044 BC3 2.1074 F8P 2774 SG1 2570.1 SG2 816.3 THA 38.88 EL1 33.1 EL2 8.9 ALF 29.14

LAUNCH DATE AUG 30 1973 FLIGHT TIME 204.00 ARRIVAL DATE MAR 22 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.867 GAL 5.92 AZL 87.85 HCA 132.19 SMA 196.02 ECC .25045 INC 2.1484 V1 29.498  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.559 GAP 5.67 AZP 91.44 TAL 30.25 TAP 182.45 RCA 146.93 APO 245.11 V2 22.749  
 RC 242.049 GL 13.92 GP -20.50 ZAL 41.88 ZAP 98.95 ETS 185.23 ZAE 131.49 ETE 202.45 ZAC 66.15 ETC 285.07 LVI -.52

Distance 448.255 Earth to Mars

Planetocentric Conic: C3 25.967 VHL 5.096 DLA 19.24 RAL 9.48 RAD 6645.4 VEL 12.080 PTH 7.06 VHP 2.433 DPA -8.72 RAP 34.33 ECC 1.4274  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 48 3586.98 -47.24 136.27 252.09 96.48 9 9 35 2587.0 -39.27 104.68  
 60.00 8 26 38 3542.16 -40.28 132.92 252.77 91.56 9 25 41 2542.2 -35.25 103.02  
 70.00 8 52 18 3466.60 -34.08 126.75 252.71 87.64 9 50 5 2466.6 -31.48 98.32  
 80.00 9 34 43 3333.65 -29.46 116.31 252.36 84.88 10 30 16 2333.7 -28.59 88.92  
 90.00 10 44 10 3109.45 -27.65 99.64 252.15 83.82 11 35 39 2109.4 -27.44 72.63  
 100.00 12 17 35 2808.12 -29.46 77.68 252.36 84.88 13 4 23 1808.1 -28.59 50.29  
 110.00 13 51 44 2513.42 -34.08 55.68 252.71 87.64 14 33 38 1513.4 -31.48 27.24

Differential Corrections: TDE -.3172 TRA-1.3134 TC3-1.4487 BAU .7697 SGT 2178.9 SGR 1779.2 SG3 1624.3 ST 29.6 SR 17.2 SB 32.6  
 RDE -.2862 RRA -.3029 RC3-1.6801 FAU .51459 RRT .8264 RRF .9424 RTF .8587 CRT .8269 CRS .4889 CBT -.0525  
 FDE 2.0972 FRA-5.4323 FC-17.1565 B8P 4273 SGB 2813.1 R23 .2087 R13 .9294 L8A 34.6 M8A 32.1 S8A 2.7  
 BDE .4272 BRA 1.3478 BC3 2.2171 F8P 2782 SG1 2693.8 SG2 810.5 THA 38.07 EL1 33.1 EL2 8.6 ALF 27.70

LAUNCH DATE AUG 30 1973 FLIGHT TIME 206.00 ARRIVAL DATE MAR 24 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.867 GAL 5.89 AZL 87.80 HCA 133.12 SMA 196.02 ECC .25024 INC 2.2015 V1 29.498  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.528 GAP 5.43 AZP 91.51 TAL 30.10 TAP 183.22 RCA 146.97 APO 245.08 V2 22.720  
 RC 244.907 GL 14.28 GP -20.87 ZAL 42.12 ZAP 97.46 ETS 184.71 ZAE 129.80 ETE 201.57 ZAC 65.93 ETC 285.13 LVI -.28

Distance 452.052 Earth to Mars

Planetocentric Conic: C3 25.807 VHL 5.090 DLA 19.64 RAL 9.48 RAD 6645.4 VEL 12.078 PTH 7.06 VHP 2.425 DPA -9.29 RAP 33.91 ECC 1.4264  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 1 3594.70 -47.30 137.01 252.41 95.91 9 7 56 2594.7 -39.53 105.24  
 60.00 8 24 16 3551.44 -40.29 133.71 253.00 91.02 9 23 27 2551.4 -35.47 103.71  
 70.00 8 49 10 3478.11 -34.05 127.64 252.87 87.11 9 47 8 2478.1 -31.67 99.17  
 80.00 9 30 43 3347.84 -29.36 117.36 252.46 84.34 10 26 31 2347.8 -28.74 89.95  
 90.00 10 39 44 3125.09 -27.53 100.77 252.23 83.27 11 31 49 2125.1 -27.57 73.76  
 100.00 12 13 35 2822.31 -29.36 78.73 252.46 84.34 13 0 38 1822.3 -28.74 51.32  
 110.00 13 48 36 2524.93 -34.05 56.56 252.87 87.11 14 30 41 1524.9 -31.67 28.08

Differential Corrections: TDE -.3081 TRA-1.3580 TC3-1.5680 BAU .8063 SGT 2302.7 SGR 1816.7 SG3 1632.6 ST 30.0 SR 16.2 SB 33.8  
 RDE -.2848 RRA -.3183 RC3-1.7209 FAU .51613 RRT .8398 RRF .9460 RTF .8672 CRT .8312 CRS .4780 CBT -.0557  
 FDE 2.2284 FRA-5.4542 FC-17.2479 B8P 4512 SGB 2933.1 R23 .2092 R13 .9323 L8A 35.0 M8A 32.7 S8A 2.6  
 BDE .4082 BRA 1.3944 BC3 2.3281 F8P 2832 SG1 2820.4 SG2 805.3 THA 37.05 EL1 33.1 EL2 8.1 ALF 25.81



LAUNCH DATE AUG 30 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC										DISTANCE 455.849										EARTH TO MARS																																																																																				
RL	151.05	LAL	.00	LOL	336.48	VL	32.867	GAL	5.86	AZL	87.74	HCA	134.05	SMA	196.03	ECC	.25005	INC	2.2580	V1	29.498	RP	241.92	LAP	1.62	LOP	110.55	VP	20.498	GAP	5.19	AZP	91.57	TAL	29.94	TAP	163.99	RCA	147.01	APO	245.05	V2	22.692	RC	247.751	GL	14.86	GP	-21.24	ZAL	42.37	ZAP	96.00	ETS	184.16	ZAE	126.12	ETZ	200.72	ZAC	65.70	ETC	285.20	LVI	-.03																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	25.851	VHL	5.084	DLA	20.05	RAL	9.45	RAD	6645.3	VEL	12.075	PTH	7.06	VHP	2.419	DPA	-9.86	RAP	33.51	ECC	1.4254	ST	30.3	SR	15.3	SS	34.8	CRT	.8362	CRS	.4549	CST	-.0709	LSA	35.6	MSA	33.0	SSA	2.6	EL1	33.1	EL2	7.7	ALF	24.23																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	2425.6	SGR	1858.7	SG3	1642.4	RRT	.8520	RRF	.9496	RTF	.8771	SG8	3055.8	R23	.2078	R13	.9356	SG1	2949.1	SG2	800.4	THA	56.23																																																							
50.00	8	6	10	3602.74	-47.35	137.78	252.75	95.32	9	6	13	2602.7	-39.79	105.83	50.00	8	21	48	3561.11	-40.30	134.53	253.24	90.47	9	21	9	2561.1	-35.70	104.42	60.00	8	45	54	3490.14	-34.00	128.58	253.04	86.56	9	44	4	2490.1	-31.86	100.05	70.00	9	26	33	3362.73	-29.26	118.45	252.57	83.77	10	22	35	2362.7	-28.88	91.03	80.00	10	35	3	3141.55	-27.39	101.95	252.32	82.69	11	27	25	2141.5	-27.69	74.95	90.00	12	9	24	2837.20	-29.26	79.82	252.57	83.77	12	56	42	1837.2	-28.88	52.40	100.00	13	45	20	2536.96	-34.00	57.50	253.04	86.56	14	27	37	1537.0	-31.86	28.97

LAUNCH DATE AUG 30 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC										DISTANCE 459.846										EARTH TO MARS																																																																																				
RL	151.05	LAL	.00	LOL	336.48	VL	32.868	GAL	5.82	AZL	87.69	HCA	134.97	SMA	196.05	ECC	.24988	INC	2.3121	V1	29.498	RP	242.19	LAP	1.64	LOP	111.48	VP	20.469	GAP	4.95	AZP	91.63	TAL	29.77	TAP	164.75	RCA	147.06	APO	245.04	V2	22.665	RC	250.580	GL	15.05	GP	-21.61	ZAL	42.63	ZAP	94.55	ETS	183.65	ZAE	126.45	ETE	199.90	ZAC	65.47	ETC	285.26	LVI	.23																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	25.799	VHL	5.079	DLA	20.47	RAL	9.43	RAD	6645.3	VEL	12.073	PTH	7.05	VHP	2.415	DPA	-10.43	RAP	33.12	ECC	1.4246	ST	30.7	SR	14.6	SS	35.5	CRT	.8421	CRS	.4189	CST	-.0984	LSA	36.2	MSA	33.1	SSA	2.5	EL1	33.1	EL2	7.3	ALF	22.98																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	2547.8	SGR	1905.7	SG3	1654.1	RRT	.8634	RRF	.9532	RTF	.8867	SG8	3181.7	R23	.2045	R13	.9395	SG1	3080.7	SG2	795.3	THA	35.58																																																							
50.00	8	4	15	3611.10	-47.40	138.58	253.11	94.70	9	4	26	2611.1	-40.07	106.45	60.00	8	19	14	3571.18	-40.30	135.39	253.50	89.88	9	18	46	2571.2	-35.93	105.18	70.00	8	42	29	3502.71	-33.95	129.56	253.21	85.99	9	40	52	2502.7	-32.05	100.98	80.00	9	22	9	3378.38	-29.14	119.60	252.68	83.18	10	18	27	2378.4	-29.02	92.18	90.00	10	30	8	3158.91	-27.24	103.20	252.40	82.09	11	22	47	2158.9	-27.61	76.20	100.00	12	5	1	2852.85	-29.14	80.97	252.68	83.18	12	52	34	1852.8	-29.02	53.54	110.00	13	41	56	2549.53	-33.95	58.48	253.21	85.99	14	24	25	1549.5	-32.05	29.90

LAUNCH DATE AUG 30 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC										DISTANCE 463.441										EARTH TO MARS																																																																																				
RL	151.05	LAL	.00	LOL	336.48	VL	32.869	GAL	5.79	AZL	87.63	HCA	135.90	SMA	196.07	ECC	.24973	INC	2.3700	V1	29.498	RP	242.46	LAP	1.65	LOP	112.40	VP	20.441	GAP	4.71	AZP	91.70	TAL	29.60	TAP	165.50	RCA	147.11	APO	245.04	V2	22.638	RC	253.394	GL	15.46	GP	-21.99	ZAL	42.90	ZAP	93.13	ETS	183.11	ZAE	124.80	ETE	199.11	ZAC	65.24	ETC	285.33	LVI	.49																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	25.751	VHL	5.075	DLA	20.90	RAL	9.41	RAD	6645.3	VEL	12.071	PTH	7.05	VHP	2.412	DPA	-10.99	RAP	32.76	ECC	1.4230	ST	31.1	SR	13.6	SS	36.7	CRT	.8538	CRS	.3851	CST	-.1094	LSA	37.3	MSA	33.2	SSA	2.5	EL1	33.3	EL2	6.6	ALF	21.31																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	2678.3	SGR	1942.7	SG3	1655.0	RRT	.8726	RRF	.9580	RTF	.8933	SG8	3308.7	R23	.2055	R13	.9415	SG1	3212.7	SG2	791.1	THA	34.74																																																							
50.00	8	2	16	3619.82	-47.44	139.42	253.48	94.06	9	2	36	2619.8	-40.34	107.10	60.00	8	16	35	3581.71	-40.30	136.28	253.77	89.28	9	16	16	2581.7	-36.17	105.97	70.00	8	38	55	3515.90	-33.88	130.58	253.40	85.39	9	37	31	2515.9	-32.24	101.97	80.00	9	17	31	3394.89	-29.00	120.81	252.79	82.56	10	14	6	2394.9	-29.16	93.38	90.00	10	24	55	3177.30	-27.06	104.51	252.49	81.45	11	17	52	2177.3	-27.92	77.54	100.00	12	0	23	2869.36	-29.00	82.18	252.79	82.56	12	48	12	1869.4	-29.16	54.75	110.00	13	36	22	2562.72	-33.88	59.50	253.40	85.39	14	21	4	1562.7	-32.24	30.88

LAUNCH DATE AUG 30 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC										DISTANCE 467.237										EARTH TO MARS																																																																																				
RL	151.05	LAL	.00	LOL	336.48	VL	32.871	GAL	5.75	AZL	87.57	HCA	136.82	SMA	196.10	ECC	.24959	INC	2.4297	V1	29.498	RP	242.73	LAP	1.66	LOP	113.32	VP	20.415	GAP	4.48	AZP	91.77	TAL	29.42	TAP	166.24	RCA	147.16	APO	245.05	V2	22.612	RC	258.191	GL	15.87	GP	-22.38	ZAL	43.19	ZAP	91.74	ETS	182.55	ZAE	123.17	ETE	198.34	ZAC	64.99	ETC	285.39	LVI	.77																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	25.708	VHL	5.070	DLA	21.35	RAL	9.39	RAD	6645.3	VEL	12.070	PTH	7.05	VHP	2.412	DPA	-11.54	RAP	32.41	ECC	1.4231	ST	31.5	SR	12.7	SS	37.8	CRT	.8678	CRS	.3359	CST	-.1304	LSA	38.5	MSA	33.1	SSA	2.4	EL1	33.4	EL2	5.9	ALF	19.95																																																											
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	2807.9	SGR	1984.0	SG3	1657.3	RRT	.8812	RRF	.9588	RTF	.9001	SG8	3438.1	R23	.2049	R13	.9439	SG1	3346.8	SG2	787.0	THA	34.05																																																							
50.00	8	0	12	3628.91	-47.48	140.30	253.88	93.39	9	0	41	2628.9	-40.63	107.78	60.00	8	13	48	3592.89	-40.28	137.22	254.06	88.64	9	13	40	2592.7	-36.41	106.80	70.00	8	35	11	3529.70	-33.80	131.65	253.59	84.76	9	34	1	2529.7	-32.43	103.00	80.00	9	12	38	3412.29	-28.84	122.08	252.91	81.81	10	9	30	2412.3	-29.29	94.66	90.00	10	19	23	3196.79	-26.85	105.90	252.57	80.78	11	12	39	2196.8	-28.02	78.95	100.00	11	55	29	2886.77	-28.84	83.44	252.91	81.91	12	43	36	1886.8	-29.29	56.03	110.00	13	34	37	2576.52	-33.80	60.57	253.59	84.76	14	17	34	1576.5	-32.43	31.91

LAUNCH DATE AUG 30 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.873 GAL 5.71 AZL 87.51 HCA 137.73 SMA 196.14 ECC .24948 INC 2.4913 V1 29.498
RP 242.99 LAP 1.88 LOP 114.24 VP 20.389 GAP 4.25 AZP 91.84 TAP 29.24 TAP 166.97 RCA 147.20 APO 245.07 V2 22.586
RC 258.972 GL 16.30 GP -22.75 ZAL 43.48 ZAP 90.38 ETS 181.99 ZAE 121.55 ETE 197.59 ZAC 64.74 ETC 285.45 LVI 1.05

PLANETOCENTRIC CONIC

C3 25.670 VHL 5.067 DLA 21.81 RAL 9.38 RAD 6645.3 VEL 12.068 PTH 7.05 VHP 2.413 DPA -12.10 RAP 32.08 ECC 1.4225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 58 3 3638.38 -47.52 141.21 254.29 92.68 8 58 41 2638.4 -40.92 108.90
60.00 8 10 53 3604.17 -40.26 138.19 254.35 87.98 9 10 58 2604.2 -36.66 107.60
70.00 0 31 15 3544.19 -33.70 132.77 253.78 84.10 9 30 19 2544.2 -32.62 104.08
80.00 9 7 27 3430.70 -28.65 123.41 253.02 81.23 10 4 37 2430.7 -29.42 98.01
90.00 10 13 28 3217.52 -26.62 107.37 252.65 80.08 11 7 6 2217.5 -28.11 80.46
100.00 11 50 19 2905.18 -26.65 84.78 253.02 81.23 12 38 44 1905.2 -29.42 57.38
110.00 13 30 42 2591.01 -33.70 61.69 253.78 84.10 14 13 53 1991.0 -32.62 33.00

DIFFERENTIAL CORRECTIONS

TDE -.2338 TRA-1.5798 TC3-2.1774 BAU .9994
RDE -.1593 RRA -.3923 RC3-1.9336 FAU .51847
FDE 2.7445 FRA-5.4557 FC-17.4857 B8P 5733
BDE .2929 BRA 1.6276 BC3 2.9120 F8P 2869

MID-COURSE EXECUTION ACCURACY

SGT 2939.3 SGR 2024.8 SG3 1656.8
RRT .8889 RRF .9615 RTF .9058
SG8 3569.2 R23 .2047 R13 .9461
SG1 3482.3 SG2 783.1 THA 33.39

ORBIT DETERMINATION ACCURACY

8T 31.9 SR 11.9 S8 38.8
CRT .8852 CR8 .2735 CST -.1535
L8A 39.7 M8A 33.0 88A 2.4
EL1 33.6 EL2 5.2 ALF 18.71

LAUNCH DATE AUG 30 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.873 GAL 5.68 AZL 87.45 HCA 138.65 SMA 198.18 ECC .24938 INC 2.5550 V1 29.498
RP 243.24 LAP 1.69 LOP 115.16 VP 20.364 GAP 4.02 AZP 91.92 TAP 29.05 TAP 167.70 RCA 147.25 APO 245.10 V2 22.580
RC 261.736 GL 16.74 GP -23.13 ZAL 43.79 ZAP 89.04 ETS 181.42 ZAE 119.95 ETE 196.85 ZAC 64.48 ETC 285.51 LVI 1.34

PLANETOCENTRIC CONIC

C3 25.637 VHL 5.063 DLA 22.28 RAL 9.38 RAD 6645.3 VEL 12.067 PTH 7.05 VHP 2.415 DPA -12.64 RAP 31.78 ECC 1.4219
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 48 3648.28 -47.55 142.17 254.73 91.95 8 56 36 2648.3 -41.22 109.26
60.00 8 7 51 3616.17 -40.23 139.21 254.66 87.29 9 8 7 2616.2 -36.91 106.60
70.00 8 27 7 3559.41 -33.59 133.94 253.98 83.42 9 26 26 2559.4 -32.80 105.23
80.00 9 1 56 3450.22 -28.44 124.82 253.14 80.52 9 59 26 2450.2 -29.53 97.45
90.00 10 7 9 3239.64 -26.35 108.94 252.72 79.34 11 1 9 2239.6 -26.18 82.08
100.00 11 44 48 2924.69 -28.44 86.19 253.14 80.52 12 33 33 1924.7 -29.53 58.82
110.00 13 26 33 2606.23 -33.59 62.86 253.98 83.42 14 10 0 1606.2 -32.80 34.15

DIFFERENTIAL CORRECTIONS

TDE -.2145 TRA-1.6250 TC3-2.3009 BAU 1.0391
RDE -.1359 RRA -.4071 RC3-1.9740 FAU .51684
FDE 2.8467 FRA-5.4298 FC-17.4461 B8P 5985
BDE .2539 BRA 1.6752 BC3 3.0316 F8P 2863

MID-COURSE EXECUTION ACCURACY

SGT 3071.9 SGR 2065.8 SG3 1654.3
RRT .8958 RRF .9639 RTF .9109
SG8 3702.0 R23 .2048 R13 .9480
SG1 3618.9 SG2 779.8 THA 32.78

ORBIT DETERMINATION ACCURACY

8T 32.4 SR 11.1 88 39.9
CRT .9059 CR8 .1950 CST -.1768
L8A 41.0 M8A 32.9 88A 2.3
EL1 33.9 EL2 4.5 ALF 17.82

LAUNCH DATE AUG 30 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.877 GAL 5.64 AZL 87.38 HCA 139.57 SMA 196.22 ECC .24930 INC 2.6208 V1 29.498
RP 243.50 LAP 1.70 LOP 116.08 VP 20.340 GAP 3.79 AZP 92.00 TAP 28.85 TAP 168.42 RCA 147.30 APO 245.14 V2 22.535
RC 264.483 GL 17.20 GP -23.92 ZAL 44.11 ZAP 87.74 ETS 180.84 ZAE 118.37 ETE 196.14 ZAC 64.22 ETC 285.57 LVI 1.64

PLANETOCENTRIC CONIC

C3 25.611 VHL 5.081 DLA 22.77 RAL 9.34 RAD 6645.2 VEL 12.066 PTH 7.05 VHP 2.419 DPA -13.19 RAP 31.50 ECC 1.4215
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 53 28 3658.60 -47.56 143.16 255.18 91.18 8 54 25 2658.6 -41.53 110.06
60.00 8 4 39 3628.72 -40.18 140.28 254.98 86.57 9 5 8 2628.7 -37.16 109.57
70.00 8 22 45 3575.42 -33.46 135.18 254.19 82.70 9 22 20 2575.4 -32.99 106.44
80.00 8 56 3 3470.96 -28.20 126.32 253.24 79.77 9 53 34 2471.0 -29.64 98.99
90.00 10 0 21 3263.34 -26.04 110.60 252.78 78.57 10 54 45 2263.3 -28.24 83.81
100.00 11 38 55 2945.43 -28.20 87.69 253.24 79.77 12 28 1 1945.4 -29.64 60.35
110.00 13 22 11 2622.24 -33.46 64.09 254.19 82.70 14 5 54 1622.2 -32.99 35.36

DIFFERENTIAL CORRECTIONS

TDE -.1935 TRA-1.6709 TC3-2.4248 BAU 1.0791
RDE -.1115 RRA -.4219 RC3-2.0134 FAU .51400
FDE 2.9486 FRA-5.3937 FC-17.3752 B8P 6240
BDE .2233 BRA 1.7233 BC3 3.1516 F8P 2855

MID-COURSE EXECUTION ACCURACY

SGT 3208.2 SGR 2108.4 SG3 1649.1
RRT .9019 RRF .9662 RTF .5.54
SG8 3836.3 R23 .2048 R13 .9497
SG1 3756.9 SG2 776.3 THA 32.19

ORBIT DETERMINATION ACCURACY

8T 32.9 SR 10.9 S8 41.0
CRT .9286 CR8 .0980 CST -.2060
L8A 42.3 M8A 32.8 88A 2.2
EL1 34.3 EL2 3.7 ALF 16.67

LAUNCH DATE AUG 30 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.880 GAL 5.80 AZL 87.31 HCA 140.48 SMA 196.27 ECC .24923 INC 2.6892 V1 29.498
RP 243.74 LAP 1.71 LOP 116.99 VP 20.318 GAP 3.56 AZP 92.06 TAP 28.85 TAP 169.13 RCA 147.36 APO 245.19 V2 22.511
RC 267.212 GL 17.67 GP -23.92 ZAL 44.44 ZAP 86.47 ETS 180.26 ZAE 116.81 ETE 195.44 ZAC 63.94 ETC 285.62 LVI 1.95

PLANETOCENTRIC CONIC

C3 25.590 VHL 5.059 DLA 23.28 RAL 9.31 RAD 6645.2 VEL 12.065 PTH 7.05 VHP 2.425 DPA -13.73 RAP 31.24 ECC 1.4212
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 50 58 3669.39 -47.57 144.21 255.65 90.38 8 52 8 2669.4 -41.85 110.90
60.00 8 1 18 3641.86 -40.12 141.39 255.30 85.82 9 2 0 2641.9 -37.42 110.59
70.00 8 18 8 3592.29 -33.30 136.47 254.39 81.95 9 18 0 2592.3 -33.17 107.73
80.00 8 49 45 3493.09 -27.92 127.90 253.34 78.98 9 47 58 2493.1 -29.72 100.62
90.00 9 53 0 3288.86 -25.68 112.39 252.82 77.74 10 47 49 2288.9 -28.27 85.67
100.00 11 32 37 2967.56 -27.92 89.27 253.34 78.98 12 22 5 1967.6 -29.72 61.99
110.00 13 17 34 2639.11 -33.30 65.39 254.39 81.95 14 1 33 1639.1 -33.17 36.65

DIFFERENTIAL CORRECTIONS

TDE -.1706 TRA-1.7166 TC3-2.5476 BAU 1.1193
RDE -.0863 RRA -.4365 RC3-2.0525 FAU .51080
FDE 3.0490 FRA-5.3834 FC-17.2808 B8P 6494
BDE .1912 BRA 1.7712 BC3 3.2715 F8P 2839

MID-COURSE EXECUTION ACCURACY

SGT 3340.8 SGR 2147.4 SG3 1642.0
RRT .9075 RRF .9684 RTF .9183
SG8 3971.5 R23 .2052 R13 .9813
SG1 3895.4 SG2 773.7 THA 31.88

ORBIT DETERMINATION ACCURACY

8T 33.4 SR 9.9 S8 42.1
CRT .9304 CR8 -.0186 CST -.2331
L8A 43.8 M8A 32.8 88A 2.2
EL1 34.7 EL2 3.0 ALF 18.90

LAUNCH DATE AUG 30 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 11 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.883 GAL 5.56 AZL 87.24 HCA 141.39 SMA 196.33 ECC .24918 INC 2.7600 V1 29.498  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.296 GAP 3.33 AZP 92.16 TAL 28.45 TAP 169.84 RCA 147.41 APO 245.25 V2 22.487  
 RC 269.924 GL 18.16 GP -24.32 ZAL 44.78 ZAP 85.23 ETS 179.66 ZAE 115.28 ETE 194.76 ZAC 63.65 ETC 285.68 LVI 2.28

Planetary Conic: C3 25.577 VHL 5.057 DLA 23.81 RAL 9.29 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.433 DPA -14.27 RAP 31.01 ECC 1.4209  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 23 3680.66 -47.57 145.30 256.13 89.54 8 49 43 2680.7 -42.17 111.79  
 60.00 7 57 46 3655.65 -40.04 142.55 255.64 85.03 8 58 42 2655.6 -37.67 111.67  
 70.00 8 13 13 3610.10 -33.13 137.83 254.60 81.16 9 13 24 2610.1 -33.34 109.09  
 80.00 8 42 58 3516.78 -27.60 129.59 253.43 78.14 9 41 35 2516.8 -29.79 102.38  
 90.00 9 44 59 3316.53 -25.27 114.30 252.85 76.87 10 40 16 2316.5 -28.28 87.70  
 100.00 11 25 50 2991.26 -27.60 90.96 253.43 78.14 12 15 41 1991.3 -29.79 83.75  
 110.00 13 12 40 2656.92 -33.13 66.75 254.60 81.16 13 56 57 1656.9 -33.34 38.01

Differential Corrections: TDE -.1461 TRA-1.7628 TC3-2.6704 BAU 1.1597 SGT 3476.7 SGR 2188.6 SG3 1632.8 ST 34.0 SR 9.6 SS 43.2  
 RDE -.0604 RRA -.4515 RC3-2.0909 FAU .50694 RRT .9126 RRF .9704 RTF .9229 CRT .9673 CRS -.1521 CST -.2662  
 FDE 3.1458 FRA-5.3077 FC-17.1589 BSP 6750 SGB 4108.2 R23 .2057 R13 .9528 LSA 45.3 MSA 32.4 SSA 2.1  
 BDE .1581 BRA 1.8197 BC3 3.3916 FSP 2821 SGI 4035.2 SG2 771.1 THA 31.14 EL1 35.3 EL2 2.3 ALF 15.33

LAUNCH DATE AUG 30 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 13 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.886 GAL 5.52 AZL 87.17 HCA 142.30 SMA 196.39 ECC .24915 INC 2.8335 V1 29.498  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.275 GAP 3.11 AZP 92.24 TAL 28.24 TAP 170.53 RCA 147.46 APO 245.32 V2 22.464  
 RC 272.618 GL 18.66 GP -24.73 ZAL 45.14 ZAP 84.02 ETS 179.06 ZAE 113.76 ETE 194.09 ZAC 63.35 ETC 285.74 LVI 2.62

Planetary Conic: C3 25.571 VHL 5.057 DLA 24.35 RAL 9.26 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.442 DPA -14.81 RAP 30.81 ECC 1.4208  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 45 39 3692.45 -47.56 146.44 256.64 88.66 8 47 12 2692.5 -42.50 112.73  
 60.00 7 54 2 3670.12 -39.95 143.77 255.98 84.20 8 55 12 2670.1 -37.93 112.82  
 70.00 8 8 0 3628.95 -32.92 139.26 254.80 80.34 9 8 29 2629.0 -33.51 110.53  
 80.00 8 35 38 3542.29 -27.23 131.40 253.50 77.26 9 34 40 2542.3 -29.84 104.28  
 90.00 9 36 10 3346.76 -24.79 116.39 252.85 75.93 10 31 57 2346.8 -28.24 89.91  
 100.00 11 18 29 3016.76 -27.23 92.76 253.50 77.26 12 8 46 2016.8 -29.84 85.64  
 110.00 13 7 27 2675.77 -32.92 68.18 254.80 80.34 13 52 2 1675.8 -33.51 39.45

Differential Corrections: TDE -.1194 TRA-1.8089 TC3-2.7919 BAU 1.2002 SGT 3612.8 SGR 2229.6 SG3 1621.2 ST 34.7 SR 9.5 SS 44.3  
 RDE -.0333 RRA -.4662 RC3-2.1283 FAU .50237 RRT .9171 RRF .9723 RTF .9260 CRT .9745 CRS -.2965 CST -.2987  
 FDE 3.2426 FRA-5.2528 FC-17.0082 BSP 7012 SGB 4245.4 R23 .2064 R13 .9540 LSA 47.0 MSA 32.3 SSA 2.1  
 BDE .1240 BRA 1.8680 BC3 3.5107 FSP 2801 SGI 4175.1 SG2 769.0 THA 30.66 EL1 35.9 EL2 2.1 ALF 14.98

LAUNCH DATE AUG 30 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 15 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.890 GAL 5.48 AZL 87.09 HCA 143.20 SMA 196.46 ECC .24912 INC 2.9100 V1 29.498  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.255 GAP 2.89 AZP 92.33 TAL 28.02 TAP 171.22 RCA 147.52 APO 245.40 V2 22.441  
 RC 275.293 GL 19.19 GP -25.15 ZAL 45.51 ZAP 82.84 ETS 178.45 ZAE 112.28 ETE 193.43 ZAC 63.03 ETC 285.80 LVI 2.97

Planetary Conic: C3 25.573 VHL 5.057 DLA 24.91 RAL 9.22 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.452 DPA -15.34 RAP 30.63 ECC 1.4209  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 47 3704.80 -47.54 147.63 257.16 87.74 8 44 31 2704.8 -42.83 113.73  
 60.00 7 50 5 3685.32 -39.84 145.05 256.33 83.34 8 51 30 2685.3 -38.19 114.03  
 70.00 8 2 26 3648.94 -32.68 140.77 254.99 79.48 9 3 15 2648.9 -33.66 112.07  
 80.00 8 27 37 3569.90 -26.81 133.34 253.55 76.33 9 27 7 2569.9 -29.86 106.33  
 90.00 9 26 22 3380.14 -24.21 118.66 252.81 74.93 10 22 43 2380.1 -28.16 92.34  
 100.00 11 10 29 3044.38 -26.81 94.70 253.55 76.33 12 1 13 2044.4 -29.86 87.70  
 110.00 13 1 52 2695.76 -32.68 69.69 254.99 79.48 13 46 48 1695.8 -33.66 40.99

Differential Corrections: TDE -.0910 TRA-1.8552 TC3-2.9125 BAU 1.2407 SGT 3749.6 SGR 2270.8 SG3 1607.5 ST 35.4 SR 9.6 SS 45.4  
 RDE -.0054 RRA -.4812 RC3-2.1650 FAU .49717 RRT .9213 RRF .9741 RTF .9287 CRT .9690 CRS -.4397 CST -.3324  
 FDE 3.3366 FRA-5.1931 FC-16.8306 BSP 7269 SGB 4363.6 R23 .2073 R13 .9552 LSA 48.7 MSA 32.4 SSA 2.0  
 BDE .0912 BRA 1.9168 BC3 3.6290 FSP 2775 SGI 4315.9 SG2 767.2 THA 30.21 EL1 36.6 EL2 2.3 ALF 14.78

LAUNCH DATE AUG 30 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 17 1974

Heliocentric Conic: RL 151.05 LAL .00 LOL 336.48 VL 32.893 GAL 5.44 AZL 87.01 HCA 144.11 SMA 196.53 ECC .24911 INC 2.9897 V1 29.498  
 RP 244.68 LAP 1.75 LOP 120.63 VP 20.237 GAP 2.66 AZP 92.42 TAL 27.80 TAP 171.91 RCA 147.57 APO 245.48 V2 22.418  
 RC 277.948 GL 19.73 GP -25.58 ZAL 45.89 ZAP 81.70 ETS 177.82 ZAE 110.81 ETE 192.78 ZAC 62.70 ETC 285.87 LVI 3.34

Planetary Conic: C3 25.585 VHL 5.058 DLA 25.50 RAL 9.18 RAD 6645.2 VEL 12.064 PTH 7.05 VHP 2.464 DPA -15.88 RAP 30.48 ECC 1.4211  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 44 3717.75 -47.49 148.88 257.70 86.78 8 41 42 2717.7 -43.17 114.79  
 60.00 7 45 54 3701.33 -39.71 146.39 256.69 82.44 8 47 35 2701.3 -38.44 115.31  
 70.00 7 56 27 3670.21 -32.41 142.37 255.18 78.57 8 57 37 2670.2 -33.81 113.72  
 80.00 8 18 49 3600.04 -26.30 135.43 253.56 75.34 9 18 49 2600.0 -29.84 108.57  
 90.00 9 15 18 3417.56 -23.53 121.19 252.72 73.84 10 12 16 2417.6 -28.01 95.07  
 100.00 11 1 41 3074.51 -26.30 96.80 253.56 75.34 11 52 55 2074.5 -29.84 89.94  
 110.00 12 55 54 2717.03 -32.41 71.28 255.18 78.57 13 41 11 1717.0 -33.81 42.63

Differential Corrections: TDE -.0603 TRA-1.9014 TC3-3.0312 BAU 1.2812 SGT 3886.1 SGR 2311.8 SG3 1591.5 ST 36.2 SR 10.0 SS 46.5  
 RDE -.0239 RRA -.4961 RC3-2.2007 FAU .49129 RRT .9250 RRF .9757 RTF .9311 CRT .9508 CRS -.5712 CST -.3671  
 FDE 3.4303 FRA-5.1251 FC-16.6242 BSP 7531 SGB 4521.8 R23 .2085 R13 .9561 LSA 50.5 MSA 31.9 SSA 1.9  
 BDE .0648 BRA 1.9651 BC3 3.7458 FSP 2746 SGI 4456.5 SG2 765.9 THA 29.79 EL1 37.5 EL2 3.0 ALF 14.81

LAUNCH DATE AUG 30 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.897 GAL 5.40 AZL 86.93 HCA 149.01 SMA 196.60 ECC .24911 INC 3.0727 V1 29.498
RP 244.90 LAP 1.76 LOP 121.53 VP 20.219 GAP 2.44 AZP 92.52 TAL 27.56 TAP 172.59 RCA 147.62 APO 245.58 V2 22.397
RC 280.584 GL 20.30 GP -26.02 ZAL 46.29 ZAP 80.60 ETS 177.19 ZAE 109.38 ETE 192.13 ZAC 62.35 ETC 285.93 LVI 3.72

PLANETOCENTRIC CONIC

C3 25.606 VHL 5.060 DLA 28.10 RAL 9.13 RAD 6645.2 VEL 12.065 PTH 7.05 VHP 2.478 DPA -16.42 RAP 30.38 ECC 1.4214
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 36 31 3731.33 -47.43 190.19 258.26 85.77 8 38 42 2731.3 -43.52 115.91
60.00 7 41 26 3718.21 -59.55 147.80 257.05 81.50 8 43 25 2718.2 -36.70 116.67
70.00 7 50 1 3692.91 -32.09 144.06 255.36 77.62 8 51 34 2692.9 -33.93 115.48
80.00 8 9 1 3633.25 -25.71 137.72 253.54 74.27 9 9 35 2633.3 -29.76 111.03
90.00 9 2 31 3460.44 -22.69 124.05 252.55 72.65 10 0 12 2460.4 -27.76 98.18
100.00 10 51 53 3107.73 -25.71 99.09 253.54 74.27 11 43 41 2107.7 -29.76 72.40
110.00 12 49 28 2739.73 -32.09 72.98 255.36 77.62 13 35 7 1739.7 -33.93 44.40

DIFFERENTIAL CORRECTIONS

TDE -.0277 TRA-1.9480 TC3-3.1488 BAU 1.3222
RDE .0540 RRA -.5116 RC3-2.2364 FAU .48505
FDE 3.3189 FRA-5.0551 FC-16.3992 BSP 7786
BDE .0607 BRA 2.0141 BC3 3.8622 FSP 2712

MID-COURSE EXECUTION ACCURACY

SGT 4025.6 SGR 2354.3 SG3 1574.2
RRT .9285 RRF .9773 RTF .9333
SG8 4661.7 R23 .2097 R13 .9571
SG1 4598.5 SG2 765.0 THA 29.41

ORBIT DETERMINATION ACCURACY

ST 37.2 SR 10.7 SS 47.6
CRT .9246 CR3 -.6804 CST -.4026
LSA 52.5 MSA 31.8 SSA 1.9
EL1 38.5 EL2 3.9 ALF 15.06

LAUNCH DATE AUG 30 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.901 GAL 5.35 AZL 86.84 HCA 149.91 SMA 196.60 ECC .24913 INC 3.1594 V1 29.488
RP 245.11 LAP 1.77 LOP 122.44 VP 20.202 GAP 2.22 AZP 92.62 TAL 27.35 TAP 173.26 RCA 147.68 APO 245.68 V2 22.375
RC 283.198 GL 20.89 GP -26.47 ZAL 46.70 ZAP 79.53 ETS 176.55 ZAE 107.97 ETE 191.50 ZAC 61.98 ETC 285.99 LVI 4.12

PLANETOCENTRIC CONIC

C3 25.639 VHL 5.063 DLA 26.72 RAL 9.07 RAD 6645.3 VEL 12.067 PTH 7.05 VHP 2.493 DPA -16.95 RAP 30.27 ECC 1.4219
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 33 8 3745.60 -47.35 191.56 258.84 84.72 8 35 31 2745.6 -43.87 117.10
60.00 7 36 41 3736.03 -39.36 149.28 257.41 80.52 8 38 57 2736.0 -38.94 118.12
70.00 7 43 4 3717.23 -31.72 145.86 255.51 76.61 8 45 1 2717.2 -34.04 117.37
80.00 7 57 59 3670.38 -25.00 140.25 253.45 73.12 8 59 9 2670.4 -29.62 113.78
90.00 8 47 12 3511.34 -21.61 127.40 252.27 71.31 9 45 44 2511.3 -27.37 101.85
100.00 10 40 51 3144.85 -25.00 101.62 253.45 73.12 11 33 16 2144.9 -29.62 75.13
110.00 12 42 30 2764.05 -31.72 74.78 255.51 76.61 13 28 34 1764.0 -34.04 46.29

DIFFERENTIAL CORRECTIONS

TDE .0071 TRA-1.9948 TC3-3.2637 BAU 1.3628
RDE .0894 RRA -.5273 RC3-2.2708 FAU .47804
FDE 3.6053 FRA-4.9798 FC-18.1419 BSP 8046
BDE .0857 BRA 2.0633 BC3 3.9758 FSP 2676

MID-COURSE EXECUTION ACCURACY

SGT 4160.6 SGR 2396.3 SG3 1534.4
RRT .9316 RRF .9787 RTF .9353
SG8 4801.4 R23 .2110 R13 .9579
SG1 4740.1 SG2 764.3 THA 29.04

ORBIT DETERMINATION ACCURACY

ST 38.2 SR 11.6 SS 48.7
CRT .8958 CR3 -.7662 CST -.4384
LSA 54.5 MSA 31.6 SSA 1.8
EL1 39.7 EL2 5.0 ALF 15.52

LAUNCH DATE AUG 30 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.908 GAL 5.31 AZL 86.75 HCA 146.81 SMA 196.76 ECC .24915 INC 3.2500 V1 29.498
RP 245.32 LAP 1.78 LOP 123.34 VP 20.189 GAP 2.01 AZP 92.72 TAL 27.11 TAP 173.93 RCA 147.74 APO 245.78 V2 22.354
RC 285.791 GL 21.50 GP -26.94 ZAL 47.13 ZAP 78.50 ETS 175.89 ZAE 108.59 ETE 190.87 ZAC 61.60 ETC 286.06 LVI 4.54

PLANETOCENTRIC CONIC

C3 25.683 VHL 5.068 DLA 27.37 RAL 9.00 RAD 6645.3 VEL 12.069 PTH 7.05 VHP 2.510 DPA -17.49 RAP 30.21 ECC 1.4227
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 29 28 3760.61 -47.25 193.00 259.42 83.62 8 32 8 2760.6 -44.22 118.37
60.00 7 31 36 3754.89 -39.13 190.83 257.77 79.4 8 34 11 2754.9 -39.18 119.67
70.00 7 35 30 3743.42 -31.29 147.78 255.65 75.55 8 37 53 2743.4 -34.11 119.41
80.00 7 45 16 3712.72 -24.13 143.10 253.29 71.87 8 47 9 2712.7 -29.38 116.91
90.00 8 27 32 3576.10 -20.14 131.57 251.79 69.72 9 27 8 2576.1 -26.72 106.48
100.00 10 28 8 3187.19 -24.13 104.47 253.29 71.87 11 21 15 2187.2 -29.38 78.27
110.00 12 34 58 2790.24 -31.29 76.70 255.65 75.55 13 21 26 1790.2 -34.11 48.33

DIFFERENTIAL CORRECTIONS

TDE .0440 TRA-2.0416 TC3-3.3768 BAU 1.4038
RDE .1179 RRA -.5436 RC3-2.3046 FAU .47069
FDE 3.6878 FRA-4.9013 FC-15.8660 BSP 8302
BDE .1259 BRA 2.1127 BC3 4.0883 FSP 2835

MID-COURSE EXECUTION ACCURACY

SGT 4298.0 SGR 2439.9 SG3 1933.3
RRT .9345 RRF .9801 RTF .9370
SG8 4842.3 R23 .2123 R13 .9588
SG1 4882.8 SG2 764.2 THA 28.72

ORBIT DETERMINATION ACCURACY

ST 39.4 SR 12.8 SS 48.8
CRT .8693 CR3 -.8300 CST -.4740
LSA 56.7 MSA 31.4 SSA 1.7
EL1 41.0 EL2 6.1 ALF 16.16

LAUNCH DATE AUG 30 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.910 GAL 5.27 AZL 86.65 HCA 147.71 SMA 196.84 ECC .24919 INC 3.3451 V1 29.498
RP 245.53 LAP 1.79 LOP 124.24 VP 20.170 GAP 1.79 AZP 92.83 TAL 26.88 TAP 174.59 RCA 147.79 APO 245.89 V2 22.334
RC 288.361 GL 22.14 GP -27.42 ZAL 47.57 ZAP 77.50 ETS 175.23 ZAE 105.23 ETE 190.25 ZAC 61.19 ETC 286.14 LVI 4.98

PLANETOCENTRIC CONIC

C3 25.741 VHL 5.074 DLA 28.05 RAL 8.93 RAD 6645.3 VEL 12.071 PTH 7.05 VHP 2.528 DPA -18.04 RAP 30.19 ECC 1.4238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 25 35 3776.42 -47.12 154.50 260.02 82.47 8 28 31 2776.4 -44.57 119.73
60.00 7 26 9 3774.90 -38.87 152.47 258.12 78.40 8 29 4 2774.9 -39.41 121.32
70.00 7 27 12 3771.78 -30.79 149.84 255.75 74.43 8 30 4 2771.8 -34.15 121.62
80.00 7 30 8 3762.58 -23.04 146.40 253.00 70.46 8 32 51 2762.6 -28.99 120.56
90.00 7 56 20 3677.80 -17.62 137.96 250.78 67.51 8 57 38 2677.0 -25.36 113.61
100.00 10 13 0 3237.05 -23.04 107.78 253.00 70.46 11 6 57 2237.1 -28.99 81.93
110.00 12 26 39 2818.60 -30.79 78.76 255.75 74.43 13 13 37 1818.6 -34.15 50.54

DIFFERENTIAL CORRECTIONS

TDE .0837 TRA-2.0882 TC3-3.4864 BAU 1.4444
RDE .1522 RRA -.5599 RC3-2.3371 FAU .46264
FDE 3.7894 FRA-4.8159 FC-15.5598 BSP 8565
BDE .1737 BRA 2.1619 BC3 4.1973 FSP 2594

MID-COURSE EXECUTION ACCURACY

SGT 4434.4 SGR 2483.3 SG3 1909.8
RRT .9372 RRF .9814 RTF .9385
SG8 5082.4 R23 .2141 R13 .9593
SG1 5024.5 SG2 764.5 THA 28.41

ORBIT DETERMINATION ACCURACY

ST 40.7 SR 14.2 SS 51.0
CRT .8474 CR3 -.8768 CST -.5094
LSA 59.0 MSA 31.2 SSA 1.7
EL1 42.5 EL2 7.2 ALF 16.99

LAUNCH DATE AUG 30 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 516.497

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 32.914 GAL 5.22 AZL 86.36 HCA 148.61 SMA 196.83 ECC .24923 INC 3.4446 V1 29.498  
 RP 245.73 LAP 1.79 LOP 125.14 VP 20.156 GAP 1.57 AZP 92.94 TAL 26.63 TAP 175.25 RCA 147.85 APO 246.01 V2 22.314  
 RC 290.907 GL 22.81 GP -27.93 ZAL 48.03 ZAP 76.55 ETS 174.36 ZAE 103.90 EYE 189.63 ZAC 60.76 ETC 286.21 LVI 5.44

PLANETOCENTRIC CONIC

C3 25.815 VHL 5.081 DLA 28.74 RAL 8.83 RAD 6645.3 VEL 12.074 PTH 7.05 VHP 2.548 DPA -18.59 RAP 30.19 ECC 1.4248  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 21 26 3793.10 -46.96 158.08 260.63 81.26 8 24 39 2793.1 -44.93 121.18  
 60.00 7 20 16 3796.18 -38.57 154.19 258.47 77.26 8 23 33 2796.2 -39.63 123.09  
 70.00 7 18 3 3802.72 -30.20 152.06 255.80 73.24 8 21 26 2802.7 -34.14 124.04  
 80.00 7 11 0 3824.93 -21.56 150.44 252.50 68.83 8 14 45 2824.9 -28.36 125.08  
 84.63 6 39 17 3927.11 -15.01 155.04 249.58 65.20 7 44 44 2927.1 -23.95 131.47  
 100.00 9 53 52 3299.41 -21.56 111.80 252.50 68.83 10 48 51 2299.4 -28.36 86.45  
 110.00 12 17 30 2849.54 -30.20 80.97 255.80 73.24 13 4 59 1849.5 -34.14 52.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1256 TRA-2.1353 TC3-3.5934 BAU 1.4854 SGT 4571.2 SGR 2528.0 SG3 1484.9 ST 42.2 SR 15.8 SS 52.1  
 RDE .1878 RRA -.5769 RC3-2.3691 FAU .45418 RRT .9396 RRF .9826 RTF .9398 CRT .8317 CRS -.9101 CST -.5439  
 FDE 3.8464 FRA-4.7280 FC-15.2318 BSP 8823 SGB 5223.7 R23 .2158 R13 .9598 LSA 61.4 MSA 31.0 SSA 1.6  
 BDE .2259 BRA 2.2118 BC3 4.3041 FSP 2548 SG1 5167.3 SG2 765.4 THA 28.13 EL1 44.2 EL2 6.3 ALF 17.95

LAUNCH DATE AUG 30 1973

FLIGHT TIME 242.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 520.280

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 32.919 GAL 5.18 AZL 86.45 HCA 149.51 SMA 197.02 ECC .24929 INC 3.5494 V1 29.498  
 RP 245.93 LAP 1.80 LOP 126.04 VP 20.142 GAP 1.36 AZP 93.06 TAL 26.39 TAP 175.90 RCA 147.91 APO 246.14 V2 22.295  
 RC 293.430 GL 23.50 GP -28.45 ZAL 48.50 ZAP 75.63 ETS 173.87 ZAE 102.61 EYE 189.02 ZAC 60.31 ETC 286.29 LVI 5.93

PLANETOCENTRIC CONIC

C3 25.904 VHL 5.090 DLA 29.47 RAL 8.73 RAD 6645.4 VEL 12.078 PTH 7.06 VHP 2.570 DPA -19.15 RAP 30.23 ECC 1.4263  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 59 3810.73 -46.76 157.74 261.25 80.00 8 20 30 2810.7 -45.28 122.73  
 60.00 7 13 55 3818.88 -38.21 156.02 258.79 76.07 8 17 34 2818.9 -39.83 124.98  
 70.00 7 7 51 3836.81 -29.51 154.47 255.80 71.97 8 11 48 2836.8 -34.07 126.70  
 80.00 6 42 36 3916.42 -19.20 156.20 251.53 66.69 7 47 52 2916.4 -27.13 131.60  
 81.35 6 12 35 4012.53 -15.34 161.49 249.70 64.53 7 19 28 3012.5 -24.52 137.95  
 100.00 9 25 28 3390.89 -19.20 117.57 251.53 66.69 10 21 58 2390.9 -27.13 92.97  
 110.00 12 7 17 2883.63 -29.51 83.39 255.80 71.97 12 55 21 1883.6 -34.07 55.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1704 TRA-2.1824 TC3-3.6963 BAU 1.5263 SGT 4707.1 SGR 2573.8 SG3 1458.2 ST 43.8 SR 17.5 SS 53.2  
 RDE .2250 RRA -.5948 RC3-2.4001 FAU .44521 RRT .9419 RRF .9838 RTF .9410 CRT .8223 CRS -.9338 CST -.5778  
 FDE 3.9200 FRA-4.8384 FC-14.8791 BSP 9082 SGB 5364.8 R23 .2175 R13 .9604 LSA 64.0 MSA 30.8 SSA 1.3  
 BDE .2823 BRA 2.2620 BC3 4.4072 FSP 2499 SG1 5309.8 SG2 766.4 THA 27.88 EL1 46.2 EL2 9.4 ALF 19.05

LAUNCH DATE AUG 30 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 524.081

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 32.924 GAL 5.13 AZL 86.34 HCA 150.40 SMA 197.11 ECC .24935 INC 3.6596 V1 29.498  
 RP 246.12 LAP 1.81 LOP 126.93 VP 20.129 GAP 1.15 AZP 93.14 TAL 26.14 TAP 176.54 RCA 147.96 APO 246.26 V2 22.278  
 RC 295.928 GL 24.23 GP -28.99 ZAL 48.90 ZAP 74.76 ETS 173.17 ZAE 101.34 EYE 188.40 ZAC 59.83 ETC 286.38 LVI 6.44

PLANETOCENTRIC CONIC

C3 26.013 VHL 5.100 DLA 30.22 RAL 8.60 RAD 6645.4 VEL 12.082 PTH 7.06 VHP 2.584 DPA -19.71 RAP 30.30 ECC 1.4281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 12 3829.39 -46.53 159.48 261.87 78.67 8 16 1 2829.4 -45.63 124.39  
 60.00 7 7 2 3843.18 -37.79 157.95 259.10 74.82 8 11 5 2843.2 -40.00 127.03  
 70.00 6 56 18 3874.86 -28.68 157.12 255.71 70.60 8 0 53 2874.9 -33.92 129.66  
 78.87 5 53 9 4074.07 -15.68 186.23 249.83 63.83 7 1 3 3074.1 -25.11 142.72  
 78.87 5 53 9 4074.07 -15.68 186.23 249.83 63.83 7 1 3 3074.1 -25.11 142.72  
 78.87 5 53 9 4074.07 -15.68 186.23 249.83 63.83 7 1 3 3074.1 -25.11 142.72  
 110.00 11 55 44 2921.68 -28.68 86.03 255.71 70.60 12 44 26 1921.7 -33.92 58.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2179 TRA-2.2298 TC3-3.7951 BAU 1.5671 SGT 4842.5 SGR 2620.4 SG3 1429.7 ST 45.3 SR 19.4 SS 54.3  
 RDE .2642 RRA -.6130 RC3-2.4298 FAU .43573 RRT .9439 RRF .9848 RTF .9420 CRT .8177 CRS -.9508 CST -.6100  
 FDE 3.9910 FRA-4.5431 FC-14.5016 BSP 9345 SGB 5506.0 R23 .2195 R13 .9608 LSA 66.7 MSA 30.7 SSA 1.4  
 BDE .3425 BRA 2.3125 BC3 4.5063 FSP 2450 SG1 5452.2 SG2 768.3 THA 27.65 EL1 48.4 EL2 10.5 ALF 20.22

LAUNCH DATE AUG 30 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 527.841

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 32.929 GAL 5.08 AZL 86.22 HCA 151.29 SMA 197.21 ECC .24943 INC 3.7759 V1 29.498  
 RP 246.30 LAP 1.81 LOP 127.83 VP 20.117 GAP .94 AZP 93.31 TAL 25.89 TAP 177.18 RCA 148.02 APO 246.40 V2 22.258  
 RC 298.401 GL 24.99 GP -29.55 ZAL 49.50 ZAP 73.93 ETS 172.45 ZAE 100.10 EYE 187.79 ZAC 59.32 ETC 286.47 LVI 6.97

PLANETOCENTRIC CONIC

C3 26.142 VHL 5.113 DLA 31.01 RAL 8.48 RAD 6645.5 VEL 12.087 PTH 7.07 VHP 2.620 DPA -20.29 RAP 30.41 ECC 1.4302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 7 2 3849.18 -46.25 161.31 262.48 77.29 8 11 11 2849.2 -45.97 126.18  
 60.00 6 59 30 3869.29 -37.31 159.99 259.36 73.51 8 3 59 2869.3 -40.15 129.23  
 70.00 6 42 58 3918.13 -27.66 160.07 255.50 69.12 7 48 16 2918.1 -33.65 133.01  
 76.72 5 36 55 4124.95 -16.01 170.22 249.96 63.09 6 45 40 3125.0 -25.71 146.75  
 76.72 5 36 55 4124.95 -16.01 170.22 249.96 63.09 6 45 40 3125.0 -25.71 146.75  
 76.72 5 36 55 4124.95 -16.01 170.22 249.96 63.09 6 45 40 3125.0 -25.71 146.75  
 110.00 11 42 25 2964.95 -27.66 88.99 255.50 69.12 12 31 49 1964.9 -33.65 61.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2679 TRA-2.2773 TC3-3.8898 BAU 1.6084 SGT 4977.7 SGR 2669.2 SG3 1399.9 ST 47.5 SR 21.4 SS 55.3  
 RDE .3048 RRA -.6323 RC3-2.4593 FAU .42597 RRT .9459 RRF .9858 RTF .9430 CRT .8178 CRS -.9628 CST -.6408  
 FDE 4.0539 FRA-4.4465 FC-14.1068 BSP 9601 SGB 5648.2 R23 .2213 R13 .9612 LSA 69.6 MSA 30.5 SSA 1.4  
 BDE .4059 BRA 2.3634 BC3 4.6021 FSP 2394 SG1 5595.4 SG2 770.6 THA 27.46 EL1 50.8 EL2 11.5 ALF 21.42

LAUNCH DATE AUG 30 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.934 GAL 5.04 AZL 86.10 HCA 152.18 SMA 197.31 ECC .24951 INC 3.8989 V1 29.498  
 RP 246.48 LAP 1.82 LOP 128.72 VP 20.106 GAP .73 AZP 93.45 TAL 25.83 TAP 177.82 RCA 148.08 APO 246.54 V2 22.241  
 RC 300.850 GL 25.79 GP -30.14 ZAL 90.03 ZAP 73.13 ETS 171.73 ZAE 98.89 ETE 187.18 ZAC 58.78 ETC 286.57 LVI 7.54

PLANETOCENTRIC CONIC

C3 26.295 VHL 5.128 DLA 31.82 RAL 8.30 RAD 6645.5 VEL 12.094 PTH 7.07 VHP 2.647 DPA -20.88 RAP 30.58 ECC 1.4327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 1 27 3870.22 -45.91 163.23 263.09 75.84 8 5 57 2870.2 -46.30 128.11  
 60.00 6 51 14 3897.48 -36.74 162.17 259.59 72.12 7 56 11 2897.5 -40.25 131.63  
 70.00 6 27 7 3968.82 -26.39 163.46 255.13 67.48 7 33 16 2968.8 -33.21 136.90  
 74.76 5 22 36 4169.35 -16.36 173.76 250.09 62.31 6 32 5 3169.3 -26.34 150.33  
 74.76 5 22 36 4169.35 -16.36 173.76 250.09 62.31 6 32 5 3169.3 -26.34 150.33  
 74.76 5 22 36 4169.35 -16.36 173.76 250.09 62.31 6 32 5 3169.3 -26.34 150.33  
 110.00 11 28 33 3015.64 -26.39 92.38 255.13 67.48 12 16 49 2015.6 -33.21 65.82

DIFFERENTIAL CORRECTIONS

TDE .3217 TRA-2.3248 TC3-3.9780 BAU 1.6490  
 RDE .3483 RRA -.6523 RC3-2.4859 FAU .41543  
 FDE 4.1170 FRA-4.3453 FC-13.6778 BSP 9066  
 BDE .4741 BRA 2.4146 BC3 4.6909 FSP 2339

MID-COURSE EXECUTION ACCURACY

SGT 5110.8 SGR 2717.9 SG3 1367.7  
 RRT .9477 RRF .9868 RTF .9437  
 SGB 5788.6 R23 .2253 R13 .9615  
 SGI 5736.7 S62 773.1 THA 27.28

ORBIT DETERMINATION ACCURACY

ST 49.6 SR 23.6 SS 56.3  
 CRT .8209 CR3 -.9717 CST -.6700  
 LSA 72.6 MSA 30.3 SSA 1.3  
 EL1 53.5 EL2 12.5 ALF 22.66

LAUNCH DATE AUG 30 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.939 GAL 4.99 AZL 85.97 HCA 153.07 SMA 197.41 ECC .24960 INC 4.0290 V1 29.498  
 RP 246.65 LAP 1.82 LOP 129.61 VP 20.096 GAP .52 AZP 93.59 TAL 25.38 TAP 178.45 RCA 148.14 APO 246.68 V2 22.224  
 RC 303.274 GL 26.62 GP -30.76 ZAL 90.50 ZAP 72.39 ETS 170.99 ZAE 97.72 ETE 186.57 ZAC 58.21 ETC 286.68 LVI 8.13

PLANETOCENTRIC CONIC

C3 26.474 VHL 5.145 DLA 32.68 RAL 8.11 RAD 6645.6 VEL 12.101 PTH 7.08 VHP 2.677 DPA -21.48 RAP 30.74 ECC 1.4357  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 23 3892.64 -45.32 165.25 263.68 74.33 8 0 15 2892.6 -46.60 130.18  
 60.00 6 42 6 3928.11 -36.08 164.50 259.75 70.67 7 47 34 2928.1 -40.30 134.23  
 70.00 6 7 11 4031.50 -24.69 167.54 254.47 65.61 7 14 23 3031.5 -32.48 141.64  
 72.91 5 9 32 4209.35 -16.70 177.01 250.23 61.50 6 19 41 3209.4 -26.98 153.63  
 72.91 5 9 32 4209.35 -16.70 177.01 250.23 61.50 6 19 41 3209.4 -26.98 153.63  
 72.91 5 9 32 4209.35 -16.70 177.01 250.23 61.50 6 19 41 3209.4 -26.98 153.63  
 110.00 11 6 37 3078.32 -24.69 96.45 254.47 65.61 11 57 56 2078.3 -32.48 70.56

DIFFERENTIAL CORRECTIONS

TDE .3775 TRA-2.3737 TC3-4.0619 BAU 1.6905  
 RDE .3933 RRA -.6742 RC3-2.5126 FAU .40474  
 FDE 4.1704 FRA-4.2464 FC-13.2353 BSP 10121  
 BDE .5452 BRA 2.4676 BC3 4.7762 FSP 2278

MID-COURSE EXECUTION ACCURACY

SGT 5244.9 SGR 2770.0 SG3 1334.7  
 RRT .9494 RRF .9876 RTF .9445  
 SGB 5931.4 R23 .2252 R13 .9619  
 SGI 5880.4 S62 776.2 THA 27.14

ORBIT DETERMINATION ACCURACY

ST 52.0 SR 26.0 SS 57.3  
 CRT .8266 CR3 -.9780 CST -.6871  
 LSA 75.8 MSA 30.1 SSA 1.2  
 EL1 56.5 EL2 13.4 ALF 23.87

LAUNCH DATE AUG 30 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.945 GAL 4.94 AZL 85.85 HCA 153.96 SMA 197.51 ECC .24970 INC 4.1673 V1 29.498  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.086 GAP .31 AZP 93.75 TAL 25.11 TAP 179.08 RCA 148.19 APO 246.83 V2 22.207  
 RC 305.673 GL 27.50 GP -31.40 ZAL 91.16 ZAP 71.69 ETS 170.23 ZAE 96.58 ETE 185.95 ZAC 57.61 ETC 286.79 LVI 8.76

PLANETOCENTRIC CONIC

C3 26.684 VHL 5.166 DLA 33.56 RAL 7.89 RAD 6645.7 VEL 12.110 PTH 7.08 VHP 2.709 DPA -22.10 RAP 30.96 ECC 1.4391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 48 46 3916.60 -45.06 167.37 264.25 72.75 7 54 2 2916.6 -46.89 132.43  
 60.00 6 31 54 3961.63 -35.29 167.00 259.84 69.13 7 37 56 2961.6 -40.28 137.08  
 70.00 5 38 30 4120.21 -22.08 173.10 253.21 63.25 6 47 10 3120.2 -31.12 148.20  
 71.12 4 57 23 4246.13 -17.05 180.04 250.37 60.64 6 8 9 3246.1 -27.64 156.73  
 71.12 4 57 23 4246.13 -17.05 180.04 250.37 60.64 6 8 9 3246.1 -27.64 156.73  
 71.12 4 57 23 4246.13 -17.05 180.04 250.37 60.64 6 8 9 3246.1 -27.64 156.73  
 110.00 10 37 56 3167.03 -22.08 102.02 253.21 63.25 11 30 43 2167.0 -31.12 77.11

DIFFERENTIAL CORRECTIONS

TDE .4374 TRA-2.4218 TC3-4.1380 BAU 1.7319  
 RDE .4413 RRA -.6885 RC3-2.5369 FAU .39346  
 FDE 4.2205 FRA-4.1397 FC-12.7655 BSP 10387  
 BDE .6213 BRA 2.5200 BC3 4.8337 FSP 2217

MID-COURSE EXECUTION ACCURACY

SGT 5376.2 SGR 2822.8 SG3 1299.5  
 RRT .9509 RRF .9884 RTF .9480  
 SGB 6072.2 R23 .2272 R13 .9621  
 SGI 6021.9 S62 780.1 THA 27.02

ORBIT DETERMINATION ACCURACY

ST 54.5 SR 28.4 SS 58.3  
 CRT .8340 CR3 -.9828 CST -.7225  
 LSA 79.2 MSA 30.0 SSA 1.2  
 EL1 59.8 EL2 14.3 ALF 25.05

LAUNCH DATE AUG 30 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

RL 151.05 LAL .00 LOL 336.48 VL 32.950 GAL 4.89 AZL 85.69 HCA 154.85 SMA 197.62 ECC .24981 INC 4.3143 V1 29.498  
 RP 246.98 LAP 1.83 LOP 131.39 VP 20.078 GAP .10 AZP 93.91 TAL 24.85 TAP 179.70 RCA 148.25 APO 246.99 V2 22.191  
 RC 308.046 GL 28.42 GP -32.08 ZAL 91.75 ZAP 71.03 ETS 169.45 ZAE 95.47 ETE 185.33 ZAC 56.97 ETC 286.92 LVI 9.42

PLANETOCENTRIC CONIC

C3 28.929 VHL 5.189 DLA 34.49 RAL 7.64 RAD 6645.8 VEL 12.120 PTH 7.09 VHP 2.744 DPA -22.73 RAP 31.22 ECC 1.4432  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 41 31 3942.27 -44.52 169.60 264.77 71.10 7 47 13 2942.3 -47.14 134.86  
 60.00 6 20 25 3998.65 -34.36 169.70 259.81 67.50 7 27 4 2998.6 -40.17 140.22  
 69.38 4 45 51 4280.50 -17.40 182.93 250.52 59.74 5 57 12 3280.5 -28.31 159.69  
 69.38 4 45 51 4280.50 -17.40 182.93 250.52 59.74 5 57 12 3280.5 -28.31 159.69  
 69.38 4 45 51 4280.50 -17.40 182.93 250.52 59.74 5 57 12 3280.5 -28.31 159.69  
 69.38 4 45 51 4280.50 -17.40 182.93 250.52 59.74 5 57 12 3280.5 -28.31 159.69  
 69.38 4 45 51 4280.50 -17.40 182.93 250.52 59.74 5 57 12 3280.5 -28.31 159.69

DIFFERENTIAL CORRECTIONS

TDE .4924 TRA-2.4784 TC3-4.2175 BAU 1.7791  
 RDE .4814 RRA -.7316 RC3-2.5758 FAU .38459  
 FDE 4.2059 FRA-4.0949 FC-12.3644 BSP 10505  
 BDE .6886 BRA 2.5841 BC3 4.9419 FSP 2091

MID-COURSE EXECUTION ACCURACY

SGT 5520.6 SGR 2896.5 SG3 1270.8  
 RRT .9533 RRF .9894 RTF .9471  
 SGB 6234.4 R23 .2248 R13 .9636  
 SGI 6185.3 S62 750.5 THA 27.04

ORBIT DETERMINATION ACCURACY

ST 57.1 SR 30.6 SS 58.6  
 CRT .8464 CR3 -.9852 CST -.7466  
 LSA 82.2 MSA 29.6 SSA 1.1  
 EL1 63.1 EL2 14.8 ALF 25.94

LAUNCH DATE AUG 30 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.956 GAL 4.84 AZL 85.93 HCA 155.74 SMA 197.73 ECC .24993 INC 4.4713 V1 29.498  
 RP 247.14 LAP 1.84 LOP 132.28 VP 20.070 GAP -.11 AZP 94.08 TAL 24.58 TAP 180.32 RCA 148.31 APO 247.14 V2 22.176  
 RC 310.395 GL 29.39 GP -32.80 ZAL 52.37 ZAP 70.42 ETS 168.67 ZAE 94.40 ETE 184.71 ZAC 56.29 ETC 287.05 LVI 10.12

PLANETOCENTRIC CONIC  
 C3 27.211 VHL 5.216 DLA 35.46 RAL 7.35 RAD 6648.9 VEL 12.131 PTH 7.10 VHP 2.782 DPA -23.39 RAP 31.53 ECC 1.4478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 33 32 3969.91 -43.88 171.96 265.24 69.38 7 39 42 2969.9 -47.35 137.50  
 60.00 6 7 16 4040.15 -33.24 172.65 259.64 65.76 7 14 36 3040.2 -39.93 143.73  
 67.66 4 34 48 4312.98 -17.75 185.71 250.66 58.79 5 46 41 3313.0 -29.00 162.55  
 67.66 4 34 48 4312.98 -17.75 185.71 250.66 58.79 5 46 41 3313.0 -29.00 162.55  
 67.66 4 34 48 4312.98 -17.75 185.71 250.66 58.79 5 46 41 3313.0 -29.00 162.55  
 67.66 4 34 48 4312.98 -17.75 185.71 250.66 58.79 5 46 41 3313.0 -29.00 162.55

DIFFERENTIAL CORRECTIONS  
 TDE .5906 TRA-2.3265 TC3-4.2761 BAU 1.8190 SGT 5846.9 SGR 2948.8 SG3 1229.9 ST 60.0 SR 33.5 SS 59.6  
 RDE .5380 RRA -.7545 RC3-2.5917 FAU .37157 RRT .9544 RRF .9900 RTF .9471 CRT .8536 CRS -.9863 CST -.7678  
 FDE 4.2802 FRA-3.9676 FC-11.8216 BSP 10813 SGB 6370.5 R23 .2282 R13 .9634 LSA 86.1 MSA 29.4 SSA 1.1  
 BDE .7770 BRA 2.6368 BC3 5.0002 F8P 2045 SG1 6321.8 SG2 786.2 THA 26.94 EL1 66.9 EL2 15.7 ALF 27.07

LAUNCH DATE AUG 30 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.961 GAL 4.79 AZL 85.36 HCA 156.62 SMA 197.84 ECC .25005 INC 4.6390 V1 29.498  
 RP 247.29 LAP 1.84 LOP 133.17 VP 20.063 GAP -.31 AZP 94.26 TAL 24.31 TAP 180.93 RCA 148.37 APO 247.30 V2 22.161  
 RC 312.717 GL 30.41 GP -33.55 ZAL 53.02 ZAP 69.87 ETS 167.86 ZAE 93.36 ETE 184.08 ZAC 55.57 ETC 287.20 LVI 10.86

PLANETOCENTRIC CONIC  
 C3 27.539 VHL 5.248 DLA 36.47 RAL 7.02 RAD 6646.0 VEL 12.145 PTH 7.11 VHP 2.823 DPA -24.07 RAP 31.87 ECC 1.4532  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 24 42 3999.78 -43.13 174.44 265.63 67.58 7 31 22 2999.8 -47.50 140.37  
 60.00 5 51 54 4087.56 -31.87 175.91 259.25 63.90 7 0 2 3087.6 -39.52 147.69  
 65.95 4 24 5 4343.98 -18.09 188.41 250.81 57.78 5 36 29 3344.0 -29.71 165.36  
 65.95 4 24 5 4343.98 -18.09 188.41 250.81 57.78 5 36 29 3344.0 -29.71 165.36  
 65.95 4 24 5 4343.98 -18.09 188.41 250.81 57.78 5 36 29 3344.0 -29.71 165.36  
 65.95 4 24 5 4343.98 -18.09 188.41 250.81 57.78 5 36 29 3344.0 -29.71 165.36

DIFFERENTIAL CORRECTIONS  
 TDE .6302 TRA-2.5774 TC3-4.3283 BAU 1.8603 SGT 5775.4 SGR 3006.0 SG3 1188.5 ST 63.1 SR 36.5 SS 60.5  
 RDE .5963 RRA -.7810 RC3-2.6073 FAU .35849 RRT .9555 RRF .9906 RTF .9471 CRT .8614 CRS -.9905 CST -.7861  
 FDE 4.2975 FRA-3.8476 FC-11.2697 BSP 11085 SGB 6510.8 R23 .2310 R13 .9633 LSA 90.0 MSA 29.4 SSA 1.0  
 BDE .8676 BRA 2.6931 BC3 5.0529 F8P 1985 SG1 6482.5 SG2 792.1 THA 26.88 EL1 71.0 EL2 16.5 ALF 28.09

LAUNCH DATE AUG 30 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.967 GAL 4.74 AZL 85.18 HCA 157.50 SMA 197.95 ECC .25018 INC 4.8191 V1 29.498  
 RP 247.44 LAP 1.84 LOP 134.06 VP 20.056 GAP -.51 AZP 94.45 TAL 24.04 TAP 181.54 RCA 148.43 APO 247.47 V2 22.147  
 RC 315.013 GL 31.49 GP -34.34 ZAL 53.70 ZAP 69.37 ETS 167.05 ZAE 92.36 ETE 183.45 ZAC 54.80 ETC 287.37 LVI 11.65

PLANETOCENTRIC CONIC  
 C3 27.919 VHL 5.284 DLA 37.53 RAL 6.64 RAD 6646.2 VEL 12.160 PTH 7.12 VHP 2.867 DPA -24.77 RAP 32.27 ECC 1.4595  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 14 51 4032.23 -42.26 177.07 265.92 65.71 7 22 3 3032.2 -47.57 143.50  
 60.00 5 33 20 4143.47 -30.13 179.63 258.55 61.86 6 42 24 3143.5 -38.85 152.30  
 64.23 4 13 38 4373.71 -18.43 191.05 250.95 56.71 5 26 31 3373.7 -30.43 168.12  
 64.23 4 13 38 4373.71 -18.43 191.05 250.95 56.71 5 26 31 3373.7 -30.43 168.12  
 64.23 4 13 38 4373.71 -18.43 191.05 250.95 56.71 5 26 31 3373.7 -30.43 168.12  
 64.23 4 13 38 4373.71 -18.43 191.05 250.95 56.71 5 26 31 3373.7 -30.43 168.12

DIFFERENTIAL CORRECTIONS  
 TDE .7044 TRA-2.6282 TC3-4.3701 BAU 1.9019 SGT 5901.2 SGR 3066.2 SG3 1145.5 ST 66.4 SR 39.6 SS 61.3  
 RDE .6588 RRA -.8091 RC3-2.6204 FAU .34505 RRT .9566 RRF .9911 RTF .5.71 CRT .8698 CRS -.9922 CST -.8032  
 FDE 4.3269 FRA-3.7239 FC-10.6996 BSP 11370 SGB 6650.3 R23 .2339 R13 .9632 LSA 94.2 MSA 29.4 SSA .9  
 BDE .9643 BRA 2.7499 BC3 5.0955 F8P 1923 SG1 6602.2 SG2 798.7 THA 26.85 EL1 75.4 EL2 17.2 ALF 29.06

LAUNCH DATE AUG 30 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.973 GAL 4.69 AZL 84.99 HCA 158.39 SMA 198.06 ECC .25031 INC 5.0127 V1 29.498  
 RP 247.58 LAP 1.84 LOP 134.94 VP 20.051 GAP -.72 AZP 94.66 TAL 23.76 TAP 182.15 RCA 148.48 APO 247.64 V2 22.133  
 RC 317.282 GL 32.63 GP -35.17 ZAL 54.40 ZAP 68.92 ETS 166.21 ZAE 91.41 ETE 182.81 ZAC 53.99 ETC 287.55 LVI 12.48

PLANETOCENTRIC CONIC  
 C3 28.359 VHL 5.325 DLA 38.63 RAL 6.21 RAD 6646.4 VEL 12.178 PTH 7.14 VHP 2.915 DPA -25.51 RAP 32.72 ECC 1.4667  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 3 46 4067.69 -41.23 179.85 266.07 63.76 7 11 34 3067.7 -47.55 146.93  
 60.00 5 9 28 4213.56 -27.79 184.10 257.32 59.56 6 19 41 3213.6 -37.74 157.92  
 62.50 4 3 17 4402.57 -18.75 193.66 251.08 55.58 5 16 39 3402.6 -31.17 170.86  
 62.50 4 3 17 4402.57 -18.75 193.66 251.08 55.58 5 16 39 3402.6 -31.17 170.86  
 62.50 4 3 17 4402.57 -18.75 193.66 251.08 55.58 5 16 39 3402.6 -31.17 170.86  
 62.50 4 3 17 4402.57 -18.75 193.66 251.08 55.58 5 16 39 3402.6 -31.17 170.86

DIFFERENTIAL CORRECTIONS  
 TDE .7804 TRA-2.6815 TC3-4.4012 BAU 1.9439 SGT 6026.5 SGR 3129.8 SG3 1100.9 ST 69.9 SR 42.9 SS 61.9  
 RDE .7240 RRA -.8406 RC3-2.6301 FAU .33114 RRT .9576 RRF .9916 RTF .9470 CRT .8774 CRS -.9934 CST -.8182  
 FDE 4.3422 FRA-3.6025 FC-10.1091 BSP 11646 SGB 6790.7 R23 .2367 R13 .9630 LSA 98.4 MSA 29.3 SSA .9  
 BDE 1.0646 BRA 2.8102 BC3 5.1272 F8P 1855 SG1 6742.7 SG2 805.6 THA 26.86 EL1 80.0 EL2 18.0 ALF 29.95

LAUNCH DATE AUG 30 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.979 GAL 4.84 AZL 84.78 HCA 199.27 SMA 198.18 ECC .25046 INC 5.2219 V1 29.498  
 RP 247.71 LAP 1.85 LOP 135.83 VP 20.046 GAP -.92 AZP 94.89 TAL 23.48 TAP 182.75 RCA 148.54 APO 247.81 V2 22.120  
 RC 319.522 GL 33.83 GP -36.05 ZAL 55.14 ZAP 68.53 ETS 165.56 ZAE 90.49 ETE 182.16 ZAC 53.12 ETC 287.75 LVI 13.36

DISTANCE 561.813 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 28.869 VHL 5.373 DLA 39.79 RAL 5.70 RAD 6646.6 VEL 12.199 PTH 7.16 VHP 2.968 DPA -26.27 RAP 33.21 ECC 1.4751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 51 12 4106.77 -40.01 182.80 266.04 61.73 6 59 39 3106.8 -47.39 150.70  
 60.00 4 32 47 4318.36 -24.02 190.39 254.86 56.61 5 44 46 3318.4 -35.54 165.94  
 60.75 3 53 1 4430.62 -19.07 196.24 251.20 54.39 5 6 51 3430.6 -31.92 173.61  
 60.75 3 53 1 4430.62 -19.07 196.24 251.20 54.39 5 6 51 3430.6 -31.92 173.61  
 60.75 3 53 1 4430.62 -19.07 196.24 251.20 54.39 5 6 51 3430.6 -31.92 173.61  
 60.75 3 53 1 4430.62 -19.07 196.24 251.20 54.39 5 6 51 3430.6 -31.92 173.61  
 60.75 3 53 1 4430.62 -19.07 196.24 251.20 54.39 5 6 51 3430.6 -31.92 173.61

DIFFERENTIAL CORRECTIONS  
 TDE .8594 TRA-2.7363 TC3-4.4205 BAU 1.9866 SGT 6150.3 SGR 3197.4 SG3 1055.1 ST 73.5 SR 46.3 SS 62.3  
 RDE .7932 RRA -.8759 RC3-2.6370 FAU .31694 RRT .9587 RRF .9921 RTF .9469 CRT .8851 CRS -.9942 CST -.8315  
 FDE 4.3428 FRA-3.4825 FC3-9.5045 BSP 11920 SGB 6931.8 R23 .2392 R13 .9629 LSA 102.8 MSA 29.3 SSA .8  
 BDE 1.1695 BRA 2.8731 BC3 5.1473 FSP 1781 SG1 6884.0 SG2 812.6 THA 26.90 EL1 84.8 EL2 18.7 ALF 30.78

LAUNCH DATE AUG 30 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.985 GAL 4.59 AZL 84.55 HCA 160.15 SMA 198.29 ECC .25061 INC 5.4484 V1 29.498  
 RP 247.84 LAP 1.85 LOP 136.71 VP 20.042 GAP -1.12 AZP 95.13 TAL 23.20 TAP 183.35 RCA 148.60 APO 247.99 V2 22.107  
 RC 321.734 GL 35.11 GP -36.98 ZAL 55.92 ZAP 68.21 ETS 164.50 ZAE 89.62 ETE 181.51 ZAC 52.21 ETC 287.97 LVI 14.29

DISTANCE 565.582 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.462 VHL 5.428 DLA 41.01 RAL 5.13 RAD 6646.6 VEL 12.223 PTH 7.17 VHP 3.026 DPA -27.06 RAP 33.76 ECC 1.4849  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 36 45 4190.32 -38.56 185.96 265.76 59.62 6 45 55 3150.3 -47.06 154.85  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39  
 58.97 3 42 42 4458.17 -19.36 198.81 251.31 53.12 4 57 0 3458.2 -32.67 176.39

DIFFERENTIAL CORRECTIONS  
 TDE .9402 TRA-2.7942 TC3-4.4284 BAU 2.0310 SGT 6274.8 SGR 3270.8 SG3 1008.0 ST 77.1 SR 49.8 SS 62.6  
 RDE .8664 RRA -.9156 RC3-2.6413 FAU .30248 RRT .9598 RRF .9924 RTF .9468 CRT .8921 CRS -.9949 CST -.8430  
 FDE 4.3283 FRA-3.3640 FC3-8.8882 BSP 12181 SGB 7076.1 R23 .2415 R13 .9628 LSA 107.2 MSA 29.3 SSA .8  
 BDE 1.2785 BRA 2.9404 BC3 5.1563 FSP 1702 SG1 7028.4 SG2 820.0 THA 26.98 EL1 89.8 EL2 19.3 ALF 31.56

LAUNCH DATE AUG 30 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.991 GAL 4.54 AZL 84.31 HCA 161.02 SMA 198.41 ECC .25076 INC 5.6949 V1 29.498  
 RP 247.97 LAP 1.85 LOP 137.59 VP 20.038 GAP -1.32 AZP 95.39 TAL 22.92 TAP 183.94 RCA 148.66 APO 248.16 V2 22.095  
 RC 323.917 GL 36.46 GP -37.97 ZAL 56.73 ZAP 67.95 ETS 163.62 ZAE 88.79 ETE 180.85 ZAC 51.23 ETC 288.22 LVI 15.29

DISTANCE 569.349 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.153 VHL 5.491 DLA 42.28 RAL 4.46 RAD 6647.1 VEL 12.251 PTH 7.20 VHP 3.089 DPA -27.89 RAP 34.37 ECC 1.4962  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 19 50 4199.59 -36.80 189.36 265.13 57.41 6 29 49 3199.6 -46.49 159.48  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21  
 57.16 3 32 16 4485.40 -19.62 201.39 251.39 51.77 4 47 1 3485.4 -33.42 179.21

DIFFERENTIAL CORRECTIONS  
 TDE 1.0238 TRA-2.8534 TC3-4.4209 BAU 2.0758 SGT 6395.7 SGR 3348.0 SG3 959.0 ST 80.9 SR 53.5 SS 62.7  
 RDE .9453 RRA -.9588 RC3-2.6403 FAU .28750 RRT .9608 RRF .9927 RTF .9465 CRT .8984 CRS -.9954 CST -.8529  
 FDE 4.3012 FRA-3.2401 FC3-8.2345 BSP 12449 SGB 7219.0 R23 .2441 R13 .9626 LSA 111.7 MSA 29.3 SSA .7  
 BDE 1.3935 BRA 3.0102 BC3 5.1493 FSP 1619 SG1 7171.4 SG2 828.2 THA 27.09 EL1 94.9 EL2 20.0 ALF 32.32

LAUNCH DATE AUG 30 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC  
 RL 151.05 LAL .00 LOL 336.48 VL 32.997 GAL 4.48 AZL 84.04 HCA 161.90 SMA 198.53 ECC .25093 INC 5.9640 V1 29.498  
 RP 248.09 LAP 1.85 LOP 138.47 VP 20.036 GAP -1.52 AZP 95.67 TAL 22.64 TAP 184.54 RCA 148.71 APO 248.35 V2 22.084  
 RC 328.069 GL 37.90 GP -39.02 ZAL 57.59 ZAP 67.76 ETS 162.74 ZAE 88.02 ETE 180.18 ZAC 50.19 ETC 288.49 LVI 16.34

DISTANCE 573.115 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.961 VHL 5.564 DLA 43.61 RAL 3.69 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 3.160 DPA -28.76 RAP 35.03 ECC 1.5095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 59 28 4256.75 -34.64 193.11 264.01 55.08 6 10 25 3256.8 -45.58 164.69  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09  
 55.30 3 21 39 4512.37 -19.85 203.98 251.43 50.34 4 36 51 3512.4 -34.16 182.09

DIFFERENTIAL CORRECTIONS  
 TDE 1.1074 TRA-2.9162 TC3-4.3970 BAU 2.1213 SGT 6514.8 SGR 3428.7 SG3 907.8 ST 84.7 SR 57.3 SS 62.6  
 RDE 1.0290 RRA-1.0070 RC3-2.6324 FAU .27187 RRT .9617 RRF .9929 RTF .9461 CRT .9038 CRS -.9957 CST -.8607  
 FDE 4.2557 FRA-3.1140 FC3-7.6020 BSP 12713 SGB 7362.0 R23 .2469 R13 .9623 LSA 116.2 MSA 29.4 SSA .7  
 BDE 1.5117 BRA 3.0851 BC3 5.1247 FSP 1534 SG1 7314.3 SG2 836.8 THA 27.23 EL1 100.2 EL2 20.8 ALF 33.08



LAUNCH DATE AUG 30 1973 FLIGHT TIME 272.00 ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC										DISTANCE 576.860										EARTH TO MARS																																													
RL	151.05	LAL	.00	LOL	336.48	VL	33.003	GAL	4.43	AZL	83.74	HCA	162.78	SMA	198.65	ECC	.25110	INC	6.2593	V1	29.498	RP	248.20	LAP	1.85	LOP	139.36	VP	20.034	GAP	-1.71	AZP	95.98	TAL	22.35	TAP	185.13	RCA	148.77	APO	248.53	V2	22.073	RC	328.191	GL	39.43	GP	-40.12	ZAL	58.49	ZAP	67.64	ETS	161.84	ZAE	87.30	ETE	179.51	ZAC	49.08	ETC	288.00	LVI	17.46
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.909	VHL	5.649	DLA	45.00	RAL	2.79	RAD	6647.7	VEL	12.322	PTH	7.25	VHP	3.238	DPA	-29.68	RAP	35.79	ECC	1.5251	SGT	6632.6	SGR	3516.4	SG3	855.1	ST	88.4	SR	61.3	SS	62.2	CR	.9082	CRS	-.9958	CST	-.8668																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RTF	.9456	RTF	.9456	RTF	.9456	LSA	120.7	MSA	29.6	SSA	.6	EL1	105.4	EL2	21.5	ALF	33.79																						
50.00	4	33	46	4326.11	-31.85	197.38	262.13	52.58	5	45	53	3326.1	-44.14	170.75	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05															
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05																								
53.41	3	10	42	4539.40	-20.04	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4	-34.89	185.05	206.61	251.42	48.82	4	26	21	3539.4																										

LAUNCH DATE AUG 30 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 6 1974

HELIOCENTRIC CONIC

DISTANCE 591.923

EARTH TO MARS

RL 151.05 LAL .00 LOL 336.48 VL 33.028 GAL 4.22 AZL 82.20 MCA 186.27 SMA 199.14 ECC .25183 INC 7.8013 V1 29.498  
 RP 248.59 LAP 1.85 LOP 142.87 VP 20.033 GAP -2.49 AZP 97.58 TAL 21.19 TAP 187.46 RCA 148.99 APO 249.30 V2 22.034  
 RC 336.377 GL 46.61 GP -45.25 ZAL 82.61 ZAP 60.04 ETS 158.34 ZAE 85.08 ETE 176.84 ZAC 43.91 ETC 290.49 LVI 22.67

PLANETOCENTRIC CONIC

CS 37.854 VHL 6.153 DLA 51.24 RAL 357.40 RAD 6649.9 VEL 12.559 PTH 7.43 VMP 3.663 DPA -33.77 RAP 39.58 ECC 1.6230  
 LNCH AZMTM LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTM INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98  
 45.31 2 21 28 4650.80 -20.02 217.46 250.40 41.79 3 38 58 3650.8 -37.33 197.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4535 TRA-3.2946 TCS-3.9871 BAW 2.3777 SGT 7065.1 SGR 3937.9 SG3 626.1 ST 100.2 SR 77.4 SS 56.9  
 RDE 1.5243 RRA-1.3677 RC3-2.4855 FAU .18709 RRT .9667 RRF .9924 RTF .9412 CRT .9131 CRC -.9950 CST -.8681  
 FDE 3.6742 FRA-2.4320 FC3-4.2788 BSP 13990 SGB 8088.5 R23 .2650 R13 .9589 LSA 135.1 MSA 31.5 SSA .4  
 BDE 2.1062 BRA 3.5672 BC3 4.6983 FSP 1041 SGI 8039.8 SG2 885.7 THA 28.70 EL1 124.0 EL2 25.5 ALF 37.02



LAUNCH DATE AUG 31 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 23 1973

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.918 GAL 6.84 AZL 89.31 HCA 87.09 SMA 218.98 ECC .32806 INC .4892 V1 29.503
RP 225.59 LAP .48 LOP 64.54 VP 23.862 GAP 19.07 AZP 89.98 TAL 27.29 TAP 114.38 RCA 146.86 APO 290.26 V2 24.360
RC 114.316 GL 2.71 GP -6.82 ZAL 44.10 ZAP 161.36 ETS 202.62 ZAE 160.60 ETE 336.84 ZAC 75.77 ETC 282.33 LVI -9.01

DISTANCE 279.562

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.376 VHL 6.031 DLA 10.89 RAL 18.82 RAD 6649.4 VEL 12.501 PTH 7.39 VHP 5.838 DPA 10.41 RAP 46.88 ECC 1.5987
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 16 56 3499.79 -46.25 128.09 261.36 102.71 10 15 15 2499.8 -36.16 98.63
60.00 9 44 36 3426.15 -39.60 123.13 263.03 98.16 10 41 42 2426.1 -32.11 94.79
70.00 10 23 25 3311.92 -33.86 114.69 263.84 94.76 11 18 37 2311.9 -28.41 87.33
80.00 11 19 19 3136.83 -29.76 101.72 264.14 92.53 12 11 36 2136.8 -25.70 75.03
90.00 12 35 16 2891.68 -28.23 83.77 264.21 91.73 13 23 28 1891.7 -24.68 57.32
100.00 14 2 11 2611.30 -29.76 63.09 264.14 92.53 14 45 42 1611.3 -25.70 36.40
110.00 15 22 52 2358.74 -33.86 43.61 263.84 94.76 16 2 10 1358.7 -28.41 16.25

DIFFERENTIAL CORRECTIONS

TDE -.3012 TRA -.6491 TC3 .5422 BAU .2784
RDE -.6522 RRA .2219 RC3 -.1838 FAU .10495
FDE .0587 FRA -.6551 FC3-2.4978 BSP 1216
BDE .7184 BRA .6860 BC3 .5726 FSP 369

MID-COURSE EXECUTION ACCURACY

SGT 950.8 SGR 692.2 SG3 286.1
RRT -.1558 RRF .2334 RTF -.5426
SGB 1176.1 R23 -.0629 R13 .5596
SG1 963.1 SG2 675.0 THA 167.12

ORBIT DETERMINATION ACCURACY

ST 17.2 SR 31.1 SS 5.5
CRT .7720 CRS .3405 CST -.2420
LSA 34.2 MSA 11.0 S8A 2.5
EL1 34.1 EL2 10.0 ALF 64.66

LAUNCH DATE AUG 31 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 25 1973

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.845 GAL 6.65 AZL 89.48 HCA 86.15 SMA 216.79 ECC .32287 INC .5179 V1 29.505
RP 225.98 LAP .52 LOP 65.60 VP 23.715 GAP 18.68 AZP 89.98 TAL 27.67 TAP 115.83 RCA 146.79 APO 286.78 V2 24.338
RC 117.057 GL 2.91 GP -6.99 ZAL 43.62 ZAP 160.32 ETS 201.93 ZAE 161.03 ETE 335.51 ZAC 75.59 ETC 282.34 LVI -8.83

DISTANCE 283.022

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.748 VHL 5.979 DLA 10.90 RAL 18.28 RAD 6649.2 VEL 12.476 PTH 7.37 VHP 5.665 DPA 10.25 RAP 46.95 ECC 1.5883
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 14 47 3495.48 -46.18 127.70 260.40 103.00 10 13 2 2495.5 -36.02 98.34
60.00 9 42 27 3421.85 -39.56 122.78 262.11 98.40 10 39 29 2421.8 -31.98 94.50
70.00 10 21 16 3307.64 -33.84 114.36 262.95 94.96 11 16 24 2307.6 -28.31 87.04
80.00 11 17 9 3132.56 -29.75 101.40 263.27 92.70 12 9 22 2132.6 -25.62 74.74
90.00 12 33 7 2887.42 -28.22 83.45 263.34 91.89 13 21 14 1887.4 -24.60 57.03
100.00 14 0 1 2607.04 -29.75 62.77 263.27 92.70 14 43 28 1607.0 -25.62 36.11
110.00 15 20 42 2354.45 -33.84 43.28 262.95 94.96 15 59 57 1354.5 -28.31 15.96

DIFFERENTIAL CORRECTIONS

TDE -.3028 TRA -.6423 TC3 .5574 BAU .2825
RDE -.6492 RRA .2179 RC3 -.1970 FAU .11049
FDE .0604 FRA -.7184 FC3-2.6758 BSP 1247
BDE .7164 BRA .6783 BC3 .5911 FSP 396

MID-COURSE EXECUTION ACCURACY

SGT 959.9 SGR 698.4 SG3 283.1
RRT -.1638 RRF .2485 RTF -.5437
SGB 1187.1 R23 -.0700 R13 .5629
SG1 973.4 SG2 679.4 THA 166.57

ORBIT DETERMINATION ACCURACY

ST 17.3 SR 31.3 SS 5.8
CRT .7773 CRS .3271 CST -.2524
LSA 34.4 MSA 11.1 S8A 2.6
EL1 34.3 EL2 9.9 ALF 64.43

LAUNCH DATE AUG 31 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 27 1973

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.776 GAL 6.66 AZL 89.45 HCA 89.21 SMA 215.15 ECC .31801 INC .5505 V1 29.505
RP 226.37 LAP .55 LOP 66.66 VP 23.574 GAP 18.31 AZP 89.99 TAL 28.05 TAP 117.28 RCA 146.73 APO 283.57 V2 24.297
RC 119.633 GL 3.12 GP -7.18 ZAL 43.17 ZAP 159.27 ETS 201.29 ZAE 161.50 ETE 334.05 ZAC 75.41 ETC 282.35 LVI -8.66

DISTANCE 286.513

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.169 VHL 5.930 DLA 10.91 RAL 17.77 RAD 6649.0 VEL 12.453 PTH 7.35 VHP 5.499 DPA 10.07 RAP 47.01 ECC 1.5788
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 12 41 3491.59 -46.12 127.34 259.51 103.27 10 10 53 2491.6 -35.88 98.09
60.00 9 40 20 3417.99 -39.52 122.46 261.25 98.62 10 37 18 2418.0 -31.87 94.24
70.00 10 19 8 3303.83 -33.81 114.06 262.10 95.13 11 14 12 2303.8 -28.23 86.78
80.00 11 15 1 3128.80 -29.73 101.12 262.44 92.84 12 7 9 2128.8 -25.55 74.48
90.00 12 30 58 2883.68 -28.21 83.18 262.51 92.02 13 19 1 1883.7 -24.54 56.77
100.00 13 37 52 2603.27 -29.73 62.49 262.44 92.84 14 41 16 1603.3 -25.55 35.85
110.00 15 18 35 2350.65 -33.81 42.98 262.10 95.13 15 57 45 1350.6 -28.23 15.70

DIFFERENTIAL CORRECTIONS

TDE -.3041 TRA -.6356 TC3 .5715 BAU .2864
RDE -.6464 RRA .2137 RC3 -.2109 FAU .11834
FDE .0623 FRA -.7835 FC3-2.8038 BSP 1271
BDE .7143 BRA .6707 BC3 .6092 FSP 425

MID-COURSE EXECUTION ACCURACY

SGT 968.1 SGR 704.8 SG3 301.0
RRT -.1724 RRF .2645 RTF -.5446
SGB 1197.4 R23 -.0773 R13 .5682
SG1 983.1 SG2 683.6 THA 165.85

ORBIT DETERMINATION ACCURACY

ST 17.5 SR 31.4 SS 6.2
CRT .7823 CRS .3180 CST -.2612
LSA 34.6 MSA 11.3 S8A 2.6
EL1 34.5 EL2 9.8 ALF 64.21

LAUNCH DATE AUG 31 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 29 1973

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.712 GAL 6.87 AZL 89.42 HCA 90.27 SMA 213.84 ECC .31347 INC .5829 V1 29.808
RP 226.76 LAP .88 LOP 67.72 VP 23.438 GAP 17.94 AZP 90.00 TAL 28.41 TAP 118.88 RCA 146.67 APO 280.61 V2 24.289
RC 122.241 GL 3.32 GP -7.36 ZAL 42.74 ZAP 156.20 ETS 200.71 ZAE 162.00 ETE 332.41 ZAC 75.23 ETC 282.36 LVI -8.49

DISTANCE 290.033

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.635 VHL 5.885 DLA 10.93 RAL 17.27 RAD 6648.8 VEL 12.431 PTH 7.34 VHP 5.339 DPA 9.88 RAP 47.04 ECC 1.5700
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 10 38 3488.11 -46.07 127.02 258.66 103.51 10 8 46 2488.1 -35.74 97.86
60.00 9 38 16 3414.57 -39.49 122.17 260.43 98.81 10 35 10 2414.6 -31.76 94.00
70.00 10 17 2 3300.48 -33.79 113.80 261.30 95.28 11 12 3 2300.5 -28.15 86.55
80.00 11 12 53 3125.53 -29.72 100.88 261.65 92.97 12 4 59 2125.5 -25.49 74.26
90.00 12 28 49 2880.45 -28.21 82.95 261.73 92.14 13 16 50 1880.5 -24.48 56.55
100.00 13 55 45 2600.01 -29.72 62.25 261.65 92.97 14 39 5 1600.0 -25.49 35.63
110.00 15 16 29 2347.30 -33.79 42.72 261.30 95.28 15 55 36 1347.3 -28.15 15.47

DIFFERENTIAL CORRECTIONS

TDE -.3056 TRA -.6296 TC3 .5843 BAU .2900
RDE -.6435 RRA .2092 RC3 -.2254 FAU .12244
FDE .0651 FRA -.8565 FC3-3.0608 BSP 1292
BDE .7124 BRA .6634 BC3 .6263 FSP 456

MID-COURSE EXECUTION ACCURACY

SGT 975.3 SGR 711.3 SG3 319.8
RRT -.1810 RRF .2810 RTF -.5446
SGB 1207.1 R23 -.0850 R13 .5691
SG1 992.0 SG2 687.7 THA 165.29

ORBIT DETERMINATION ACCURACY

ST 17.6 SR 31.5 SS 6.5
CRT .7873 CRS .3060 CST -.2663
LSA 34.7 MSA 11.4 S8A 2.7
EL1 34.7 EL2 9.8 ALF 63.98

LAUNCH DATE AUG 31 1973 FLIGHT TIME 122.00 ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC										DISTANCE 293.581										EARTH TO MARS			
RL	151.01	LAL	.00	LOL	337.48	VL	33.681	GAL	6.68	AZL	89.38	HCA	91.32	SMA	212.24	ECC	.30922	INC	.6153	V1	29.505		
RP	227.15	LAP	.62	LOP	68.77	VP	23.307	GAP	17.57	AZP	90.01	TAL	28.78	TAP	120.08	RCA	146.61	APO	277.87	V2	24.214		
RC	124.878	GL	3.52	GP	-7.56	ZAL	42.33	ZAP	157.10	ETS	200.18	ZAE	162.52	ETE	330.60	ZAC	75.05	ETC	282.38	LVI	-8.32		
PLANETOCENTRIC CONIC																							
C3	34.142	VHL	5.843	DLA	10.95	RAL	16.80	RAD	6648.6	VEL	12.412	PTH	7.32	VHP	5.185	DPA	9.69	RAP	47.06	ECC	1.5619		
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT	ASC	INJ AZMTH	INJ TIME	PO CST	TIM	INJ 2 LAT	INJ 2 LONG											
50.00	9 8 38	3485.03	-46.02	126.74	257.86	103.72	10 6 43	2485.0	-35.63	97.66													
60.00	9 36 14	3411.57	-39.46	121.92	259.66	98.97	10 33 5	2411.6	-31.67	93.60													
70.00	10 14 58	3297.58	-33.77	113.58	260.55	95.41	11 9 56	2297.6	-28.08	86.35													
80.00	11 10 47	3122.74	-29.71	100.67	260.90	93.08	12 2 50	2122.7	-25.44	74.07													
90.00	12 26 42	2877.71	-28.20	82.75	260.98	92.24	13 14 40	1877.7	-24.44	56.36													
100.00	13 53 39	2597.22	-29.71	62.04	260.90	93.08	14 36 56	1597.2	-25.44	35.44													
110.00	15 14 24	2344.40	-33.77	42.50	260.55	95.41	15 53 29	1344.4	-28.08	15.27													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY			
TDE	-.3070	TRA	-.6237	TC3	.5958	BAU	.2933	SGT	981.5	SGR	717.9	SG3	339.7	ST	17.7	SR	31.6	SS	6.9				
RDE	-.6407	RRA	.2043	RC3	-.2407	FAU	.12888	RRT	-.1899	RRF	.2983	RTF	-.5441	CRT	.7922	CRS	.2987	CST	-.2695				
FDE	.0685	FRA	-.9318	FC3	-3.2680	BSP	1309	SG8	1216.1	R23	-.0931	R13	.5717	LSA	34.9	MSA	11.6	SSA	2.8				
BDE	.7104	BRA	.6563	BC3	.6426	FSP	489	SG1	1000.2	SG2	691.7	THA	164.57	EL1	34.9	EL2	9.8	ALF	63.76				

LAUNCH DATE AUG 31 1973 FLIGHT TIME 124.00 ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC										DISTANCE 297.152										EARTH TO MARS			
RL	151.01	LAL	.00	LOL	337.45	VL	33.594	GAL	6.68	AZL	89.35	HCA	92.37	SMA	210.94	ECC	.30524	INC	.6475	V1	29.505		
RP	227.54	LAP	.85	LOP	69.82	VP	23.182	GAP	17.21	AZP	90.03	TAL	29.09	TAP	121.48	RCA	146.56	APO	275.33	V2	24.172		
RC	127.544	GL	3.73	GP	-7.76	ZAL	41.95	ZAP	155.99	ETS	199.68	ZAE	163.07	ETE	328.57	ZAC	74.86	ETC	282.40	LVI	-8.13		
PLANETOCENTRIC CONIC																							
C3	33.686	VHL	5.804	DLA	10.99	RAL	16.34	RAD	6648.4	VEL	12.393	PTH	7.31	VHP	5.037	DPA	9.47	RAP	47.06	ECC	1.5544		
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT	ASC	INJ AZMTH	INJ TIME	PO CST	TIM	INJ 2 LAT	INJ 2 LONG											
50.00	9 6 40	3482.32	-45.97	126.50	257.12	103.91	10 4 43	2482.3	-35.52	97.46													
60.00	9 34 14	3408.97	-39.43	121.71	258.93	99.12	10 31 3	2409.0	-31.59	93.63													
70.00	10 12 55	3295.12	-33.76	113.39	259.83	95.53	11 7 51	2295.1	-28.02	86.19													
80.00	11 8 41	3120.42	-29.70	100.50	260.20	93.17	12 0 42	2120.4	-25.39	73.91													
90.00	12 24 36	2875.45	-28.19	82.58	260.28	92.32	13 12 31	1875.4	-24.40	56.81													
100.00	13 51 33	2594.89	-29.70	61.87	260.20	93.17	14 34 48	1594.9	-25.39	35.28													
110.00	15 12 22	2341.94	-33.76	42.31	259.83	95.53	15 51 24	1341.9	-28.02	15.10													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY			
TDE	-.3084	TRA	-.6183	TC3	.6056	BAU	.2962	SGT	986.6	SGR	724.8	SG3	380.6	ST	17.9	SR	31.6	SS	7.3				
RDE	-.6379	RRA	.1991	RC3	-.2567	FAU	.13564	RRT	-.1989	RRF	.3165	RTF	-.5425	CRT	.7969	CRS	.2918	CST	-.2721				
FDE	.0720	FRA	-1.0113	FC3	-3.4861	BSP	1322	SG8	1224.3	R23	-.1019	R13	.5738	LSA	35.0	MSA	11.8	SSA	2.8				
BDE	.7085	BRA	.6496	BC3	.6577	FSP	524	SG1	1007.4	SG2	695.7	THA	163.79	EL1	35.0	EL2	9.8	ALF	63.52				

LAUNCH DATE AUG 31 1973 FLIGHT TIME 126.00 ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC										DISTANCE 300.744										EARTH TO MARS			
RL	151.01	LAL	.00	LOL	337.45	VL	33.540	GAL	6.69	AZL	89.32	HCA	93.41	SMA	209.74	ECC	.30151	INC	.6797	V1	29.505		
RP	227.93	LAP	.68	LOP	70.88	VP	23.080	GAP	16.85	AZP	90.04	TAL	29.41	TAP	122.82	RCA	146.50	APO	272.98	V2	24.131		
RC	130.237	GL	3.93	GP	-7.97	ZAL	41.58	ZAP	154.86	ETS	199.22	ZAE	163.62	ETE	326.30	ZAC	74.67	ETC	282.42	LVI	-7.97		
PLANETOCENTRIC CONIC																							
C3	33.262	VHL	5.767	DLA	11.03	RAL	15.90	RAD	6648.2	VEL	12.376	PTH	7.29	VHP	4.895	DPA	9.25	RAP	47.04	ECC	1.5474		
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT	ASC	INJ AZMTH	INJ TIME	PO CST	TIM	INJ 2 LAT	INJ 2 LONG											
50.00	9 4 45	3479.98	-45.94	126.28	256.41	104.07	10 2 45	2480.0	-35.44	97.33													
60.00	9 32 16	3406.76	-39.40	121.52	258.24	99.24	10 29 3	2406.6	-31.53	93.48													
70.00	10 10 54	3293.08	-33.74	113.23	259.16	95.62	11 5 47	2293.1	-27.97	86.05													
80.00	11 6 37	3118.55	-29.70	100.38	259.53	93.24	11 58 36	2118.5	-25.36	73.78													
90.00	12 22 30	2873.66	-28.19	82.45	259.62	92.39	13 10 24	1873.7	-24.37	56.09													
100.00	13 49 29	2593.02	-29.70	61.73	259.53	93.24	14 32 42	1593.0	-25.36	35.15													
110.00	15 10 21	2339.90	-33.74	42.15	259.16	95.62	15 49 21	1339.9	-27.97	14.98													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY			
TDE	-.3100	TRA	-.6138	TC3	.6133	BAU	.2988	SGT	990.6	SGR	732.0	SG3	382.4	ST	18.0	SR	31.7	SS	7.7				
RDE	-.6390	RRA	.1936	RC3	-.2738	FAU	.14269	RRT	-.2077	RRF	.3393	RTF	-.5597	CRT	.8014	CRS	.2874	CST	-.2723				
FDE	.0767	FRA	-1.0949	FC3	-3.7139	BSP	1334	SG8	1231.7	R23	-.1115	R13	.5752	LSA	35.2	MSA	12.0	SSA	2.9				
BDE	.7066	BRA	.6436	BC3	.6716	FSP	561	SG1	1013.6	SG2	699.8	THA	162.96	EL1	35.1	EL2	9.7	ALF	63.28				

LAUNCH DATE AUG 31 1973 FLIGHT TIME 128.00 ARRIVAL DATE JAN 6 1974

HELIOCENTRIC CONIC										DISTANCE 304.357										EARTH TO MARS			
RL	151.01	LAL	.00	LOL	337.45	VL	33.490	GAL	6.69	AZL	89.29	HCA	94.46	SMA	208.63	ECC	.29803	INC	.7118	V1	29.505		
RP	228.32	LAP	.71	LOP	71.91	VP	22.944	GAP	16.50	AZP	90.06	TAL	29.72	TAP	124.17	RCA	146.45	APO	270.80	V2	24.090		
RC	132.954	GL	4.13	GP	-8.18	ZAL	41.24	ZAP	153.71	ETS	198.79	ZAE	164.18	ETE	323.76	ZAC	74.48	ETC	282.45	LVI	-7.80		
PLANETOCENTRIC CONIC																							
C3	32.870	VHL	5.733	DLA	11.08	RAL	15.48	RAD	6648.1	VEL	12.361	PTH	7.28	VHP	4.758	DPA	9.01	RAP	47.01	ECC	1.5410		
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT	ASC	INJ AZMTH	INJ TIME	PO CST	TIM	INJ 2 LAT	INJ 2 LONG											
50.00	9 2 53	3477.99	-45.90	126.10	255.76	104.20	10 0 51	2478.0	-35.36	97.20													
60.00	9 30 21	3404.93	-39.38	121.37	257.60	99.34	10 27 6	2404.9	-31.47	93.35													
70.00	10 8 58	3291.44	-33.73	113.11	258.53	95.69	11 3 46	2291.4	-27.93	85.94													
80.00	11 4 34	3117.11	-29.69	100.26	258.90	93.30	11 56 31	2117.1	-25.33	73.68													
90.00	12 20 25	2872.32	-28.18	82.35	258.99	92.44	13 8 17	1872.3	-24.34	56.00													
100.00	13 47 26	2591.59	-29.69	61.62	258.90	93.30	14 30 37	1591.6	-25.33	35.05													
110.00	15 8 21	2338.26	-33.73	42.02	258.53	95.69	15 47 19	1338.3	-27.93	14.85													
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY			
TDE	-.3116	TRA	-.6098	TC3	.6193	BAU	.3007	SGT	993.4	SGR	739.6	SG3	405.3	ST	18.2	SR	31.7	SS	8.1				
RDE	-.6321	RRA	.1877	RC3	-.2911	FAU	.15010	RRT	-.2164	RRF	.3348	RTF	-.5356	CRT	.8059	CRS	.2836	CST	-.2715				
FDE	.0818	FRA	-1.1833	FC3	-3.9535	BSP	1345	SG8	1238.5	R23	-.1220	R13	.5761	LSA	35.3	MSA	12.2	SSA	2.9				
BDE	.7048	BRA	.6380	BC3	.6843	FSP	599	SG1	1019.0	SG2	704.0	THA	162.07	EL1	35.3	EL2	9.7	ALF	63.01				

LAUNCH DATE AUG 31 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 8 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.442 GAL 6.70 AZL 89.26 HCA 95.49 SMA 207.59 ECC .29476 INC .7440 V1 29.505
RP 226.70 LAP .74 LOP 72.94 VP 22.831 GAP 16.15 AZP 90.07 TAL 30.01 TAP 125.50 RCA 146.40 APO 268.78 V2 24.049
RC 135.694 GL 4.34 GP -8.40 ZAL 40.91 ZAP 152.54 ETS 198.38 ZAE 164.74 ETE 320.92 ZAC 74.29 ETC 282.47 LVI -7.83

DISTANCE 307.988

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.305 VHL 5.701 DLA 11.14 RAL 15.08 RAD 6648.0 VEL 12.346 PTH 7.27 VHP 4.626 DPA 8.78 RAP 46.95 ECC 1.5349
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 1 4 3476.34 -45.87 125.95 255.14 104.32 9 59 0 2476.3 -35.30 97.09
60.00 9 28 27 3403.46 -39.37 121.25 257.00 99.42 10 25 11 2403.5 -31.43 93.26
70.00 10 6 57 3290.20 -33.72 113.01 257.94 95.75 11 1 47 2290.2 -27.90 85.85
80.00 11 2 31 3116.11 -29.69 100.18 258.31 93.34 11 54 27 2116.1 -25.31 73.62
90.00 12 18 20 2871.42 -28.18 82.29 258.40 92.47 13 6 11 1871.4 -24.33 55.93
100.00 13 45 23 2590.58 -29.69 61.55 258.31 93.34 14 28 33 1590.6 -25.31 34.98
110.00 15 6 23 2337.02 -33.72 41.93 257.94 95.75 15 45 20 1337.0 -27.90 14.77

DIFFERENTIAL CORRECTIONS

TDE -.3137 TRA -.8067 TC3 .6230 BAU .3023
RDE -.6292 RRA .1814 RC3 -.3095 FAU .15780
FDE .0865 FRA-1.2759 FC3-4.2028 BSP 1355
BDE .7030 BRA .6332 BC3 .6956 FSP 641

MID-COURSE EXECUTION ACCURACY

SGT 995.0 SGR 747.6 SG3 429.2
RRR -.2243 RRF .3749 RTF -.5301
SGB 1244.5 R23 -.1336 R13 .5763
SG1 1023.3 SG2 708.4 THA 161.13

ORBIT DETERMINATION ACCURACY

ST 18.3 SR 31.7 SS 8.5
CRT .8103 CRS .2824 CST -.2862
LSA 35.4 MSA 12.5 SSA 3.0
EL1 35.4 EL2 9.6 ALF 62.71

LAUNCH DATE AUG 31 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 10 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.398 GAL 6.70 AZL 89.22 HCA 96.53 SMA 206.63 ECC .29170 INC .7760 V1 29.505
RP 229.09 LAP .77 LOP 73.98 VP 22.723 GAP 15.80 AZP 90.09 TAL 30.28 TAP 126.81 RCA 146.36 APO 266.91 V2 24.008
RC 138.457 GL 4.54 GP -8.63 ZAL 40.61 ZAP 151.35 ETS 198.00 ZAE 165.29 ETE 317.74 ZAC 74.09 ETC 282.51 LVI -7.48

DISTANCE 311.635

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.165 VHL 5.671 DLA 11.20 RAL 14.69 RAD 6647.8 VEL 12.332 PTH 7.26 VHP 4.500 DPA 8.50 RAP 46.87 ECC 1.5294
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 59 17 3475.02 -45.85 125.83 254.57 104.41 9 57 12 2475.0 -35.25 97.01
60.00 9 26 36 3402.34 -39.36 121.16 256.44 99.48 10 23 18 2402.3 -31.39 93.18
70.00 10 5 0 3289.35 -33.72 112.94 257.38 95.79 10 59 49 2289.3 -27.88 85.79
80.00 11 0 29 3115.52 -29.69 100.14 257.76 93.36 11 52 25 2115.5 -25.30 73.58
90.00 12 16 16 2870.95 -28.18 82.25 257.84 92.49 13 4 7 1871.0 -24.32 55.90
100.00 13 43 21 2589.99 -29.69 61.51 257.76 93.36 14 26 31 1590.0 -25.30 34.94
110.00 15 4 26 2336.17 -33.72 41.86 257.38 95.79 15 43 22 1336.2 -27.88 14.71

DIFFERENTIAL CORRECTIONS

TDE -.3154 TRA -.6040 TC3 .6249 BAU .3037
RDE -.6261 RRA .1747 RC3 -.3289 FAU .16590
FDE .0956 FRA-1.3732 FC3-4.4652 BSP 1357
BDE .7011 BRA .6288 BC3 .7061 FSP 683

MID-COURSE EXECUTION ACCURACY

SGT 995.5 SGR 756.1 SG3 454.4
RRR -.2322 RRF .3957 RTF -.5235
SGB 1250.0 R23 -.1457 R13 .5765
SG1 1026.8 SG2 713.0 THA 160.09

ORBIT DETERMINATION ACCURACY

ST 18.5 SR 31.7 SS 9.0
CRT .8143 CRS .2813 CST -.2649
LSA 35.5 MSA 12.7 SSA 3.0
EL1 35.5 EL2 9.6 ALF 62.42

LAUNCH DATE AUG 31 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.356 GAL 6.70 AZL 89.19 HCA 97.56 SMA 205.74 ECC .28884 INC .8081 V1 29.505
RP 229.48 LAP .80 LOP 75.01 VP 22.619 GAP 15.46 AZP 90.11 TAL 30.55 TAP 128.10 RCA 146.31 APO 265.17 V2 23.967
RC 141.241 GL 4.75 GP -8.87 ZAL 40.33 ZAP 150.13 ETS 197.63 ZAE 165.81 ETE 314.17 ZAC 73.89 ETC 282.54 LVI -7.29

DISTANCE 315.298

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.848 VHL 5.643 DLA 11.27 RAL 14.33 RAD 6647.7 VEL 12.320 PTH 7.25 VHP 4.379 DPA 8.22 RAP 46.78 ECC 1.5241
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 57 33 3474.01 -45.84 125.74 254.04 104.47 9 55 27 2474.0 -35.21 96.94
60.00 9 24 46 3401.56 -39.35 121.09 255.91 99.52 10 21 28 2401.6 -31.37 93.13
70.00 10 3 4 3288.86 -33.72 112.91 256.85 95.81 10 57 53 2288.9 -27.87 85.76
80.00 10 58 28 3115.33 -29.68 100.12 257.23 93.37 11 50 23 2115.3 -25.29 73.56
90.00 12 14 12 2870.91 -28.18 82.25 257.32 92.49 13 2 3 1870.9 -24.32 55.90
100.00 13 41 20 2589.80 -29.68 61.49 257.23 93.37 14 24 29 1589.8 -25.29 34.93
110.00 15 2 31 2335.68 -33.72 41.82 256.85 95.81 15 41 26 1335.7 -27.87 14.68

DIFFERENTIAL CORRECTIONS

TDE -.3178 TRA -.8025 TC3 .6240 BAU .3044
RDE -.6230 RRA .1676 RC3 -.3490 FAU .17429
FDE .1042 FRA-1.4731 FC3-4.7376 BSP 1360
BDE .6993 BRA .6254 BC3 .7150 FSP 728

MID-COURSE EXECUTION ACCURACY

SGT 994.6 SGR 765.1 SG3 480.6
RRR -.2389 RRF .4170 RTF -.5448
SGB 1254.8 R23 -.1593 R13 .5758
SG1 1029.0 SG2 718.1 THA 159.00

ORBIT DETERMINATION ACCURACY

ST 18.7 SR 31.7 SS 9.4
CRT .8183 CRS .2818 CST -.2800
LSA 35.6 MSA 13.0 SSA 3.0
EL1 35.6 EL2 9.6 ALF 62.09

LAUNCH DATE AUG 31 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.48 VL 33.317 GAL 6.71 AZL 89.16 HCA 98.59 SMA 204.91 ECC .28615 INC .8403 V1 29.505
RP 229.86 LAP .83 LOP 76.04 VP 22.518 GAP 15.12 AZP 90.13 TAL 30.79 TAP 129.38 RCA 146.27 APO 263.55 V2 23.927
RC 144.046 GL 4.98 GP -9.11 ZAL 40.07 ZAP 148.90 ETS 197.28 ZAE 166.30 ETE 310.20 ZAC 73.89 ETC 282.56 LVI -7.12

DISTANCE 318.874

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.552 VHL 5.617 DLA 11.36 RAL 13.98 RAD 6647.6 VEL 12.308 PTH 7.24 VHP 4.282 DPA 7.93 RAP 46.66 ECC 1.5193
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 55 51 3473.31 -45.82 125.68 253.55 104.52 9 53 44 2473.3 -35.18 96.90
60.00 9 22 58 3401.11 -39.34 121.06 255.42 99.55 10 19 39 2401.1 -31.35 93.10
70.00 10 1 10 3288.73 -33.71 112.90 256.37 95.81 10 55 59 2288.7 -27.87 85.75
80.00 10 56 27 3115.53 -29.69 100.14 256.75 93.36 11 48 23 2115.5 -25.30 73.58
90.00 12 12 8 2871.27 -28.18 82.27 256.83 92.47 12 59 59 1871.3 -24.33 55.92
100.00 13 39 19 2590.01 -29.69 61.51 256.75 93.36 14 22 29 1590.0 -25.30 34.94
110.00 15 0 36 2335.55 -33.71 41.81 256.37 95.81 15 39 32 1335.6 -27.87 14.67

DIFFERENTIAL CORRECTIONS

TDE -.3198 TRA -.8020 TC3 .6209 BAU .3049
RDE -.6198 RRA .1602 RC3 -.3702 FAU .18303
FDE .1135 FRA-1.5810 FC3-5.0221 BSP 1364
BDE .6974 BRA .6229 BC3 .7229 FSP 776

MID-COURSE EXECUTION ACCURACY

SGT 992.6 SGR 774.8 SG3 507.9
RRR -.2447 RRF .4389 RTF -.5044
SGB 1259.2 R23 -.1739 R13 .5745
SG1 1030.5 SG2 723.6 THA 157.82

ORBIT DETERMINATION ACCURACY

ST 18.9 SR 31.7 SS 9.8
CRT .8220 CRS .2825 CST -.2551
LSA 35.7 MSA 13.3 SSA 3.1
EL1 35.6 EL2 9.6 ALF 61.75

LAUNCH DATE AUG 31 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC										DISTANCE 322.663										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.280	GAL	6.71	AZL	89.13	HCA	99.61	SMA	204.14	ECC	.28364	INC	.8726	V1	29.505	RP	230.25	LAP	.86	LOP	77.06	VP	22.421	GAP	14.79	AZP	90.15	TAL	31.02	TAP	130.63	RCA	146.24	APO	262.04	V2	23.867	RC	146.870	GL	5.16	GP	-9.36	ZAL	39.83	ZAP	147.65	ETS	196.95	ZAE	166.74	ETE	305.79	ZAC	73.49	ETC	282.82	LVI	-6.95
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.275	VHL	5.592	DLA	11.44	RAL	13.65	RAD	6647.5	VEL	12.286	PTH	7.23	VHP	4.150	DPA	7.63	RAP	46.33	ECC	1.5147	SGT	989.3	SGR	785.2	SG3	536.3	ST	19.0	SR	31.7	SS	10.3																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRS	.8255	CRS	.2848	CST	-.2488	LSA	35.7	MSA	13.6	SSA	3.1																												
50.00	8	54	11	3472.89	-45.82	125.64	253.09	104.55	9	52	4	2472.9	-35.16	96.87	RTF	-.4920	EL1	35.7	EL2	9.5	ALF	61.38																																											
60.00	9	21	12	3400.97	-39.34	121.04	254.97	99.56	10	17	53	2401.0	-31.35	93.09	SG6	1263.0	R23	-1.897	R13	.5730																																													
70.00	9	59	16	3288.95	-33.72	112.91	255.91	95.80	10	54	5	2289.0	-27.87	85.77	SG1	1030.9	SG2	729.8	THA	156.54																																													
80.00	10	54	27	3116.12	-29.69	100.18	256.29	93.34	11	46	23	2116.1	-25.31	73.62																																																			
90.00	12	10	5	2872.03	-28.18	82.33	256.38	92.45	12	57	57	1872.0	-24.34	55.98																																																			
100.00	13	37	18	2590.59	-29.69	61.55	256.29	93.34	14	20	29	1590.6	-25.31	34.98																																																			
110.00	14	58	43	2335.77	-33.72	41.83	255.91	95.80	15	37	39	1335.8	-27.87	14.68																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC										DISTANCE 326.363										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.248	GAL	6.71	AZL	89.09	HCA	100.63	SMA	203.42	ECC	.28129	INC	.9049	V1	29.505	RP	230.63	LAP	.89	LOP	78.08	VP	22.327	GAP	14.46	AZP	90.17	TAL	31.24	TAP	131.87	RCA	146.20	APO	260.64	V2	23.847	RC	149.713	GL	5.37	GP	-9.61	ZAL	39.61	ZAP	146.37	ETS	196.62	ZAE	167.11	ETE	300.92	ZAC	73.28	ETC	282.87	LVI	-6.78
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.016	VHL	5.569	DLA	11.54	RAL	13.33	RAD	6647.4	VEL	12.286	PTH	7.22	VHP	4.043	DPA	7.31	RAP	46.37	ECC	1.9104	SGT	984.8	SGR	797.3	SG3	587.2	ST	18.7	SR	31.6	SS	10.8																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRS	.8251	CRS	.2718	CST	-.2630	LSA	35.6	MSA	13.9	SSA	3.1																												
50.00	8	52	33	3472.74	-45.81	125.63	252.67	104.56	9	50	26	2472.7	-35.16	96.86	RTF	-.4945	EL1	35.5	EL2	9.4	ALF	61.89																																											
60.00	9	19	28	3401.13	-39.34	121.06	254.54	99.55	10	16	9	2401.1	-31.36	93.10	SG6	1267.1	R23	-1.872	R13	.5862																																													
70.00	9	57	24	3289.50	-33.72	112.95	255.48	95.78	10	52	13	2289.5	-27.89	85.80	SG1	1035.1	SG2	730.9	THA	154.23																																													
80.00	10	52	26	3117.06	-29.69	100.25	255.86	93.30	11	44	24	2117.1	-25.33	73.68																																																			
90.00	12	8	1	2873.15	-28.19	82.41	255.95	92.41	12	55	54	1873.2	-24.36	56.05																																																			
100.00	13	35	18	2591.53	-29.69	61.62	255.86	93.30	14	18	30	1591.5	-25.33	35.05																																																			
110.00	14	56	50	2336.32	-33.72	41.87	255.48	95.78	15	35	47	1336.3	-27.89	14.72																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC										DISTANCE 330.073										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.214	GAL	6.71	AZL	89.06	HCA	101.65	SMA	202.76	ECC	.27908	INC	.9374	V1	29.505	RP	231.01	LAP	.92	LOP	79.10	VP	22.237	GAP	14.13	AZP	90.19	TAL	31.44	TAP	133.09	RCA	146.17	APO	259.35	V2	23.807	RC	152.572	GL	5.58	GP	-9.87	ZAL	39.41	ZAP	145.07	ETS	196.31	ZAE	167.40	ETE	295.63	ZAC	73.08	ETC	282.72	LVI	-6.61
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.772	VHL	5.547	DLA	11.65	RAL	13.04	RAD	6647.3	VEL	12.278	PTH	7.22	VHP	3.940	DPA	6.97	RAP	46.19	ECC	1.5064	SGT	979.1	SGR	809.2	SG3	597.4	ST	19.1	SR	31.6	SS	11.2																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRS	.8297	CRS	.2814	CST	-.2479	LSA	35.7	MSA	14.2	SSA	3.1																												
50.00	8	50	58	3472.89	-45.82	125.64	252.28	104.55	9	48	51	2472.9	-35.16	96.87	RTF	-.4907	EL1	35.7	EL2	9.4	ALF	61.11																																											
60.00	9	17	45	3401.60	-39.35	121.10	254.15	99.52	10	14	28	2401.6	-31.37	93.13	SG6	1270.2	R23	-2.123	R13	.5786																																													
70.00	9	55	32	3290.40	-33.73	113.02	255.09	95.74	10	50	23	2290.4	-27.91	85.86	SG1	1031.8	SG2	740.8	THA	153.05																																													
80.00	10	50	27	3118.39	-29.70	100.35	255.46	93.25	11	42	25	2118.4	-25.35	73.77																																																			
90.00	12	5	57	2874.69	-28.19	82.52	255.55	92.35	12	53	52	1874.7	-24.39	56.16																																																			
100.00	13	33	18	2592.87	-29.70	61.72	255.46	93.25	14	16	31	1592.9	-25.35	35.14																																																			
110.00	14	54	59	2337.21	-33.73	41.94	255.09	95.74	15	33	56	1337.2	-27.91	14.78																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC										DISTANCE 333.793										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.184	GAL	6.70	AZL	89.03	HCA	102.66	SMA	202.14	ECC	.27702	INC	.9699	V1	29.505	RP	231.39	LAP	.95	LOP	80.11	VP	22.149	GAP	13.81	AZP	90.21	TAL	31.62	TAP	134.29	RCA	146.15	APO	258.14	V2	23.767	RC	155.447	GL	5.79	GP	-10.14	ZAL	39.22	ZAP	143.75	ETS	196.00	ZAE	167.59	ETE	289.95	ZAC	72.87	ETC	282.77	LVI	-6.44
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.542	VHL	5.526	DLA	11.78	RAL	12.76	RAD	6647.2	VEL	12.267	PTH	7.21	VHP	3.841	DPA	6.63	RAP	46.00	ECC	1.5026	SGT	972.7	SGR	822.1	SG3	628.8	ST	19.5	SR	31.5	SS	11.7																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRS	.8336	CRS	.2906	CST	-.2340	LSA	35.8	MSA	14.6	SSA	3.2																												
50.00	8	49	24	3473.29	-45.82	125.68	251.93	104.52	9	47	18	2473.3	-35.18	96.90	RTF	-.4465	EL1	35.8	EL2	9.5	ALF	60.42																																											
60.00	9	16	3	3402.36	-39.36	121.16	253.80	99.48	10	12	46	2402.4	-31.39	93.18	SG6	1273.6	R23	-2.359	R13	.5730																																													
70.00	9	53	42	3291.61	-33.73	113.12	254.73	95.68	10	48	33	2291.6	-27.94	85.95	SG1	1028.3	SG2	751.4	THA	151.64																																													
80.00	10	48	27	3120.08	-29.70	100.48	255.10	93.18	11	40	27	2120.1	-25.39	73.89																																																			
90.00	12	3	53	2876.60	-28.20	82.66	255.18	92.28	12	51	50	1876.6	-24.42	56.29																																																			
100.00	13	31	19	2594.55	-29.70	61.84	255.10	93.18	14	14	33	1594.6	-25.39	35.25																																																			
110.00	14	53	8	2338.43	-33.73	42.04	254.73	95.68	15	32	6	1338.4	-27.94	14.86																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.193 GAL 6.70 AZL 89.00 HCA 103.87 SMA 201.57 ECC .27508 INC 1.0027 V1 29.505
RP 231.77 LAP .97 LOP 81.12 VP 22.065 GAP 13.49 AZP 90.24 TAL 31.79 TAP 135.47 RCA 146.12 APO 257.02 V2 23.728
RC 158.336 GL 8.01 GP -10.42 ZAL 39.06 ZAP 142.41 ETS 193.70 ZAE 167.66 ETE 283.97 ZAC 72.86 ETC 282.83 LVI -6.27

DISTANCE 337.522

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.325 VHL 5.507 DLA 11.88 RAL 12.49 RAD 6647.1 VEL 12.258 PTH 7.20 VHP 3.747 DPA 6.26 RAP 45.78 ECC 1.4981
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 47 53 3473.95 -45.83 125.74 251.61 104.48 9 45 47 2473.9 -35.20 96.94
60.00 9 14 23 3403.40 -39.37 121.25 253.47 99.42 10 11 6 2403.4 -31.42 93.25
70.00 9 51 31 3293.14 -33.74 113.24 254.39 95.62 10 46 44 2293.1 -27.97 86.05
80.00 10 46 27 3122.11 -29.71 100.83 254.75 93.10 11 38 29 2122.1 -25.42 74.02
90.00 12 1 49 2876.87 -26.20 82.83 254.83 92.20 12 49 48 1878.9 -24.46 56.44
100.00 13 29 19 2596.58 -26.71 62.00 254.75 93.10 14 12 35 1596.6 -25.42 35.39
110.00 14 51 18 2339.98 -33.74 42.15 254.39 95.62 15 30 18 1340.0 -27.97 14.97

DIFFERENTIAL CORRECTIONS

TDE -.3308 TRA -.6123 TC3 .5672 BAU .3041
RDE -.6013 RRA .1158 RC3 -.4910 FAU .23191
FDE .1828 FRA-2.1820 FC3-6.8208 B8P 1314
BDE .6863 BRA .6231 BC3 .7502 F8P 1042

MID-COURSE EXECUTION ACCURACY

SGT 965.6 SGR 836.1 SG3 661.3
RRR -.2510 RRF .5329 RTF -.4208
SGB 1277.3 R23 -.2581 R13 .5692
SG1 1024.5 S62 762.8 THA 149.97

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 31.3 S8 12.2
CRT .8367 CR8 .2987 CST -.2222
LSA 35.9 MSA 15.0 S8A 3.2
EL1 35.8 EL2 9.5 ALF 59.80

LAUNCH DATE AUG 31 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.129 GAL 6.70 AZL 88.98 HCA 104.88 SMA 201.04 ECC .27327 INC 1.0355 V1 29.505
RP 232.14 LAP 1.00 LOP 82.13 VP 21.983 GAP 13.18 AZP 90.26 TAL 31.95 TAP 136.63 RCA 146.10 APO 255.98 V2 23.689
RC 161.238 GL 6.22 GP -10.70 ZAL 38.91 ZAP 141.05 ETS 195.40 ZAE 167.59 ETE 277.80 ZAC 72.44 ETC 282.89 LVI -6.11

DISTANCE 341.258

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.120 VHL 5.488 DLA 12.01 RAL 12.24 RAD 6647.1 VEL 12.250 PTH 7.20 VHP 3.658 DPA 5.89 RAP 45.54 ECC 1.4957
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 46 23 3474.85 -45.85 125.82 251.32 104.42 9 44 18 2474.6 -35.24 97.00
60.00 9 12 44 3404.71 -39.38 121.35 253.17 99.35 10 9 29 2404.7 -31.46 93.34
70.00 9 50 1 3294.98 -33.76 113.38 254.08 95.53 10 44 56 2295.0 -28.02 86.18
80.00 10 44 27 3124.49 -29.72 100.80 254.44 93.01 11 36 31 2124.5 -25.47 74.19
90.00 11 59 44 2881.50 -26.21 83.02 254.51 92.10 12 47 45 1881.5 -24.50 56.82
100.00 13 27 18 2598.96 -29.72 62.17 254.44 93.01 14 10 37 1599.0 -25.47 35.55
110.00 14 49 28 2341.80 -33.76 42.30 254.08 95.53 15 28 30 1341.8 -28.02 15.09

DIFFERENTIAL CORRECTIONS

TDE -.3349 TRA -.6195 TC3 .5453 BAU .3029
RDE -.5969 RRA .1057 RC3 -.5182 FAU .24257
FDE .2042 FRA-2.3132 FC3-6.9723 B8P 1316
BDE .6844 BRA .6284 BC3 .7523 F8P 1102

MID-COURSE EXECUTION ACCURACY

SGT 958.0 SGR 851.3 SG3 695.0
RRR -.2418 RRF .5757 RTF -.3922
SGB 1281.5 R23 -.2796 R13 .5666
SG1 1020.2 S62 775.6 THA 148.04

ORBIT DETERMINATION ACCURACY

ST 20.1 SR 31.2 S8 12.7
CRT .8394 CR8 .3067 CST -.2109
LSA 36.0 MSA 15.4 S8A 3.2
EL1 35.9 EL2 9.5 ALF 59.19

LAUNCH DATE AUG 31 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.105 GAL 6.69 AZL 88.93 HCA 105.88 SMA 200.58 ECC .27157 INC 1.0687 V1 29.505
RP 232.51 LAP 1.03 LOP 83.13 VP 21.904 GAP 12.87 AZP 90.29 TAL 32.09 TAP 137.77 RCA 146.08 APO 255.01 V2 23.650
RC 164.150 GL 6.44 GP -10.99 ZAL 38.79 ZAP 139.66 ETS 195.10 ZAE 167.38 ETE 271.58 ZAC 72.23 ETC 282.95 LVI -5.94

DISTANCE 345.002

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.925 VHL 5.470 DLA 12.14 RAL 12.00 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 3.570 DPA 5.50 RAP 45.28 ECC 1.4925
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 54 3475.99 -45.87 125.92 251.06 104.34 9 42 50 2476.0 -35.28 97.07
60.00 9 11 6 3406.28 -39.40 121.48 252.89 99.26 10 7 52 2406.3 -31.51 93.45
70.00 9 48 12 3297.11 -33.77 113.54 253.80 95.44 10 43 9 2297.1 -28.07 86.32
80.00 10 42 26 3127.20 -29.73 101.00 254.15 92.91 11 34 33 2127.2 -25.52 74.37
90.00 11 57 38 2884.48 -26.22 83.24 254.22 91.99 12 45 43 1884.5 -24.55 56.82
100.00 13 25 18 2601.67 -29.73 62.37 254.15 92.91 14 8 40 1601.7 -25.52 35.74
110.00 14 47 38 2343.93 -33.77 42.46 253.80 95.44 15 26 42 1343.9 -28.07 15.24

DIFFERENTIAL CORRECTIONS

TDE -.3385 TRA -.6274 TC3 .5210 BAU .3021
RDE -.5923 RRA .0950 RC3 -.5486 FAU .25333
FDE .2275 FRA-2.4483 FC3-7.3345 B8P 1315
BDE .6822 BRA .6346 BC3 .7551 F8P 1163

MID-COURSE EXECUTION ACCURACY

SGT 950.0 SGR 837.6 SG3 729.7
RRR -.2298 RRF .5982 RTF -.3009
SGB 1286.6 R23 -.2993 R13 .5686
SG1 1019.5 S62 789.9 THA 145.78

ORBIT DETERMINATION ACCURACY

ST 20.4 SR 31.1 S8 13.2
CRT .8416 CR8 .3148 CST -.2003
LSA 36.0 MSA 15.8 S8A 3.2
EL1 35.9 EL2 9.5 ALF 58.60

LAUNCH DATE AUG 31 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.082 GAL 6.68 AZL 88.90 HCA 106.88 SMA 200.09 ECC .26999 INC 1.1019 V1 29.505
RP 232.89 LAP 1.06 LOP 84.14 VP 21.828 GAP 12.56 AZP 90.32 TAL 32.22 TAP 138.80 RCA 146.07 APO 254.11 V2 23.612
RC 167.073 GL 6.65 GP -11.29 ZAL 38.87 ZAP 138.26 ETS 194.80 ZAE 167.02 ETE 265.48 ZAC 72.02 ETC 283.02 LVI -5.77

DISTANCE 348.752

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.741 VHL 5.454 DLA 12.29 RAL 11.78 RAD 6646.9 VEL 12.234 PTH 7.18 VHP 3.487 DPA 5.09 RAP 45.00 ECC 1.4895
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 28 3477.37 -45.89 126.05 250.83 104.25 9 41 25 2477.4 -35.34 97.16
60.00 9 9 29 3408.12 -39.42 121.64 252.65 99.16 10 6 17 2408.1 -31.57 93.57
70.00 9 46 23 3299.54 -33.79 113.73 253.54 95.33 10 41 22 2299.5 -28.12 86.49
80.00 10 40 25 3130.24 -29.74 101.23 253.88 92.79 11 32 35 2130.2 -25.58 74.58
90.00 11 55 32 2887.81 -26.22 83.48 253.95 91.87 12 43 40 1887.8 -24.61 57.05
100.00 13 23 17 2604.71 -29.74 62.60 253.88 92.79 14 6 42 1604.7 -25.58 35.95
110.00 14 45 49 2346.36 -33.79 42.65 253.54 95.33 15 24 55 1346.4 -28.12 15.40

DIFFERENTIAL CORRECTIONS

TDE -.3420 TRA -.6364 TC3 .4936 BAU .3016
RDE -.5874 RRA .0839 RC3 -.5760 FAU .26476
FDE .2329 FRA-2.5872 FC3-7.7070 B8P 1312
BDE .6797 BRA .6419 BC3 .7586 F8P 1230

MID-COURSE EXECUTION ACCURACY

SGT 942.0 SGR 885.3 SG3 765.4
RRR -.2138 RRF .6206 RTF -.3257
SGB 1292.7 R23 -.3164 R13 .5692
SG1 1010.5 S62 806.1 THA 143.10

ORBIT DETERMINATION ACCURACY

ST 20.7 SR 30.9 S8 13.7
CRT .8435 CR8 .3228 CST -.1902
LSA 36.0 MSA 16.2 S8A 3.2
EL1 35.9 EL2 9.6 ALF 57.99



LAUNCH DATE AUG 31 1973 FLIGHT TIME 154.00 ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC										DISTANCE 352.508										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.061	GAL	6.67	AZL	88.86	HCA	107.68	SMA	199.67	ECC	.26850	INC	1.1355	V1	29.505	RP	233.25	LAP	1.08	LOP	85.13	VP	21.755	GAP	12.26	AZP	90.35	TAL	32.33	TAP	140.01	RCA	146.06	APO	253.28	V2	23.573	RC	170.003	GL	6.87	GP	-11.59	ZAL	38.58	ZAP	136.83	ETS	194.51	ZAE	166.52	ETE	259.57	ZAC	71.80	ETC	283.09	LVI	-5.60
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.566	VHL	5.437	DLA	12.44	RAL	11.57	RAD	6646.8	VEL	12.227	PTH	7.18	VHP	3.408	DPA	4.66	RAP	44.70	ECC	1.4866	SGT	934.4	SGR	904.3	SG3	801.8	ST	21.0	SR	30.7	SS	14.3	CRT	.8450	CR8	.3307	C8T	-.1807	LSA	36.1	MSA	16.7	SSA	3.2																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG	SG2	1005.5	SG2	824.5	THA	139.82	EL1	36.0	EL2	9.6	ALF	57.36																												
50.00	8	42	2	3478.97	-45.92	126.19	250.62	104.14	9	40	1	2479.0	-35.40	97.26																																																			
60.00	9	7	52	3410.21	-39.44	121.81	252.43	99.05	10	4	42	2410.2	-31.63	93.71																																																			
70.00	9	44	33	3302.25	-33.80	113.94	253.31	95.20	10	39	36	2302.3	-28.19	88.67																																																			
80.00	10	38	23	3133.60	-29.75	101.48	253.63	92.66	11	30	37	2133.6	-25.64	74.81																																																			
90.00	11	53	24	2891.48	-26.23	83.75	253.70	91.74	12	41	36	1891.5	-24.67	57.30																																																			
100.00	13	21	15	2608.07	-29.75	62.85	253.63	92.66	14	4	43	1608.1	-25.64	36.18																																																			
110.00	14	44	0	2349.07	-33.80	42.86	253.31	95.20	15	23	9	1349.1	-28.19	15.59																																																			

LAUNCH DATE AUG 31 1973 FLIGHT TIME 156.00 ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC										DISTANCE 356.269										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.041	GAL	6.67	AZL	88.83	HCA	108.88	SMA	199.28	ECC	.26710	INC	1.1694	V1	29.505	RP	233.62	LAP	1.11	LOP	86.13	VP	21.683	GAP	11.96	AZP	90.37	TAL	32.42	TAP	141.10	RCA	146.05	APO	252.50	V2	23.536	RC	172.941	GL	7.10	GP	-11.90	ZAL	38.50	ZAP	135.38	ETS	194.21	ZAE	165.87	ETE	254.01	ZAC	71.58	ETC	283.16	LVI	-5.43
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.399	VHL	5.422	DLA	12.60	RAL	11.38	RAD	6646.8	VEL	12.220	PTH	7.17	VHP	3.333	DPA	4.24	RAP	44.39	ECC	1.4838	SGT	927.5	SGR	924.6	SG3	839.1	ST	21.3	SR	30.5	SS	14.8	CRT	.8462	CR8	.3390	C8T	-.1713	LSA	36.1	MSA	17.1	SSA	3.2																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG	SG2	1309.6	R23	-.3324	R13	.5897	EL1	35.9	EL2	9.6	ALF	56.72																												
50.00	8	40	38	3480.79	-45.95	126.36	250.44	104.01	9	38	39	2480.8	-35.47	97.38																																																			
60.00	9	6	16	3412.54	-39.47	122.00	252.23	98.92	10	3	9	2412.5	-31.70	93.87																																																			
70.00	9	42	44	3305.26	-33.82	114.17	253.09	95.07	10	37	49	2305.3	-28.26	88.88																																																			
80.00	10	36	21	3137.29	-29.76	101.75	253.41	92.51	11	28	38	2137.3	-25.71	75.06																																																			
90.00	11	51	16	2895.49	-28.24	84.04	253.47	91.59	12	39	31	1895.5	-24.74	57.58																																																			
100.00	13	19	13	2611.76	-29.76	63.12	253.41	92.51	14	2	44	1611.8	-25.71	38.43																																																			
110.00	14	42	10	2352.07	-33.82	43.09	253.09	95.07	15	21	22	1352.1	-28.26	15.79																																																			

LAUNCH DATE AUG 31 1973 FLIGHT TIME 158.00 ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC										DISTANCE 360.035										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.023	GAL	6.66	AZL	88.80	HCA	109.67	SMA	198.91	ECC	.26580	INC	1.2035	V1	29.505	RP	233.99	LAP	1.13	LOP	87.12	VP	21.614	GAP	11.66	AZP	90.41	TAL	32.51	TAP	142.18	RCA	146.04	APO	251.78	V2	23.498	RC	175.886	GL	7.32	GP	-12.21	ZAL	38.44	ZAP	133.92	ETS	193.91	ZAE	165.09	ETE	248.85	ZAC	71.37	ETC	283.23	LVI	-5.26
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.239	VHL	5.407	DLA	12.77	RAL	11.20	RAD	6646.7	VEL	12.214	PTH	7.17	VHP	3.262	DPA	3.80	RAP	44.05	ECC	1.4812	SGT	922.1	SGR	946.3	SG3	877.1	ST	21.6	SR	30.3	SS	15.3	CRT	.8472	CR8	.3484	C8T	-.1610	LSA	36.1	MSA	17.6	SSA	3.2																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG	SG2	1321.2	R23	-.3189	R13	.6139	EL1	35.9	EL2	9.7	ALF	56.02																												
50.00	8	39	15	3482.84	-45.98	126.54	250.29	103.87	9	37	18	2482.8	-35.54	97.52																																																			
60.00	9	4	41	3415.13	-39.49	122.22	252.06	98.77	10	1	36	2415.1	-31.78	94.04																																																			
70.00	9	40	54	3308.54	-33.84	114.43	252.90	94.92	10	36	3	2308.5	-28.33	87.10																																																			
80.00	10	34	17	3141.30	-29.77	102.05	253.21	92.36	11	26	38	2141.3	-25.78	73.34																																																			
90.00	11	49	6	2899.85	-28.25	84.36	253.27	91.43	12	37	26	1899.8	-24.81	57.88																																																			
100.00	13	17	9	2615.77	-29.77	63.42	253.21	92.36	14	0	45	1615.8	-25.78	36.71																																																			
110.00	14	40	21	2355.36	-33.84	43.35	252.90	94.92	15	19	36	1355.4	-28.33	16.02																																																			

LAUNCH DATE AUG 31 1973 FLIGHT TIME 160.00 ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC										DISTANCE 363.806										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	33.008	GAL	6.84	AZL	88.76	HCA	110.66	SMA	198.58	ECC	.26458	INC	1.2379	V1	29.505	RP	234.35	LAP	1.16	LOP	88.11	VP	21.548	GAP	11.36	AZP	90.44	TAL	32.58	TAP	143.23	RCA	146.04	APO	251.12	V2	23.461	RC	178.836	GL	7.55	GP	-12.53	ZAL	38.40	ZAP	132.44	ETS	193.60	ZAE	164.19	ETE	244.12	ZAC	71.15	ETC	283.31	LVI	-5.09
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	29.087	VHL	5.393	DLA	12.94	RAL	11.02	RAD	6646.6	VEL	12.208	PTH	7.16	VHP	3.194	DPA	3.34	RAP	43.70	ECC	1.4787	SGT	918.6	SGR	969.4	SG3	915.5	ST	22.0	SR	30.0	SS	15.9	CRT	.8478	CR8	.3571	C8T	-.1519	LSA	36.1	MSA	18.0	SSA	3.2																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIME	INJ	2	LAT	INJ	2	LONG	SG2	1335.5	R23	-.2709	R13	.6539	EL1	35.9	EL2	9.7	ALF	55.30																												
50.00	8	37	53	3485.09	-46.02	126.75	250.16	103.72	9	35	58	2485.1	-35.63	97.66																																																			
60.00	9	3	6	3417.95	-39.52	122.45	251.91	98.62	10	0	4	2417.9	-31.86	94.23																																																			
70.00	9	39	4	3312.10	-33.86	114.70	252.73	94.75	10	34	17	2312.1	-28.42	87.35																																																			
80.00	10	32	12	3145.63	-29.78	102.37	253.03	92.19	11	24	38	2145.6	-25.86	75.63																																																			
90.00	11	46	54	2904.54	-28.25	84.71	253.08	91.26	12	35	19	1904.5	-24.89	58.20																																																			
100.00	13	15	4	2620.10	-29.78	63.74	253.03	92.19	13	58	44	1620.1	-25.86	37.00																																																			
110.00	14	38	31	2358.92	-33.86	43.62	252.73	94.75	15	17	50	1358.9	-28.42	16.26																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 9 1974

DISTANCE 367.581

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.990 GAL 6.63 AZL 88.73 HCA 111.64 SMA 198.27 ECC .26343 INC 1.2726 V1 29.509  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.485 GAP 11.07 AZP 90.47 TAL 32.64 TAP 144.28 RCA 146.04 APO 250.50 V2 23.424  
 RC 181.791 GL 7.78 GP -12.85 ZAL 38.37 ZAP 130.93 ETS 193.29 ZAE 163.18 ETE 239.83 ZAC 70.93 ETC 283.39 LVI -4.92

PLANETOCENTRIC CONIC  
 C3 28.940 VHL 5.380 DLA 13.13 RAL 10.87 RAD 8846.6 VEL 12.202 PTH 7.16 VHP 3.129 DPA 2.87 RAP 43.32 ECC 1.4763  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 36 31 3487.56 -46.06 126.97 250.06 103.55 9 34 39 2487.6 -35.72 97.82  
 60.00 9 1 32 3421.01 -39.55 122.71 251.78 98.45 9 58 33 2421.0 -31.96 94.44  
 70.00 9 37 14 3315.93 -33.88 115.00 252.59 94.58 10 32 30 2315.9 -28.51 87.61  
 80.00 10 30 6 3150.27 -29.80 102.72 252.86 92.01 11 22 37 2150.3 -25.95 75.95  
 90.00 11 44 41 2909.57 -28.26 85.07 252.91 91.08 12 33 11 1909.6 -24.97 58.54  
 100.00 13 12 58 2624.74 -29.80 64.08 252.86 92.01 13 56 43 1624.7 -25.95 37.32  
 110.00 14 36 40 2362.75 -33.88 43.92 252.59 94.58 15 16 3 1362.8 -28.51 16.53

DIFFERENTIAL CORRECTIONS  
 TDE -.3585 TRA -.7021 TC3 .3047 BAU .3095 SGT 918.1 SGR 993.9 S63 954.5 ST 22.3 SR 29.8 S8 16.5  
 RDE -.5584 RRA .0216 RC3 -.7398 FAU .3239D RRT -.0569 RRF .7237 RTF -.0790 CRT .8482 CRS .3672 CST -.1418  
 FDE .4199 FRA-3.3182 FC3-9.6893 BSP 1346 SGB 1353.0 R23 -.1661 R13 .7054 LSA 36.1 MSA 16.5 S8A 3.2  
 BDE .6636 BRA .7025 BC3 .8000 FSP 1574 SG1 1002.2 SG2 908.9 THA 107.81 EL1 35.9 EL2 9.8 ALF 54.52

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 31 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 11 1974

DISTANCE 371.359

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.975 GAL 6.62 AZL 88.69 HCA 112.62 SMA 197.99 ECC .26237 INC 1.3078 V1 29.505  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.421 GAP 10.78 AZP 90.50 TAL 32.68 TAP 145.30 RCA 146.04 APO 249.93 V2 23.387  
 RC 184.750 GL 8.01 GP -13.18 ZAL 38.35 ZAP 129.41 ETS 192.98 ZAE 162.07 ETE 235.94 ZAC 70.72 ETC 283.47 LVI -4.75

PLANETOCENTRIC CONIC  
 C3 28.800 VHL 5.367 DLA 13.32 RAL 10.72 RAD 8846.5 VEL 12.196 PTH 7.15 VHP 3.068 DPA 2.38 RAP 42.93 ECC 1.4740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 35 11 3490.23 -46.10 127.22 249.97 103.37 9 33 21 2490.2 -35.82 98.00  
 60.00 8 59 57 3424.30 -39.59 122.98 251.67 98.26 9 57 1 2424.3 -32.05 94.67  
 70.00 9 35 23 3320.04 -33.90 115.32 252.46 94.39 10 30 43 2320.0 -28.60 87.89  
 80.00 10 27 59 3155.22 -29.81 103.08 252.72 91.82 11 20 34 2155.2 -26.03 76.30  
 90.00 11 42 26 2914.93 -28.27 85.46 252.76 90.88 12 31 1 1914.9 -25.06 58.91  
 100.00 13 10 51 2629.69 -29.81 64.45 252.72 91.82 13 54 41 1629.7 -26.03 37.66  
 110.00 14 34 49 2366.86 -33.90 44.24 252.46 94.39 15 14 16 1366.9 -28.60 16.81

DIFFERENTIAL CORRECTIONS  
 TDE -.3576 TRA -.7159 TC3 .2613 BAU .3155 SGT 917.2 SGR 1021.2 S63 995.5 ST 22.4 SR 29.5 S8 17.0  
 RDE -.5524 RRA .0071 RC3 -.7767 FAU .33660 RRT -.0158 RRF .7428 RTF -.0219 CRT .8472 CRS .3669 CST -.1449  
 FDE .4504 FRA-3.4796 FC-10.1184 BSP 1352 SGB 1372.6 R23 -.0384 R13 .7419 LSA 35.9 MSA 19.0 S8A 3.1  
 BDE .6580 BRA .7159 BC3 .8195 FSP 1634 SG1 1021.7 SG2 916.6 THA 94.17 EL1 35.7 EL2 9.8 ALF 54.07

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 31 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 13 1974

DISTANCE 375.141

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.962 GAL 6.60 AZL 88.66 HCA 113.60 SMA 197.73 ECC .26137 INC 1.3434 V1 29.505  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.361 GAP 10.50 AZP 90.54 TAL 32.71 TAP 146.31 RCA 146.05 APO 249.41 V2 23.351  
 RC 187.714 GL 8.24 GP -13.51 ZAL 38.35 ZAP 127.88 ETS 192.66 ZAE 160.87 ETE 232.44 ZAC 70.50 ETC 283.55 LVI -4.58

PLANETOCENTRIC CONIC  
 C3 28.664 VHL 5.354 DLA 13.52 RAL 10.58 RAD 8846.5 VEL 12.191 PTH 7.15 VHP 3.010 DPA 1.89 RAP 42.53 ECC 1.4717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 51 3493.12 -46.15 127.48 249.92 103.17 9 32 4 2493.1 -35.93 98.19  
 60.00 8 58 22 3427.84 -39.62 123.27 251.59 98.07 9 55 30 2427.8 -32.16 94.91  
 70.00 9 33 31 3324.43 -33.93 115.66 252.35 94.19 10 28 55 2324.4 -28.70 88.20  
 80.00 10 25 50 3160.51 -29.82 103.48 252.59 91.61 11 18 30 2160.5 -26.13 76.66  
 90.00 11 40 9 2920.64 -28.27 85.88 252.63 90.67 12 28 49 1920.6 -25.15 59.31  
 100.00 13 8 42 2634.98 -29.82 64.84 252.59 91.61 13 52 37 1635.0 -26.13 38.03  
 110.00 14 32 57 2371.25 -33.93 44.58 252.35 94.19 15 12 28 1371.2 -28.70 17.11

DIFFERENTIAL CORRECTIONS  
 TDE -.3638 TRA -.7383 TC3 .2040 BAU .3212 SGT 927.2 SGR 1047.5 S63 1033.7 ST 23.0 SR 29.2 S8 17.8  
 RDE -.5445 RRA -.0065 RC3 -.8129 FAU .34840 RRT .0438 RRF .7597 RTF .512 CRT .8479 CRS .3845 CST -.1262  
 FDE .5057 FRA-3.6220 FC-10.5224 BSP 1410 SGB 1398.9 R23 .0969 R13 .7537 LSA 36.0 MSA 19.6 S8A 3.1  
 BDE .6549 BRA .7383 BC3 .8381 FSP 1716 SG1 1051.0 SG2 923.2 THA 80.14 EL1 35.8 EL2 9.9 ALF 52.93

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 31 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 15 1974

DISTANCE 378.925

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.950 GAL 6.59 AZL 88.62 HCA 114.58 SMA 197.49 ECC .26043 INC 1.3793 V1 29.505  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.302 GAP 10.21 AZP 90.57 TAL 32.73 TAP 147.31 RCA 146.06 APO 248.92 V2 23.315  
 RC 190.680 GL 8.48 GP -13.85 ZAL 38.36 ZAP 126.33 ETS 192.33 ZAE 159.59 ETE 229.28 ZAC 70.29 ETC 283.63 LVI -4.41

PLANETOCENTRIC CONIC  
 C3 28.534 VHL 5.342 DLA 13.72 RAL 10.45 RAD 8846.4 VEL 12.185 PTH 7.14 VHP 2.955 DPA 1.38 RAP 42.11 ECC 1.4698  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 32 31 3496.20 -46.19 127.76 249.88 102.95 9 30 48 2496.2 -36.05 98.39  
 60.00 8 56 47 3431.61 -39.66 123.59 251.52 97.86 9 53 59 2431.6 -32.27 95.16  
 70.00 9 31 38 3329.09 -33.95 116.02 252.26 93.98 10 27 7 2329.1 -28.80 88.52  
 80.00 10 23 39 3166.11 -29.83 103.89 252.48 91.39 11 16 25 2166.1 -26.23 77.05  
 90.00 11 37 49 2926.69 -28.26 86.32 252.51 90.45 12 26 36 1926.7 -25.24 59.72  
 100.00 13 6 30 2640.58 -29.83 65.26 252.48 91.39 13 50 31 1640.6 -26.23 38.42  
 110.00 14 31 4 2375.91 -33.95 44.94 252.26 93.98 15 10 40 1375.9 -28.80 17.44

DIFFERENTIAL CORRECTIONS  
 TDE -.3675 TRA -.7599 TC3 .1462 BAU .3292 SGT 940.1 SGR 1075.8 S63 1072.6 ST 23.4 SR 28.8 S8 18.2  
 RDE -.5366 RRA -.0207 RC3 -.8504 FAU .36040 RRT .1029 RRF .7760 RTF .1224 CRT .8477 CRS .3971 CST -.1142  
 FDE .5586 FRA-3.7674 FC-10.9347 BSP 1465 SGB 1428.7 R23 .1713 R13 .7580 LSA 36.0 MSA 20.1 S8A 3.1  
 BDE .6504 BRA .7602 BC3 .8629 FSP 1792 SG1 1092.0 SG2 921.2 THA 71.36 EL1 35.7 EL2 10.0 ALF 51.96

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE AUG 31 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.938 GAL 6.57 AZL 88.58 HCA 115.55 SMA 197.27 ECC .25956 INC 1.4157 V1 29.503  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.246 GAP 9.93 AZP 90.61 TAL 32.74 TAP 148.29 RCA 146.07 APO 248.48 V2 23.279  
 RC 193.849 GL 8.73 GP -14.19 ZAL 30.39 ZAP 124.77 ETS 191.99 ZAE 156.25 ETE 226.43 ZAC 70.07 ETC 283.72 LVI -4.23

PLANETOCENTRIC CONIC  
 C3 28.408 VHL 5.330 DLA 13.94 RAL 10.34 RAD 6646.4 VEL 12.180 PTH 7.14 VHP 2.904 DPA .87 RAP 41.68 ECC 1.4675  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 31 12 3499.49 -46.24 128.07 249.86 102.73 9 29 32 2498.5 -36.17 98.61  
 60.00 8 55 12 3435.60 -39.69 123.92 251.47 97.63 9 52 28 2435.6 -32.39 95.44  
 70.00 9 29 43 3334.02 -33.97 116.41 252.18 93.75 10 25 17 2334.0 -28.91 88.86  
 80.00 10 21 25 3172.02 -29.84 104.33 252.39 91.16 11 14 17 2172.0 -26.33 77.46  
 90.00 11 35 27 2933.08 -28.20 86.79 252.41 90.21 12 24 20 1933.1 -25.34 60.17  
 100.00 13 4 17 2646.49 -29.84 65.70 252.39 91.16 13 48 24 1646.5 -26.33 38.82  
 110.00 14 29 10 2380.84 -33.97 45.32 252.18 93.75 15 8 50 1380.8 -28.91 17.78

DIFFERENTIAL CORRECTIONS  
 TDE -.3677 TRA -.7800 TC3 .0891 BAU .3397 SGT 954.8 SGR 1107.0 SG3 1113.4 ST 23.6 SR 28.5 SS 18.8  
 RDE -.5291 RRA -.0360 RC3 -.8901 FAU .37290 RRT .1601 RRF .7921 RTF .1908 CRT .8463 CRS .4007 CST -.1139  
 FDE .6026 FRA-3.9240 FC-11.3641 BSP 1521 SGB 1461.8 R23 .2008 R13 .7690 LSA 35.9 MSA 20.6 SSA 3.1  
 BDE .6444 BRA .7808 BC3 .8945 FSP 1855 SG1 1139.8 SG2 915.3 THA 66.42 EL1 35.6 EL2 10.1 ALF 51.25

LAUNCH DATE AUG 31 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.928 GAL 6.55 AZL 88.55 HCA 116.52 SMA 197.07 ECC .25874 INC 1.4526 V1 29.505  
 RP 236.48 LAP 1.30 LOP 93.98 VP 21.191 GAP 9.65 AZP 90.85 TAL 32.73 TAP 149.25 RCA 146.08 APO 248.07 V2 23.244  
 RC 196.819 GL 8.97 GP -14.53 ZAL 38.43 ZAP 123.20 ETS 191.65 ZAE 156.84 ETE 223.85 ZAC 69.86 ETC 283.80 LVI -4.06

PLANETOCENTRIC CONIC  
 C3 28.288 VHL 5.318 DLA 14.16 RAL 10.25 RAD 6646.3 VEL 12.175 PTH 7.14 VHP 2.895 DPA .34 RAP 41.24 ECC 1.4658  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 53 3502.98 -46.29 128.39 249.87 102.48 9 28 16 2503.0 -36.30 98.84  
 60.00 8 53 36 3439.84 -39.73 124.28 251.44 97.40 9 50 56 2439.8 -32.51 95.73  
 70.00 9 27 48 3339.23 -33.99 116.81 252.13 93.52 10 23 27 2339.2 -29.03 89.22  
 80.00 10 19 10 3178.27 -29.85 104.79 252.32 90.92 11 12 8 2178.3 -26.43 77.89  
 90.00 11 33 2 2939.83 -28.28 87.29 252.33 89.97 12 22 2 1939.8 -25.44 60.63  
 100.00 13 2 2 2652.74 -29.85 66.16 252.32 90.92 13 46 14 1652.7 -26.43 39.26  
 110.00 14 27 14 2386.05 -33.99 45.73 252.13 93.52 15 7 0 1386.1 -29.03 18.14

DIFFERENTIAL CORRECTIONS  
 TDE -.3726 TRA -.8063 TC3 .0212 BAU .3514 SGT 981.9 SGR 1137.2 SG3 1151.3 ST 24.2 SR 28.1 SS 19.5  
 RDE -.5200 RRA -.0506 RC3 -.9289 FAU .38446 RRT .2265 RRF .8063 RTF .2654 CRT .8461 CRS .4167 CST -.0980  
 FDE .6680 FRA-4.0620 FC-11.7670 BSP 1606 SGB 1502.5 R23 .2289 R13 .7778 LSA 35.9 MSA 21.2 SSA 3.1  
 BDE .6397 BRA .8079 BC3 .9292 FSP 1936 SG1 1196.0 SG2 909.4 THA 61.52 EL1 35.6 EL2 10.1 ALF 50.04

LAUNCH DATE AUG 31 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.919 GAL 6.54 AZL 88.51 HCA 117.49 SMA 196.89 ECC .25798 INC 1.4901 V1 29.503  
 RP 236.81 LAP 1.32 LOP 94.95 VP 21.139 GAP 9.38 AZP 90.69 TAL 32.71 TAP 150.20 RCA 146.10 APO 247.69 V2 23.209  
 RC 199.589 GL 9.22 GP -14.88 ZAL 38.49 ZAP 121.62 ETS 191.29 ZAE 155.38 ETE 221.52 ZAC 69.65 ETC 283.89 LVI -3.88

PLANETOCENTRIC CONIC  
 C3 28.169 VHL 5.307 DLA 14.39 RAL 10.13 RAD 6646.3 VEL 12.170 PTH 7.13 VHP 2.810 DPA -.19 RAP 40.78 ECC 1.4636  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 34 3506.87 -46.35 128.73 249.90 102.23 9 27 1 2506.7 -36.44 99.09  
 60.00 8 52 0 3444.30 -39.77 124.65 251.43 97.15 9 49 24 2444.3 -32.64 96.04  
 70.00 9 25 50 3344.72 -34.02 117.24 252.09 93.26 10 21 35 2344.7 -29.15 89.60  
 80.00 10 16 52 3184.84 -29.85 105.28 252.25 90.66 11 9 57 2184.8 -26.54 78.35  
 90.00 11 30 34 2946.92 -28.28 87.80 252.26 89.71 12 19 41 1946.9 -25.55 61.13  
 100.00 12 59 44 2659.31 -29.85 66.65 252.25 90.66 13 44 3 1659.3 -26.54 39.72  
 110.00 14 25 17 2391.54 -34.02 46.16 252.09 93.26 15 5 8 1391.5 -29.15 18.52

DIFFERENTIAL CORRECTIONS  
 TDE -.3735 TRA -.8308 TC3 -.0454 BAU .3656 SGT 1010.9 SGR 1170.5 SG3 1190.7 ST 24.5 SR 27.7 SS 20.1  
 RDE -.5114 RRA -.0663 RC3 -.9688 FAU .39646 RRT .2879 RRF .8203 RTF .3541 CRT .8445 CRS .4223 CST -.0957  
 FDE .7215 FRA-4.2113 FC-12.1849 BSP 1694 SGB 1546.6 R23 .2363 R13 .7921 LSA 35.9 MSA 21.8 SSA 3.1  
 BDE .6332 BRA .8333 BC3 .9709 FSP 2002 SG1 1256.4 SG2 901.9 THA 58.53 EL1 35.5 EL2 10.2 ALF 49.14

LAUNCH DATE AUG 31 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.910 GAL 6.52 AZL 88.47 HCA 118.45 SMA 196.73 ECC .25727 INC 1.5281 V1 29.505  
 RP 237.14 LAP 1.34 LOP 95.91 VP 21.087 GAP 9.11 AZP 90.73 TAL 32.69 TAP 151.14 RCA 146.12 APO 247.35 V2 23.174  
 RC 202.557 GL 9.48 GP -15.23 ZAL 38.55 ZAP 120.02 ETS 190.93 ZAE 153.88 ETE 219.39 ZAC 69.44 ETC 283.98 LVI -3.71

PLANETOCENTRIC CONIC  
 C3 28.055 VHL 5.297 DLA 14.63 RAL 10.04 RAD 6646.2 VEL 12.166 PTH 7.13 VHP 2.767 DPA -.73 RAP 40.32 ECC 1.4617  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 15 3510.56 -46.40 129.09 249.94 101.96 9 25 46 2510.6 -36.50 99.35  
 60.00 8 50 23 3449.00 -39.81 125.04 251.44 96.88 9 47 52 2449.0 -32.77 96.36  
 70.00 9 23 51 3350.48 -34.04 117.69 252.06 93.00 10 19 42 2350.5 -29.27 90.00  
 80.00 10 14 31 3191.73 -29.86 105.80 252.21 90.39 11 7 43 2191.7 -26.66 78.83  
 90.00 11 28 3 2954.37 -28.27 88.35 252.20 89.44 12 17 18 1954.4 -25.66 61.64  
 100.00 12 57 23 2666.20 -29.86 67.16 252.21 90.39 13 41 49 1666.2 -26.66 40.20  
 110.00 14 23 17 2397.30 -34.04 46.60 252.06 93.00 15 3 15 1397.3 -29.27 18.92

DIFFERENTIAL CORRECTIONS  
 TDE -.3699 TRA -.8524 TC3 -.1099 BAU .3823 SGT 1040.1 SGR 1207.3 SG3 1232.3 ST 24.6 SR 27.3 SS 20.7  
 RDE -.5036 RRA -.0836 RC3 -1.0133 FAU .40909 RRT .3440 RRF .8341 RTF .3970 CRT .8414 CRS .4173 CST -.1075  
 FDE .7611 FRA-4.3755 FC-12.6236 BSP 1794 SGB 1593.6 R23 .2313 R13 .8099 LSA 35.6 MSA 22.4 SSA 3.1  
 BDE .6249 BRA .8565 BC3 1.0192 FSP 2046 SG1 1319.4 SG2 893.6 THA 56.75 EL1 35.3 EL2 10.3 ALF 48.57

LAUNCH DATE AUG 31 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.903 GAL 6.49 AZL 88.43 HCA 119.42 SMA 196.59 ECC .25661 INC 1.5666 V1 29.505  
 RP 237.48 LAP 1.36 LOP 96.88 VP 21.038 GAP 8.84 AZP 90.77 TAL 32.65 TAP 152.06 RCA 146.14 APO 247.03 V2 23.140  
 RC 205.523 GL 9.73 GP -15.58 ZAL 38.63 ZAP 118.43 ETS 190.56 ZAE 152.34 ETE 217.45 ZAC 69.23 ETC 284.06 LVI -19.33

DISTANCE 397.879

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.944 VHL 5.286 DLA 14.88 RAL 9.96 RAD 6846.2 VEL 12.181 PTH 7.13 VHP 2.727 DPA -1.28 RAP 39.85 ECC 1.4599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 56 3514.66 -46.46 129.46 250.01 101.67 9 24 31 2514.7 -36.74 99.62  
 60.00 8 48 44 3453.95 -39.85 125.46 251.46 96.60 9 46 18 2453.9 -32.92 96.70  
 70.00 9 21 50 3356.55 -34.06 118.16 252.05 92.72 10 17 47 2356.5 -29.40 90.43  
 80.00 10 12 7 3199.00 -29.86 106.34 252.18 90.11 11 5 26 2199.0 -26.78 79.33  
 90.00 11 25 28 2962.22 -28.27 88.92 252.16 89.15 12 14 51 1962.2 -25.77 62.19  
 100.00 12 54 59 2673.47 -29.86 67.70 252.18 90.11 13 39 32 1673.5 -26.78 40.70  
 110.00 14 21 18 2403.36 -34.06 47.08 252.05 92.72 15 1 20 1403.4 -29.40 19.33

DIFFERENTIAL CORRECTIONS

TDE -.3782 TRA -.8880 TC3 -.1980 BAU .3998  
 RDE -.4913 RRA -.0972 RC3-1.0522 FAU .41896  
 FDE .8599 FRA-4.4803 FC-12.9800 BSP 1917  
 BDE .6200 BRA .8933 BC3 1.0703 FSP 2148

MID-COURSE EXECUTION ACCURACY

SGT 1096.7 SGR 1236.1 SG3 1265.2  
 RRT .4105 RRF .8446 RTF .4648  
 SGB 1654.0 R23 .2451 R13 .8188  
 SG1 1396.1 SG2 886.9 THA 53.25

ORBIT DETERMINATION ACCURACY

ST 25.4 SR 26.7 SS 21.4  
 CRT .8418 CRS .4455 CST -.0767  
 LSA 35.8 MSA 22.9 S8A 3.0  
 EL1 35.4 EL2 10.3 ALF 46.78

LAUNCH DATE AUG 31 1973

FLIGHT TIME 180.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.896 GAL 6.47 AZL 88.39 HCA 120.38 SMA 198.48 ECC .25600 INC 1.6059 V1 29.505  
 RP 237.81 LAP 1.39 LOP 97.84 VP 20.990 GAP 8.57 AZP 90.81 TAL 32.60 TAP 132.97 RCA 146.16 APO 246.75 V2 23.108  
 RC 208.485 GL 10.00 GP -15.93 ZAL 38.73 ZAP 116.83 ETS 190.17 ZAE 150.78 ETE 215.66 ZAC 69.02 ETC 284.15 LVI -3.38

DISTANCE 401.874

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.836 VHL 5.278 DLA 15.14 RAL 9.89 RAD 6846.2 VEL 12.157 PTH 7.12 VHP 2.690 DPA -1.83 RAP 39.37 ECC 1.4581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 36 3518.97 -46.52 129.86 250.09 101.37 9 23 15 2519.0 -36.89 99.91  
 60.00 8 47 5 3459.13 -39.89 125.89 251.50 96.31 9 44 44 2459.1 -33.06 97.07  
 70.00 9 19 47 3362.89 -34.08 118.65 252.06 92.43 10 15 50 2362.9 -29.54 90.87  
 80.00 10 9 39 3206.60 -29.86 106.90 252.16 89.81 11 3 6 2206.6 -26.90 79.87  
 90.00 11 22 50 2970.43 -28.26 89.52 252.14 88.85 12 12 20 1970.4 -25.89 62.76  
 100.00 12 52 31 2681.07 -29.86 68.27 252.16 89.81 13 37 12 1681.1 -26.90 41.23  
 110.00 14 19 13 2409.71 -34.08 47.57 252.06 92.43 14 59 23 1409.7 -29.54 19.79

DIFFERENTIAL CORRECTIONS

TDE -.3793 TRA -.9182 TC3 -.2759 BAU .4199  
 RDE -.4808 RRA -.1130 RC3-1.0942 FAU .42971  
 FDE .9310 FRA-4.6087 FC-13.3642 BSP 2048  
 BDE .6124 BRA .9251 BC3 1.1284 FSP 2218

MID-COURSE EXECUTION ACCURACY

SGT 1149.6 SGR 1273.5 SG3 1301.1  
 RRT .4662 RRF .8559 RTF .5225  
 SGB 1715.6 R23 .2443 R13 .8320  
 SG1 1473.2 SG2 879.1 THA 51.20

ORBIT DETERMINATION ACCURACY

ST 25.8 SR 26.2 SS 22.1  
 CRT .8399 CRS .4547 CST -.0706  
 LSA 35.8 MSA 23.5 S8A 3.0  
 EL1 35.3 EL2 10.4 ALF 45.80

LAUNCH DATE AUG 31 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.890 GAL 6.45 AZL 88.35 HCA 121.33 SMA 196.34 ECC .25543 INC 1.6457 V1 29.505  
 RP 238.14 LAP 1.41 LOP 98.79 VP 20.944 GAP 8.30 AZP 90.86 TAL 32.54 TAP 153.87 RCA 146.19 APO 246.49 V2 23.073  
 RC 211.443 GL 10.27 GP -16.28 ZAL 38.83 ZAP 115.22 ETS 189.78 ZAE 149.15 ETE 214.01 ZAC 68.81 ETC 284.23 LVI -3.17

DISTANCE 405.471

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.732 VHL 5.266 DLA 15.40 RAL 9.82 RAD 6846.1 VEL 12.152 PTH 7.12 VHP 2.656 DPA -2.39 RAP 38.88 ECC 1.4564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 23 16 3523.48 -46.58 130.28 250.19 101.05 9 21 59 2523.5 -37.06 100.22  
 60.00 8 48 24 3464.55 -39.93 126.35 251.56 96.00 9 43 9 2464.5 -33.22 97.44  
 70.00 9 17 41 3369.53 -34.10 119.17 252.08 92.12 10 13 51 2369.5 -29.68 91.34  
 80.00 10 7 9 3214.55 -29.85 107.49 252.15 89.50 11 0 43 2214.6 -27.02 80.42  
 90.00 11 20 7 2979.03 -28.25 90.15 252.12 88.53 12 9 46 1979.0 -26.00 63.37  
 100.00 12 50 0 2689.02 -29.85 68.86 252.15 89.50 13 34 49 1689.0 -27.02 41.79  
 110.00 14 17 7 2416.35 -34.10 48.09 252.08 92.12 14 57 24 1416.3 -29.68 20.26

DIFFERENTIAL CORRECTIONS

TDE -.3787 TRA -.9498 TC3 -.3594 BAU .4421  
 RDE -.4897 RRA -.1290 RC3-1.1370 FAU .44019  
 FDE 1.0043 FRA-4.7339 FC-13.7416 BSP 2189  
 BDE .6040 BRA .9585 BC3 1.1924 FSP 2282

MID-COURSE EXECUTION ACCURACY

SGT 1209.4 SGR 1310.1 SG3 1336.3  
 RRT .5178 RRF .8862 RTF .5448  
 SGB 1783.0 R23 .2419 R13 .8447  
 SG1 1555.6 SG2 871.4 THA 49.39

ORBIT DETERMINATION ACCURACY

ST 26.2 SR 25.7 SS 22.8  
 CRT .8379 CRS .4626 CST -.0661  
 LSA 35.7 MSA 24.2 S8A 3.0  
 EL1 35.2 EL2 10.4 ALF 44.38

LAUNCH DATE AUG 31 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.884 GAL 6.43 AZL 88.31 HCA 122.29 SMA 196.24 ECC .25490 INC 1.6863 V1 29.505  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.899 GAP 8.04 AZP 90.90 TAL 32.47 TAP 154.78 RCA 146.22 APO 246.26 V2 23.040  
 RC 214.384 GL 10.54 GP -16.64 ZAL 38.95 ZAP 113.62 ETS 189.38 ZAE 147.51 ETE 212.49 ZAC 68.61 ETC 284.31 LVI -2.98

DISTANCE 409.288

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 27.831 VHL 5.257 DLA 15.67 RAL 9.78 RAD 6846.1 VEL 12.148 PTH 7.12 VHP 2.624 DPA -2.96 RAP 38.40 ECC 1.4547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 55 3528.20 -46.64 130.72 250.31 100.71 9 20 43 2528.2 -37.23 100.84  
 60.00 8 43 42 3470.22 -39.97 126.83 251.63 95.88 9 41 32 2470.2 -33.37 97.84  
 70.00 9 15 33 3376.48 -34.11 119.71 252.11 91.80 10 11 49 2376.5 -29.82 91.83  
 80.00 10 4 34 3228.88 -29.85 108.11 252.16 89.17 10 58 17 2228.9 -27.15 81.01  
 90.00 11 17 19 2988.04 -28.23 90.81 252.11 88.20 12 7 7 1988.0 -26.13 64.00  
 100.00 12 47 25 2697.35 -29.85 69.48 252.16 89.17 13 32 23 1697.3 -27.15 42.38  
 110.00 14 14 39 2423.29 -34.11 48.63 252.11 91.80 14 55 22 1423.3 -29.82 20.78

DIFFERENTIAL CORRECTIONS

TDE -.3798 TRA -.9828 TC3 -.4465 BAU .4661  
 RDE -.4981 RRA -.1452 RC3-1.1801 FAU .45018  
 FDE 1.0817 FRA-4.8534 FC-14.1050 BSP 2342  
 BDE .5951 BRA .9935 BC3 1.2617 FSP 2345

MID-COURSE EXECUTION ACCURACY

SGT 1276.6 SGR 1347.4 SG3 1370.1  
 RRT .5651 RRF .8757 RTF .6217  
 SGB 1856.1 R23 .2389 R13 .8564  
 SG1 1642.9 SG2 863.8 THA 47.73

ORBIT DETERMINATION ACCURACY

ST 26.6 SR 25.2 SS 23.5  
 CRT .8358 CRS .4702 CST -.0620  
 LSA 35.6 MSA 24.8 S8A 3.0  
 EL1 35.1 EL2 10.5 ALF 43.09

LAUNCH DATE AUG 31 1973

FLIGHT TIME 106.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.800 GAL 6.40 AZL 88.27 HCA 123.24 SMA 196.15 ECC .25440 INC 1.7276 V1 29.505  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.856 GAP 7.78 AZP 90.95 TAL 32.39 TAP 155.63 RCA 146.25 APO 246.05 V2 23.008  
 RC 217.340 GL 10.82 GP -16.99 ZAL 39.08 ZAP 112.02 ETS 188.97 ZAE 145.86 ETE 211.07 ZAC 68.41 ETC 284.40 LVI -2.79

DISTANCE 413.066 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.533 VHL 5.247 DLA 15.96 RAL 9.71 RAD 6646.0 VEL 12.144 PTH 7.11 VHP 2.595 DPA -3.52 RAP 37.91 ECC 1.4531  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 33 3533.14 -46.70 131.18 250.45 100.36 9 19 26 2533.1 -37.41 100.88  
 60.00 8 41 37 3476.15 -40.01 127.32 251.72 95.34 9 39 54 2476.1 -33.54 98.26  
 70.00 9 13 21 3383.73 -34.13 120.28 252.16 91.47 10 9 45 2383.7 -29.97 92.34  
 80.00 10 1 54 3231.58 -29.84 108.76 252.17 88.83 10 55 46 2231.6 -27.28 81.62  
 90.00 11 14 26 2997.46 -28.21 91.50 252.12 87.86 12 4 24 1997.5 -26.25 64.66  
 100.00 12 44 46 2706.05 -29.84 70.12 252.17 88.83 13 29 52 1706.1 -27.28 42.99  
 110.00 14 12 48 2430.55 -34.13 49.20 252.16 91.47 14 53 18 1430.5 -29.97 21.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3790 TRA-1.0170 TC3 -.5369 BAU .4918 SGT 1350.0 SGR 1385.3 SG3 1402.6 ST 27.0 SR 24.6 SS 24.2  
 RDE -.4460 RRA -.1615 RC3-1.2235 FAU .45969 RRT .6078 RRF .8845 RTF .6633 CRT .8334 CRS .4766 CST -.0594  
 FDE 1.1610 FRA-4.9667 FC-14.4543 BSP 2506 SGB 1934.4 R23 .2352 R13 .8673 LSA 35.6 MSA 26.5 SSA 2.9  
 BDE .5853 BRA 1.0297 BC3 1.3361 FSP 2404 SG1 1734.6 SG2 856.3 THA 46.22 EL1 35.0 EL2 10.5 ALF 41.78

LAUNCH DATE AUG 31 1973

FLIGHT TIME 108.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.878 GAL 6.37 AZL 88.23 HCA 124.19 SMA 196.07 ECC .25395 INC 1.7697 V1 29.505  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.814 GAP 7.52 AZP 90.99 TAL 32.30 TAP 156.49 RCA 146.28 APO 245.86 V2 22.975  
 RC 220.278 GL 11.11 GP -17.34 ZAL 39.22 ZAP 110.42 ETS 188.54 ZAE 144.19 ETE 209.74 ZAC 68.20 ETC 284.48 LVI -2.60

DISTANCE 416.665 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.437 VHL 5.238 DLA 16.25 RAL 9.66 RAD 6646.0 VEL 12.140 PTH 7.11 VHP 2.568 DPA -4.09 RAP 37.42 ECC 1.4516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 10 3538.30 -46.76 131.67 250.61 100.00 9 18 8 2538.3 -37.59 101.23  
 60.00 8 40 11 3482.33 -40.04 127.85 251.83 94.99 9 38 14 2482.3 -33.71 98.70  
 70.00 9 11 7 3391.30 -34.14 120.87 252.22 91.12 10 7 38 2391.3 -30.12 92.88  
 80.00 9 59 11 3240.68 -29.82 109.43 252.20 88.48 10 53 11 2240.7 -27.42 82.27  
 90.00 11 11 26 3007.32 -28.18 92.22 252.14 87.50 12 1 36 2007.3 -26.37 65.35  
 100.00 12 42 2 2715.15 -29.82 70.80 252.20 88.48 13 27 18 1715.1 -27.42 43.63  
 110.00 14 10 33 2438.12 -34.14 49.79 252.22 91.12 14 51 11 1438.1 -30.12 21.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3770 TRA-1.0518 TC3 -.6294 BAU .5192 SGT 1428.7 SGR 1425.0 SG3 1434.3 ST 27.4 SR 24.0 SS 25.0  
 RDE -.4338 RRA -.1782 RC3-1.2679 FAU .46895 RRT .6458 RRF .8929 RTF .6998 CRT .8309 CRS .4799 CST -.0607  
 FDE 1.2380 FRA-5.0775 FC-14.7970 BSP 2678 SGB 2017.8 R23 .2308 R13 .8775 LSA 35.5 MSA 26.1 SSA 2.9  
 BDE .5747 BRA 1.0668 BC3 1.4155 FSP 2452 SG1 1830.5 SG2 849.1 THA 44.89 EL1 34.9 EL2 10.5 ALF 40.49

LAUNCH DATE AUG 31 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.872 GAL 6.35 AZL 88.19 HCA 125.13 SMA 196.00 ECC .25352 INC 1.8127 V1 29.505  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.774 GAP 7.27 AZP 91.04 TAL 32.21 TAP 157.34 RCA 146.31 APO 245.69 V2 22.944  
 RC 223.209 GL 11.40 GP -17.70 ZAL 39.37 ZAP 108.82 ETS 188.11 ZAE 142.50 ETE 208.50 ZAC 68.00 ETC 284.55 LVI -2.41

DISTANCE 420.665 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.345 VHL 5.229 DLA 16.55 RAL 9.82 RAD 6646.0 VEL 12.137 PTH 7.11 VHP 2.544 DPA -4.66 RAP 36.93 ECC 1.4500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 46 3543.87 -46.83 132.17 250.79 99.61 9 16 49 2543.7 -37.78 101.61  
 60.00 8 38 25 3488.78 -40.08 128.39 251.94 94.62 9 36 32 2488.8 -33.88 99.15  
 70.00 9 8 49 3399.20 -34.15 121.49 252.29 90.75 10 5 28 2399.2 -30.27 93.44  
 80.00 9 56 22 3250.18 -29.80 110.14 252.24 88.11 10 50 32 2250.2 -27.55 82.94  
 90.00 11 8 25 3017.62 -28.15 92.97 252.16 87.13 11 58 42 2017.6 -26.50 66.08  
 100.00 12 39 14 2724.65 -29.80 71.51 252.24 88.11 13 24 38 1724.6 -27.55 44.31  
 110.00 14 8 15 2446.02 -34.15 50.40 252.29 90.75 14 49 1 1446.0 -30.27 22.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3732 TRA-1.0870 TC3 -.7238 BAU .5482 SGT 1911.3 SGR 1466.3 SG3 1465.8 ST 27.7 SR 23.4 SS 25.7  
 RDE -.4217 RRA -.1958 RC3-1.3133 FAU .47800 RRT .6798 RRF .9007 RTF .6220 CRT .8278 CRS .4783 CST -.0680  
 FDE 1.3086 FRA-5.1899 FC-15.1334 BSP 2863 SGB 2105.7 R23 .2253 R13 .8872 LSA 35.3 MSA 26.8 SSA 2.9  
 BDE .5631 BRA 1.1045 BC3 1.4996 FSP 2489 SG1 1930.0 SG2 842.1 THA 45.73 EL1 34.7 EL2 10.5 ALF 39.28

LAUNCH DATE AUG 31 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.869 GAL 6.32 AZL 88.14 HCA 126.08 SMA 195.95 ECC .25313 INC 1.8566 V1 29.505  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.735 GAP 7.01 AZP 91.09 TAL 32.10 TAP 158.18 RCA 146.35 APO 245.55 V2 22.912  
 RC 226.132 GL 11.70 GP -18.05 ZAL 39.53 ZAP 107.23 ETS 187.68 ZAE 140.80 ETE 207.33 ZAC 67.80 ETC 284.63 LVI -2.22

DISTANCE 424.465 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.256 VHL 5.221 DLA 16.86 RAL 9.58 RAD 6645.9 VEL 12.133 PTH 7.10 VHP 2.522 DPA -5.23 RAP 36.44 ECC 1.4486  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 20 3549.28 -46.89 132.70 250.98 99.21 9 15 29 2549.3 -37.98 102.00  
 60.00 8 36 32 3495.49 -40.12 128.96 252.08 94.24 9 34 47 2495.5 -34.06 99.63  
 70.00 9 6 27 3407.43 -34.15 122.13 252.38 90.37 10 3 14 2407.4 -30.43 94.03  
 80.00 9 53 28 3260.09 -29.78 110.87 252.29 87.72 10 47 48 2260.1 -27.69 83.64  
 90.00 11 5 15 3028.39 -28.11 93.75 252.20 86.73 11 55 43 2028.4 -26.63 66.84  
 100.00 12 36 19 2734.57 -29.78 72.24 252.29 87.72 13 21 54 1734.6 -27.69 45.01  
 110.00 14 5 53 2454.25 -34.15 51.05 252.38 90.37 14 46 47 1454.2 -30.43 22.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3664 TRA-1.1210 TC3 -.8175 BAU .5786 SGT 1594.6 SGR 1511.2 SG3 1498.1 ST 27.9 SR 22.9 SS 26.2  
 RDE -.4108 RRA -.2147 RC3-1.3611 FAU .48738 RRT .7100 RRF .9083 RTF .7607 CRT .8239 CRS .4673 CST -.0880  
 FDE 1.3586 FRA-5.3162 FC-15.4806 BSP 3059 SGB 2197.0 R23 .2177 R13 .8971 LSA 35.0 MSA 27.5 SSA 2.9  
 BDE .5505 BRA 1.1414 BC3 1.5878 FSP 2498 SG1 2032.0 SG2 835.2 THA 42.84 EL1 34.6 EL2 10.5 ALF 38.30

LAUNCH DATE AUG 31 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC										DISTANCE 428.263										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.867	GAL	6.29	AZL	88.10	HCA	127.02	SMA	195.91	ECC	.25277	INC	1.9013	V1	29.503	RP	240.03	LAP	1.32	LOP	104.48	VP	20.697	GAP	6.76	AZP	91.15	TAL	31.98	TAP	159.00	RCA	146.39	APO	245.42	V2	22.882	RC	229.048	GL	12.00	GP	-18.40	ZAL	39.71	ZAP	105.66	ETS	187.21	ZAE	139.11	ETE	206.23	ZAC	67.60	ETC	284.71	LVI	-2.02
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.168	VHL	5.212	DLA	17.18	RAL	9.55	RAD	6645.9	VEL	12.129	PTH	7.10	VHP	2.502	DPA	-5.80	RAP	35.97	ECC	1.4471	SGT	1707.0	SGR	1841.2	SG3	1813.7	ST	28.7	SR	22.0	SS	27.3	CR1	.8244	CR8	.4962	C8T	-.0541	CR2	.8244	CR8	.4962	C8T	-.0541																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.7371	RRF	.9135	RTF	.7831	LSA	35.3	MSA	28.3	SSA	2.8	EL1	34.6	EL2	10.3	ALF	35.94																						
50.00	8	14	53	3555.13	-46.95	133.25	251.19	98.79	9	14	8	2555.1	-38.19	102.41	93.84	9	33	1	2502.5	-34.25	100.14	93.84	9	33	1	2502.5	-34.25	100.14																																					
60.00	8	34	38	3502.51	-40.15	129.55	252.23	89.98	10	0	57	2416.0	-30.59	94.65	89.98	10	0	57	2416.0	-30.59	94.65	89.98	10	0	57	2416.0	-30.59	94.65																																					
70.00	9	4	1	3416.05	-34.15	122.80	252.48	87.32	10	44	58	2270.5	-27.83	84.38	87.32	10	44	58	2270.5	-27.83	84.38	87.32	10	44	58	2270.5	-27.83	84.38																																					
80.00	9	50	27	3270.50	-29.75	111.65	252.35	86.32	11	52	37	2039.7	-26.76	67.65	86.32	11	52	37	2039.7	-26.76	67.65	86.32	11	52	37	2039.7	-26.76	67.65																																					
90.00	11	1	57	3039.71	-28.06	94.58	252.25	87.32	13	19	4	1745.0	-27.83	45.75	87.32	13	19	4	1745.0	-27.83	45.75	87.32	13	19	4	1745.0	-27.83	45.75																																					
100.00	12	33	19	2744.97	-29.75	73.01	252.35	89.98	14	44	30	1462.9	-30.59	23.57	89.98	14	44	30	1462.9	-30.59	23.57	89.98	14	44	30	1462.9	-30.59	23.57																																					
110.00	14	3	27	2462.87	-34.15	51.72	252.48																																																										

LAUNCH DATE AUG 31 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC										DISTANCE 432.063										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.865	GAL	6.28	AZL	88.05	HCA	127.96	SMA	195.87	ECC	.25244	INC	1.9471	V1	29.505	RP	240.34	LAP	1.54	LOP	105.42	VP	20.660	GAP	6.51	AZP	91.20	TAL	31.86	TAP	159.82	RCA	146.42	APO	245.32	V2	22.851	RC	231.955	GL	12.32	GP	-18.76	ZAL	39.90	ZAP	104.10	ETS	186.75	ZAE	137.40	ETE	205.18	ZAC	67.40	ETC	284.78	LVI	-1.81
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.084	VHL	5.204	DLA	17.51	RAL	9.52	RAD	6645.8	VEL	12.128	PTH	7.10	VHP	2.485	DPA	-6.37	RAP	35.49	ECC	1.4457	SGT	1808.9	SGR	1808.7	SG3	1536.5	ST	29.1	SR	21.2	SS	28.2	CR1	.8224	CR8	.4974	C8T	-.0562	CR2	.8224	CR8	.4974	C8T	-.0562																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.7607	RRF	.9194	RTF	.8040	LSA	35.2	MSA	29.0	SSA	2.8	EL1	34.5	EL2	10.2	ALF	34.40																						
50.00	8	13	23	3581.22	-47.01	133.83	251.42	98.35	9	12	45	2561.2	-38.40	102.83	93.42	9	31	12	2509.8	-34.44	100.66	93.42	9	31	12	2509.8	-34.44	100.66																																					
60.00	8	32	42	3509.81	-40.18	130.17	252.39	89.56	9	58	35	2425.0	-30.76	95.30	89.56	9	58	35	2425.0	-30.76	95.30	89.56	9	58	35	2425.0	-30.76	95.30																																					
70.00	9	1	30	3425.01	-34.15	123.50	252.59	86.90	10	42	2	2281.3	-27.97	85.16	86.90	10	42	2	2281.3	-27.97	85.16	86.90	10	42	2	2281.3	-27.97	85.16																																					
80.00	9	47	21	3281.35	-29.71	112.45	252.42	85.90	11	49	24	2051.5	-26.89	68.49	85.90	11	49	24	2051.5	-26.89	68.49	85.90	11	49	24	2051.5	-26.89	68.49																																					
90.00	10	58	33	3051.51	-28.01	95.44	252.30	86.90	13	16	8	1755.8	-27.97	46.53	86.90	13	16	8	1755.8	-27.97	46.53	86.90	13	16	8	1755.8	-27.97	46.53																																					
100.00	12	30	12	2755.82	-29.71	73.82	252.42	89.56	14	42	8	1471.8	-30.76	24.21	89.56	14	42	8	1471.8	-30.76	24.21	89.56	14	42	8	1471.8	-30.76	24.21																																					
110.00	14	0	56	2471.83	-34.15	52.42	252.59																																																										

LAUNCH DATE AUG 31 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC										DISTANCE 435.862										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.864	GAL	6.23	AZL	88.01	HCA	128.89	SMA	195.85	ECC	.25214	INC	1.9940	V1	29.503	RP	240.63	LAP	1.55	LOP	106.36	VP	20.625	GAP	6.26	AZP	91.25	TAL	31.73	TAP	160.63	RCA	146.47	APO	245.23	V2	22.821	RC	234.852	GL	12.64	GP	-19.11	ZAL	40.09	ZAP	102.55	ETS	186.27	ZAE	135.70	ETE	204.18	ZAC	67.20	ETC	284.85	LVI	-1.60
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.002	VHL	5.196	DLA	17.85	RAL	9.50	RAD	6645.8	VEL	12.123	PTH	7.09	VHP	2.469	DPA	-6.94	RAP	35.03	ECC	1.4444	SGT	1915.5	SGR	1620.5	SG3	1557.2	ST	29.5	SR	20.5	SS	29.0	CR1	.8208	CR8	.4971	C8T	-.0592	CR2	.8208	CR8	.4971	C8T	-.0592																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.7815	RRF	.9248	RTF	.5119	LSA	35.1	MSA	29.8	SSA	2.8	EL1	34.5	EL2	10.0	ALF	32.81																						
50.00	8	11	52	3567.56	-47.07	134.43	251.66	97.89	9	11	20	2567.6	-38.62	103.28	92.98	9	29	19	2517.4	-34.63	101.21	92.98	9	29	19	2517.4	-34.63	101.21																																					
60.00	8	30	42	3517.41	-40.21	130.82	252.56	89.13	9	56	9	2434.4	-30.93	95.97	89.13	9	56	9	2434.4	-30.93	95.97	89.13	9	56	9	2434.4	-30.93	95.97																																					
70.00	8	58	55	3434.36	-34.14	124.23	252.70	86.46	10	39	0	2292.7	-28.12	85.97	86.46	10	39	0	2292.7	-28.12	85.97	86.46	10	39	0	2292.7	-28.12	85.97																																					
80.00	9	44	7	3292.68	-29.87	113.29	252.50	85.45	11	46	4	2063.9	-27.02	69.37	85.45	11	46	4	2063.9	-27.02	69.37	85.45	11	46	4	2063.9	-27.02	69.37																																					
90.00	10	55	0	3063.88	-27.94	96.34	252.36	86.46	13	13	6	1767.2	-28.12	47.34	86.46	13	13	6	1767.2	-28.12	47.34	86.46	13	13	6	1767.2	-28.12	47.34																																					
100.00	12	26	59	2767.15	-29.67	74.66	252.50	89.13	14	39	42	1481.2	-30.93	24.89	89.13	14	39	42	1481.2	-30.93	24.89	89.13	14	39	42	1481.2	-30.93	24.89																																					
110.00	13	58	21	2481.18	-34.14	53.15	252.70																																																										

LAUNCH DATE AUG 31 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC										DISTANCE 439.661										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.863	GAL	6.20	AZL	87.96	HCA	129.83	SMA	195.83	ECC	.25186	INC	2.0421	V1	29.505	RP	240.93	LAP	1.57	LOP	107.30	VP	20.591	GAP	6.02	AZP	91.31	TAL	31.59	TAP	161.42	RCA	146.51	APO	245.15	V2	22.792	RC	237.739	GL	12.97	GP	-19.46	ZAL	40.30	ZAP	101.02	ETS	185.79	ZAE	133.99	ETE	203.22	ZAC	67.00	ETC	284.92	LVI	-1.39
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.924	VHL	5.189	DLA	18.20	RAL	9.48	RAD	6645.8	VEL	12.119	PTH	7.09	VHP	2.456	DPA	-7.50	RAP	34.58	ECC	1.4431	SGT	2025.7	SGR	1660.2	SG3	1575.5	ST	29.9	SR	19.7	SS	29.8	CR1	.8197	CR8	.4937	C8T	-.0648	CR2	.8197	CR8	.4937	C8T	-.0648																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8000	RRF	.9298	RTF	.8378	LSA	35.0	MSA	30.7	SSA	2.7	EL1	34.4	EL2	9.8	ALF	31.24																						
50.00	8	10	18	3574.16	-47.13	135.05	251.92	97.41	9	9	53	2574.2	-38.84	103.75	92.53	9	27	24	2525.3	-34.83	101.79	92.53	9	27	24	2525.3	-34.83	101.79																																					
60.00	8	28	39	3525.32	-40.23	131.49	252.75	88.68	9	53	38	2444.1	-31.10	98.68	88.68	9	53	38	2444.1	-31.10	98.68	88.68	9	53	38	2444.1	-31.10	98.6																																					

LAUNCH DATE AUG 31 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC										DISTANCE 443.460										EARTH TO MARS																																																																																				
RL	151.01	LAL	.00	LOL	337.45	VL	32.863	GAL	6.17	AZL	87.91	HCA	130.76	SMA	195.82	ECC	.25161	INC	2.0913	V1	29.505	RP	241.22	LAP	1.58	LOP	108.23	VP	20.559	GAP	5.77	AZP	91.37	TAL	31.45	TAP	162.21	RCA	146.35	APO	245.09	V2	22.763	RC	240.615	GL	13.30	GP	-19.81	ZAL	40.52	ZAP	99.30	ETP	185.30	ZAE	132.29	ETE	202.31	ZAC	66.80	ETC	264.99	LVI	-1.17																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	26.849	VHL	5.192	DLA	18.57	RAL	9.46	RAD	6645.8	VEL	12.116	PTH	7.09	VHP	2.445	DPA	-8.06	RAP	34.13	ECC	1.4419	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	8	42	3581.02	-47.19	135.71	252.20	96.91	9	8	23	2581.0	-39.07	104.25	60.00	8	26	31	3533.56	-40.26	132.19	252.96	92.05	9	25	25	2533.6	-35.04	102.39	70.00	8	53	27	3454.28	-34.11	125.79	252.97	88.21	9	51	2	2454.3	-31.28	97.42	80.00	9	37	16	3316.94	-29.55	115.08	252.68	85.52	10	32	33	2316.9	-28.40	87.72	90.00	10	47	27	3090.40	-27.78	98.26	252.50	84.50	11	38	57	2090.4	-27.28	71.26	100.00	12	20	8	2791.41	-29.55	76.45	252.68	85.52	13	6	39	1791.4	-28.40	49.08	110.00	13	52	54	2501.10	-34.11	54.70	252.97	88.21	14	34	35	1501.1	-31.28	26.34
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3460	TRA	-1.3335	TC3	-1.3670	BAU	.7475	SGT	2139.0	SGR	1700.8	SG3	1592.4	ST	30.2	SR	19.0	SS	30.7	RDE	-.3275	RRA	-.2893	RC3	-1.5702	FAU	.51246	RRT	.8164	RRF	.9345	RTF	.8513	CRT	.8191	CRS	.4867	CST	-.0735	FDE	1.8929	FRA	-5.5612	FC	-16.5240	BSP	4112	SGB	2732.8	R23	.2108	R13	.9232	LSA	34.9	MSA	31.5	SSA	2.7	BDE	.4764	BRA	1.3646	BC3	2.0824	FSP	2750	SG1	2611.7	SG2	804.5	THA	37.09	EL1	34.4	EL2	9.6	ALF	29.70																									

LAUNCH DATE AUG 31 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC										DISTANCE 447.260										EARTH TO MARS																																																																																				
RL	151.01	LAL	.00	LOL	337.45	VL	32.863	GAL	6.14	AZL	87.86	HCA	131.69	SMA	195.82	ECC	.25138	INC	2.1418	V1	29.505	RP	241.50	LAP	1.60	LOP	109.16	VP	20.527	GAP	5.53	AZP	91.43	TAL	31.30	TAP	162.99	RCA	146.60	APO	245.03	V2	22.734	RC	243.479	GL	13.65	GP	-20.17	ZAL	40.75	ZAP	96.00	ETP	184.80	ZAE	130.60	ETE	201.43	ZAC	66.60	ETC	285.05	LVI	-.95																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	26.778	VHL	5.175	DLA	18.94	RAL	9.45	RAD	6645.7	VEL	12.113	PTH	7.09	VHP	2.438	DPA	-8.62	RAP	33.70	ECC	1.4407	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	7	3	3588.16	-47.25	136.39	252.80	96.39	9	6	51	2588.2	-39.31	104.76	60.00	8	24	20	3542.14	-40.28	132.92	253.17	91.56	9	23	22	2542.1	-35.25	103.02	70.00	8	50	34	3464.88	-34.09	126.61	253.12	87.72	9	48	19	2464.9	-31.46	98.19	80.00	9	33	38	3329.91	-29.48	116.04	252.78	85.02	10	29	8	2329.9	-28.55	88.65	90.00	10	43	25	3104.63	-27.69	99.29	252.58	83.99	11	35	10	2104.6	-27.40	72.29	100.00	12	16	30	2804.38	-29.48	77.41	252.78	85.02	13	3	14	1804.4	-28.55	50.02	110.00	13	50	1	2511.70	-34.09	55.53	253.12	87.72	14	31	52	1511.7	-31.46	27.11
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3359	TRA	-1.3754	TC3	-1.4794	BAU	.7843	SGT	2252.8	SGR	1745.1	SG3	1610.3	ST	30.6	SR	18.3	SS	31.4	RDE	-.3123	RRA	-.3071	RC3	-1.6158	FAU	.51705	RRT	.8313	RRF	.9392	RTF	.8640	CRT	.8186	CRS	.4704	CST	-.0925	FDE	1.9640	FRA	-5.6218	FC	-16.7165	BSP	4336	SGB	2849.6	R23	.2069	R13	.9283	LSA	34.6	MSA	32.4	SSA	2.7	BDE	.4587	BRA	1.4093	BC3	2.1908	FSP	2744	SG1	2735.3	SG2	798.9	THA	36.37	EL1	34.4	EL2	9.3	ALF	28.37																									

LAUNCH DATE AUG 31 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC										DISTANCE 451.057										EARTH TO MARS																																																																																				
RL	151.01	LAL	.00	LOL	337.45	VL	32.863	GAL	6.10	AZL	87.81	HCA	132.62	SMA	195.83	ECC	.25117	INC	2.1936	V1	29.505	RP	241.78	LAP	1.61	LOP	110.09	VP	20.497	GAP	5.29	AZP	91.49	TAL	31.14	TAP	163.76	RCA	146.64	APO	245.02	V2	22.706	RC	246.330	GL	14.01	GP	-20.52	ZAL	40.99	ZAP	96.53	ETP	184.29	ZAE	128.92	ETE	200.50	ZAC	66.39	ETC	285.11	LVI	-.72																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	26.709	VHL	5.168	DLA	19.32	RAL	9.44	RAD	6645.7	VEL	12.111	PTH	7.08	VHP	2.428	DPA	-9.17	RAP	33.29	ECC	1.4396	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	5	21	3595.60	-47.30	137.10	252.82	95.84	9	5	17	2595.6	-39.56	105.30	60.00	8	22	4	3551.08	-40.29	133.68	253.40	91.04	9	21	15	2551.1	-35.46	103.68	70.00	8	47	35	3475.97	-34.05	127.48	253.28	87.21	9	45	31	2476.0	-31.64	99.01	80.00	9	29	49	3343.54	-29.39	117.04	252.89	84.50	10	25	33	2343.5	-28.69	89.64	90.00	10	39	11	3119.62	-27.57	100.37	252.67	83.46	11	31	11	2119.6	-27.53	73.36	100.00	12	12	41	2818.01	-29.39	78.41	252.89	84.50	12	59	39	1818.0	-28.69	51.01	110.00	13	47	1	2522.78	-34.05	56.39	253.28	87.21	14	29	4	1522.8	-31.64	27.93
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3282	TRA	-1.4219	TC3	-1.5990	BAU	.8212	SGT	2377.9	SGR	1778.9	SG3	1618.6	ST	31.1	SR	17.3	SS	32.5	RDE	-.2909	RRA	-.3194	RC3	-1.6531	FAU	.51803	RRT	.8435	RRF	.9427	RTF	.8731	CRT	.8215	CRS	.4688	CST	-.0881	FDE	2.0989	FRA	-5.6100	FC	-16.7913	BSP	4576	SGB	2969.7	R23	.2079	R13	.9309	LSA	34.7	MSA	33.3	SSA	2.6	BDE	.4386	BRA	1.4573	BC3	2.3000	FSP	2803	SG1	2861.6	SG2	793.9	THA	35.38	EL1	34.4	EL2	8.9	ALF	26.45																									

LAUNCH DATE AUG 31 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC										DISTANCE 454.854										EARTH TO MARS																																																																																				
RL	151.01	LAL	.00	LOL	337.45	VL	32.864	GAL	6.07	AZL	87.75	HCA	133.54	SMA	195.85	ECC	.25099	INC	2.2469	V1	29.505	RP	242.08	LAP	1.63	LOP	111.02	VP	20.467	GAP	5.05	AZP	91.55	TAL	30.97	TAP	164.52	RCA	146.69	APO	245.00	V2	22.679	RC	249.167	GL	14.37	GP	-20.87	ZAL	41.24	ZAP	95.07	ETP	183.77	ZAE	127.25	ETE	199.78	ZAC	66.17	ETC	285.17	LVI	-.48																																							
PLANETOCENTRIC CONIC																																																																																																								
C3	26.644	VHL	5.162	DLA	19.72	RAL	9.43	RAD	6645.7	VEL	12.108	PTH	7.08	VHP	2.423	DPA	-9.72	RAP	32.89	ECC	1.4385	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	3	35	3603.34	-47.35	137.84	253.15	95.28	9	3	39	2603.3	-39.81	105.87	60.00	8	19	43	3560.40	-40.30	134.47	253.64	90.51	9	19	3	2560.4	-35.68	104.37	70.00	8	44	28	3487.53	-34.01	128.38	253.45	86.68	9	42	35	2487.5	-31.82	99.86	80.00	9	25	50	3357.81	-29.30	118.09	253.00	83.96	10	21	48	2357.8	-28.83	90.68	90.00	10	34	45	3135.36	-27.45	101.51	252.75	82.91	11	27	0	2135.4	-27.65	74.50	100.00	12	8	42	2832.29	-29.30	79.46	253.00	83.96	12	55	55	1832.3	-28.83	52.05	110.00	13	43	54	2534.35	-34.01	57.30	253.45	86.68	14	26	8	1534.4	-31.82	28.78
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
TDE	-.3172	TRA	-1.4667	TC3	-1.7163	BAU	.8591	SGT	2500.9	SGR	1818.2	SG3	1625.5	ST	31.5	SR	16.4	SS	33.4	RDE	-.2720	RRA	-.3344	RC3	-1.6943	FAU	.51981	RRT	.8549	RRF	.9464	RTF	.8821	CRT	.8247	CRS	.4524	CST	-.0997	FDE	2.1993	FRA	-5.6234	FC	-16.8901	BSP	4812	SGB	3092.0	R23	.2066	R13	.9342	LSA	34.6	MSA	34.3	SSA	2.6	BDE	.4179	BRA	1.5043	BC3	2.4117	FSP	2817	SG1	2989.6	SG2	789.1	THA	34.62	EL1	34.5	EL2	8.5	ALF	24.90																									

LAUNCH DATE AUG 31 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC

DISTANCE 458.651

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.865 GAL 6.03 AZL 87.70 HCA 134.47 SMA 195.87 ECC .25082 INC 2.3017 V1 29.505
RP 242.33 LAP 1.64 LOP 111.84 VP 20.439 GAP 4.81 AZP 91.61 TAL 30.80 TAP 165.27 RCA 146.74 APO 245.00 V2 22.652
RC 251.989 GL 14.73 GP -21.23 ZAL 41.51 ZAP 93.64 ETS 183.25 ZAE 125.60 ETE 198.97 ZAC 65.96 ETC 285.23 LVI -.24

PLANETOCENTRIC CONIC

C3 26.583 VHL 5.156 DLA 20.13 RAL 9.42 RAD 6645.6 VEL 12.105 PTH 7.08 VHP 2.419 DPA -10.27 RAP 32.51 ECC 1.4375
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 1 46 3611.40 -47.40 138.61 253.50 94.68 9 1 57 2611.4 -40.07 106.47
60.00 8 17 16 3570.10 -40.30 133.30 253.90 89.95 9 16 46 2570.1 -35.91 105.10
70.00 8 41 12 3499.63 -33.96 129.32 253.63 86.13 9 39 32 2499.6 -32.00 100.76
80.00 9 21 39 3372.81 -29.18 119.19 253.11 83.39 10 17 52 2372.8 -28.97 91.77
90.00 10 30 4 3151.96 -27.30 102.70 252.84 82.33 11 22 36 2152.0 -27.77 75.70
100.00 12 4 31 2847.28 -29.18 80.56 253.11 83.39 12 51 59 1847.3 -28.97 53.14
110.00 13 40 39 2546.44 -33.96 58.24 253.63 86.13 14 23 5 1546.4 -32.00 29.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3081 TRA-1.5120 TC3-1.8340 BAU .8973 SGT 2626.2 SGR 1857.2 SG3 1631.8 ST 31.9 SR 15.6 SS 34.3
RDE -.2525 RRA -.3493 RC3-1.7346 FAU .52074 RRT .8651 RRF .9498 RTF .8899 CRT .8299 CRS .4309 CST -.1128
FDE 2.2996 FRA-5.6279 FC-16.9592 BSP 5053 SGB 3216.5 R23 .2057 R13 .9372 LSA 35.3 MSA 34.4 S8A 2.5
BDE .3960 BRA 1.5518 BC3 2.5249 FSP 2829 SG1 3119.4 SG2 784.4 THA 33.89 EL1 34.6 EL2 8.0 ALF 23.40

LAUNCH DATE AUG 31 1973

FLIGHT TIME 212.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC

DISTANCE 462.448

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.867 GAL 6.00 AZL 87.64 HCA 135.39 SMA 195.90 ECC .25068 INC 2.3582 V1 29.505
RP 242.80 LAP 1.66 LOP 112.86 VP 20.412 GAP 4.58 AZP 91.68 TAL 30.62 TAP 166.01 RCA 146.79 APO 245.00 V2 22.625
RC 254.795 GL 15.14 GP -21.59 ZAL 41.78 ZAP 92.24 ETS 182.71 ZAE 123.95 ETE 198.21 ZAC 65.74 ETC 285.29 LVI .01

PLANETOCENTRIC CONIC

C3 26.526 VHL 5.150 DLA 20.55 RAL 9.41 RAD 6645.6 VEL 12.103 PTH 7.08 VHP 2.417 DPA -10.81 RAP 32.15 ECC 1.4366
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 59 53 3619.79 -47.44 139.42 253.87 94.06 9 0 12 2619.8 -40.34 107.09
60.00 8 14 44 3580.22 -40.30 136.16 254.16 89.36 9 14 24 2580.2 -36.14 105.86
70.00 8 37 48 3512.27 -33.90 130.30 253.81 85.55 9 36 21 2512.3 -32.19 101.70
80.00 9 17 16 3386.58 -29.05 120.35 253.23 82.80 10 13 44 2388.6 -29.11 92.92
90.00 10 25 8 3169.47 -27.14 103.95 252.93 81.72 11 17 57 2169.5 -27.68 76.97
100.00 12 0 7 2863.05 -29.05 81.71 253.23 82.80 12 47 50 1863.0 -29.11 54.29
110.00 13 37 15 2559.09 -33.90 59.22 253.81 85.55 14 19 54 1559.1 -32.19 30.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2913 TRA-1.5577 TC3-1.9541 BAU .9362 SGT 2753.4 SGR 1896.7 SG3 1636.5 ST 32.3 SR 14.7 SS 35.3
RDE -.2325 RRA -.3644 RC3-1.7751 FAU .52115 RRT .8742 RRF .9531 RTF .8969 CRT .8373 CRS .4023 CST -.1289
FDE 2.3969 FRA-5.6272 FC-17.0088 BSP 5295 SGB 3343.5 R23 .2047 R13 .9400 LSA 36.3 MSA 34.3 S8A 2.5
BDE .3727 BRA 1.5997 BC3 2.6400 FSP 2833 SG1 3251.3 SG2 780.0 THA 33.21 EL1 34.7 EL2 7.5 ALF 21.99

LAUNCH DATE AUG 31 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

DISTANCE 468.244

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.868 GAL 5.98 AZL 87.58 HCA 136.31 SMA 195.93 ECC .25055 INC 2.4184 V1 29.505
RP 242.86 LAP 1.67 LOP 113.78 VP 20.388 GAP 4.34 AZP 91.75 TAL 30.44 TAP 166.74 RCA 146.84 APO 245.02 V2 22.599
RC 257.584 GL 15.54 GP -21.95 ZAL 42.06 ZAP 90.86 ETS 182.17 ZAE 122.33 ETE 197.46 ZAC 65.51 ETC 285.35 LVI .27

PLANETOCENTRIC CONIC

C3 26.474 VHL 5.145 DLA 20.99 RAL 9.40 RAD 6645.6 VEL 12.101 PTH 7.08 VHP 2.416 DPA -11.34 RAP 31.81 ECC 1.4357
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 57 55 3628.53 -47.48 140.26 254.25 93.42 8 58 23 2628.5 -40.82 107.75
60.00 8 12 5 3590.78 -40.28 137.05 254.44 88.75 9 11 56 2590.8 -36.37 106.66
70.00 8 34 15 3525.51 -33.82 131.33 254.00 84.95 9 33 0 2525.5 -32.37 102.68
80.00 9 12 37 3405.19 -28.91 121.56 253.35 82.17 10 9 22 2405.2 -29.24 94.14
90.00 10 19 54 3188.00 -26.95 105.28 253.02 81.08 11 13 2 2188.0 -27.98 78.32
100.00 11 55 29 2879.66 -28.91 82.93 253.35 82.17 12 43 29 1879.7 -29.24 55.51
110.00 13 33 41 2572.33 -33.82 60.24 254.00 84.95 14 16 33 1572.3 -32.37 31.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2764 TRA-1.6038 TC3-2.0744 BAU .9754 SGT 2882.6 SGR 1935.5 SG3 1638.3 ST 32.7 SR 13.9 SS 36.2
RDE -.2115 RRA -.3790 RC3-1.8145 FAU .52066 RRT .8823 RRF .9560 RTF .5229 CRT .8476 CRS .3668 CST -.1453
FDE 2.4974 FRA-5.6129 FC-17.0264 BSP 5542 SGB 3472.1 R23 .2043 R13 .9424 LSA 37.4 MSA 34.2 S8A 2.4
BDE .3480 BRA 1.6478 BC3 2.7560 FSP 2835 SG1 3384.3 SG2 775.9 THA 32.57 EL1 34.9 EL2 6.9 ALF 20.62

LAUNCH DATE AUG 31 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

DISTANCE 470.039

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 32.871 GAL 5.92 AZL 87.52 HCA 137.23 SMA 195.97 ECC .25044 INC 2.4764 V1 29.505
RP 243.12 LAP 1.68 LOP 114.70 VP 20.361 GAP 4.11 AZP 91.82 TAL 30.24 TAP 167.47 RCA 146.89 APO 245.05 V2 22.573
RC 260.358 GL 15.93 GP -22.31 ZAL 42.36 ZAP 89.31 ETS 181.62 ZAE 120.72 ETE 196.74 ZAC 65.27 ETC 285.40 LVI .54

PLANETOCENTRIC CONIC

C3 26.428 VHL 5.141 DLA 21.43 RAL 9.39 RAD 6645.6 VEL 12.099 PTH 7.08 VHP 2.418 DPA -11.87 RAP 31.49 ECC 1.4349
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 52 3637.84 -47.52 141.14 254.66 92.74 8 58 30 2637.6 -40.90 108.44
60.00 8 9 19 3601.80 -40.28 137.99 254.73 88.12 9 9 21 2601.8 -36.61 107.50
70.00 8 30 31 3539.39 -33.73 132.40 254.19 84.32 9 29 30 2539.4 -32.55 103.72
80.00 9 7 43 3422.72 -28.74 122.83 253.47 81.52 10 4 46 2422.7 -29.36 95.43
90.00 10 14 20 3207.66 -26.73 106.67 253.11 80.42 11 7 48 2207.7 -28.07 79.75
100.00 11 50 35 2897.20 -28.74 84.20 253.47 81.52 12 38 52 1897.2 -29.36 56.80
110.00 13 29 57 2586.21 -33.73 61.32 254.19 84.32 14 13 3 1586.2 -32.55 32.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2599 TRA-1.6502 TC3-2.1950 BAU 1.0149 SGT 3013.5 SGR 1973.9 SG3 1637.6 ST 33.2 SR 13.0 SS 37.2
RDE -.1897 RRA -.3935 RC3-1.8531 FAU .51937 RRT .8896 RRF .9588 RTF .9081 CRT .8614 CRS .3212 CST -.1638
FDE 2.5986 FRA-5.5917 FC-17.0151 BSP 5791 SGB 3602.4 R23 .2042 R13 .9445 LSA 38.6 MSA 34.0 S8A 2.4
BDE .3217 BRA 1.6965 BC3 2.8726 FSP 2834 SG1 3518.7 SG2 772.1 THA 31.95 EL1 35.1 EL2 6.3 ALF 19.34



LAUNCH DATE AUG 31 1973 FLIGHT TIME 210.00 ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.873 GAL 5.88 AZL 87.46 HCA 138.14 SMA 196.02 ECC .25034 INC 2.5385 V1 29.509  
 RP 243.37 LAP 1.69 LOP 118.62 VP 20.337 GAP 3.88 AZP 91.89 TAL 30.03 TAP 168.18 RCA 148.95 APO 245.09 V2 22.548  
 RC 263.112 GL 16.38 GP -22.68 ZAL 42.67 ZAP 88.19 ETS 181.06 ZAE 119.14 ETE 196.03 ZAC 65.03 ETC 285.46 LVI .82

DISTANCE 473.833 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.383 VHL 5.136 DLA 21.90 RAL 9.39 RAD 6645.6 VEL 12.097 PTH 7.07 VHP 2.421 DPA -12.40 RAP 31.20 ECC 1.4342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 44 3647.14 -47.54 142.06 255.08 92.03 8 54 31 2647.1 -41.19 109.17  
 60.00 8 6 26 3613.32 -40.23 138.97 255.03 87.45 9 6 39 2613.3 -36.85 108.38  
 70.00 8 26 35 3553.95 -33.63 133.52 254.39 83.66 9 25 49 2554.0 -32.74 104.82  
 80.00 9 2 31 3441.27 -28.54 124.10 253.58 80.84 9 59 52 2441.3 -29.48 96.79  
 90.00 10 8 24 3228.57 -26.49 108.16 253.19 79.71 11 2 12 2228.6 -28.15 81.27  
 100.00 11 45 23 2915.74 -28.54 85.55 253.58 80.84 12 33 58 1915.7 -29.48 58.16  
 110.00 13 26 1 2600.77 -33.63 62.44 254.39 83.66 14 9 22 1600.8 -32.74 33.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2418 TRA-1.6965 TC3-2.3157 BAU 1.0545 SGT 3145.1 SGR 2012.3 SG3 1634.6 ST 33.6 SR 12.2 SS 38.2  
 RDE -.1671 RRA -.4077 RC3-1.8911 FAU .51741 RRT .8961 RRF .9614 RTF .9127 CRT .8785 CRS .2638 CST -.1840  
 FDE 2.6987 FRA-5.5600 FC-16.9781 BSP 6042 SGB 3733.8 R23 .2044 R13 .9464 LSA 39.8 MSA 33.9 SSA 2.3  
 BDE .2939 BRA 1.7449 BC3 2.9897 FSP 2028 SG1 3653.8 SG2 768.6 THA 31.37 EL1 35.3 EL2 5.6 ALF 18.17

LAUNCH DATE AUG 31 1973 FLIGHT TIME 220.00 ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.876 GAL 5.84 AZL 87.40 HCA 139.06 SMA 196.07 ECC .25026 INC 2.6027 V1 29.505  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.314 GAP 3.65 AZP 91.97 TAL 29.85 TAP 168.90 RCA 147.00 APO 245.14 V2 22.523  
 RC 265.850 GL 16.82 GP -23.05 ZAL 42.99 ZAP 86.90 ETS 180.50 ZAE 117.57 ETE 195.34 ZAC 64.77 ETC 285.51 LVI 1.10

DISTANCE 477.626 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.346 VHL 5.133 DLA 22.38 RAL 9.38 RAD 6645.5 VEL 12.096 PTH 7.07 VHP 2.425 DPA -12.92 RAP 30.92 ECC 1.4338  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 51 30 3657.05 -47.56 143.01 255.52 91.30 8 52 27 2657.0 -41.48 109.93  
 60.00 8 3 24 3625.35 -40.19 139.99 255.34 86.76 9 3 49 2625.4 -37.09 109.31  
 70.00 8 22 26 3569.25 -33.51 134.70 254.60 82.98 9 21 56 2569.2 -32.92 105.98  
 80.00 8 56 59 3460.94 -28.32 125.60 253.70 80.13 9 54 40 2460.9 -29.59 98.24  
 90.00 10 2 2 3250.90 -26.21 109.73 253.26 78.97 10 56 13 2250.9 -28.21 82.90  
 100.00 11 39 50 2935.41 -28.32 86.97 253.70 80.13 12 28 46 1935.4 -29.59 59.61  
 110.00 13 21 53 2616.07 -33.51 63.62 254.60 82.98 14 5 29 1616.1 -32.92 34.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2222 TRA-1.7435 TC3-2.4365 BAU 1.0945 SGT 3278.4 SGR 2050.9 SG3 1629.8 ST 34.1 SR 11.5 SS 39.2  
 RDE -.1439 RRA -.4223 RC3-1.9287 FAU .51481 RRT .9021 RRF .9638 RTF .9169 CRT .8989 CRS .1913 CST -.2068  
 FDE 2.7960 FRA-5.5249 FC-16.9168 BSP 6294 SGB 3867.0 R23 .2046 R13 .9482 LSA 41.1 MSA 33.7 SSA 2.3  
 BDE .2647 BRA 1.7939 BC3 3.1075 FSP 2817 SG1 3790.5 SG2 765.4 THA 30.83 EL1 35.7 EL2 4.8 ALF 17.15

LAUNCH DATE AUG 31 1973 FLIGHT TIME 222.00 ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.879 GAL 5.80 AZL 87.33 HCA 139.97 SMA 196.13 ECC .25020 INC 2.6691 V1 29.505  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.292 GAP 3.43 AZP 92.04 TAL 29.64 TAP 169.61 RCA 147.06 APO 245.20 V2 22.499  
 RC 268.570 GL 17.27 GP -23.42 ZAL 43.32 ZAP 85.64 ETS 179.92 ZAE 116.03 ETE 194.66 ZAC 64.51 ETC 285.57 LVI 1.40

DISTANCE 481.419 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.315 VHL 5.130 DLA 22.87 RAL 9.36 RAD 6645.5 VEL 12.094 PTH 7.07 VHP 2.431 DPA -13.44 RAP 30.67 ECC 1.4331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 49 9 3667.39 -47.57 144.01 255.98 90.53 8 50 17 2667.4 -41.79 110.74  
 60.00 8 0 12 3637.95 -40.14 141.06 255.67 86.04 9 0 50 2638.0 -37.34 110.29  
 70.00 8 18 4 3585.35 -33.37 139.94 254.80 82.26 9 17 49 2585.3 -33.10 107.20  
 80.00 8 51 4 3481.85 -28.07 127.10 253.80 79.38 9 49 6 2481.9 -29.68 99.79  
 90.00 9 55 10 3274.84 -25.88 111.41 253.32 78.19 10 49 45 2274.8 -28.26 84.65  
 100.00 11 33 56 2956.33 -28.07 88.47 253.80 79.38 12 23 12 1956.3 -29.68 61.16  
 110.00 13 17 30 2632.18 -33.37 64.85 254.80 82.26 14 1 22 1632.2 -33.10 36.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2009 TRA-1.7904 TC3-2.5571 BAU 1.1347 SGT 3412.2 SGR 2089.2 SG3 1622.5 ST 34.7 SR 10.8 SS 40.2  
 RDE -.1198 RRA -.4365 RC3-1.9856 FAU .51152 RRT .9075 RRF .9660 RTF .9205 CRT .9216 CRS .1023 CST -.2307  
 FDE 2.8937 FRA-5.4791 FC-16.8284 BSP 6547 SGB 4001.0 R23 .2052 R13 .9497 LSA 42.5 MSA 33.6 SSA 2.2  
 BDE .2339 BRA 1.8428 BC3 3.2252 FSP 2804 SG1 3927.6 SG2 762.6 THA 30.32 EL1 36.1 EL2 4.0 ALF 16.25

LAUNCH DATE AUG 31 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.882 GAL 5.78 AZL 87.28 HCA 140.88 SMA 196.19 ECC .25015 INC 2.7380 V1 29.505  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.271 GAP 3.20 AZP 92.12 TAL 29.43 TAP 170.31 RCA 147.11 APO 245.26 V2 22.475  
 RC 271.273 GL 17.75 GP -23.81 ZAL 43.66 ZAP 84.42 ETS 179.34 ZAE 114.50 ETE 194.00 ZAC 64.23 ETC 285.62 LVI 1.71

DISTANCE 485.210 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.290 VHL 5.127 DLA 23.38 RAL 9.35 RAD 6645.5 VEL 12.093 PTH 7.07 VHP 2.438 DPA -13.96 RAP 30.45 ECC 1.4327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 42 3678.20 -47.58 145.06 256.45 89.72 8 48 0 2678.2 -42.10 111.59  
 60.00 7 36 31 3651.14 -40.07 142.17 256.00 85.28 8 57 43 2651.1 -37.59 111.32  
 70.00 8 13 26 3602.31 -33.21 137.23 255.01 81.51 9 13 28 2602.3 -33.27 108.49  
 80.00 8 44 43 3504.18 -27.78 128.70 253.90 78.59 9 43 7 2504.2 -29.76 101.45  
 90.00 9 47 45 3300.66 -25.51 113.21 253.36 77.37 10 42 45 2300.7 -28.28 86.54  
 100.00 11 27 35 2978.65 -27.78 90.06 253.90 78.59 12 17 13 1978.7 -29.76 62.61  
 110.00 13 12 52 2649.13 -33.21 66.15 255.01 81.51 13 57 1 1649.1 -33.27 37.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1778 TRA-1.8376 TC3-2.6772 BAU 1.1749 SGT 3547.1 SGR 2127.3 SG3 1613.0 ST 35.2 SR 10.3 SS 41.3  
 RDE -.0947 RRA -.4509 RC3-2.0015 FAU .50748 RRT .9123 RRF .9681 RTF .9237 CRT .9446 CRS -.0054 CST -.2566  
 FDE 2.9907 FRA-5.4279 FC-16.7113 BSP 6801 SGB 4136.1 R23 .2060 R13 .9511 LSA 43.9 MSA 33.4 SSA 2.1  
 BDE .2015 BRA 1.8921 BC3 3.3427 FSP 2786 SG1 4065.7 SG2 760.0 THA 29.83 EL1 36.6 EL2 3.2 ALF 15.50

LAUNCH DATE AUG 31 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.885 GAL 5.72 AZL 87.19 MCA 141.78 SMA 196.25 ECC .25011 INC 2.8094 V1 29.505
RP 244.34 LAP 1.74 LOP 119.27 VP 20.251 GAP 2.98 AZP 92.21 TAL 29.21 TAP 171.00 RCA 147.17 APO 245.34 V2 22.452
RC 273.957 GL 18.23 GP -24.20 ZAL 44.01 ZAP 83.22 ETS 178.75 ZAE 113.01 ETE 193.35 ZAC 63.94 ETC 285.68 LVI 2.04

PLANETOCENTRIC CONIC

C3 26.273 VHL 5.126 DLA 23.91 RAL 9.33 RAD 6645.5 VEL 12.093 PTH 7.07 VHP 2.447 DPA -14.47 RAP 30.25 ECC 1.4324
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 44 7 3689.50 -47.57 146.15 256.94 88.88 8 45 37 2689.5 -42.41 112.49
60.00 7 53 19 3664.98 -39.99 143.34 256.34 84.50 8 54 24 2665.0 -37.84 112.41
70.00 8 8 30 3620.23 -33.02 138.60 255.21 80.72 9 8 51 2620.2 -33.43 109.86
80.00 8 37 52 3528.11 -27.44 130.39 253.99 77.75 9 36 41 2528.1 -29.82 103.22
90.00 9 39 38 3328.67 -25.08 115.14 253.38 76.49 10 35 7 2328.7 -28.27 88.59
100.00 11 20 44 3002.58 -27.44 91.76 253.99 77.75 12 10 47 2002.6 -29.82 64.59
110.00 13 7 57 2667.05 -33.02 67.52 255.21 80.72 13 52 24 1667.1 -33.43 38.78

DIFFERENTIAL CORRECTIONS

TDE -.1529 TRA-1.8847 TC3-2.7962 BAU 1.2152 SGT 3681.9 SGR 2165.8 SG3 1601.7 ST 35.9 SR 9.9 SS 42.3
RDE -.0889 RRA -.4653 RC3-2.0372 FAU .80263 RRT .9167 RRF .9701 RTF .9286 CRT .9841 CR8 -.1289 CST -.2843
FDE 3.0851 FRA-5.3709 FC-16.5724 BSP 7058 SGB 4871.8 R23 .2070 R13 .9524 LSA 45.4 MSA 33.3 S8A 2.1
BDE .1677 BRA 1.9413 BC3 3.4596 FSP 2766 SG1 4204.0 SG2 757.8 THA 29.39 EL1 37.1 EL2 2.5 ALF 14.93

FLIGHT TIME 226.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.889 GAL 5.68 AZL 87.12 MCA 142.69 SMA 196.32 ECC .25009 INC 2.8836 V1 29.505
RP 244.56 LAP 1.75 LOP 120.18 VP 20.232 GAP 2.75 AZP 92.29 TAL 29.99 TAP 171.68 RCA 147.23 APO 245.42 V2 22.430
RC 276.623 GL 18.74 GP -24.60 ZAL 44.38 ZAP 82.06 ETS 178.15 ZAE 111.55 ETE 192.71 ZAC 63.64 ETC 285.73 LVI 2.38

PLANETOCENTRIC CONIC

C3 26.263 VHL 5.125 DLA 24.46 RAL 9.30 RAD 6645.5 VEL 12.092 PTH 7.07 VHP 2.458 DPA -14.98 RAP 30.08 ECC 1.4322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 24 3701.32 -47.54 147.30 257.45 88.00 8 43 5 2701.3 -42.74 113.45
60.00 7 49 35 3679.51 -39.89 144.56 256.68 83.67 8 50 53 2679.5 -38.09 113.56
70.00 8 3 16 3639.20 -32.80 140.03 255.41 78.90 9 3 53 2639.2 -33.59 111.32
80.00 8 30 27 3553.88 -27.06 132.21 254.05 76.87 9 29 41 2553.9 -29.85 105.14
90.00 9 30 42 3359.34 -24.58 117.25 253.38 75.55 10 28 41 2359.3 -28.22 90.83
100.00 11 13 19 3028.35 -27.06 93.58 254.05 76.87 12 3 48 2028.4 -29.85 66.51
110.00 13 2 42 2686.02 -32.80 68.95 255.41 79.90 13 47 28 1686.0 -33.59 40.24

DIFFERENTIAL CORRECTIONS

TDE -.1266 TRA-1.9321 TC3-2.9150 BAU 1.2550 SGT 3818.1 SGR 2205.0 SG3 1588.6 ST 36.6 SR 9.7 SS 43.4
RDE -.0424 RRA -.4799 RC3-2.0726 FAU .49787 RRT .9208 RRF .9720 RTF .9291 CRT .9756 CR8 -.2648 CST -.3130
FDE 3.1754 FRA-5.3075 FC-16.4118 BSP 7306 SGB 4409.0 R23 .2081 R13 .9535 LSA 47.0 MSA 33.1 S8A 2.0
BDE .1335 BRA 1.9908 BC3 3.5767 FSP 2738 SG1 4343.7 SG2 756.0 THA 28.96 EL1 37.8 EL2 2.1 ALF 14.54

FLIGHT TIME 230.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.893 GAL 5.64 AZL 87.04 MCA 143.60 SMA 196.40 ECC .25008 INC 2.9609 V1 29.505
RP 244.79 LAP 1.76 LOP 121.08 VP 20.213 GAP 2.53 AZP 92.38 TAL 28.76 TAP 172.36 RCA 147.28 APO 245.51 V2 22.407
RC 279.268 GL 19.27 GP -25.01 ZAL 44.76 ZAP 80.94 ETS 177.54 ZAE 110.09 ETE 192.07 ZAC 63.32 ETC 285.94 LVI 2.73

PLANETOCENTRIC CONIC

C3 26.262 VHL 5.125 DLA 25.02 RAL 9.27 RAD 6645.5 VEL 12.092 PTH 7.07 VHP 2.470 DPA -15.50 RAP 29.94 ECC 1.4322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 38 31 3713.71 -47.51 148.49 257.98 87.08 8 40 25 2713.7 -43.07 114.45
60.00 7 45 38 3694.78 -39.76 145.84 257.03 82.81 8 47 12 2694.8 -38.34 114.78
70.00 7 57 39 3659.33 -32.55 141.55 255.61 79.03 8 58 39 2659.3 -33.74 112.88
80.00 8 22 21 3581.83 -26.61 134.17 254.09 75.93 9 22 3 2581.8 -29.85 107.21
90.00 9 20 44 3393.28 -23.98 119.55 253.33 74.54 10 17 17 2393.3 -28.12 93.30
100.00 11 5 13 3056.30 -26.61 95.34 254.09 75.93 11 56 9 2056.3 -29.85 68.58
110.00 12 57 8 2706.15 -32.55 70.47 255.61 79.03 13 42 12 1706.2 -33.74 41.79

DIFFERENTIAL CORRECTIONS

TDE -.0977 TRA-1.9792 TC3-3.0316 BAU 1.2963 SGT 3953.5 SGR 2244.3 SG3 1573.5 ST 37.3 SR 9.7 SS 44.4
RDE -.0147 RRA -.4947 RC3-2.1072 FAU .49219 RRT .9245 RRF .9738 RTF .5114 CRT .9757 CR8 -.4035 CST -.3437
FDE 3.2634 FRA-5.2397 FC-16.2252 BSP 7563 SGB 4546.1 R23 .2094 R13 .9545 LSA 48.7 MSA 32.9 S8A 2.0
BDE .0988 BRA 2.0400 BC3 3.6920 FSP 2708 SG1 4483.0 SG2 754.5 THA 28.58 EL1 38.5 EL2 2.1 ALF 14.33

FLIGHT TIME 232.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 32.897 GAL 5.59 AZL 86.96 MCA 144.50 SMA 196.48 ECC .25008 INC 3.0414 V1 29.505
RP 245.01 LAP 1.77 LOP 121.99 VP 20.198 GAP 2.31 AZP 92.48 TAL 28.53 TAP 173.03 RCA 147.34 APO 245.61 V2 22.386
RC 281.893 GL 19.81 GP -25.43 ZAL 45.15 ZAP 79.84 ETS 176.92 ZAE 108.66 ETE 191.45 ZAC 62.99 ETC 285.85 LVI 3.10

PLANETOCENTRIC CONIC

C3 26.270 VHL 5.125 DLA 25.81 RAL 9.23 RAD 6645.5 VEL 12.093 PTH 7.07 VHP 2.483 DPA -16.01 RAP 29.83 ECC 1.4323
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 35 29 3726.69 -47.46 149.74 258.52 86.12 8 37 36 2726.7 -43.40 115.52
60.00 7 41 25 3710.86 -39.82 147.19 257.39 81.91 8 43 16 2710.9 -38.59 116.08
70.00 7 51 38 3680.78 -32.26 143.16 255.79 78.13 8 52 59 2680.8 -33.87 114.53
80.00 8 13 25 3612.38 -26.09 136.29 254.10 74.94 9 13 38 2612.4 -29.81 109.48
90.00 9 9 26 3431.45 -23.26 122.12 253.22 73.45 10 6 38 2431.5 -27.94 98.08
100.00 10 56 17 3086.85 -26.09 97.66 254.10 74.94 11 47 44 2086.8 -29.81 70.85
110.00 12 51 4 2727.58 -32.26 72.07 255.79 78.13 13 36 32 1727.6 -33.87 43.45

DIFFERENTIAL CORRECTIONS

TDE -.0669 TRA-2.0266 TC3-3.1468 BAU 1.3366 SGT 4089.2 SGR 2283.3 SG3 1556.1 ST 38.2 SR 10.1 SS 45.9
RDE .0142 RRA -.5095 RC3-2.1404 FAU .48577 RRT .9278 RRF .9754 RTF .9334 CRT .9632 CR8 -.5342 CST -.3751
FDE 3.3545 FRA-5.1654 FC-16.0086 BSP 7819 SGB 4683.5 R23 .2109 R13 .9554 LSA 50.5 MSA 32.8 S8A 1.9
BDE .0684 BRA 2.0896 BC3 3.8037 FSP 2677 SG1 4622.5 SG2 753.4 THA 28.20 EL1 39.4 EL2 2.6 ALF 14.31

LAUNCH DATE AUG 31 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC										DISTANCE 504.154										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.901	GAL	5.55	AZL	86.87	HCA	145.40	SMA	196.56	ECC	.25009	INC	3.1253	V1	29.505	RP	245.22	LAP	1.77	LOP	122.89	VP	20.180	GAP	2.09	AZP	92.57	TAL	28.30	TAP	173.70	RCA	147.40	APO	245.71	V2	22.365	RC	284.497	GL	20.38	GP	-25.87	ZAL	48.56	ZAP	78.79	ETS	176.30	ZAE	107.27	ETE	190.84	ZAC	62.64	ETC	285.91	LVI	3.48
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.289	VHL	5.127	DLA	26.21	RAL	9.19	RAD	6645.5	VEL	12.093	PTH	7.07	VHP	2.498	DPA	-16.52	RAP	29.74	ECC	1.4327	SGT	4224.9	SGR	2323.6	SG3	1537.4	ST	39.1	SR	10.6	SS	46.6	CRT	.9410	CRS	-.6473	CST	-.4075	LSA	52.4	MSA	32.6	SSA	1.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG2	4762.6	SG2	752.7	THA	27.87	EL1	40.4	EL2	3.5	ALF	14.48																												
50.00	7	32	16	3740.32	-47.38	151.05	259.08	85.11	8	34	36	2740.3	-43.74	116.66																																																			
60.00	7	36	57	3727.82	-39.45	148.60	257.75	80.97	8	39	5	2727.8	-38.83	117.45																																																			
70.00	7	45	9	3703.65	-31.93	144.86	255.96	77.17	8	46	53	2703.6	-33.98	116.31																																																			
80.00	8	3	28	3646.12	-25.47	138.60	254.06	73.87	9	4	14	2646.1	-29.72	111.99																																																			
90.00	8	58	19	3475.42	-22.38	125.04	253.03	72.25	9	54	14	2475.4	-27.66	99.27																																																			
100.00	10	46	20	3120.59	-25.47	99.97	254.06	73.87	11	38	21	2120.6	-29.72	73.35																																																			
110.00	12	44	35	2750.47	-31.93	73.77	255.96	77.17	13	30	26	1750.5	-33.98	45.23																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC										DISTANCE 507.940										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.906	GAL	5.51	AZL	86.79	HCA	146.30	SMA	196.64	ECC	.25011	INC	3.2131	V1	29.505	RP	245.43	LAP	1.78	LOP	123.79	VP	20.164	GAP	1.87	AZP	92.67	TAL	28.06	TAP	174.36	RCA	147.46	APO	245.82	V2	22.344	RC	287.079	GL	20.97	GP	-26.32	ZAL	45.98	ZAP	77.77	ETS	175.66	ZAE	105.90	ETE	190.23	ZAC	62.27	ETC	285.97	LVI	3.89
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.319	VHL	5.130	DLA	26.84	RAL	9.14	RAD	6645.5	VEL	12.095	PTH	7.07	VHP	2.514	DPA	-17.04	RAP	29.69	ECC	1.4331	SGT	4359.9	SGR	2363.9	SG3	1516.7	ST	40.2	SR	11.5	SS	47.7	CRT	.9138	CR8	-.7387	C8T	-.4405	LSA	54.4	M8A	32.4	88A	1.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG2	4959.5	R23	.2162	R13	.9569	EL1	41.5	EL2	4.5	ALF	14.84																												
50.00	7	28	50	3754.65	-47.29	152.43	259.66	84.06	8	31	25	2754.6	-44.08	117.87																																																			
60.00	7	32	10	3745.75	-39.24	150.08	258.11	79.98	8	34	36	2745.7	-39.07	118.92																																																			
70.00	7	38	7	3728.20	-31.54	148.67	256.11	76.16	8	40	16	2728.2	-34.07	118.22																																																			
80.00	7	52	13	3683.96	-24.73	141.17	253.96	72.71	8	53	37	2684.0	-29.55	114.79																																																			
90.00	8	40	27	3528.08	-21.25	128.48	252.72	70.88	9	39	15	2528.1	-27.22	103.06																																																			
100.00	10	35	4	3158.43	-24.73	102.54	253.96	72.71	11	27	43	2158.4	-29.55	76.15																																																			
110.00	12	37	34	2775.01	-31.54	75.58	256.11	76.16	13	23	49	1775.0	-34.07	47.54																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC										DISTANCE 511.724										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.910	GAL	5.46	AZL	86.70	HCA	147.20	SMA	196.73	ECC	.25015	INC	3.3049	V1	29.505	RP	245.63	LAP	1.79	LOP	124.69	VP	20.149	GAP	1.66	AZP	92.78	TAL	27.82	TAP	175.02	RCA	147.52	APO	245.94	V2	22.324	RC	289.637	GL	21.58	GP	-26.78	ZAL	46.42	ZAP	76.79	ETS	175.01	ZAE	104.56	ETE	189.62	ZAC	61.88	ETC	286.04	LVI	4.31
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.362	VHL	5.134	DLA	27.49	RAL	9.07	RAD	6645.6	VEL	12.096	PTH	7.07	VHP	2.532	DPA	-17.56	RAP	29.67	ECC	1.4338	SGT	4495.3	SGR	2405.0	SG3	1494.2	ST	41.3	SR	12.8	SS	48.8	CRT	.8661	CR8	-.8091	C8T	-.4732	LSA	56.6	M8A	32.2	88A	1.7																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG2	5098.2	R23	.2161	R13	.9575	EL1	42.8	EL2	5.8	ALF	15.38																												
50.00	7	25	11	3769.72	-47.18	153.87	260.24	82.95	8	28	1	2769.7	-44.42	119.15																																																			
60.00	7	27	3	3764.73	-39.01	151.64	258.46	78.95	8	29	48	2764.7	-39.30	120.48																																																			
70.00	7	30	28	3754.65	-31.09	148.60	256.24	75.10	8	33	3	2754.7	-34.13	120.28																																																			
80.00	7	39	10	3727.31	-23.82	144.07	253.78	71.45	8	41	18	2727.3	-29.28	117.98																																																			
90.00	8	19	39	3596.45	-19.66	132.87	252.18	69.25	9	19	36	2596.5	-26.48	107.92																																																			
100.00	10	22	2	3201.78	-23.82	105.44	253.78	71.45	11	15	24	2201.8	-29.28	79.35																																																			
110.00	12	29	55	2801.47	-31.09	77.52	256.24	75.10	13	16	36	1801.5	-34.13	49.20																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC										DISTANCE 515.508										EARTH TO MARS																																													
RL	151.01	LAL	.00	LOL	337.45	VL	32.915	GAL	5.41	AZL	86.60	HCA	148.09	SMA	196.82	ECC	.25019	INC	3.4011	V1	29.505	RP	245.83	LAP	1.80	LOP	125.59	VP	20.138	GAP	1.44	AZP	92.89	TAL	27.57	TAP	175.67	RCA	147.58	APO	246.08	V2	22.305	RC	292.178	GL	22.22	GP	-27.26	ZAL	46.87	ZAP	75.84	ETS	174.35	ZAE	103.24	ETE	189.02	ZAC	61.46	ETC	286.11	LVI	4.75
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	26.418	VHL	5.140	DLA	28.17	RAL	9.00	RAD	6645.6	VEL	12.099	PTH	7.08	VHP	2.552	DPA	-18.08	RAP	29.68	ECC	1.4348	SGT	4630.6	SGR	2447.8	SG3	1470.6	ST	42.6	SR	13.9	SS	49.8	CRT	.8629	CR8	-.8601	C8T	-.5063	LSA	58.8	M8A	32.0	88A	1.6																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG2	5237.7	R23	.2180	R13	.9580	EL1	44.3	EL2	6.7	ALF	16.08																												
50.00	7	21	17	3785.61	-47.03	155.37	260.84	81.80	8	24	23	2785.6	-44.77	120.53																																																			
60.00	7	21	34	3784.87	-38.73	153.28	258.81	77.87	8	24	38	2784.9	-39.52	122.15																																																			
70.00	7	22	5	3783.35	-30.57	150.67	256.33	73.98	8	25	8	2783.3	-34.15	122.53																																																			
80.00	7	23	32	3778.77	-22.66	147.45	253.46	70.03	8	26	31	2778.8	-28.85	121.74																																																			
90.00	7	42	56	3715.98	-16.61	140.31	250.91	66.78	8	44	52	2716.0	-24.75	116.24																																																			
100.00	10	6	24	3253.24	-22.66	108.82	253.46	70.03	11	0	37	2253.2	-28.85	83.11																																																			
110.00	12	21	31	2830.17	-30.57	79.59	256.33	73.98	13	8	41	1830.2	-34.15	51.44																																																			

LAUNCH DATE AUG 31 1973

FLIGHT TIME 248.00

ARRIVAL DATE APR 30 1974

Heliocentric Conic

RL 151.01 LAL .00 LOL 337.48 VL 32.920 GAL 5.37 AZL 86.30 HCA 148.99 SMA 196.92 ECC .25024 INC 3.5021 V1 29.509  
 RP 246.02 LAP 1.80 LOP 126.48 VP 20.123 GAP 1.23 AZP 93.00 TAL 27.32 TAP 176.31 RCA 147.64 APO 246.19 V2 22.286  
 RC 294.882 GL 22.89 GP -27.76 ZAL 47.34 ZAP 74.93 ETS 173.60 ZAE 101.96 ETE 188.42 ZAC 61.03 ETC 286.18 LVI 5.22

DISTANCE 518.291

EARTH TO MARS

Planetocentric Conic

C3 26.490 VHL 5.147 DLA 28.87 RAL 8.91 RAD 6645.6 VEL 12.102 PTH 7.08 VHP 2.573 DPA -18.62 RAP 29.72 ECC 1.4360  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 6 3802.38 -46.86 158.96 261.45 80.59 8 20 29 2802.4 -45.12 121.99  
 60.00 7 15 38 3806.31 -38.41 155.01 259.15 76.73 8 19 4 2806.3 -39.72 123.93  
 70.00 7 12 47 3814.71 -29.96 152.91 256.37 72.78 8 16 22 2814.7 -34.13 124.98  
 80.00 7 3 25 3844.19 -21.08 151.67 252.90 68.35 8 7 29 2844.2 -28.13 126.47  
 83.94 6 30 3 3951.56 -14.89 156.78 250.09 64.98 7 35 55 2951.6 -23.93 133.26  
 100.00 9 46 17 3318.67 -21.08 113.03 252.90 68.35 10 41 36 2318.7 -28.13 87.84  
 110.00 12 12 14 2861.53 -29.96 81.83 256.37 72.78 12 59 55 1861.5 -34.13 53.89

Differential Corrections

TDE .1209 TRA-2.2633 TC3-3.6880 BAU 1.5393  
 RDE .1771 RRA -.5898 RC3-2.2999 FAU .44688  
 FDE 3.7579 FRA-4.7336 FC-14.6045 BSP 9105  
 BDE .2145 BRA 2.3389 BC3 4.3464 FSP 2476

MID-COURSE EXECUTION ACCURACY

SGT 4765.3 SGR 2491.0 SG3 1445.0  
 RRT .9410 RRF .9823 RTF .9404  
 SGB 5377.1 R23 .2200 R13 .9585  
 SG1 5323.9 SG2 754.5 THA 26.77

ORBIT DETERMINATION ACCURACY

ST 44.0 SR 15.4 SS 50.9  
 CRT .8446 CRS -.8973 CST -.5386  
 LSA 61.2 MSA 31.9 SSA 1.6  
 EL1 46.0 EL2 7.9 ALF 16.93

LAUNCH DATE AUG 31 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 2 1974

Heliocentric Conic

RL 151.01 LAL .00 LOL 337.45 VL 32.925 GAL 5.32 AZL 86.39 HCA 149.88 SMA 197.01 ECC .25030 INC 3.6084 V1 29.505  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.110 GAP 1.02 AZP 93.12 TAL 27.07 TAP 176.95 RCA 147.70 APO 246.33 V2 22.267  
 RC 297.167 GL 23.59 GP -28.28 ZAL 47.82 ZAP 74.07 ETS 173.00 ZAE 100.70 ETE 187.82 ZAC 60.56 ETC 286.26 LVI 5.71

DISTANCE 523.072

EARTH TO MARS

Planetocentric Conic

C3 26.580 VHL 5.156 DLA 29.60 RAL 8.80 RAD 6645.6 VEL 12.105 PTH 7.08 VHP 2.596 DPA -19.16 RAP 29.79 ECC 1.4374  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 38 3820.11 -46.65 158.62 262.06 79.33 8 16 18 2820.1 -45.46 123.56  
 60.00 7 9 13 3829.20 -38.04 156.84 259.46 75.54 8 13 2 2829.2 -39.91 125.85  
 70.00 7 2 24 3849.33 -29.24 155.34 256.34 71.51 8 6 33 2849.3 -34.03 127.67  
 80.00 6 31 34 3946.56 -18.38 158.06 251.74 66.05 7 37 21 2946.6 -26.65 133.71  
 80.88 6 5 18 4030.62 -15.21 162.77 250.21 64.30 7 12 29 3030.6 -24.50 139.28  
 100.00 9 14 26 3421.04 -18.38 119.43 251.74 66.05 10 11 27 2421.0 -26.65 95.08  
 110.00 12 1 50 2896.15 -29.24 84.26 256.34 71.51 12 50 6 1896.2 -34.03 56.59

Differential Corrections

TDE .1658 TRA-2.3108 TC3-3.7866 BAU 1.5798  
 RDE .2139 RRA -.6074 RC3-2.3297 FAU .43774  
 FDE 3.8273 FRA-4.6383 FC-14.2576 BSP 9362  
 BDE .2707 BRA 2.3893 BC3 4.4459 FSP 2426

MID-COURSE EXECUTION ACCURACY

SGT 4899.1 SGR 2535.7 SG3 1418.0  
 RRT .9431 RRF .9835 RTF .9414  
 SGB 5516.5 R23 .2220 R13 .9590  
 SG1 5464.4 SG2 755.9 THA 26.57

ORBIT DETERMINATION ACCURACY

ST 45.6 SR 17.0 SS 51.9  
 CRT .8322 CRS -.9240 CST -.5705  
 LSA 63.7 MSA 31.7 SSA 1.5  
 EL1 47.9 EL2 9.0 ALF 17.91

LAUNCH DATE AUG 31 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 4 1974

Heliocentric Conic

RL 151.01 LAL .00 LOL 337.45 VL 32.930 GAL 5.27 AZL 86.28 HCA 150.77 SMA 197.11 ECC .25037 INC 3.7202 V1 29.505  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.099 GAP .81 AZP 93.25 TAL 26.81 TAP 177.59 RCA 147.76 APO 246.46 V2 22.249  
 RC 299.628 GL 24.32 GP -28.82 ZAL 48.33 ZAP 73.24 ETS 172.30 ZAE 99.48 ETE 187.23 ZAC 60.07 ETC 286.35 LVI 6.22

DISTANCE 526.853

EARTH TO MARS

Planetocentric Conic

C3 26.889 VHL 5.168 DLA 30.36 RAL 8.68 RAD 6645.7 VEL 12.110 PTH 7.08 VHP 2.620 DPA -19.71 RAP 29.90 ECC 1.4392  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 7 48 3836.89 -46.40 180.36 262.67 78.01 8 11 47 2838.9 -45.79 125.25  
 60.00 7 2 14 3853.72 -37.60 158.78 259.76 74.29 8 6 28 2853.7 -40.07 127.92  
 70.00 6 50 36 3888.09 -28.37 158.03 256.23 70.14 7 55 24 2888.1 -33.85 130.69  
 78.48 5 46 37 4089.67 -15.55 167.33 250.34 63.59 6 54 47 3089.7 -25.09 143.88  
 78.48 5 46 37 4089.67 -15.55 167.33 250.34 63.59 6 54 47 3089.7 -25.09 143.88  
 78.48 5 46 37 4089.67 -15.55 167.33 250.34 63.59 6 54 47 3089.7 -25.09 143.88  
 110.00 11 50 2 2934.91 -20.37 86.94 256.23 70.14 12 38 57 1934.9 -33.85 59.60

Differential Corrections

TDE .2129 TRA-2.3592 TC3-3.8817 BAU 1.6208  
 RDE .2525 RRA -.6261 RC3-2.3587 FAU .42813  
 FDE 3.8928 FRA-4.5405 FC-13.8879 BSP 9812  
 BDE .3302 BRA 2.4409 BC3 4.5421 FSP 2373

MID-COURSE EXECUTION ACCURACY

SGT 5033.4 SGR 2581.7 SG3 1389.4  
 RRT .9450 RRF .9846 RTF .5222  
 SGB 5658.9 R23 .2242 R13 .9594  
 SG1 5605.9 SG2 758.0 THA 26.38

ORBIT DETERMINATION ACCURACY

ST 47.4 SR 18.8 SS 53.0  
 CRT .8248 CRS -.9431 CST -.6009  
 LSA 66.4 MSA 31.5 SSA 1.4  
 EL1 50.0 EL2 10.1 ALF 18.97

LAUNCH DATE AUG 31 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 6 1974

Heliocentric Conic

RL 151.01 LAL .00 LOL 337.45 VL 32.935 GAL 5.23 AZL 86.16 HCA 151.68 SMA 197.21 ECC .25045 INC 3.8385 V1 29.505  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.089 GAP .60 AZP 93.30 TAL 26.55 TAP 178.22 RCA 147.82 APO 246.61 V2 22.232  
 RC 302.063 GL 25.09 GP -29.39 ZAL 48.83 ZAP 72.45 ETS 171.59 ZAE 98.28 ETE 186.63 ZAC 59.56 ETC 286.44 LVI 6.77

DISTANCE 530.632

EARTH TO MARS

Planetocentric Conic

C3 26.819 VHL 5.179 DLA 31.15 RAL 8.54 RAD 6645.7 VEL 12.115 PTH 7.09 VHP 2.647 DPA -20.27 RAP 30.05 ECC 1.4414  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 2 35 3836.82 -46.10 182.19 263.28 76.62 8 6 54 2858.8 -46.12 127.08  
 60.00 6 54 37 3880.10 -37.10 180.83 260.01 72.97 7 59 17 2880.1 -40.19 130.18  
 70.00 6 38 56 3932.37 -27.31 181.03 258.99 88.65 7 42 28 2932.4 -33.54 134.10  
 78.37 5 30 49 4139.11 -15.88 171.22 250.47 62.85 6 39 48 3139.1 -25.69 147.81  
 78.37 5 30 49 4139.11 -15.88 171.22 250.47 62.85 6 39 48 3139.1 -25.69 147.81  
 78.37 5 30 49 4139.11 -15.88 171.22 250.47 62.85 6 39 48 3139.1 -25.69 147.81  
 110.00 11 36 22 2979.19 -27.31 89.95 255.99 68.65 12 26 1 1979.2 -33.54 63.82

Differential Corrections

TDE .2645 TRA-2.4063 TC3-3.9702 BAU 1.6608  
 RDE .2938 RRA -.6449 RC3-2.3857 FAU .41793  
 FDE 3.9598 FRA-4.4346 FC-13.4908 BSP 9883  
 BDE .3953 BRA 2.4912 BC3 4.6319 FSP 2323

MID-COURSE EXECUTION ACCURACY

SGT 5164.4 SGR 2826.0 SG3 1358.7  
 RRT .9467 RRF .9856 RTF .9429  
 SGB 5794.6 R23 .2266 R13 .9596  
 SG1 5744.5 SG2 760.7 THA 26.22

ORBIT DETERMINATION ACCURACY

ST 49.3 SR 20.8 SS 54.0  
 CRT .8219 CRS -.9573 CST -.6309  
 LSA 69.3 MSA 31.3 SSA 1.4  
 EL1 52.3 EL2 11.2 ALF 20.12

LAUNCH DATE AUG 31 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.941 GAL 5.18 AZL 86.04 HCA 152.55 SMA 197.32 ECC .25034 INC 3.9635 V1 29.505  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.079 GAP .39 AZP 93.52 TAL 26.29 TAP 178.84 RCA 147.88 APO 246.76 V2 22.215  
 RC 304.476 GL 25.89 GP -29.98 ZAL 49.39 ZAP 71.71 ETS 170.87 ZAE 97.12 ETE 186.03 ZAC 59.01 ETC 286.54 LVI 7.34

DISTANCE 534.411 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 26.975 VHL 5.194 DLA 31.97 RAL 8.37 RAD 6645.8 VEL 12.122 PTH 7.09 VHP 2.675 DPA -20.84 RAP 30.23 ECC 1.4439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 56 56 3880.03 -45.75 164.12 263.87 75.18 8 1 36 2880.0 -46.44 129.01  
 60.00 6 46 14 3908.63 -36.51 163.03 260.22 71.59 7 51 22 2908.6 -40.27 132.57  
 70.00 6 20 32 3984.62 -25.97 164.50 255.57 67.00 7 26 57 2984.6 -33.05 138.10  
 74.43 5 16 46 4182.56 -16.22 174.69 250.60 62.07 6 26 29 3182.6 -26.31 151.33  
 74.43 5 16 46 4182.56 -16.22 174.69 250.60 62.07 6 26 29 3182.6 -26.31 151.33  
 74.43 5 16 46 4182.56 -16.22 174.69 250.60 62.07 6 26 29 3182.6 -26.31 151.33  
 110.00 11 19 59 3031.44 -25.97 93.42 255.57 67.00 12 10 30 2031.4 -33.05 67.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3177 TRA-2.4548 TC3-4.0553 BAU 1.7018 SGT 5296.9 SGR 2677.6 SG3 1327.3 ST 51.4 SR 23.0 SS 55.0  
 RDE .3364 RRA -.6656 RC3-2.4130 FAU .40759 RRT .9484 RRF .9865 RTF .9435 CRT .8229 CRS -.9673 CST -.6590  
 FDE 4.0164 FRA-4.3326 FC-13.0814 BSP 10136 SGB 5935.2 R23 .2288 R13 .9599 LSA 72.3 MSA 31.1 S8A 1.3  
 BDE .4627 BRA 2.5434 BC3 4.7189 FSP 2265 SG1 5885.9 SG2 763.8 THA 26.09 EL1 54.9 EL2 12.2 ALF 21.29

LAUNCH DATE AUG 31 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.946 GAL 5.13 AZL 85.90 HCA 153.44 SMA 197.43 ECC .25064 INC 4.0960 V1 29.505  
 RP 246.90 LAP 1.83 LOP 130.95 VP 20.070 GAP .18 AZP 93.67 TAL 26.02 TAP 179.46 RCA 147.94 APO 246.91 V2 22.199  
 RC 306.863 GL 26.73 GP -30.60 ZAL 49.96 ZAP 71.01 ETS 170.13 ZAE 95.98 ETE 185.43 ZAC 56.42 ETC 286.64 LVI 7.94

DISTANCE 538.188 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.158 VHL 5.211 DLA 32.83 RAL 8.18 RAD 6645.9 VEL 12.129 PTH 7.10 VHP 2.706 DPA -21.43 RAP 30.45 ECC 1.4469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 50 48 3902.66 -45.33 166.14 264.45 73.67 7 55 50 2902.7 -46.73 131.12  
 60.00 6 36 56 3939.66 -35.81 165.37 260.36 70.13 7 42 36 2939.7 -40.30 135.21  
 70.00 5 59 38 4050.18 -24.16 168.73 254.83 65.09 7 7 8 3050.2 -32.23 143.04  
 72.59 5 3 54 4221.90 -16.57 177.89 250.74 61.25 6 14 16 3221.9 -26.95 154.58  
 72.59 5 3 54 4221.90 -16.57 177.89 250.74 61.25 6 14 16 3221.9 -26.95 154.58  
 72.59 5 3 54 4221.90 -16.57 177.89 250.74 61.25 6 14 16 3221.9 -26.95 154.58  
 110.00 10 59 4 3097.00 -24.16 97.65 254.83 65.09 11 50 41 2097.0 -32.23 71.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3742 TRA-2.5034 TC3-4.1337 BAU 1.7425 SGT 5427.7 SGR 2728.1 SG3 1293.9 ST 53.7 SR 25.2 SS 56.0  
 RDE .3815 RRA -.6672 RC3-2.4382 FAU .39666 RRT .9500 RRF .9874 RTF .9440 CRT .8266 CRS -.9746 CST -.6855  
 FDE 4.0690 FRA-4.2259 FC-12.6447 BSP 10395 SGB 6074.7 R23 .2311 R13 .9601 LSA 75.4 MSA 31.0 S8A 1.2  
 BDE .3344 BRA 2.5960 BC3 4.7992 FSP 2207 SG1 6026.0 SG2 767.5 THA 25.98 EL1 57.8 EL2 13.2 ALF 22.47

LAUNCH DATE AUG 31 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.952 GAL 5.08 AZL 85.76 HCA 154.33 SMA 197.53 ECC .25074 INC 4.2368 V1 29.505  
 RP 247.06 LAP 1.83 LOP 131.84 VP 20.062 GAP -.03 AZP 93.82 TAL 25.76 TAP 180.08 RCA 148.00 APO 247.06 V2 22.183  
 RC 309.224 GL 27.61 GP -31.25 ZAL 50.54 ZAP 70.35 ETS 169.37 ZAE 94.88 ETE 184.82 ZAC 57.81 ETC 287.76 LVI 8.58

DISTANCE 541.964 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.373 VHL 5.232 DLA 33.72 RAL 7.96 RAD 6646.0 VEL 12.138 PTH 7.11 VHP 2.739 DPA -22.04 RAP 30.70 ECC 1.4505  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 44 5 3926.84 -44.85 168.27 265.00 72.09 7 49 32 2926.6 -47.00 133.39  
 60.00 6 26 33 3973.67 -35.00 167.88 260.42 68.59 7 32 47 2973.7 -40.25 138.10  
 70.00 5 28 4 4147.50 -21.23 174.77 253.36 62.60 6 37 11 3147.5 -30.63 150.17  
 70.82 4 51 52 4258.16 -16.91 180.89 250.88 60.38 6 2 50 3258.2 -27.61 157.65  
 70.82 4 51 52 4258.16 -16.91 180.89 250.88 60.38 6 2 50 3258.2 -27.61 157.65  
 70.82 4 51 52 4258.16 -16.91 180.89 250.88 60.38 6 2 50 3258.2 -27.61 157.65  
 110.00 10 27 30 3194.32 -21.23 103.68 253.36 62.60 11 20 44 2194.3 -30.63 79.09

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4270 TRA-2.5390 TC3-4.2149 BAU 1.7892 SGT 5569.7 SGR 2798.2 SG3 1266.9 ST 56.1 SR 27.3 SS 56.3  
 RDE .4196 RRA -.7204 RC3-2.4773 FAU .38811 RRT .9524 RRF .9884 RTF .9460 CRT .8373 CRS -.9786 CST -.7115  
 FDE 4.0620 FRA-4.1768 FC-12.2748 BSP 10519 SGB 6233.1 R23 .2291 R13 .9616 LSA 78.3 MSA 30.5 S8A 1.2  
 BDE .5986 BRA 2.6584 BC3 4.8890 FSP 2085 SG1 6185.6 SG2 768.4 THA 26.00 EL1 60.8 EL2 13.6 ALF 23.48

LAUNCH DATE AUG 31 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC  
 RL 151.01 LAL .00 LOL 337.45 VL 32.958 GAL 5.03 AZL 85.61 HCA 155.21 SMA 197.64 ECC .25085 INC 4.3867 V1 29.505  
 RP 247.22 LAP 1.84 LOP 132.73 VP 20.055 GAP -.23 AZP 93.98 TAL 25.48 TAP 180.70 RCA 148.06 APO 247.22 V2 22.188  
 RC 311.559 GL 28.54 GP -31.94 ZAL 51.15 ZAP 69.75 ETS 168.60 ZAE 93.82 ETE 184.21 ZAC 57.15 ETC 286.89 LVI 9.26

DISTANCE 545.741 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.624 VHL 5.256 DLA 34.65 RAL 7.71 RAD 6646.1 VEL 12.148 PTH 7.12 VHP 2.775 DPA -22.67 RAP 31.00 ECC 1.4546  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 36 43 3982.81 -44.28 170.51 265.50 70.44 7 42 36 2952.8 -47.23 135.86  
 60.00 6 14 49 4011.58 -34.02 170.61 260.36 66.96 7 21 40 3011.4 -40.11 141.30  
 69.08 4 40 27 4292.15 -17.26 183.76 251.02 59.47 5 51 59 3292.2 -28.28 160.59  
 69.08 4 40 27 4292.15 -17.26 183.76 251.02 59.47 5 51 59 3292.2 -28.28 160.59  
 69.08 4 40 27 4292.15 -17.26 183.76 251.02 59.47 5 51 59 3292.2 -28.28 160.59  
 69.08 4 40 27 4292.15 -17.26 183.76 251.02 59.47 5 51 59 3292.2 -28.28 160.59  
 69.08 4 40 27 4292.15 -17.26 183.76 251.02 59.47 5 51 59 3292.2 -28.28 160.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4901 TRA-2.8083 TC3-4.2786 BAU 1.8294 SGT 5697.5 SGR 2849.4 SG3 1228.5 ST 58.7 SR 29.9 SS 57.3  
 RDE .4716 RRA -.7431 RC3-2.4962 FAU .37568 RRT .9535 RRF .9891 RTF .9459 CRT .8423 CRS -.9832 CST -.7335  
 FDE 4.1148 FRA-4.0536 FC-11.7741 BSP 10796 SGB 6370.3 R23 .2324 R13 .9614 LSA 81.8 MSA 30.5 S8A 1.1  
 BDE .6802 BRA 2.7121 BC3 4.9336 FSP 2036 SG1 6323.1 SG2 773.7 THA 25.91 EL1 64.2 EL2 14.7 ALF 24.60

LAUNCH DATE AUG 31 1973 FLIGHT TIME 258.00 ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC DISTANCE 549.514 EARTH TO MARS
RL 151.01 LAL .00 LOL 337.45 VL 32.963 GAL 4.98 AZL 85.45 HCA 156.10 SMA 197.76 ECC .25097 INC 4.5468 V1 29.505

PLANETOCENTRIC CONIC
C3 27.915 VHL 5.283 DLA 35.63 RAL 7.41 RAD 6646.2 VEL 12.160 PTH 7.12 VHP 2.814 DPA -23.32 RAP 31.35 ECC 1.4594

END OF TAPE, CHANGE AND PRESS START
TDE .5574 TRA-2.6581 TC3-4.3347 BAU 1.0701 SGT 5824.3 SGR 2904.2 SG3 1189.1 ST 61.6 SR 32.7 SS 58.3

LAUNCH DATE AUG 31 1973 FLIGHT TIME 260.00 ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC DISTANCE 553.287 EARTH TO MARS
RL 151.01 LAL .00 LOL 337.45 VL 32.969 GAL 4.93 AZL 85.28 HCA 156.98 SMA 197.87 ECC .25110 INC 4.7183 V1 29.505

PLANETOCENTRIC CONIC
C3 28.254 VHL 5.315 DLA 36.65 RAL 7.08 RAD 6646.3 VEL 12.174 PTH 7.14 VHP 2.856 DPA -23.99 RAP 31.73 ECC 1.4650

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE .6273 TRA-2.7096 TC3-4.3819 BAU 1.9112 SGT 5950.6 SGR 2961.7 SG3 1148.2 ST 64.6 SR 35.6 SS 59.1

LAUNCH DATE AUG 31 1973 FLIGHT TIME 262.00 ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC DISTANCE 557.058 EARTH TO MARS
RL 151.01 LAL .00 LOL 337.45 VL 32.975 GAL 4.88 AZL 85.10 HCA 157.86 SMA 197.99 ECC .25123 INC 4.9026 V1 29.505

PLANETOCENTRIC CONIC
C3 28.648 VHL 5.352 DLA 37.72 RAL 6.69 RAD 6646.5 VEL 12.190 PTH 7.15 VHP 2.901 DPA -24.69 RAP 32.17 ECC 1.4715

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE .7014 TRA-2.7808 TC3-4.4177 BAU 1.9523 SGT 6073.4 SGR 3022.9 SG3 1106.1 ST 67.8 SR 38.7 SS 59.8

LAUNCH DATE AUG 31 1973 FLIGHT TIME 264.00 ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC DISTANCE 560.829 EARTH TO MARS
RL 151.01 LAL .00 LOL 337.45 VL 32.981 GAL 4.82 AZL 84.90 HCA 158.74 SMA 198.11 ECC .25137 INC 5.1010 V1 29.505

PLANETOCENTRIC CONIC
C3 29.105 VHL 5.395 DLA 38.84 RAL 6.24 RAD 6646.7 VEL 12.208 PTH 7.16 VHP 2.951 DPA -25.42 RAP 32.65 ECC 1.4790

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE .7769 TRA-2.8149 TC3-4.4450 BAU 1.9949 SGT 6197.7 SGR 3088.5 SG3 1062.8 ST 71.2 SR 41.9 SS 60.4

LAUNCH DATE AUG 31 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 24 1974

Heliocentric Conic: RL 151.01 LAL .00 LOL 337.45 VL 32.987 GAL 4.77 AZL 84.68 HCA 159.62 SMA 198.23 ECC .25131 INC 5.3155 V1 29.505  
 RP 247.91 LAP 1.85 LOP 137.15 VP 20.029 GAP -1.24 AZP 94.98 TAL 24.08 TAP 183.70 RCA 148.37 APO 248.08 V2 22.101  
 RC 322.829 GL 34.01 GP -35.97 ZAL 54.63 ZAP 67.49 ETS 164.50 ZAE 89.06 ETE 181.07 ZAC 53.20 ETC 287.73 LVI 13.28

Planetocentric Conic: C3 29.637 VHL 5.444 DLA 40.01 RAL 5.73 RAD 6646.9 VEL 12.230 PTH 7.18 VHP 3.005 DPA -26.19 RAP 33.18 ECC 1.4677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 45 18 4119.96 -39.58 183.77 266.57 61.08 6 53 58 3120.0 -47.31 151.96  
 60.00 4 18 37 4354.27 -22.66 192.45 254.50 55.73 5 31 11 3354.3 -34.66 168.58  
 60.43 3 47 42 4441.32 -18.90 197.01 251.67 54.06 5 1 44 3441.3 -31.88 174.50  
 60.43 3 47 42 4441.32 -18.90 197.01 251.67 54.06 5 1 44 3441.3 -31.88 174.50  
 60.43 3 47 42 4441.32 -18.90 197.01 251.67 54.06 5 1 44 3441.3 -31.88 174.50  
 60.43 3 47 42 4441.32 -18.90 197.01 251.67 54.06 5 1 44 3441.3 -31.88 174.50

Differential Corrections: TDE .8549 TRA-2.8706 TC3-4.4598 BAU 2.0381 SGT 6320.2 SGR 3158.1 SG3 1017.8 ST 74.7 SR 45.2 SS 60.8  
 RDE .7806 RRA -.8946 RC3-2.5631 FAU .30898 RRT .9588 RRF .9918 RTF .9454 CRT .8792 CR3 -.9932 CST -.8192  
 FDE 4.2291 FRA-3.4441 FC3-9.0257 BSP 12156 SGB 7065.3 R23 .2470 R13 .9607 LSA 102.0 MSA 30.1 SSA .6  
 BDE 1.1577 BRA 3.0067 BC3 5.1439 FSP 1713 SG1 7019.0 SG2 807.6 THA 25.97 EL1 85.2 EL2 18.9 ALF 29.63

LAUNCH DATE AUG 31 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 26 1974

Heliocentric Conic: RL 151.01 LAL .00 LOL 337.45 VL 32.994 GAL 4.72 AZL 84.45 HCA 160.50 SMA 198.35 ECC .25166 INC 5.5483 V1 29.505  
 RP 248.03 LAP 1.85 LOP 138.03 VP 20.026 GAP -1.44 AZP 95.23 TAL 23.80 TAP 184.30 RCA 148.43 APO 248.26 V2 22.089  
 RC 324.997 GL 35.31 GP -36.92 ZAL 55.42 ZAP 67.22 ETS 163.63 ZAE 88.23 ETE 180.41 ZAC 52.26 ETC 287.96 LVI 14.23

Planetocentric Conic: C3 30.256 VHL 5.501 DLA 41.23 RAL 5.13 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 3.064 DPA -26.99 RAP 33.77 ECC 1.4979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 30 24 4164.51 -38.06 186.95 266.21 58.96 6 39 49 3164.5 -46.91 156.20  
 58.64 3 37 21 4468.83 -19.18 199.58 251.77 52.77 4 51 50 3468.8 -32.63 177.29  
 58.64 3 37 21 4468.83 -19.18 199.58 251.77 52.77 4 51 50 3468.8 -32.63 177.29  
 58.64 3 37 21 4468.83 -19.18 199.58 251.77 52.77 4 51 50 3468.8 -32.63 177.29  
 58.64 3 37 21 4468.83 -19.18 199.58 251.77 52.77 4 51 50 3468.8 -32.63 177.29  
 58.64 3 37 21 4468.83 -19.18 199.58 251.77 52.77 4 51 50 3468.8 -32.63 177.29

Differential Corrections: TDE .9358 TRA-2.9281 TC3-4.4603 BAU 2.0814 SGT 6440.2 SGR 3230.7 SG3 970.8 ST 78.3 SR 48.8 SS 61.0  
 RDE .8548 RRA -.9346 RC3-2.5680 FAU .29432 RRT .9598 RRF .9921 RTF .9450 CRT .8860 CR3 -.9940 CST -.8308  
 FDE 4.2159 FRA-3.3189 FC3-8.4215 BSP 12429 SGB 7205.1 R23 .2500 R13 .9604 LSA 106.4 MSA 30.2 SSA .7  
 BDE 1.2674 BRA 3.0736 BC3 5.1457 FSP 1638 SG1 7158.7 SG2 815.9 THA 26.07 EL1 90.1 EL2 19.6 ALF 30.49

LAUNCH DATE AUG 31 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 28 1974

Heliocentric Conic: RL 151.01 LAL .00 LOL 337.45 VL 33.000 GAL 4.66 AZL 84.20 HCA 161.38 SMA 198.47 ECC .25182 INC 5.8018 V1 29.505  
 RP 248.14 LAP 1.85 LOP 138.92 VP 20.024 GAP -1.64 AZP 95.50 TAL 23.51 TAP 184.88 RCA 148.49 APO 248.45 V2 22.078  
 RC 327.134 GL 36.68 GP -37.92 ZAL 56.26 ZAP 67.01 ETS 162.75 ZAE 87.45 ETE 179.75 ZAC 51.25 ETC 288.21 LVI 15.25

Planetocentric Conic: C3 30.980 VHL 5.566 DLA 42.52 RAL 4.44 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 3.130 DPA -27.82 RAP 34.42 ECC 1.5099  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 12 52 4215.15 -38.23 190.41 265.48 56.75 6 23 8 3215.2 -46.27 160.91  
 56.82 3 26 51 4496.01 -19.43 202.16 251.83 51.40 4 41 47 3496.0 -33.38 180.12  
 56.82 3 26 51 4496.01 -19.43 202.16 251.83 51.40 4 41 47 3496.0 -33.38 180.12  
 56.82 3 26 51 4496.01 -19.43 202.16 251.83 51.40 4 41 47 3496.0 -33.38 180.12  
 56.82 3 26 51 4496.01 -19.43 202.16 251.83 51.40 4 41 47 3496.0 -33.38 180.12  
 56.82 3 26 51 4496.01 -19.43 202.16 251.83 51.40 4 41 47 3496.0 -33.38 180.12

Differential Corrections: TDE 1.0158 TRA-2.9901 TC3-4.4496 BAU 2.1277 SGT 6562.6 SGR 3311.4 SG3 923.0 ST 81.9 SR 52.4 SS 61.0  
 RDE .9320 RRA -.9808 RC3-2.5674 FAU .27981 RRT .9608 RRF .9924 RTF .9448 CRT .8921 CR3 -.9944 CST -.8404  
 FDE 4.1809 FRA-3.1978 FC3-7.8137 BSP 12664 SGB 7330.7 R23 .2525 R13 .9603 LSA 110.8 MSA 30.2 SSA .7  
 BDE 1.3788 BRA 3.1468 BC3 5.1371 FSP 1552 SG1 7304.4 SG2 824.4 THA 26.22 EL1 95.1 EL2 20.4 ALF 31.29

LAUNCH DATE AUG 31 1973

FLIGHT TIME 272.00

ARRIVAL DATE MAY 30 1974

Heliocentric Conic: RL 151.01 LAL .00 LOL 337.45 VL 33.008 GAL 4.61 AZL 83.92 HCA 162.25 SMA 198.59 ECC .25198 INC 6.0793 V1 29.505  
 RP 248.25 LAP 1.85 LOP 139.80 VP 20.023 GAP -1.84 AZP 95.79 TAL 23.22 TAP 185.47 RCA 148.55 APO 248.63 V2 22.067  
 RC 329.241 GL 38.14 GP -38.99 ZAL 57.14 ZAP 66.88 ETS 161.87 ZAE 86.73 ETE 179.08 ZAC 50.18 ETC 288.49 LVI 16.33

Planetocentric Conic: C3 31.828 VHL 5.642 DLA 43.87 RAL 3.64 RAD 6647.7 VEL 12.319 PTH 7.25 VHP 3.202 DPA -28.70 RAP 35.14 ECC 1.5238  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 51 37 4274.34 -33.95 194.22 264.21 54.41 6 2 51 3274.3 -45.25 166.25  
 54.95 3 16 7 4523.09 -19.65 204.77 251.85 49.95 4 31 30 3523.1 -34.11 183.02  
 54.95 3 16 7 4523.09 -19.65 204.77 251.85 49.95 4 31 30 3523.1 -34.11 183.02  
 54.95 3 16 7 4523.09 -19.65 204.77 251.85 49.95 4 31 30 3523.1 -34.11 183.02  
 54.95 3 16 7 4523.09 -19.65 204.77 251.85 49.95 4 31 30 3523.1 -34.11 183.02  
 54.95 3 16 7 4523.09 -19.65 204.77 251.85 49.95 4 31 30 3523.1 -34.11 183.02

Differential Corrections: TDE 1.0993 TRA-3.0526 TC3-4.4185 BAU 2.1730 SGT 6677.9 SGR 3393.9 SG3 872.5 ST 85.6 SR 56.2 SS 60.9  
 RDE 1.0168 RRA -1.0306 RC3-2.5601 FAU .26402 RRT .9618 RRF .9926 RTF .9442 CRT .8975 CR3 -.9948 CST -.8486  
 FDE 4.1363 FRA-3.0680 FC3-7.1815 BSP 12945 SGB 7490.9 R23 .2556 R13 .9598 LSA 115.2 MSA 30.4 SSA .6  
 BDE 1.4975 BRA 3.2219 BC3 5.1066 FSP 1470 SG1 7444.3 SG2 833.7 THA 26.41 EL1 100.2 EL2 21.2 ALF 32.11

LAUNCH DATE AUG 31 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.012 GAL 4.56 AZL 83.62 HCA 163.13 SMA 198.72 ECC .25215 INC 6.3843 V1 29.903
RP 248.35 LAP 1.85 LOP 140.68 VP 20.022 GAP -2.03 AZP 96.11 TAL 22.92 TAP 186.03 RCA 148.61 APO 248.82 V2 22.057
RC 331.317 GL 39.89 GP -40.12 ZAL 58.06 ZAP 66.82 ETS 160.97 ZAE 86.06 ETE 178.41 ZAC 49.04 ETC 288.81 LVI 17.48

DISTANCE 579.683

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.827 VHL 5.730 DLA 45.28 RAL 2.71 RAD 6648.1 VEL 12.359 PTH 7.28 VHP 3.283 DPA -29.62 RAP 35.92 ECC 1.5403
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 24 23 4347.19 -30.97 198.62 262.09 51.89 5 36 50 3347.2 -43.64 172.52
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00
53.03 3 5 3 4550.16 -19.82 207.39 251.82 48.41 4 20 53 3550.2 -34.83 186.00

DIFFERENTIAL CORRECTIONS

TDE 1.1805 TRA-3.1185 TC3-4.3702 BAU 2.2199
RDE 1.1064 RRA-1.0865 RC3-2.5469 FAU .24800
FDE 4.0696 FRA-2.9348 FC3-6.5403 BSP 13213
BDE 1.6179 BRA 3.3024 BC3 5.0582 FSP 1382

MID-COURSE EXECUTION ACCURACY

SGT 6790.8 SGR 3482.2 SG3 820.2
RRT .9827 RRF .9927 RTF .9434
SGB 7631.6 R23 .2590 R13 .9593
SG1 7584.8 SG2 843.5 THA 26.63

ORBIT DETERMINATION ACCURACY

ST 89.2 SR 60.1 SS 60.5
CRT .9018 CR8 -.9950 CST -.8546
LSA 119.6 MSA 30.6 S8A .6
EL1 105.3 EL2 22.0 ALF 32.91

LAUNCH DATE AUG 31 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.019 GAL 4.50 AZL 83.28 HCA 164.00 SMA 198.84 ECC .25233 INC 6.7213 V1 29.505
RP 248.45 LAP 1.85 LOP 141.56 VP 20.022 GAP -2.23 AZP 96.46 TAL 22.63 TAP 186.63 RCA 148.67 APO 249.01 V2 22.048
RC 333.364 GL 41.35 GP -41.32 ZAL 59.04 ZAP 66.84 ETS 160.08 ZAE 85.45 ETE 177.73 ZAC 47.83 ETC 289.16 LVI 18.70

DISTANCE 583.428

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.010 VHL 5.832 DLA 46.76 RAL 1.63 RAD 6648.5 VEL 12.406 PTH 7.32 VHP 3.373 DPA -30.59 RAP 36.78 ECC 1.5597
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 3 44 7 4450.49 -26.49 204.37 258.17 48.91 4 58 17 3450.5 -40.75 180.75
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08
51.07 2 53 33 4577.43 -19.92 210.06 251.71 46.77 4 9 50 3577.4 -35.52 189.08

DIFFERENTIAL CORRECTIONS

TDE 1.2440 TRA-3.2014 TC3-4.3165 BAU 2.2782
RDE 1.1871 RRA-1.1632 RC3-2.5440 FAU .23347
FDE 3.9401 FRA-2.8421 FC3-5.9430 BSP 13254
BDE 1.7196 BRA 3.4069 BC3 5.0104 FSP 1246

MID-COURSE EXECUTION ACCURACY

SGT 6922.5 SGR 3599.7 SG3 771.1
RRT .9646 RRF .9928 RTF .9444
SGB 7802.5 R23 .2375 R13 .9602
SG1 7756.4 SG2 847.0 THA 26.99

ORBIT DETERMINATION ACCURACY

ST 92.4 SR 63.6 SS 59.2
CRT .9056 CR8 -.9948 CST -.8584
LSA 123.1 MSA 30.7 S8A .6
EL1 109.9 EL2 22.7 ALF 33.58

LAUNCH DATE AUG 31 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.025 GAL 4.45 AZL 82.90 HCA 164.87 SMA 198.97 ECC .25250 INC 7.0959 V1 29.505
RP 248.54 LAP 1.85 LOP 142.43 VP 20.023 GAP -2.42 AZP 96.85 TAL 22.34 TAP 187.21 RCA 148.73 APO 249.21 V2 22.039
RC 335.380 GL 43.11 GP -42.60 ZAL 60.07 ZAP 66.95 ETS 159.19 ZAE 84.92 ETE 177.06 ZAC 46.54 ETC 289.57 LVI 19.99

DISTANCE 587.187

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.416 VHL 5.951 DLA 48.31 RAL .35 RAD 6649.0 VEL 12.463 PTH 7.36 VHP 3.476 DPA -31.60 RAP 37.73 ECC 1.5829
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28
49.05 2 41 27 4605.10 -19.95 212.76 251.50 45.04 3 58 12 3605.1 -36.15 192.28

DIFFERENTIAL CORRECTIONS

TDE 1.3233 TRA-3.2678 TC3-4.2171 BAU 2.3214
RDE 1.2988 RRA-1.2259 RC3-2.5006 FAU .21474
FDE 3.8587 FRA-2.6658 FC3-5.2491 BSP 13698
BDE 1.8542 BRA 3.4900 BC3 4.9027 FSP 1187

MID-COURSE EXECUTION ACCURACY

SGT 7013.3 SGR 3683.9 SG3 711.0
RRT .9847 RRF .9925 RTF .5.15
SGB 7922.0 R23 .2660 R13 .9581
SG1 7874.8 SG2 863.7 THA 27.23

ORBIT DETERMINATION ACCURACY

ST 95.6 SR 68.1 SS 58.5
CRT .9066 CR8 -.9948 CST -.8593
LSA 127.4 MSA 31.3 S8A .5
EL1 115.0 EL2 23.9 ALF 34.55

LAUNCH DATE AUG 31 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC

RL 151.01 LAL .00 LOL 337.45 VL 33.032 GAL 4.39 AZL 82.49 HCA 165.74 SMA 199.09 ECC .25269 INC 7.5148 V1 29.505
RP 248.63 LAP 1.85 LOP 143.31 VP 20.024 GAP -2.61 AZP 97.20 TAL 22.04 TAP 187.78 RCA 148.79 APO 249.40 V2 22.030
RC 337.368 GL 45.00 GP -43.98 ZAL 61.18 ZAP 67.15 ETS 159.32 ZAE 84.45 ETE 176.38 ZAC 45.17 ETC 290.03 LVI 21.37

DISTANCE 590.947

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 37.105 VHL 6.091 DLA 49.92 RAL 358.85 RAD 6649.6 VEL 12.530 PTH 7.41 VHP 3.592 DPA -32.86 RAP 38.76 ECC 1.6107
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60
46.98 2 28 38 4633.34 -19.88 215.51 251.15 43.21 3 45 51 3633.3 -36.72 195.60

DIFFERENTIAL CORRECTIONS

TDE 1.3737 TRA-3.3539 TC3-4.1111 BAU 2.3790
RDE 1.3977 RRA-1.3157 RC3-2.4694 FAU .19787
FDE 3.7028 FRA-2.5331 FC3-4.6167 BSP 13868
BDE 1.9597 BRA 3.6027 BC3 4.7958 FSP 1074

MID-COURSE EXECUTION ACCURACY

SGT 7124.6 SGR 3804.4 SG3 654.9
RRT .9660 RRF .9922 RTF .9407
SGB 8076.7 R23 .2690 R13 .9575
SG1 8029.4 SG2 872.6 THA 27.64

ORBIT DETERMINATION ACCURACY

ST 98.1 SR 71.9 SS 56.8
CRT .9067 CR8 -.9944 CST -.8572
LSA 130.4 MSA 31.9 S8A .5
EL1 119.1 EL2 25.0 ALF 35.40



LAUNCH DATE AUG 31 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

DISTANCE 594.704

EARTH TO MARS

RL 151.01 LAL .00 LOL 337.45 VL 33.030 GAL 4.34 AZL 82.01 HCA 166.61 SMA 199.22 ECC .25288 INC 7.9868 V1 29.505  
 RP 248.71 LAP 1.84 LOP 144.19 VP 20.027 GAP -2.81 AZP 97.77 TAL 21.74 TAP 188.35 RCA 148.84 APO 249.60 V2 22.023  
 RC 339.321 GL 47.02 GP -45.39 ZAL 62.32 ZAP 67.46 ET8 157.48 ZAE 84.07 ETE 175.74 ZAC 43.71 ETC 290.55 LV1 22.84

PLANETOCENTRIC CONIC

C3 39.147 VHL 6.257 DLA 51.60 RAL 357.07 RAD 6650.4 VEL 12.610 PTH 7.47 VHP 3.725 DPA -33.78 RAP 39.90 ECC 1.6443  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06  
 44.86 2 14 51 4662.46 -19.69 218.29 250.61 41.28 3 32 33 3662.5 -37.19 199.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4129 TRA-3.4383 TC3-3.9707 BAU 2.4320 SGT 7214.7 SGR 3916.7 SG3 593.8 ST 100.1 SR 76.0 SS 54.9  
 RDE 1.5109 RRA-1.4069 RC3-2.4139 FAU .17907 RRT .9665 RRF .9914 RTF .9376 CRT .9037 CRS -.9938 CST -.8506  
 FDE 3.5421 FRA-2.3648 FC3-3.9602 BSP 14210 SGB 8209.3 R23 .2774 R13 .9553 LSA 133.1 MSA 32.9 SSA .4  
 BDE 2.0686 BRA 3.7150 BC3 4.6469 FSP 986 SGI 8161.1 SG2 888.6 THA 28.05 EL1 122.9 EL2 26.5 ALF 36.42

LAUNCH DATE SEP 1 1973

FLIGHT TIME 109.00

ARRIVAL DATE DEC 18 1973

Heliocentric Conic  
 RL 150.98 LAL .00 LOL 338.42 VL 34.122 GAL 6.92 AZL 89.80 HCA 83.45 SMA 223.91 ECC .34398 INC .4034 V1 29.512  
 RP 224.61 LAP .40 LOP 61.87 VP 24.248 GAP 20.12 AZP 89.95 TAL 27.44 TAP 110.89 RCA 146.63 APO 300.39 V2 24.485  
 RC 108.326 GL 2.17 GP -6.34 ZAL 44.00 ZAP 163.80 ETS 204.34 ZAE 159.79 ETE 339.66 ZAC 76.28 ETC 282.34 LVI -9.53

PLANETOCENTRIC CONIC  
 C3 39.579 VHL 6.291 DLA 10.73 RAL 19.86 RAD 6650.5 VEL 12.627 PTH 7.48 VHP 6.333 DPA 10.80 RAP 46.52 ECC 1.6514  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 17 48 3517.78 -46.50 129.75 264.30 101.45 10 16 26 2517.8 -36.85 99.83  
 60.00 9 45 40 3443.62 -39.76 124.59 265.81 97.18 10 43 4 2443.6 -32.62 95.99  
 70.00 10 24 43 3328.73 -33.95 116.00 266.52 94.00 11 20 11 2328.7 -28.80 88.49  
 80.00 11 20 49 3152.98 -29.80 102.92 266.77 91.90 12 13 22 2153.0 -25.99 76.14  
 90.00 12 36 52 2907.52 -28.26 84.92 266.82 91.15 13 25 20 1907.5 -24.94 58.40  
 100.00 14 3 41 2627.45 -29.80 64.28 266.77 91.90 14 47 28 1627.5 -25.99 37.51  
 110.00 15 24 9 2375.53 -33.95 44.91 266.52 94.00 16 3 44 1375.6 -28.80 17.41

Differential Corrections  
 TDE -.2951 TRA -.6656 TC3 .4634 BAV .2674  
 RDE -.6718 RRA .2338 RC3 -.1472 FAU .09198  
 FDE .0400 FRA -.5468 FC3-2.0121 BSP 1058  
 BDE .7337 BRA .7055 BC3 .5053 FSP 301

MID-COURSE EXECUTION ACCURACY  
 SGT 907.1 SGR 675.0 SG3 223.1  
 RRT -.1338 RRF .1933 RTF -.5281  
 SGB 1130.7 R23 -.0421 R13 .5407  
 SG1 916.7 SG2 661.9 THA 167.98

ORBIT DETERMINATION ACCURACY  
 ST 16.3 SR 30.8 SS 4.8  
 CRT .7573 CR8 .2969 CST -.2988  
 L8A 33.4 M8A 10.6 S8A 2.3  
 EL1 33.4 EL2 9.8 ALF 65.87

LAUNCH DATE SEP 1 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 20 1973

Heliocentric Conic  
 RL 150.98 LAL .00 LOL 338.42 VL 34.036 GAL 6.93 AZL 89.56 HCA 84.52 SMA 221.32 ECC .33780 INC .4365 V1 29.512  
 RP 225.00 LAP .43 LOP 62.94 VP 24.084 GAP 19.72 AZP 89.96 TAL 27.85 TAP 112.38 RCA 146.56 APO 296.08 V2 24.443  
 RC 110.773 GL 2.37 GP -6.50 ZAL 43.48 ZAP 162.80 ETS 203.45 ZAE 160.14 ETE 338.62 ZAC 76.11 ETC 282.34 LVI -9.36

PLANETOCENTRIC CONIC  
 C3 38.782 VHL 6.228 DLA 10.71 RAL 19.29 RAD 6650.2 VEL 12.596 PTH 7.46 VHP 6.141 DPA 10.66 RAP 46.62 ECC 1.6383  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 15 35 3512.32 -46.43 129.25 263.21 101.83 10 14 7 2512.3 -36.65 99.47  
 60.00 9 43 28 3438.12 -39.72 124.13 264.77 97.49 10 40 46 2438.1 -32.46 95.61  
 70.00 10 22 32 3323.17 -33.92 115.56 265.52 94.25 11 17 55 2323.2 -28.67 88.11  
 80.00 11 18 39 3147.36 -29.79 102.50 265.79 92.12 12 11 6 2147.4 -25.89 75.75  
 90.00 12 34 43 2901.87 -28.25 84.51 265.84 91.36 13 23 5 1901.9 -24.84 58.01  
 100.00 14 1 31 2621.83 -29.79 63.87 265.79 92.12 14 45 13 1621.8 -25.89 37.12  
 110.00 15 21 58 2369.99 -33.92 44.48 265.52 94.25 16 1 28 1370.0 -28.67 17.03

Differential Corrections  
 TDE -.2982 TRA -.6599 TC3 .4989 BAV .2714  
 RDE -.6689 RRA .2304 RC3 -.1584 FAU .09687  
 FDE .0395 FRA -.6031 FC3-2.1624 BSP 1110  
 BDE .7324 BRA .6990 BC3 .5234 FSP 324

MID-COURSE EXECUTION ACCURACY  
 SGT 918.2 SGR 681.3 SG3 237.8  
 RRT -.1391 RRF .2064 RTF -.5281  
 SGB 1143.4 R23 -.0507 R13 .5425  
 SG1 928.5 SG2 667.2 THA 167.67

ORBIT DETERMINATION ACCURACY  
 ST 16.6 SR 30.9 SS 5.1  
 CRT .7637 CR8 .2776 CST -.3144  
 L8A 33.7 M8A 10.8 S8A 2.3  
 EL1 33.7 EL2 9.8 ALF 65.53

LAUNCH DATE SEP 1 1973

FLIGHT TIME 112.00

ARRIVAL DATE DEC 22 1973

Heliocentric Conic  
 RL 150.98 LAL .00 LOL 338.42 VL 33.955 GAL 6.94 AZL 89.53 HCA 85.59 SMA 219.31 ECC .33204 INC .4694 V1 29.512  
 RP 225.39 LAP .47 LOP 64.01 VP 23.927 GAP 19.33 AZP 89.96 TAL 28.26 TAP 113.85 RCA 146.49 APO 292.12 V2 24.401  
 RC 113.259 GL 2.57 GP -6.66 ZAL 42.98 ZAP 161.79 ETS 202.65 ZAE 160.53 ETE 337.48 ZAC 75.94 ETC 282.34 LVI -9.19

PLANETOCENTRIC CONIC  
 C3 38.050 VHL 6.168 DLA 10.70 RAL 18.74 RAD 6650.0 VEL 12.567 PTH 7.44 VHP 5.956 DPA 10.52 RAP 46.71 ECC 1.6262  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 13 24 3507.33 -46.36 128.79 262.18 102.18 10 11 92 2507.3 -36.46 99.13  
 60.00 9 41 18 3433.10 -39.67 123.71 263.79 97.77 10 38 31 2433.1 -32.31 95.27  
 70.00 10 20 22 3318.12 -33.89 115.17 264.57 94.48 11 15 41 2318.1 -28.56 87.76  
 80.00 11 16 31 3142.27 -29.78 102.12 264.85 92.32 12 8 53 2142.3 -25.80 75.40  
 90.00 12 32 33 2896.76 -28.24 84.14 264.91 91.54 13 20 52 1896.8 -24.78 57.66  
 100.00 13 59 22 2616.74 -29.78 63.49 264.85 92.32 14 42 59 1616.7 -25.80 36.77  
 110.00 15 19 49 2364.94 -33.89 44.09 264.57 94.48 15 59 14 1364.9 -28.56 16.88

Differential Corrections  
 TDE -.3005 TRA -.6538 TC3 .5143 BAV .2755  
 RDE -.6661 RRA .2289 RC3 -.1701 FAU .10202  
 FDE .0398 FRA -.6626 FC3-2.3213 BSP 1153  
 BDE .7307 BRA .6921 BC3 .5417 FSP 349

MID-COURSE EXECUTION ACCURACY  
 SGT 928.7 SGR 687.8 SG3 233.3  
 RRT -.1456 RRF .2201 RTF -.5289  
 SGB 1155.5 R23 -.0583 R13 .5493  
 SG1 939.9 SG2 672.1 THA 167.24

ORBIT DETERMINATION ACCURACY  
 ST 16.8 SR 31.1 SS 5.4  
 CRT .7694 CR8 .2633 CST -.3250  
 L8A 34.0 M8A 10.9 S8A 2.4  
 EL1 34.0 EL2 9.8 ALF 65.25

LAUNCH DATE SEP 1 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 24 1973

Heliocentric Conic  
 RL 150.98 LAL .00 LOL 338.42 VL 33.878 GAL 6.94 AZL 89.50 HCA 86.63 SMA 217.48 ECC .32884 INC .5021 V1 29.512  
 RP 225.78 LAP .50 LOP 65.07 VP 23.776 GAP 18.94 AZP 89.97 TAL 28.66 TAP 115.31 RCA 146.42 APO 288.48 V2 24.359  
 RC 115.782 GL 2.78 GP -6.83 ZAL 42.90 ZAP 160.75 ETS 201.93 ZAE 160.95 ETE 336.21 ZAC 75.77 ETC 282.35 LVI -9.03

PLANETOCENTRIC CONIC  
 C3 37.377 VHL 6.114 DLA 10.70 RAL 18.20 RAD 6649.7 VEL 12.540 PTH 7.42 VHP 5.778 DPA 10.38 RAP 46.78 ECC 1.6181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 11 17 3502.78 -46.29 128.37 261.21 102.50 10 9 39 2502.8 -36.30 98.83  
 60.00 9 39 10 3428.55 -39.63 123.33 262.86 98.03 10 36 19 2428.5 -32.18 94.95  
 70.00 10 18 15 3313.56 -33.87 114.82 263.66 94.69 11 13 29 2313.6 -28.45 87.45  
 80.00 11 14 23 3137.70 -29.76 101.78 263.96 92.50 12 6 41 2137.7 -25.72 75.09  
 90.00 12 30 28 2892.19 -28.23 83.80 264.03 91.71 13 18 40 1892.2 -24.68 57.35  
 100.00 13 57 15 2612.17 -29.78 63.15 263.96 92.50 14 40 47 1612.2 -25.72 36.46  
 110.00 15 17 41 2360.38 -33.87 43.74 263.66 94.69 15 57 2 1360.4 -28.45 16.36

Differential Corrections  
 TDE -.3024 TRA -.6474 TC3 .5288 BAV .2795  
 RDE -.6634 RRA .2230 RC3 -.1824 FAU .10744  
 FDE .0398 FRA -.7260 FC3-2.4888 BSP 1186  
 BDE .7291 BRA .6647 BC3 .5594 FSP 375

MID-COURSE EXECUTION ACCURACY  
 SGT 937.9 SGR 693.9 SG3 269.7  
 RRT -.1526 RRF .2346 RTF -.5297  
 SGB 1166.7 R23 -.0658 R13 .5482  
 SG1 950.3 SG2 676.9 THA 166.74

ORBIT DETERMINATION ACCURACY  
 ST 17.0 SR 31.3 SS 5.7  
 CRT .7749 CR8 .2492 CST -.3353  
 L8A 34.2 M8A 11.1 S8A 2.5  
 EL1 34.2 EL2 9.8 ALF 65.00

LAUNCH DATE SEP 1 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC										DISTANCE 281.804										EARTH TO MARS																																																																																																																																																																	
RL	150.98	LAL	.00	L0L	338.42	VL	33.807	GAL	6.95	AZL	89.47	HCA	87.72	SMA	215.74	ECC	.32160	INC	.5346	V1	29.512	RP	226.17	LAP	.53	L0P	66.13	VP	23.631	GAP	18.56	AZP	89.98	TAL	29.04	TAP	116.76	RCA	146.36	APO	285.12	V2	24.318	RC	118.341	GL	2.96	GP	-7.01	ZAL	42.05	ZAP	159.70	ETS	201.27	ZAE	161.42	ETE	334.81	ZAC	75.60	ETC	282.32	LVI	-8.86																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	36.756	VHL	6.063	DLA	10.71	RAL	17.69	RAD	6649.3	VEL	12.516	PTH	7.40	VHP	5.607	DPA	10.19	RAP	46.83	ECC	1.6049	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	50.00		9	9	12		3498.66		-46.23		127.99		260.30		102.78		10	7	30		2498.7		-36.14		98.56		60.00		9	37	5		3424.44		-39.59		122.99		261.98		98.26		10	34	9		2424.4		-32.06		94.67		70.00		10	16	9		3309.48		-33.85		114.50		262.80		94.87		11	11	19		2309.5		-28.36		87.17		80.00		11	12	17		3133.64		-29.75		101.48		263.12		92.66		12	4	31		2133.6		-25.64		74.81		90.00		12	28	21		2888.15		-28.22		83.51		263.19		91.86		13	16	29		1888.1		-24.62		57.07		100.00		13	55	9		2606.12		-29.75		62.85		263.12		92.66		14	38	37		1608.1		-25.64		38.18		110.00		15	15	36		2356.30		-33.85		43.42		262.80		94.87		15	54	52		1356.3		-28.36		18.00
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-.3040	TRA	-.6412	TC3	.5427	BAU	.2834	SGT	946.5	SGR	700.3	SG3	286.9	ST	17.1	SR	31.4	SS	6.1	RDE	-.6608	RRA	.2189	RC3	-.1953	FAU	.11314	RRT	-.1603	RRF	.2497	RTF	-.5304	CRT	.7800	CRS	.2379	CST	-.3487	FDE	.0403	FRA	-.7931	FC3	-2.6647	BSP	1212	SG8	1177.4	R23	-.0731	R13	.5512	LSA	34.4	MSA	11.2	SSA	2.6	BDE	.7274	BRA	.6775	BC3	.5767	FSP	402	SG1	960.2	SG2	681.4	THA	166.17	EL1	34.4	EL2	9.8	ALF	64.78																																																																																																						

LAUNCH DATE SEP 1 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC										DISTANCE 285.312										EARTH TO MARS																																																																																																																																																																	
RL	150.98	LAL	.00	L0L	338.42	VL	33.740	GAL	6.95	AZL	89.43	HCA	88.77	SMA	214.18	ECC	.31889	INC	.5869	V1	29.512	RP	226.56	LAP	.57	L0P	67.19	VP	23.491	GAP	18.18	AZP	89.99	TAL	29.41	TAP	118.19	RCA	146.29	APO	282.02	V2	24.276	RC	120.933	GL	3.16	GP	-7.19	ZAL	41.61	ZAP	158.63	ETS	200.67	ZAE	161.91	ETE	333.25	ZAC	75.42	ETC	282.37	LVI	-8.69																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	36.184	VHL	6.015	DLA	10.72	RAL	17.19	RAD	6649.3	VEL	12.493	PTH	7.38	VHP	5.443	DPA	10.01	RAP	46.87	ECC	1.5955	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	50.00		9	7	10		3494.96		-46.17		127.65		259.43		103.04		10	5	25		2495.0		-36.00		98.31		60.00		9	35	2		3420.78		-39.55		122.69		261.14		98.46		10	32	3		2420.8		-31.95		94.43		70.00		10	14	6		3305.86		-33.82		114.22		261.99		95.04		11	9	11		2305.9		-28.27		86.92		80.00		11	10	12		3130.08		-29.74		101.22		262.32		92.79		12	2	22		2130.1		-25.57		74.57		90.00		12	26	16		2884.61		-28.22		83.25		262.39		91.99		13	14	21		1884.6		-24.56		56.83		100.00		13	53	4		2604.55		-29.74		62.59		262.32		92.79		14	36	29		1604.6		-25.57		35.94		110.00		15	13	32		2352.68		-33.82		43.14		261.99		95.04		15	52	45		1352.7		-28.27		15.84
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-.3055	TRA	-.6351	TC3	.5554	BAU	.2870	SGT	954.0	SGR	706.7	SG3	305.0	ST	17.3	SR	31.5	SS	6.5	RDE	-.6582	RRA	.2145	RC3	-.2088	FAU	.11912	RRT	-.1683	RRF	.2655	RTF	-.5306	CRT	.7850	CRS	.2298	CST	-.3465	FDE	.0416	FRA	-.8641	FC3	-2.8501	BSP	1235	SG8	1187.3	R23	-.0806	R13	.5540	LSA	34.6	MSA	11.4	SSA	2.6	BDE	.7257	BRA	.6704	BC3	.5933	FSP	432	SG1	969.2	SG2	685.7	THA	165.54	EL1	34.6	EL2	9.7	ALF	64.57																																																																																																						

LAUNCH DATE SEP 1 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC										DISTANCE 288.848										EARTH TO MARS																																																																																																																																																																	
RL	150.98	LAL	.00	L0L	338.42	VL	33.677	GAL	6.96	AZL	89.40	HCA	89.83	SMA	212.69	ECC	.31248	INC	.5991	V1	29.512	RP	226.95	LAP	.60	L0P	68.24	VP	23.357	GAP	17.81	AZP	90.00	TAL	29.77	TAP	119.60	RCA	146.23	APO	279.15	V2	24.234	RC	123.556	GL	3.36	GP	-7.38	ZAL	41.20	ZAP	157.54	ETS	200.12	ZAE	162.43	ETE	331.51	ZAC	75.25	ETC	282.38	LVI	-8.53																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	35.655	VHL	5.971	DLA	10.74	RAL	16.71	RAD	6649.1	VEL	12.472	PTH	7.37	VHP	5.285	DPA	9.82	RAP	46.89	ECC	1.5868	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	50.00		9	5	11		3491.65		-46.12		127.35		258.62		103.27		10	3	22		2491.7		-35.88		98.09		60.00		9	33	2		3417.53		-39.52		122.42		260.36		98.64		10	29	59		2417.5		-31.85		94.21		70.00		10	12	3		3302.70		-33.81		113.98		261.22		95.18		11	7	6		2302.7		-28.20		86.70		80.00		11	8	9		3127.00		-29.73		100.99		261.56		92.91		12	0	16		2127.0		-25.52		74.36		90.00		12	24	12		2881.56		-28.21		83.03		261.64		92.10		13	12	13		1881.6		-24.50		56.83		100.00		13	51	0		2601.47		-29.73		62.36		261.56		92.91		14	34	22		1601.5		-25.52		35.73		110.00		15	11	30		2349.52		-33.81		42.89		261.22		95.18		15	50	39		1349.5		-28.20		15.62
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-.3069	TRA	-.6294	TC3	.5667	BAU	.2903	SGT	960.5	SGR	713.3	SG3	324.0	ST	17.4	SR	31.6	SS	6.8	RDE	-.6557	RRA	.2098	RC3	-.2230	FAU	.12540	RRT	-.1766	RRF	.2820	RTF	-.5300	CRT	.7898	CRS	.2230	CST	-.3491	FDE	.0432	FRA	-.9394	FC3	-3.0449	BSP	1252	SG8	1196.4	R23	-.0885	R13	.5566	LSA	34.8	MSA	11.5	SSA	2.7	BDE	.7240	BRA	.6634	BC3	.6090	FSP	464	SG1	977.4	SG2	689.9	THA	164.84	EL1	34.8	EL2	9.7	ALF	64.36																																																																																																						

LAUNCH DATE SEP 1 1973

FLIGHT TIME 122.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC										DISTANCE 292.409										EARTH TO MARS																																																																																																																																																																	
RL	150.98	LAL	.00	L0L	338.42	VL	33.817	GAL	6.96	AZL	89.37	HCA	90.88	SMA	211.34	ECC	.30835	INC	.6312	V1	29.512	RP	227.34	LAP	.63	L0P	69.30	VP	23.228	GAP	17.44	AZP	90.01	TAL	30.12	TAP	121.00	RCA	146.17	APO	276.50	V2	24.193	RC	126.208	GL	3.55	GP	-7.57	ZAL	40.81	ZAP	156.43	ETS	199.61	ZAE	162.97	ETE	329.57	ZAC	75.07	ETC	282.40	LVI	-8.36																																																																																																																				
PLANETOCENTRIC CONIC																																																																																																																																																																																					
C3	35.186	VHL	5.930	DLA	10.77	RAL	16.25	RAD	6649.0	VEL	12.453	PTH	7.35	VHP	5.133	DPA	9.62	RAP	46.89	ECC	1.5788	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																						
	50.00		9	3	14		3488.73		-46.08		127.08		257.85		103.47		10	1	23		2488.7		-35.77		97.90		60.00		9	31	4		3414.70		-39.49		122.18		259.62		98.80		10	27	58		2414.7		-31.77		94.01		70.00		10	10	3		3299.97		-33.79		113.76		260.50		95.31		11	5	3		2300.0		-28.13		86.52		80.00		11	6	6		3124.38		-29.72		100.80		260.84		93.02		11	58	10		2124.4		-25.47		74.18		90.00		12	22	8		2879.00		-28.20		82.84		260.92		92.19		13	10	7		1879.0		-24.46		56.45		100.00		13	48	58		2598.85		-29.72		62.16		260.84		93.02		14	32	17		1598.9		-25.47		35.55		110.00		15	9	29		2346.79		-33.79		42.68		260.50		95.31		15	48	36		1346.8		-28.13		15.43
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																	
TDE	-.3084	TRA	-.6244	TC3	.5764	BAU	.2932	SGT	966.0	SGR	720.0	SG3	344.1	ST	17.5	SR	31.7	SS	7.2	RDE	-.6532	RRA	.2048	RC3	-.2379	FAU	.13199	RRT	-.18																																																																																																																																																								

LAUNCH DATE SEP 1 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC															EARTH TO MARS						
RL	150.98	LAL	.00	LOL	338.42	VL	33.562	GAL	6.97	AZL	89.34	HCA	91.92	SMA	210.08	ECC	.30449	INC	.6632	V1	29.512
RP	227.73	LAP	.66	LOP	70.34	VP	23.104	GAP	17.08	AZP	90.02	TAL	30.45	TAP	122.37	RCA	146.12	APO	274.05	V2	24.152
RC	128.887	GL	3.75	GP	-7.77	ZAL	40.44	ZAP	155.31	ETS	199.13	ZAE	163.52	ETE	327.40	ZAC	74.69	ETC	282.42	LVI	-8.20

PLANETOCENTRIC CONIC															EARTH TO MARS										
C3	34.714	VHL	5.892	DLA	10.80	RAL	15.81	RAD	6648.8	VEL	12.434	PTH	7.34	VHP	4.987	DPA	9.40	RAP	46.87	ECC	1.5713				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		9	1	21		3488.17		-46.04	126.85		257.13		103.64		9	59	27	2486.2		-35.67					97.73
60.00		9	29	8		3412.25		-39.46	121.98		258.92		98.93		10	26	0	2412.2		-31.69					93.85
70.00		10	8	4		3297.67		-33.77	113.59		259.81		95.41		11	3	2	2297.7		-28.08					86.36
80.00		11	4	5		3122.22		-29.71	100.63		260.17		93.10		11	56	7	2122.2		-25.43					74.03
90.00		12	20	5		2876.90		-28.20	82.69		260.25		92.27		13	8	2	1876.9		-24.42					56.31
100.00		13	46	56		2596.69		-29.71	62.00		260.17		93.10		14	30	13	1596.7		-25.43					35.40
110.00		15	7	31		2344.48		-33.77	42.50		259.81		95.41		15	46	35	1344.5		-28.08					15.28

DIFFERENTIAL CORRECTIONS															MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY			
TDE	-.3100	TRA	-.6190	TC3	.5845	BAU	.2957	SGT	970.5	SGR	727.0	SG3	365.1	ST	17.7	SR	31.8	SS		7.6
RDE	-.6506	RRA	.1994	RC3	-.2536	FAU	.13889	RRT	-.1930	RRF	.3172	RTF	-.9257	CRT	.7989	CRS	.2134	CST		-3.500
FDE	.0480	FRA	-1.1027	FC3	-3.4639	BSP	1281	SGB	1212.6	R23	-.1167	R13	.5598	LSA	35.1	MSA	11.9	SSA		2.8
BDE	.7207	BRA	.6511	BC3	.6371	FSP	532	SG1	991.3	SG2	698.4	THA	163.31	EL1	35.1	EL2	9.6	ALF		63.90

LAUNCH DATE SEP 1 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC															EARTH TO MARS						
RL	150.98	LAL	.00	LOL	338.42	VL	33.509	GAL	6.97	AZL	89.30	HCA	92.97	SMA	208.92	ECC	.30088	INC	.6951	V1	29.512
RP	228.12	LAP	.69	LOP	71.39	VP	22.985	GAP	16.72	AZP	90.04	TAL	30.76	TAP	123.73	RCA	146.06	APO	271.78	V2	24.110
RC	131.592	GL	3.95	GP	-7.98	ZAL	40.09	ZAP	154.16	ETS	198.69	ZAE	164.09	ETE	324.97	ZAC	74.70	ETC	282.45	LVI	-8.03

PLANETOCENTRIC CONIC															EARTH TO MARS										
C3	34.293	VHL	5.856	DLA	10.84	RAL	15.39	RAD	6648.6	VEL	12.418	PTH	7.33	VHP	4.846	DPA	9.18	RAP	46.84	ECC	1.5644				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	59	30		3483.97		-46.00	126.65		256.46		103.80		9	57	34	2484.0		-35.59					97.59
60.00		9	27	14		3410.18		-39.44	121.81		258.26		99.05		10	24	4	2410.2		-31.63					93.71
70.00		10	6	7		3295.77		-33.76	113.44		259.17		95.50		11	1	3	2295.8		-28.04					86.23
80.00		11	2	4		3120.50		-29.70	100.51		259.53		93.17		11	54	5	2120.5		-25.39					73.91
90.00		12	18	3		2875.26		-28.19	82.57		259.61		92.33		13	5	58	1875.3		-24.39					56.20
100.00		13	44	56		2594.97		-29.70	61.88		259.53		93.17		14	28	11	1595.0		-25.39					35.28
110.00		15	5	33		2342.59		-33.76	42.36		259.17		95.50		15	44	36	1342.6		-28.04					15.15

DIFFERENTIAL CORRECTIONS															MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY			
TDE	-.3118	TRA	-.6159	TC3	.5907	BAU	.2978	SGT	973.7	SGR	734.3	SG3	387.2	ST	17.8	SR	31.8	SS		8.0
RDE	-.6480	RRA	.1937	RC3	-.2700	FAU	.14614	RRT	-.2010	RRF	.3359	RTF	-.5218	CRT	.8033	CRS	.2106	CST		-3.483
FDE	.0514	FRA	-1.1909	FC3	-3.6893	BSP	1291	SGB	1219.6	R23	-.1167	R13	.5806	LSA	35.2	MSA	12.2	SSA		2.8
BDE	.7191	BRA	.6457	BC3	.6495	FSP	569	SG1	996.8	SG2	702.7	THA	162.45	EL1	35.2	EL2	9.6	ALF		63.85

LAUNCH DATE SEP 1 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC															EARTH TO MARS						
RL	150.98	LAL	.00	LOL	338.42	VL	33.480	GAL	6.97	AZL	89.27	HCA	94.01	SMA	207.84	ECC	.29750	INC	.7269	V1	29.512
RP	228.51	LAP	.73	LOP	72.42	VP	22.870	GAP	16.37	AZP	90.05	TAL	31.07	TAP	125.07	RCA	146.01	APO	269.68	V2	24.069
RC	134.321	GL	4.15	GP	-8.19	ZAL	39.76	ZAP	152.99	ETS	198.27	ZAE	164.66	ETE	322.25	ZAC	74.51	ETC	282.48	LVI	-7.87

PLANETOCENTRIC CONIC															EARTH TO MARS										
C3	33.903	VHL	5.823	DLA	10.90	RAL	14.99	RAD	6648.5	VEL	12.402	PTH	7.31	VHP	4.711	DPA	8.93	RAP	46.78	ECC	1.5580				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	57	42		3482.11		-45.97	126.48		255.83		103.92		9	55	45	2482.1		-35.52					97.47
60.00		9	25	22		3408.48		-39.42	121.67		257.65		99.14		10	22	11	2408.5		-31.58					93.59
70.00		10	4	11		3294.27		-33.75	113.32		258.56		95.56		10	59	6	2294.3		-28.00					86.13
80.00		11	0	4		3119.20		-29.70	100.41		258.93		93.22		11	52	4	2119.2		-25.37					73.63
90.00		12	16	2		2874.06		-28.19	82.48		259.01		92.37		13	3	58	1874.1		-24.37					56.11
100.00		13	42	56		2593.67		-29.70	61.78		258.93		93.22		14	26	10	1593.7		-25.37					35.19
110.00		15	3	38		2341.09		-33.75	42.24		258.56		95.56		15	42	39	1341.1		-28.00					15.04

DIFFERENTIAL CORRECTIONS															MID-COURSE EXECUTION ACCURACY		ORBIT DETERMINATION ACCURACY			
TDE	-.3135	TRA	-.6128	TC3	.5951	BAU	.2995	SGT	976.0	SGR	742.0	SG3	410.3	ST	18.0	SR	31.9	SS		8.4
RDE	-.6454	RRA	.1878	RC3	-.2878	FAU	.13372	RRT	-.2089	RRF	.3954	RTF	-.5.87	CRT	.8075	CRS	.2081	CST		-3.468
FDE	.0551	FRA	-1.2839	FC3	-3.9254	BSP	1299	SGB	1226.0	R23	-.1277	R13	.5810	LSA	35.3	MSA	12.4	SSA		2.9
BDE	.7175	BRA	.6408	BC3	.6600	FSP	609	SG1	1001.5	SG2	707.1	THA	161.52	EL1	35.3	EL2	9.6	ALF		63.39

LAUNCH DATE SEP 1 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC															EARTH TO MARS						
RL	150.98	LAL	.00	LOL	338.42	VL	33.414	GAL	6.98	AZL	89.24	HCA	95.04	SMA	206.84	ECC	.29433	INC	.7587	V1	29.512
RP	228.90	LAP	.76	LOP	73.46	VP	22.759	GAP	16.02	AZP	90.07	TAL	31.38	TAP	126.39	RCA	145.96	APO	267.72	V2	24.028
RC	137.073	GL	4.35	GP	-8.41	ZAL	39.46	ZAP	151.81	ETS	197.88	ZAE	165.22	ETE	319.19	ZAC	74.33	ETC	282.51	LVI	-7.70

PLANETOCENTRIC CONIC															EARTH TO MARS										
C3	33.539	VHL	5.791	DLA	10.95	RAL	14.61	RAD	6648.4	VEL	12.387	PTH	7.30	VHP	4.581	DPA	8.68	RAP	46.71	ECC	1.5520				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		8	55	57		3480.57		-45.95	126.34		255.25		104.03		9	53	58	2480.6		-35.46					97.37
60.00		9	23	33		3407.13		-39.41	121.55		257.08		99.22		10	20	20	2407.1		-31.54					93.50
70.00		10	2	17		3293.15		-33.74	113.24		257.99		95.61		10	57	10	2293.1		-27.97					86.05
80.00		10	58	6		3118.32		-29.70	100.35		258.36		93.25		11	50	4	2118.3		-25.35					73.77
90.00		12	14	1		2873.29		-28.19	82.42		258.45		92.40		13	1	54	1873.3		-24.36					56.06
100.00		13	40	57		2592.79		-29.70	61.71		258.36		93.25		14	24	10	1592.8		-25.35					35.13
110.00		15	1	43		2339.97</																			

LAUNCH DATE SEP 1 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 11 1974

HELIOCENTRIC CONIC DISTANCE 310.520 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 33.371 GAL 6.98 AZL 89.21 HCA 96.08 SMA 205.91 ECC .29137 INC .7906 V1 29.512  
 RP 229.28 LAP .79 LOP 74.49 VP 22.652 GAP 15.67 AZP 90.08 TAL 31.62 TAP 127.70 RCA 145.92 APO 265.91 V2 23.988  
 RC 139.847 GL 4.55 GP -8.64 ZAL 39.17 ZAP 150.80 ETS 197.51 ZAE 165.76 ETE 315.76 ZAC 74.13 ETC 282.54 LVI -7.54

PLANETOCENTRIC CONIC  
 C3 33.200 VHL 5.762 DLA 11.02 RAL 14.24 RAD 6648.2 VEL 12.374 PTH 7.29 VHP 4.457 DPA 8.41 RAP 46.62 ECC 1.5464  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 14 3479.36 -45.92 126.23 254.70 104.11 9 52 14 2479.4 -35.41 97.29  
 60.00 9 21 45 3406.11 -39.40 121.47 256.54 99.27 10 18 32 2406.1 -31.51 93.43  
 70.00 10 0 24 3292.40 -33.74 113.18 257.46 95.65 10 55 17 2292.4 -27.98 88.00  
 80.00 10 56 8 3117.84 -29.69 100.31 257.83 93.27 11 48 5 2117.8 -25.34 73.73  
 90.00 12 12 1 2872.93 -28.19 82.40 257.92 92.41 12 59 54 1872.9 -24.35 56.04  
 100.00 13 38 59 2592.31 -29.69 61.68 257.83 93.27 14 22 12 1592.3 -25.34 35.10  
 110.00 14 59 51 2339.22 -33.74 42.10 257.46 95.65 15 38 50 1339.2 -27.98 14.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3176 TRA -.6090 TC3 .5974 BAU .3016 SGT 976.8 SGR 758.5 SG3 459.7 ST 18.3 SR 31.9 SS 9.3  
 RDE -.6399 RRA .1741 RC3 -.3238 FAU .16985 RRT -.2225 RRF .3960 RTF -.5017 CRT .8155 CRS .2085 CST -.3377  
 FDE .0682 FRA -1.4833 FC3 -4.4291 BSP 1306 SGB 1236.8 R23 -.1529 R13 .5598 LSA 35.6 MSA 12.9 SSA 3.0  
 BDE .7144 BRA .6334 BC3 .6796 FSP 693 SG1 1007.9 SG2 716.7 THA 159.48 EL1 35.6 EL2 9.5 ALF 62.80

LAUNCH DATE SEP 1 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC DISTANCE 314.192 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 33.330 GAL 6.98 AZL 89.18 HCA 97.10 SMA 205.05 ECC .28859 INC .8225 V1 29.512  
 RP 229.67 LAP .82 LOP 75.52 VP 22.549 GAP 15.33 AZP 90.10 TAL 31.88 TAP 128.98 RCA 145.88 APO 264.23 V2 23.947  
 RC 142.641 GL 4.75 GP -8.87 ZAL 38.91 ZAP 149.37 ETS 197.15 ZAE 166.27 ETE 311.93 ZAC 73.94 ETC 282.58 LVI -7.37

PLANETOCENTRIC CONIC  
 C3 32.883 VHL 5.734 DLA 11.09 RAL 13.89 RAD 6648.1 VEL 12.361 PTH 7.28 VHP 4.337 DPA 8.13 RAP 46.50 ECC 1.5412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 34 3478.44 -45.91 126.14 254.20 104.17 9 50 32 2478.4 -35.38 97.23  
 60.00 9 20 0 3405.43 -39.39 121.41 256.04 99.31 10 16 45 2405.4 -31.49 93.39  
 70.00 9 58 33 3292.01 -33.74 113.15 256.96 95.67 10 53 25 2292.0 -27.95 85.87  
 80.00 10 54 10 3117.75 -29.69 100.30 257.33 93.27 11 46 8 2117.7 -25.34 73.73  
 90.00 12 10 1 2872.98 -28.19 82.40 257.42 92.41 12 57 54 1873.0 -24.36 56.04  
 100.00 13 37 2 2592.22 -29.69 61.67 257.33 93.27 14 20 14 1592.2 -25.34 35.10  
 110.00 14 57 59 2338.83 -33.74 42.07 256.96 95.67 15 36 58 1338.8 -27.95 14.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3198 TRA -.6084 TC3 .5953 BAU .3022 SGT 975.7 SGR 767.7 SG3 486.2 ST 18.5 SR 31.9 SS 9.7  
 RDE -.6371 RRA .1668 RC3 -.3437 FAU .17848 RRT -.2282 RRF .4173 RTF -.4916 CRT .8191 CRS .2086 CST -.3336  
 FDE .0724 FRA -1.5902 FC3 -4.6989 BSP 1305 SGB 1241.5 R23 -.1672 R13 .5585 LSA 35.7 MSA 13.2 SSA 3.0  
 BDE .7128 BRA .6309 BC3 .6874 FSP 738 SG1 1009.9 SG2 722.2 THA 158.34 EL1 35.7 EL2 9.5 ALF 62.48

LAUNCH DATE SEP 1 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC DISTANCE 317.876 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 33.292 GAL 6.98 AZL 89.15 HCA 98.13 SMA 204.25 ECC .28600 INC .8543 V1 29.512  
 RP 230.05 LAP .85 LOP 76.55 VP 22.450 GAP 14.99 AZP 90.12 TAL 32.12 TAP 130.25 RCA 145.84 APO 262.67 V2 23.907  
 RC 145.456 GL 4.95 GP -9.11 ZAL 38.66 ZAP 148.12 ETS 196.81 ZAE 166.74 ETE 307.65 ZAC 73.75 ETC 282.62 LVI -7.21

PLANETOCENTRIC CONIC  
 C3 32.587 VHL 5.709 DLA 11.18 RAL 13.56 RAD 6648.0 VEL 12.349 PTH 7.27 VHP 4.222 DPA 7.84 RAP 46.37 ECC 1.5363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 56 3477.81 -45.90 126.09 253.73 104.22 9 48 54 2477.8 -35.35 97.19  
 60.00 9 18 16 3405.06 -39.39 121.38 255.57 99.33 10 15 1 2405.1 -31.48 93.36  
 70.00 9 56 42 3291.97 -33.74 113.15 256.50 95.67 10 51 34 2292.0 -27.95 85.97  
 80.00 10 52 13 3118.04 -29.70 100.33 256.87 93.26 11 44 11 2118.0 -25.35 73.73  
 90.00 12 8 1 2873.43 -28.19 82.43 256.95 92.40 12 55 54 1873.4 -24.36 56.07  
 100.00 13 35 5 2592.51 -29.70 61.69 256.87 93.26 14 18 18 1592.5 -25.35 35.12  
 110.00 14 56 8 2338.79 -33.74 42.06 256.50 95.67 15 35 7 1338.8 -27.95 14.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3223 TRA -.6090 TC3 .5904 BAU .3022 SGT 973.2 SGR 777.4 SG3 513.6 ST 18.7 SR 31.9 SS 10.1  
 RDE -.6341 RRA .1590 RC3 -.3642 FAU .18739 RRT -.2323 RRF .4389 RTF -.4.93 CRT .8226 CRS .2120 CST -.3265  
 FDE .0811 FRA -1.7014 FC3 -4.9783 BSP 1306 SGB 1245.6 R23 -.1829 R13 .5585 LSA 35.8 MSA 13.5 SSA 3.0  
 BDE .7113 BRA .6294 BC3 .6937 FSP 786 SG1 1010.6 SG2 728.2 THA 157.14 EL1 35.8 EL2 9.5 ALF 62.12

LAUNCH DATE SEP 1 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC DISTANCE 321.572 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 33.256 GAL 6.98 AZL 89.11 HCA 99.15 SMA 203.51 ECC .28356 INC .8862 V1 29.512  
 RP 230.44 LAP .87 LOP 77.57 VP 22.354 GAP 14.66 AZP 90.14 TAL 32.34 TAP 131.49 RCA 145.80 APO 261.22 V2 23.887  
 RC 148.289 GL 5.15 GP -9.36 ZAL 38.44 ZAP 146.85 ETS 196.48 ZAE 167.15 ETE 302.92 ZAC 73.55 ETC 282.66 LVI -7.05

PLANETOCENTRIC CONIC  
 C3 32.309 VHL 5.684 DLA 11.27 RAL 13.25 RAD 6647.9 VEL 12.338 PTH 7.26 VHP 4.112 DPA 7.53 RAP 46.22 ECC 1.5317  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 20 3477.47 -45.89 126.06 253.29 104.24 9 47 17 2477.5 -35.34 97.17  
 60.00 9 16 34 3405.00 -39.39 121.38 255.14 99.33 10 13 19 2405.0 -31.47 93.36  
 70.00 9 54 53 3292.26 -33.74 113.17 256.06 95.65 10 49 45 2292.3 -27.95 85.99  
 80.00 10 50 17 3118.70 -29.70 100.37 256.43 93.24 11 42 16 2118.7 -25.36 73.79  
 90.00 12 6 1 2874.26 -28.19 82.49 256.52 92.37 12 53 55 1874.3 -24.38 56.13  
 100.00 13 33 9 2593.17 -29.70 61.74 256.43 93.24 14 16 22 1593.2 -25.36 35.16  
 110.00 14 54 19 2339.08 -33.74 42.09 256.06 95.65 15 33 18 1339.1 -27.95 14.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3249 TRA -.6105 TC3 .5832 BAU .3020 SGT 969.8 SGR 787.9 SG3 542.2 ST 18.9 SR 31.9 SS 10.6  
 RDE -.6309 RRA .1509 RC3 -.3858 FAU .19667 RRT -.2353 RRF .4610 RTF -.4649 CRT .8259 CRS .2148 CST -.3201  
 FDE .0903 FRA -1.8170 FC3 -5.2700 BSP 1303 SGB 1249.6 R23 -.1996 R13 .5543 LSA 35.9 MSA 13.8 SSA 3.0  
 BDE .7097 BRA .6289 BC3 .6992 FSP 836 SG1 1010.6 SG2 734.9 THA 155.82 EL1 35.8 EL2 9.5 ALF 61.75

LAUNCH DATE SEP 1 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.223 GAL 6.97 AZL 89.08 HCA 100.17 SMA 202.82 ECC .28128 INC .9182 V1 29.512
RP 230.82 LAP .90 LOP 78.59 VP 22.262 GAP 14.33 AZP 90.16 TAL 32.95 TAP 132.72 RCA 145.77 APO 259.87 V2 23.827
RC 151.140 GL 5.38 GP -9.61 ZAL 38.23 ZAP 145.55 ETS 198.16 ZAE 167.48 ETE 297.71 ZAC 73.35 ETC 282.71 LVI -6.89

PLANETOCENTRIC CONIC

C3 32.049 VHL 5.661 DLA 11.36 RAL 12.95 RAD 6647.6 VEL 12.328 PTH 7.26 VHP 4.006 DPA 7.20 RAP 46.04 ECC 1.5274
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 47 46 3477.39 -45.89 126.05 252.89 104.25 9 45 44 2477.4 -35.34 97.16
60.00 9 14 53 3405.21 -39.39 121.40 254.74 99.32 10 11 38 2405.2 -31.48 93.37
70.00 9 53 4 3292.87 -33.74 113.22 255.66 95.63 10 47 57 2292.9 -27.97 86.03
80.00 10 48 21 3119.70 -29.70 100.45 256.03 93.20 11 40 20 2119.7 -25.38 73.86
90.00 12 4 1 2875.45 -28.19 82.58 256.11 92.32 12 51 57 1875.4 -24.40 56.21
100.00 13 31 13 2594.17 -29.70 61.82 256.03 93.20 14 14 27 1594.2 -25.38 35.23
110.00 14 52 30 2339.69 -33.74 42.13 255.66 95.63 15 31 30 1339.7 -27.97 14.95

DIFFERENTIAL CORRECTIONS

TDE -.3183 TRA -.6037 TC3 .5848 BAU .3057
RDE -.6281 RRA .1417 RC3 -.4088 FAU .20666
FDE .0924 FRA-1.9468 FC3-5.5826 BSP 1195
BDE .7042 BRA .6201 BC3 .7135 FSP 878

MID-COURSE EXECUTION ACCURACY

SGT 964.6 SGR 799.9 SG3 573.1
RRT -.2498 RRF .4848 RTF -.4630
SGB 1253.1 R23 -.2005 R13 .5652
SG1 1013.2 SG2 737.4 THA 153.51

ORBIT DETERMINATION ACCURACY

ST 18.7 SR 31.9 SS 11.1
CRT .8258 CR3 .2045 CST -.3307
LSA 35.7 MSA 14.1 SSA 3.1
EL1 35.7 EL2 9.4 ALF 62.11

LAUNCH DATE SEP 1 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.192 GAL 6.97 AZL 89.05 HCA 101.19 SMA 202.18 ECC .27915 INC .9504 V1 29.512
RP 231.20 LAP .93 LOP 79.61 VP 22.173 GAP 14.00 AZP 90.18 TAL 32.74 TAP 133.93 RCA 145.74 APO 258.62 V2 23.787
RC 154.008 FL 5.56 GP -9.87 ZAL 38.05 ZAP 144.24 ETS 195.85 ZAE 167.72 ETE 292.10 ZAC 73.15 ETC 282.76 LVI -6.73

PLANETOCENTRIC CONIC

C3 31.802 VHL 5.639 DLA 11.47 RAL 12.67 RAD 6647.7 VEL 12.318 PTH 7.25 VHP 3.905 DPA 6.87 RAP 45.85 ECC 1.5234
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 46 15 3477.58 -45.90 126.07 252.53 104.23 9 44 12 2477.6 -35.34 97.17
60.00 9 13 14 3405.74 -39.39 121.44 254.37 99.29 10 10 0 2405.7 -31.50 93.41
70.00 9 51 16 3293.81 -33.75 113.29 255.29 95.58 10 46 10 2293.8 -27.99 86.10
80.00 10 46 25 3121.08 -29.71 100.55 255.65 93.14 11 38 26 2121.1 -25.40 73.95
90.00 12 2 2 2877.03 -28.20 82.70 255.73 92.26 12 49 59 1877.0 -24.43 56.32
100.00 13 29 17 2595.55 -29.71 61.92 255.65 93.14 14 12 32 1595.6 -25.40 35.32
110.00 14 50 43 2340.63 -33.75 42.21 255.29 95.58 15 29 43 1340.6 -27.99 15.01

DIFFERENTIAL CORRECTIONS

TDE -.3247 TRA -.6111 TC3 .5676 BAU .3033
RDE -.6245 RRA .1328 RC3 -.4320 FAU .21647
FDE .1076 FRA-2.0685 FC3-5.8929 BSP 1229
BDE .7039 BRA .6233 BC3 .7133 FSP 935

MID-COURSE EXECUTION ACCURACY

SGT 959.2 SGR 811.8 SG3 603.5
RRT -.2438 RRF .5069 RTF -.4378
SGB 1256.6 R23 -.2257 R13 .5577
SG1 1009.9 SG2 747.8 THA 152.26

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 31.8 SS 11.5
CRT .8298 CR3 .2143 CST -.3166
LSA 35.9 MSA 14.5 SSA 3.1
EL1 35.9 EL2 9.4 ALF 61.39

LAUNCH DATE SEP 1 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.182 GAL 6.97 AZL 89.02 HCA 102.20 SMA 201.58 ECC .27715 INC .9825 V1 29.512
RP 231.58 LAP .96 LOP 80.62 VP 22.087 GAP 13.68 AZP 90.21 TAL 32.92 TAP 135.12 RCA 145.71 APO 257.45 V2 23.748
RC 156.890 GL 5.77 GP -10.13 ZAL 37.88 ZAP 142.90 ETS 195.55 ZAE 167.84 ETE 286.14 ZAC 72.95 ETC 282.82 LVI -6.56

PLANETOCENTRIC CONIC

C3 31.570 VHL 5.619 DLA 11.58 RAL 12.40 RAD 6647.6 VEL 12.308 PTH 7.24 VHP 3.808 DPA 6.52 RAP 45.83 ECC 1.5196
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 44 45 3478.02 -45.90 126.11 252.20 104.20 9 42 43 2478.0 -35.36 97.20
60.00 9 11 37 3406.53 -39.40 121.50 254.03 99.25 10 8 23 2406.5 -31.52 93.46
70.00 9 49 29 3295.07 -33.76 113.39 254.94 95.33 10 44 25 2295.1 -28.02 86.18
80.00 10 44 29 3122.80 -29.71 100.68 255.30 93.08 11 36 32 2122.8 -25.44 74.07
90.00 12 0 2 2878.97 -28.20 82.84 255.38 92.19 12 48 1 1879.0 -24.46 56.45
100.00 13 27 21 2597.27 -29.71 62.05 255.30 93.08 14 10 38 1597.3 -25.44 35.44
110.00 14 48 56 2341.89 -33.76 42.30 254.94 95.33 15 27 58 1341.9 -28.02 15.10

DIFFERENTIAL CORRECTIONS

TDE -.3303 TRA -.6184 TC3 .5489 BAU .3013
RDE -.6207 RRA .1234 RC3 -.4563 FAU .22661
FDE .1245 FRA-2.1950 FC3-6.2144 BSP 1248
BDE .7031 BRA .6306 BC3 .7138 FSP 994

MID-COURSE EXECUTION ACCURACY

SGT 953.0 SGR 824.6 SG3 634.9
RRT -.2364 RRF .5292 RTF -.4411
SGB 1260.3 R23 -.2498 R13 .5516
SG1 1006.1 SG2 759.0 THA 150.78

ORBIT DETERMINATION ACCURACY

ST 19.4 SR 31.7 SS 12.0
CRT .8333 CR3 .2242 CST -.3031
LSA 36.0 MSA 14.9 SSA 3.1
EL1 36.0 EL2 9.5 ALF 60.72

LAUNCH DATE SEP 1 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.135 GAL 6.96 AZL 88.99 HCA 103.21 SMA 201.03 ECC .27528 INC 1.0149 V1 29.512
RP 231.95 LAP .99 LOP 81.63 VP 22.004 GAP 13.36 AZP 90.23 TAL 33.08 TAP 136.29 RCA 145.69 APO 256.37 V2 23.708
RC 159.785 GL 5.97 GP -10.41 ZAL 37.73 ZAP 141.54 ETS 195.25 ZAE 167.83 ETE 279.93 ZAC 72.75 ETC 282.88 LVI -6.40

PLANETOCENTRIC CONIC

C3 31.350 VHL 5.599 DLA 11.70 RAL 12.15 RAD 6647.5 VEL 12.299 PTH 7.23 VHP 3.715 DPA 6.15 RAP 45.40 ECC 1.5159
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 43 17 3478.71 -45.91 126.17 251.90 104.16 9 41 18 2478.7 -35.39 97.25
60.00 9 10 0 3407.60 -39.41 121.59 253.72 99.19 10 6 48 2407.6 -31.55 93.53
70.00 9 47 43 3296.62 -33.77 113.51 254.62 95.46 10 42 40 2296.6 -28.06 86.29
80.00 10 42 33 3124.85 -29.72 100.83 254.98 93.00 11 34 38 2124.9 -25.48 74.21
90.00 11 58 1 2881.26 -28.21 83.00 255.05 92.11 12 46 3 1881.3 -24.50 56.60
100.00 13 25 25 2599.33 -29.72 62.20 254.98 93.00 14 8 44 1599.3 -25.48 35.58
110.00 14 47 9 2343.44 -33.77 42.42 254.62 95.46 15 26 13 1343.4 -28.06 15.21

DIFFERENTIAL CORRECTIONS

TDE -.3349 TRA -.6261 TC3 .5285 BAU .2997
RDE -.6167 RRA .1134 RC3 -.4818 FAU .23712
FDE .1420 FRA-2.3268 FC3-6.5479 BSP 1255
BDE .7018 BRA .6363 BC3 .7150 FSP 1034

MID-COURSE EXECUTION ACCURACY

SGT 946.4 SGR 838.6 SG3 667.6
RRT -.2274 RRF .5517 RTF -.3827
SGB 1264.5 R23 -.2720 R13 .5475
SG1 1002.0 SG2 771.3 THA 149.04

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 31.6 SS 12.4
CRT .8361 CR3 .2326 CST -.2919
LSA 36.1 MSA 15.3 SSA 3.1
EL1 36.1 EL2 9.5 ALF 60.11

LAUNCH DATE SEP 1 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 27 1974

Heliocentric Conic

DISTANCE 340.198

EARTH TO MARS

RL 150.98 LAL .00 LOL 336.42 VL 33.110 GAL 6.95 AZL 88.95 HCA 104.21 SMA 200.52 ECC .27353 INC 1.0475 V1 29.512  
 RP 232.33 LAP 1.02 LOP 82.63 VP 21.923 GAP 13.04 AZP 90.26 TAL 33.23 TAP 137.44 RCA 145.67 APO 255.37 V2 23.670  
 RC 162.693 GL 6.18 GP -10.68 ZAL 37.60 ZAP 140.17 ETS 194.95 ZAE 167.68 ETE 273.61 ZAC 72.54 ETC 282.94 LVI -6.24

Planetocentric Conic

C3 31.142 VHL 5.581 DLA 11.03 RAL 11.92 RAD 6647.4 VEL 12.291 PTH 7.23 VHP 3.626 DPA 5.78 RAP 45.14 ECC 1.5125  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 51 3479.63 -45.93 126.25 251.62 104.09 9 39 51 2479.6 -35.42 97.31  
 60.00 9 8 25 3408.93 -39.43 121.70 253.44 99.12 10 5 14 2408.9 -31.59 93.62  
 70.00 9 45 57 3298.47 -33.78 113.65 254.33 95.37 10 40 56 2298.5 -28.10 86.41  
 80.00 10 40 37 3127.24 -29.73 101.01 254.68 92.90 11 32 44 2127.2 -25.52 74.37  
 90.00 11 56 1 2803.89 -26.21 83.20 254.73 92.01 12 44 4 1883.9 -24.54 56.78  
 100.00 13 23 29 2601.71 -29.73 62.37 254.68 92.90 14 6 50 1601.7 -25.52 35.74  
 110.00 14 45 24 2345.29 -33.78 42.57 254.33 95.37 15 24 29 1345.3 -28.10 15.33

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3390 TRA -.6344 TC3 .5056 BAU .2984 SGT 939.4 SGR 853.6 SG3 701.2 ST 20.1 SR 31.8 SS 12.9  
 RDE -.6125 RRA .1030 RC3 -.5080 FAU .24791 RRT -.2157 RRF .5742 RTF -.3514 CRT .8385 CR8 .2410 CST -.2812  
 FDE .1612 FRA-2.4628 FC3-6.8918 BSP 1258 SGB 1269.3 R23 -.2945 R13 .5452 LSA 36.1 MSA 15.7 SSA 3.1  
 BDE .7001 BRA .6427 BC3 .7167 FSP 1115 SG1 997.4 SG2 785.0 THA 146.99 EL1 36.1 EL2 9.5 ALF 59.52

LAUNCH DATE SEP 1 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 29 1974

Heliocentric Conic

DISTANCE 343.947

EARTH TO MARS

RL 150.98 LAL .00 LOL 336.42 VL 33.086 GAL 6.95 AZL 88.92 HCA 105.22 SMA 200.05 ECC .27189 INC 1.0802 V1 29.512  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.846 GAP 12.73 AZP 90.28 TAL 33.36 TAP 138.58 RCA 145.66 APO 254.44 V2 23.631  
 RC 165.610 GL 6.39 GP -10.97 ZAL 37.48 ZAP 136.77 ETS 194.65 ZAE 167.37 ETE 267.34 ZAC 72.34 ETC 283.00 LVI -6.08

Planetocentric Conic

C3 30.945 VHL 5.563 DLA 11.97 RAL 11.70 RAD 6647.4 VEL 12.283 PTH 7.22 VHP 3.541 DPA 5.38 RAP 44.86 ECC 1.5093  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 40 26 3480.78 -45.95 126.36 251.38 104.01 9 38 27 2480.8 -35.47 97.38  
 60.00 9 6 51 3410.51 -39.45 121.83 253.18 99.03 10 3 41 2410.5 -31.64 93.73  
 70.00 9 44 12 3300.61 -33.79 113.81 254.07 95.28 10 39 12 2300.6 -28.15 86.56  
 80.00 10 38 40 3129.94 -29.74 101.21 254.40 92.80 11 30 50 2129.9 -25.57 74.56  
 90.00 11 53 59 2886.87 -28.22 83.41 254.47 91.91 12 42 6 1886.9 -24.59 56.99  
 100.00 13 21 32 2604.41 -29.74 62.58 254.40 92.80 14 4 56 1604.4 -25.57 35.93  
 110.00 14 43 38 2347.42 -33.79 42.73 254.07 95.28 15 22 45 1347.4 -28.15 15.48

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3430 TRA -.6438 TC3 .4800 BAU .2975 SGT 932.5 SGR 869.8 SG3 735.8 ST 20.4 SR 31.4 SS 13.4  
 RDE -.6081 RRA .0921 RC3 -.5354 FAU .25899 RRT -.2005 RRF .5964 RTF -.3167 CRT .8405 CR8 .2503 CST -.2701  
 FDE .1831 FRA-2.6023 FC3-7.2458 BSP 1256 SGB 1275.2 R23 -.3144 R13 .5453 LSA 36.2 MSA 16.1 SSA 3.1  
 BDE .6981 BRA .6504 BC3 .7191 FSP 1178 SG1 992.6 SG2 800.5 THA 144.59 EL1 36.2 EL2 9.6 ALF 58.91

LAUNCH DATE SEP 1 1973

FLIGHT TIME 152.00

ARRIVAL DATE JAN 31 1974

Heliocentric Conic

DISTANCE 347.701

EARTH TO MARS

RL 150.98 LAL .00 LOL 336.42 VL 33.064 GAL 6.94 AZL 88.89 HCA 106.22 SMA 199.61 ECC .27035 INC 1.1131 V1 29.512  
 RP 233.07 LAP 1.07 LOP 84.84 VP 21.771 GAP 12.42 AZP 90.31 TAL 33.48 TAP 139.69 RCA 145.65 APO 253.57 V2 23.593  
 RC 168.537 GL 6.80 GP -11.26 ZAL 37.39 ZAP 137.35 ETS 194.36 ZAE 166.92 ETE 261.27 ZAC 72.13 ETC 283.07 LVI -5.92

Planetocentric Conic

C3 30.757 VHL 5.548 DLA 12.11 RAL 11.49 RAD 6647.3 VEL 12.275 PTH 7.22 VHP 3.460 DPA 4.98 RAP 44.57 ECC 1.5062  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 3 3482.16 -45.97 126.48 251.16 103.92 9 37 6 2482.2 -35.52 97.47  
 60.00 9 5 17 3412.34 -39.46 121.99 252.95 98.93 10 2 10 2412.3 -31.70 93.85  
 70.00 9 42 26 3303.02 -33.81 114.00 253.82 95.17 10 37 29 2303.0 -28.21 86.72  
 80.00 10 36 43 3132.96 -29.75 101.43 254.15 92.68 11 28 56 2133.0 -25.63 74.77  
 90.00 11 51 57 2890.18 -28.23 83.66 254.22 91.78 12 40 7 1890.2 -24.65 57.21  
 100.00 13 19 35 2607.44 -29.75 62.80 254.15 92.68 14 3 3 1607.4 -25.63 36.13  
 110.00 14 41 53 2349.84 -33.81 42.92 253.82 95.17 15 21 2 1349.8 -28.21 15.64

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3467 TRA -.6543 TC3 .4516 BAU .2970 SGT 925.8 SGR 887.2 SG3 771.4 ST 20.7 SR 31.2 SS 13.9  
 RDE -.6034 RRA .0807 RC3 -.5639 FAU .27035 RRT -.1813 RRF .6189 RTF -.2.80 CRT .8420 CR8 .2587 CST -.2604  
 FDE .2063 FRA-2.7457 FC3-7.6098 BSP 1233 SGB 1283.0 R23 -.3304 R13 .5493 LSA 36.2 MSA 16.6 SSA 3.1  
 BDE .6959 BRA .6593 BC3 .7224 FSP 1242 SG1 987.5 SG2 818.0 THA 141.62 EL1 36.2 EL2 9.6 ALF 58.31

LAUNCH DATE SEP 1 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 2 1974

Heliocentric Conic

DISTANCE 351.462

EARTH TO MARS

RL 150.98 LAL .00 LOL 336.42 VL 33.044 GAL 6.93 AZL 88.85 HCA 107.21 SMA 199.20 ECC .26891 INC 1.1462 V1 29.512  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.698 GAP 12.12 AZP 90.34 TAL 33.58 TAP 140.79 RCA 145.64 APO 252.77 V2 23.554  
 RC 171.472 GL 6.82 GP -11.56 ZAL 37.31 ZAP 135.91 ETS 194.06 ZAE 166.33 ETE 255.50 ZAC 71.92 ETC 283.14 LVI -5.76

Planetocentric Conic

C3 30.577 VHL 5.530 DLA 12.26 RAL 11.30 RAD 6647.2 VEL 12.268 PTH 7.21 VHP 3.383 DPA 4.56 RAP 44.25 ECC 1.5032  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 42 3483.75 -46.00 126.63 250.97 103.81 9 35 45 2483.8 -35.58 97.58  
 60.00 9 3 45 3414.42 -39.49 122.16 252.75 98.81 10 0 39 2414.4 -31.76 93.99  
 70.00 9 40 41 3305.72 -33.82 114.21 253.60 95.04 10 35 47 2305.7 -28.27 86.91  
 80.00 10 34 46 3136.30 -29.76 101.68 253.92 92.55 11 27 2 2136.3 -25.69 74.99  
 90.00 11 49 54 2893.81 -28.24 83.92 253.98 91.65 12 38 7 1893.8 -24.71 57.46  
 100.00 13 17 37 2610.77 -29.76 63.05 253.92 92.55 14 1 8 1610.8 -25.69 36.36  
 110.00 14 40 7 2352.54 -33.82 43.13 253.60 95.04 15 19 20 1352.5 -28.27 15.83

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3502 TRA -.6661 TC3 .4198 BAU .2971 SGT 919.9 SGR 905.9 SG3 807.7 ST 21.0 SR 31.0 SS 14.4  
 RDE -.9985 RRA .0689 RC3 -.5934 FAU .28192 RRT -.1575 RRF .6401 RTF -.2348 CRT .8433 CR8 .2671 CST -.2511  
 FDE .2315 FRA-2.8919 FC3-7.9819 BSP 1251 SGB 1291.0 R23 -.3394 R13 .5594 LSA 36.3 MSA 17.0 SSA 3.1  
 BDE .6935 BRA .6697 BC3 .7269 FSP 1308 SG1 982.4 SG2 837.6 THA 137.78 EL1 36.2 EL2 9.7 ALF 57.68

LAUNCH DATE SEP 1 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.025 GAL 6.92 AZL 88.82 HCA 108.20 SMA 198.83 ECC .26736 INC 1.1796 V1 29.512	DISTANCE 355.227	EARTH TO MARS
RP 233.80 LAP 1.12 LOP 86.63 VP 21.628 GAP 11.82 AZP 90.37 TAL 33.67 TAP 141.87 RCA 145.63 APO 252.03 V2 23.517		
RC 174.413 GL 7.03 GP -11.86 ZAL 37.24 ZAP 134.45 ZEL 193.76 ZAE 165.59 ETE 230.13 ZAC 71.72 ETC 263.21 LVI -5.60		

PLANETOCENTRIC CONIC

C3 30.406 VHL 5.314 DLA 12.42 RAL 11.11 RAD 6647.2 VEL 12.261 PTH 7.21 VHP 3.310 DPA 4.12 RAP 43.92 ECC 1.5004		
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG		
50.00 8 38 21 3485.56 -46.03 126.79 250.81 103.69 9 34 27 2485.6 -35.65 97.69		
60.00 9 2 13 3416.73 -39.51 122.35 252.56 98.69 9 59 9 2416.7 -31.83 94.15		
70.00 9 38 56 3308.69 -33.84 114.44 253.41 94.91 10 34 4 2308.7 -28.34 87.11		
80.00 10 32 47 3139.95 -29.77 101.95 253.71 92.41 11 25 7 2139.9 -25.76 75.24		
90.00 11 47 49 2897.78 -28.24 84.21 253.77 91.51 12 36 7 1897.8 -24.78 57.73		
100.00 13 15 39 2614.42 -29.77 63.32 253.71 92.41 13 59 14 1614.4 -25.76 36.61		
110.00 14 38 22 2355.51 -33.84 43.36 253.41 94.91 15 17 37 1355.5 -28.34 16.03		

DIFFERENTIAL CORRECTIONS

TDE -.3540 TRA -.6795 TC3 .3845 BAU .2979	SGT 915.2 SGR 925.8 SG3 844.7	ORBIT DETERMINATION ACCURACY
RDE -.5933 RRA .0366 RC3 -.6239 FAU .29370	RRT -.1281 RRF .6611 RTF -.1867	ST 21.4 SR 30.9 S8 14.9
FDE .2599 FRA-3.0407 FC3-8.3623 B8P 1255	SG8 1301.9 R23 -.3339 R13 .5798	CRT .8443 CRS .2765 CST -.2412
BDE .6909 BRA .6918 BC3 .7329 F8P 1375	SG1 977.9 SG2 859.3 THA 132.44	LSA 36.3 M8A 17.5 S8A 3.1
		EL1 36.2 EL2 9.7 ALF 57.00

LAUNCH DATE SEP 1 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 33.007 GAL 6.91 AZL 88.79 HCA 109.19 SMA 198.48 ECC .26630 INC 1.2133 V1 29.512	DISTANCE 358.997	EARTH TO MARS
RP 234.17 LAP 1.15 LOP 87.82 VP 21.561 GAP 11.52 AZP 90.40 TAL 33.74 TAP 142.94 RCA 145.63 APO 251.34 V2 23.479		
RC 177.360 GL 7.25 GP -12.18 ZAL 37.19 ZAP 132.97 ETS 193.46 ZAE 164.73 ETE 245.20 ZAC 71.51 ETC 263.28 LVI -5.44		

PLANETOCENTRIC CONIC

C3 30.242 VHL 5.499 DLA 12.58 RAL 10.94 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 3.240 DPA 3.68 RAP 43.56 ECC 1.4977		
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG		
50.00 8 35 2 3487.58 -46.06 126.98 250.67 103.55 9 33 9 2487.6 -35.72 97.63		
60.00 9 0 41 3419.28 -39.54 122.56 252.40 98.54 9 57 40 2419.3 -31.90 94.32		
70.00 9 37 10 3311.93 -33.86 114.69 253.25 94.76 10 32 22 2311.9 -28.41 87.33		
80.00 10 30 40 3143.90 -29.78 102.24 253.52 92.26 11 23 12 2143.9 -25.83 75.52		
90.00 11 45 44 2902.07 -28.25 84.52 253.58 91.35 12 34 6 1902.1 -24.85 58.03		
100.00 13 13 40 2618.37 -29.78 63.61 253.52 92.26 13 57 18 1618.4 -25.83 36.88		
110.00 14 36 36 2358.75 -33.86 43.61 253.25 94.76 15 15 55 1358.7 -28.41 16.25		

DIFFERENTIAL CORRECTIONS

TDE -.3578 TRA -.6944 TC3 .3458 BAU .2997	SGT 912.7 SGR 947.1 SG3 882.5	ORBIT DETERMINATION ACCURACY
RDE -.5877 RRA .0439 RC3 -.6556 FAU .30367	RRT -.0934 RRF .6816 RTF -.1339	ST 21.7 SR 30.6 S8 15.5
FDE .2914 FRA-3.1911 FC3-8.7504 B8P 1263	SG8 1315.3 R23 -.2966 R13 .6178	CRT .8450 CRS .2866 CST -.2311
BDE .6880 BRA .6936 BC3 .7412 F8P 1443	SG1 975.7 SG2 882.2 THA 124.18	LSA 36.3 M8A 17.9 S8A 3.1
		EL1 36.2 EL2 9.8 ALF 56.29

LAUNCH DATE SEP 1 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 8 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.991 GAL 6.89 AZL 88.75 HCA 110.18 SMA 198.16 ECC .26512 INC 1.2473 V1 29.512	DISTANCE 362.771	EARTH TO MARS
RP 234.53 LAP 1.17 LOP 88.80 VP 21.495 GAP 11.22 AZP 90.43 TAL 33.80 TAP 143.98 RCA 145.63 APO 250.70 V2 23.442		
RC 180.313 GL 7.47 GP -12.48 ZAL 37.16 ZAP 131.47 ETS 193.16 ZAE 163.75 ETE 240.71 ZAC 71.30 ETC 263.36 LVI -5.28		

PLANETOCENTRIC CONIC

C3 30.084 VHL 5.485 DLA 12.76 RAL 10.79 RAD 6647.0 VEL 12.248 PTH 7.19 VHP 3.173 DPA 3.22 RAP 43.19 ECC 1.4951		
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG		
50.00 8 33 43 3489.80 -46.09 127.18 250.55 103.40 9 31 53 2489.8 -35.01 97.97		
60.00 8 59 10 3422.06 -39.56 122.79 252.27 98.39 9 56 12 2422.1 -31.99 94.51		
70.00 9 35 24 3315.43 -33.88 114.96 253.07 94.60 10 30 40 2315.4 -28.49 87.58		
80.00 10 28 48 3148.16 -29.79 102.56 253.35 92.09 11 21 16 2148.2 -25.91 75.81		
90.00 11 43 37 2906.69 -28.26 84.86 253.40 91.18 12 32 3 1906.7 -24.92 58.35		
100.00 13 11 39 2622.63 -29.79 63.93 253.35 92.09 13 55 22 1622.6 -25.91 37.18		
110.00 14 34 50 2362.25 -33.88 43.88 253.07 94.60 15 14 13 1362.3 -28.49 16.49		

DIFFERENTIAL CORRECTIONS

TDE -.3614 TRA -.7107 TC3 .3033 BAU .3024	SGT 912.5 SGR 969.6 SG3 920.5	ORBIT DETERMINATION ACCURACY
RDE -.5818 RRA .0309 RC3 -.6881 FAU .31767	RRT -.0930 RRF .7013 RTF -.1382	ST 22.1 SR 30.4 S8 16.0
FDE .3259 FRA-3.3422 FC3-9.1417 B8P 1279	SG8 1331.5 R23 -.1923 R13 .6755	CRT .8454 CRS .2978 CST -.2209
BDE .6849 BRA .7114 BC3 .7320 F8P 1513	SG1 978.6 SG2 902.8 THA 110.55	LSA 36.3 M8A 18.4 S8A 3.1
		EL1 36.2 EL2 9.9 ALF 55.99

LAUNCH DATE SEP 1 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.976 GAL 6.88 AZL 88.72 HCA 111.18 SMA 197.87 ECC .26401 INC 1.2815 V1 29.512	DISTANCE 366.550	EARTH TO MARS
RP 234.89 LAP 1.20 LOP 89.59 VP 21.432 GAP 10.93 AZP 90.46 TAL 33.85 TAP 145.02 RCA 145.63 APO 250.11 V2 23.405		
RC 183.270 GL 7.69 GP -12.79 ZAL 37.13 ZAP 129.96 ETS 192.84 ZAE 162.87 ETE 236.65 ZAC 71.10 ETC 263.44 LVI -5.13		

PLANETOCENTRIC CONIC

C3 29.934 VHL 5.471 DLA 12.94 RAL 10.64 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 3.110 DPA 2.75 RAP 42.80 ECC 1.4928		
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG		
50.00 8 32 25 3492.21 -46.13 127.40 250.46 103.23 9 30 37 2492.2 -35.90 98.13		
60.00 8 57 39 3425.06 -39.59 123.04 252.15 98.22 9 54 44 2425.1 -32.08 94.72		
70.00 9 33 38 3319.19 -33.90 115.25 252.93 94.43 10 28 57 2319.2 -28.58 87.63		
80.00 10 26 46 3152.70 -29.80 102.90 253.20 91.91 11 19 19 2152.7 -25.99 76.12		
90.00 11 41 28 2911.61 -28.28 85.22 253.25 91.00 12 30 0 1911.6 -25.00 58.68		
100.00 13 9 38 2627.17 -29.80 64.26 253.20 91.91 13 53 25 1627.2 -25.99 37.49		
110.00 14 33 4 2366.01 -33.90 44.17 252.93 94.43 15 12 30 1366.0 -28.58 16.75		

DIFFERENTIAL CORRECTIONS

TDE -.3549 TRA -.7186 TC3 .2710 BAU .3093	SGT 906.8 SGR 996.7 SG3 963.0	ORBIT DETERMINATION ACCURACY
RDE -.5774 RRA .0155 RC3 -.7240 FAU .33109	RRT -.0255 RRF .7224 RTF -.0311	ST 21.9 SR 30.3 S8 16.5
FDE .3348 FRA-3.5230 FC3-9.5756 B8P 1251	SG8 1347.5 R23 -.0733 R13 .7188	CRT .8427 CRS .2825 CST -.2413
BDE .6778 BRA .7188 BC3 .7730 F8P 1554	SG1 998.2 SG2 905.1 THA 97.53	LSA 36.1 M8A 18.9 S8A 3.1
		EL1 36.0 EL2 9.9 ALF 55.66



LAUNCH DATE SEP 1 1973 FLIGHT TIME 164.00 ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC DISTANCE 370.330 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 32.962 GAL 6.86 AZL 88.68 HCA 112.14 SMA 197.60 ECC .26298 INC 1.3163 V1 29.512  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.370 GAP 10.64 AZP 90.50 TAL 33.89 TAP 146.03 RCA 145.64 APO 249.57 V2 23.369  
 RC 106.232 GL 7.92 GP -13.11 ZAL 37.13 ZAP 128.43 ETS 192.53 ZAE 161.49 ETE 233.01 ZAC 70.89 ETC 283.52 LVI -4.96

PLANETOCENTRIC CONIC  
 C3 29.787 VHL 5.458 DLA 13.13 RAL 10.50 RAD 6646.9 VEL 12.236 PTH 7.19 VHP 3.050 DPA 2.27 RAP 42.40 ECC 1.4902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 31 8 3494.84 -46.17 127.64 250.39 103.05 9 29 23 2494.8 -36.00 98.30  
 60.00 8 56 8 3428.30 -39.63 123.31 252.05 98.04 9 53 17 2428.3 -32.17 94.94  
 70.00 9 31 51 3323.23 -33.92 115.57 252.82 94.25 10 27 14 2323.2 -28.67 88.11  
 80.00 10 24 43 3157.58 -29.81 103.28 253.07 91.72 11 17 20 2157.6 -26.08 76.46  
 90.00 11 39 17 2916.89 -28.27 85.61 253.11 90.81 12 27 54 1916.9 -25.09 59.05  
 100.00 13 7 35 2632.05 -29.81 64.63 253.07 91.72 13 51 27 1632.1 -26.08 37.83  
 110.00 14 31 17 2370.08 -33.92 44.49 252.82 94.25 15 10 47 1370.1 -28.67 17.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3857 TRA -.7452 TC3 .2115 BAU .3129 SGT 919.8 SGR 1019.8 SG3 999.0 ST 22.7 SR 29.9 SS 17.1  
 RDE -.5695 RRA .0029 RC3 -.7368 FAU .34238 RRT .0387 RRF .7390 RTF .0470 CRT .8447 CRS .3105 CST -.2110  
 FDE .3943 FRA -3.6567 FC3-9.9508 BSP 1326 SGB 1373.3 R23 .1000 R13 .7324 LSA 36.3 MSA 19.4 SSA 3.1  
 BDE .6768 BRA .7452 BC3 .7858 FSP 1646 SGI 1023.0 SG2 916.2 THA 79.75 EL1 36.2 EL2 10.0 ALF 54.21

LAUNCH DATE SEP 1 1973 FLIGHT TIME 166.00 ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC DISTANCE 374.114 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 32.949 GAL 6.85 AZL 88.65 HCA 113.12 SMA 197.35 ECC .26202 INC 1.3513 V1 29.512  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.311 GAP 10.36 AZP 90.53 TAL 33.91 TAP 147.03 RCA 145.64 APO 249.06 V2 23.332  
 RC 189.197 GL 8.15 GP -13.44 ZAL 37.14 ZAP 126.89 ETS 192.21 ZAE 160.24 ETE 229.73 ZAC 70.69 ETC 283.80 LVI -4.80

PLANETOCENTRIC CONIC  
 C3 29.646 VHL 5.445 DLA 13.32 RAL 10.38 RAD 6646.9 VEL 12.230 PTH 7.18 VHP 2.994 DPA 1.78 RAP 41.99 ECC 1.4879  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 52 3497.66 -46.22 127.90 250.34 102.85 9 28 10 2497.7 -36.10 98.49  
 60.00 8 54 38 3431.76 -39.66 123.60 251.98 97.85 9 51 49 2431.8 -32.27 95.17  
 70.00 9 30 3 3327.53 -33.94 115.90 252.72 94.05 10 25 30 2327.5 -28.77 88.41  
 80.00 10 22 38 3162.76 -29.82 103.64 252.95 91.52 11 15 21 2162.8 -26.17 76.82  
 90.00 11 37 5 2922.48 -28.27 86.02 252.99 90.60 12 25 47 1922.5 -25.18 59.43  
 100.00 13 5 30 2637.23 -29.82 65.01 252.95 91.52 13 49 27 1637.2 -26.17 38.18  
 110.00 14 29 29 2374.35 -33.94 44.82 252.72 94.05 15 9 3 1374.4 -28.77 17.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3716 TRA -.7688 TC3 .1550 BAU .3197 SGT 934.1 SGR 1045.6 SG3 1036.9 ST 23.2 SR 29.6 SS 17.6  
 RDE -.5620 RRA -.0109 RC3 -.7917 FAU .35426 RRT .0978 RRF .7558 RTF .1190 CRT .8449 CRS .3274 CST -.1943  
 FDE .4453 FRA -3.8022 FC-10.3453 BSP 1386 SGB 1402.0 R23 .1880 R13 .7334 LSA 36.3 MSA 19.9 SSA 3.1  
 BDE .6737 BRA .7689 BC3 .8067 FSP 1726 SGI 1062.5 SG2 914.8 THA 69.55 EL1 36.2 EL2 10.1 ALF 53.13

LAUNCH DATE SEP 1 1973 FLIGHT TIME 168.00 ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC DISTANCE 377.901 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 32.937 GAL 6.83 AZL 88.61 HCA 114.10 SMA 197.13 ECC .26111 INC 1.3867 V1 29.512  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.254 GAP 10.07 AZP 90.57 TAL 33.92 TAP 148.02 RCA 145.66 APO 248.60 V2 23.297  
 RC 192.165 GL 8.38 GP -13.76 ZAL 37.16 ZAP 125.33 ETS 191.87 ZAE 158.92 ETE 226.77 ZAC 70.49 ETC 283.68 LVI -4.64

PLANETOCENTRIC CONIC  
 C3 29.510 VHL 5.432 DLA 13.53 RAL 10.27 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 2.940 DPA 1.28 RAP 41.55 ECC 1.4857  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 36 3500.67 -46.26 128.17 250.31 102.64 9 26 57 2500.7 -36.22 98.89  
 60.00 8 53 7 3435.45 -39.69 123.91 251.92 97.64 9 50 22 2435.4 -32.38 95.43  
 70.00 9 28 14 3332.09 -33.96 116.26 252.64 93.84 10 23 46 2332.1 -28.87 88.73  
 80.00 10 20 32 3168.24 -29.83 104.05 252.86 91.31 11 13 20 2168.2 -26.26 77.19  
 90.00 11 34 50 2928.40 -28.28 86.45 252.86 90.39 12 23 39 1928.4 -25.27 59.84  
 100.00 13 3 23 2642.71 -29.83 65.42 252.86 91.31 13 47 26 1642.7 -26.26 38.56  
 110.00 14 27 40 2378.91 -33.96 45.17 252.64 93.84 15 7 19 1378.9 -28.87 17.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3734 TRA -.7920 TC3 .0970 BAU .3288 SGT 931.9 SGR 1073.1 SG3 1075.4 ST 23.6 SR 29.3 SS 18.2  
 RDE -.5545 RRA -.0234 RC3 -.8277 FAU .36626 RRT .1370 RRF .7720 RTF .1096 CRT .8445 CRS .3399 CST -.1833  
 FDE .4943 FRA -3.9313 FC-10.7449 BSP 1448 SGB 1434.4 R23 .2258 R13 .7415 LSA 36.3 MSA 20.4 SSA 3.1  
 BDE .6696 BRA .7924 BC3 .8334 FSP 1799 SGI 1109.4 SG2 909.3 THA 63.71 EL1 36.2 EL2 10.2 ALF 52.18

LAUNCH DATE SEP 1 1973 FLIGHT TIME 170.00 ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC DISTANCE 381.690 EARTH TO MARS  
 RL 150.98 LAL .00 LOL 338.42 VL 32.927 GAL 6.81 AZL 88.58 HCA 115.07 SMA 196.92 ECC .26027 INC 1.4226 V1 29.512  
 RP 236.29 LAP 1.29 LOP 93.49 VP 21.199 GAP 9.79 AZP 90.60 TAL 33.92 TAP 148.99 RCA 145.67 APO 248.18 V2 23.261  
 RC 195.134 GL 8.61 GP -14.09 ZAL 37.20 ZAP 123.76 ETS 191.54 ZAE 157.53 ETE 224.10 ZAC 70.28 ETC 283.76 LVI -4.48

PLANETOCENTRIC CONIC  
 C3 29.378 VHL 5.420 DLA 13.74 RAL 10.16 RAD 6646.8 VEL 12.220 PTH 7.17 VHP 2.890 DPA .77 RAP 41.11 ECC 1.4835  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 21 3503.88 -46.31 128.47 250.31 102.42 9 25 45 2503.9 -36.34 98.90  
 60.00 8 51 35 3439.35 -39.73 124.24 251.88 97.42 9 48 55 2439.4 -32.50 95.70  
 70.00 9 26 24 3336.92 -33.98 116.63 252.57 93.62 10 22 1 2336.9 -28.98 89.06  
 80.00 10 18 23 3174.02 -29.84 104.48 252.77 91.08 11 11 17 2174.0 -26.36 77.60  
 90.00 11 32 33 2934.65 -28.28 86.91 252.79 90.16 12 21 28 1934.6 -25.36 60.27  
 100.00 13 1 15 2648.49 -29.84 65.85 252.77 91.08 13 45 23 1648.5 -26.36 38.96  
 110.00 14 25 50 2383.73 -33.98 45.55 252.57 93.62 15 5 34 1383.7 -28.98 17.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3785 TRA -.8163 TC3 .0362 BAU .3400 SGT 975.1 SGR 1102.3 SG3 1114.3 ST 24.0 SR 28.9 SS 18.8  
 RDE -.5466 RRA -.0403 RC3 -.8649 FAU .37833 RRT .2172 RRF .7876 RTF .2593 CRT .8436 CRS .3504 CST -.1750  
 FDE .5441 FRA -4.1020 FC-11.1489 BSP 1521 SGB 1471.7 R23 .2424 R13 .7547 LSA 36.3 MSA 20.9 SSA 3.0  
 BDE .6649 BRA .8173 BC3 .8657 FSP 1871 SGI 1162.4 SG2 902.6 THA 59.75 EL1 36.2 EL2 10.3 ALF 51.23

LAUNCH DATE SEP 1 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.917 GAL 8.79 AZL 88.54 HCA 118.04 SMA 196.74 ECC .25948 INC 1.4590 V1 29.512
RP 236.83 LAP 1.31 LOP 94.46 VP 21.148 GAP 9.82 AZP 90.64 TAL 33.90 TAP 149.04 RCA 145.69 APO 247.79 V2 23.228
RC 198.104 GL 8.05 GP -14.43 ZAL 37.25 ZAP 122.18 ETS 191.19 ZAE 156.09 ETE 221.69 ZAC 70.08 ETC 283.65 LVI -4.32

PLANETOCENTRIC CONIC

C3 29.250 VHL 5.408 DLA 13.96 RAL 10.06 RAD 6646.7 VEL 12.214 PTH 7.17 VHP 2.643 DPA .25 RAP 40.65 ECC 1.4814
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 26 5 3507.28 -46.36 128.78 250.32 102.18 9 24 33 2507.3 -36.46 99.13
60.00 8 50 3 3443.48 -39.76 124.58 251.86 97.19 9 47 27 2443.5 -32.62 95.98
70.00 9 24 32 3342.00 -34.01 117.03 252.52 93.39 10 20 14 2342.0 -29.09 89.41
80.00 10 16 12 3180.11 -29.85 104.93 252.70 90.84 11 9 12 2180.1 -26.47 78.02
90.00 11 30 13 2941.23 -28.20 87.39 252.72 89.92 12 19 14 1941.2 -25.46 60.73
100.00 12 59 4 2654.59 -29.85 66.30 252.70 90.84 13 43 19 1654.6 -26.47 39.39
110.00 14 23 59 2388.82 -34.01 45.94 252.52 93.39 15 3 47 1388.8 -29.09 18.33

DIFFERENTIAL CORRECTIONS

TDE -.3812 TRA -.8421 TC3 -.0284 BAU .3532
RDE -.5384 RRA -.0554 RC3 -.9027 FAU .39013
FDE .5974 FRA-4.2484 FC-11.5469 BSP 1606
BDE .6597 BRA .8440 BC3 .9031 FSP 1940

MID-COURSE EXECUTION ACCURACY

SGT 1004.6 SGR 1132.4 S63 1152.4
RRT .2777 RRF .8021 RTF .3277
SGB 1513.8 R23 .2498 R13 .7700
SG1 1220.6 S62 895.3 THA 56.69

ORBIT DETERMINATION ACCURACY

ST 24.5 SR 28.6 SS 19.3
CRT .8423 CRS .3611 CST -.1669
LSA 36.3 MSA 21.5 S8A 3.0
EL1 36.1 EL2 10.4 ALF 50.25

LAUNCH DATE SEP 1 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.908 GAL 6.77 AZL 88.50 HCA 117.00 SMA 196.37 ECC .25875 INC 1.4958 V1 29.512
RP 236.98 LAP 1.33 LOP 95.43 VP 21.093 GAP 9.24 AZP 90.68 TAL 33.88 TAP 150.88 RCA 145.71 APO 247.43 V2 23.191
RC 201.073 GL 9.09 GP -14.76 ZAL 37.31 ZAP 120.59 ETS 190.84 ZAE 154.60 ETE 219.50 ZAC 69.89 ETC 283.93 LVI -4.15

PLANETOCENTRIC CONIC

C3 29.127 VHL 5.397 DLA 14.19 RAL 9.98 RAD 6646.7 VEL 12.209 PTH 7.16 VHP 2.799 DPA -.28 RAP 40.19 ECC 1.4793
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 24 50 3510.88 -46.41 129.11 250.35 101.93 9 23 21 2510.9 -36.60 99.37
60.00 8 48 31 3447.83 -39.80 124.94 251.85 96.95 9 45 59 2447.8 -32.74 96.28
70.00 9 22 39 3347.35 -34.03 117.44 252.49 93.14 10 18 27 2347.3 -29.21 99.79
80.00 10 13 59 3186.52 -29.85 105.41 252.65 90.59 11 7 6 2186.5 -26.57 78.46
90.00 11 27 51 2948.14 -28.28 87.89 252.66 89.66 12 16 59 1948.1 -25.57 61.21
100.00 12 56 51 2660.99 -29.85 66.78 252.65 90.59 13 41 12 1661.0 -26.57 39.83
110.00 14 22 6 2394.17 -34.03 46.36 252.49 93.14 15 2 0 1394.2 -29.21 18.70

DIFFERENTIAL CORRECTIONS

TDE -.3821 TRA -.8678 TC3 -.0943 BAU .3687
RDE -.5302 RRA -.0714 RC3 -.9420 FAU .40218
FDE .6460 FRA-4.4013 FC-11.9541 BSP 1704
BDE .6536 BRA .8708 BC3 .9467 FSP 2001

MID-COURSE EXECUTION ACCURACY

SGT 1038.3 SGR 1164.8 S63 1191.5
RRT .3359 RRF .8161 RTF .3922
SGB 1560.4 R23 .2490 R13 .7873
SG1 1283.3 S62 887.7 THA 54.47

ORBIT DETERMINATION ACCURACY

ST 24.8 SR 28.2 SS 19.9
CRT .8405 CRS .3663 CST -.1658
LSA 36.2 MSA 22.0 S8A 3.0
EL1 36.1 EL2 10.5 ALF 49.38

LAUNCH DATE SEP 1 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.900 GAL 6.75 AZL 88.47 HCA 117.97 SMA 196.42 ECC .25806 INC 1.5332 V1 29.512
RP 237.31 LAP 1.35 LOP 96.39 VP 21.043 GAP 8.97 AZP 90.72 TAL 33.84 TAP 151.81 RCA 145.73 APO 247.10 V2 23.157
RC 204.040 GL 9.34 GP -15.10 ZAL 37.39 ZAP 118.99 ETS 190.47 ZAE 153.06 ETE 217.50 ZAC 69.69 ETC 284.02 LVI -3.99

PLANETOCENTRIC CONIC

C3 29.007 VHL 5.386 DLA 14.42 RAL 9.90 RAD 6646.6 VEL 12.204 PTH 7.16 VHP 2.757 DPA -.82 RAP 39.71 ECC 1.4774
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 23 34 3514.86 -46.46 129.46 250.40 101.67 9 22 9 2514.7 -36.73 99.62
60.00 8 46 58 3452.40 -39.84 125.33 251.87 96.69 9 44 30 2452.4 -32.87 96.80
70.00 9 20 45 3352.86 -34.05 117.88 252.47 92.89 10 16 38 2353.0 -29.33 90.18
80.00 10 11 43 3193.23 -29.86 105.91 252.61 90.33 11 4 57 2193.2 -26.66 78.93
90.00 11 25 25 2955.39 -28.27 88.42 252.61 89.40 12 14 40 1955.4 -25.67 61.72
100.00 12 54 35 2667.70 -29.86 67.27 252.61 90.33 13 39 3 1667.7 -26.68 40.30
110.00 14 20 11 2399.78 -34.05 46.80 252.47 92.89 15 0 11 1399.6 -29.33 19.10

DIFFERENTIAL CORRECTIONS

TDE -.3780 TRA -.8903 TC3 -.1574 BAU .3885
RDE -.5232 RRA -.0882 RC3 -.9841 FAU .41487
FDE .6754 FRA-4.5730 FC-12.3831 BSP 1817
BDE .6455 BRA .8948 BC3 .9966 FSP 2034

MID-COURSE EXECUTION ACCURACY

SGT 1070.9 SGR 1201.2 S63 1233.2
RRT .3882 RRF .8301 RTF .1108
SGB 1609.3 R23 .2388 R13 .8072
SG1 1347.5 S62 879.6 THA 53.28

ORBIT DETERMINATION ACCURACY

ST 24.9 SR 27.9 SS 20.4
CRT .8370 CRS .3878 CST -.1617
LSA 36.0 MSA 22.6 S8A 3.0
EL1 35.9 EL2 10.6 ALF 48.91

LAUNCH DATE SEP 1 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.893 GAL 6.73 AZL 88.43 HCA 118.93 SMA 196.28 ECC .25742 INC 1.5711 V1 29.512
RP 237.65 LAP 1.38 LOP 97.36 VP 20.994 GAP 8.70 AZP 90.76 TAL 33.79 TAP 182.78 RCA 145.75 APO 246.81 V2 23.123
RC 207.005 GL 8.59 GP -15.44 ZAL 37.48 ZAP 117.40 ETS 190.10 ZAE 151.50 ETE 215.87 ZAC 69.49 ETC 284.10 LVI -3.82

PLANETOCENTRIC CONIC

C3 28.888 VHL 5.378 DLA 14.67 RAL 9.83 RAD 6646.6 VEL 12.200 PTH 7.16 VHP 2.719 DPA -1.36 RAP 39.23 ECC 1.4754
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 22 19 3518.65 -46.52 129.83 250.47 101.39 9 20 57 2518.6 -36.88 99.89
60.00 8 45 23 3457.22 -39.87 125.73 251.90 96.42 9 43 1 2457.2 -33.01 96.93
70.00 9 18 48 3358.87 -34.07 118.34 252.47 92.61 10 14 47 2358.9 -29.45 90.59
80.00 10 9 25 3200.31 -29.86 106.43 252.59 90.05 11 2 45 2200.3 -26.80 79.43
90.00 11 22 55 2963.03 -28.27 88.98 252.57 89.12 12 12 18 1963.0 -25.78 62.25
100.00 12 52 16 2674.78 -29.86 67.80 252.59 90.05 13 36 51 1674.8 -26.80 40.79
110.00 14 18 15 2405.89 -34.07 47.26 252.47 92.61 14 58 20 1405.7 -29.45 19.51

DIFFERENTIAL CORRECTIONS

TDE -.3888 TRA -.9298 TC3 -.2456 BAU .4052
RDE -.5105 RRA -.1020 RC3-1.0199 FAU .42413
FDE .7824 FRA-4.6656 FC-12.7103 BSP 1943
BDE .6417 BRA .9354 BC3 1.0491 FSP 2149

MID-COURSE EXECUTION ACCURACY

SGT 1136.3 SGR 1229.1 S63 1263.4
RRT .4512 RRF .8404 RTF .5133
SGB 1673.9 R23 .2502 R13 .8162
SG1 1428.5 S62 872.5 THA 49.94

ORBIT DETERMINATION ACCURACY

ST 25.8 SR 27.3 SS 21.1
CRT .8378 CRS .3949 CST -.1417
LSA 36.2 MSA 23.2 S8A 3.0
EL1 36.0 EL2 10.7 ALF 46.94

LAUNCH DATE SEP 1 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.887 GAL 6.70 AZL 88.39 HCA 119.89 SMA 196.16 ECC .25683 INC 1.6097 V1 29.512  
 RP 237.98 LAP 1.40 LOP 98.31 VP 20.947 GAP 8.43 AZP 90.80 TAL 33.74 TAP 153.62 RCA 145.78 APO 248.54 V2 23.090  
 RC 209.965 GL 9.85 GP -15.77 ZAL 37.58 ZAP 115.80 ETS 189.72 ZAE 149.90 ETE 213.99 ZAC 69.30 ETC 284.18 LVI -3.85

DISTANCE 400.662

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.774 VHL 5.364 DLA 14.92 RAL 9.76 RAD 6646.5 VEL 12.195 PTH 7.15 VHP 2.693 DPA -1.90 RAP 38.75 ECC 1.4738  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 3 3522.83 -46.57 130.22 250.56 101.00 9 19 46 2522.8 -37.03 100.18  
 60.00 8 43 48 3462.25 -39.91 126.16 251.94 96.13 9 41 30 2462.3 -33.15 97.28  
 70.00 9 16 50 3365.04 -34.08 118.82 252.48 92.33 10 12 55 2365.0 -29.58 91.02  
 80.00 10 7 3 3207.70 -29.86 106.98 252.57 89.77 11 0 30 2207.7 -26.92 79.94  
 90.00 11 20 22 2971.02 -28.26 89.57 252.55 88.83 12 9 53 1971.0 -25.89 62.81  
 100.00 12 49 55 2682.17 -29.86 68.35 252.57 89.77 13 34 37 1682.2 -26.92 41.31  
 110.00 14 16 16 2411.86 -34.08 47.74 252.48 92.33 14 58 28 1411.9 -29.58 19.94

DIFFERENTIAL CORRECTIONS

TDE -.3903 TRA -.9619 TC3 -.3251 BAU .4264  
 RDE -.5003 RRA -.1178 RC3-1.0398 FAU .43469  
 FDE .8500 FRA-4.7950 FC-13.0787 BSP 2080  
 BDE .6345 BRA .9691 BC3 1.1085 FSP 2214

MID-COURSE EXECUTION ACCURACY

SGT 1194.1 SGR 1263.0 SG3 1298.3  
 RRT .9024 RRF .8514 RTF .5657  
 SGB 1738.2 R23 .2468 R13 .8303  
 SG1 1507.7 SG2 864.9 THA 48.19

ORBIT DETERMINATION ACCURACY

ST 26.3 SR 26.8 SS 21.8  
 CRT .8358 CRS .4051 CST -.1349  
 LSA 36.2 MSA 23.8 SSA 3.0  
 EL1 36.0 EL2 10.8 ALF 45.77

LAUNCH DATE SEP 1 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.881 GAL 6.68 AZL 88.35 HCA 120.84 SMA 196.05 ECC .25627 INC 1.6489 V1 29.512  
 RP 238.30 LAP 1.42 LOP 99.27 VP 20.902 GAP 8.16 AZP 90.85 TAL 33.67 TAP 154.51 RCA 145.81 APO 246.30 V2 23.056  
 RC 212.919 GL 10.11 GP -16.11 ZAL 37.69 ZAP 114.19 ETS 189.32 ZAE 148.27 ETE 212.44 ZAC 69.11 ETC 284.26 LVI -3.48

DISTANCE 404.460

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.663 VHL 5.354 DLA 15.18 RAL 9.71 RAD 6646.5 VEL 12.190 PTH 7.15 VHP 2.650 DPA -2.45 RAP 38.26 ECC 1.4717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 46 3527.21 -46.63 130.63 250.66 100.78 9 18 33 2527.2 -37.19 100.47  
 60.00 8 42 11 3467.52 -39.95 126.60 252.00 95.83 9 39 59 2467.5 -33.30 97.65  
 70.00 9 14 49 3371.49 -34.10 119.32 252.51 92.03 10 11 0 2371.5 -29.72 91.48  
 80.00 10 4 37 3215.42 -29.85 107.56 252.57 89.46 10 58 13 2215.4 -27.04 80.49  
 90.00 11 17 45 2979.37 -28.24 90.18 252.54 88.52 12 7 25 1979.4 -26.01 63.39  
 100.00 12 47 29 2689.90 -29.85 68.92 252.57 89.46 13 32 19 1689.9 -27.04 41.85  
 110.00 14 14 15 2418.31 -34.10 48.24 252.51 92.03 14 54 34 1418.3 -29.72 20.40

DIFFERENTIAL CORRECTIONS

TDE -.3915 TRA -.9954 TC3 -.4080 BAU .4497  
 RDE -.4895 RRA -.1338 RC3-1.1004 FAU .44495  
 FDE .9216 FRA-4.9186 FC-13.4392 BSP 2229  
 BDE .6268 BRA 1.0044 BC3 1.1736 FSP 2278

MID-COURSE EXECUTION ACCURACY

SGT 1258.9 SGR 1297.9 SG3 1332.3  
 RRT .5496 RRF .8617 RTF .6127  
 SGB 1808.2 R23 .2429 R13 .8434  
 SG1 1591.9 SG2 857.5 THA 46.59

ORBIT DETERMINATION ACCURACY

ST 26.7 SR 26.3 SS 22.4  
 CRT .8337 CRS .4153 CST -.1283  
 LSA 36.2 MSA 24.3 SSA 2.9  
 EL1 35.9 EL2 10.8 ALF 44.53

LAUNCH DATE SEP 1 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.878 GAL 6.85 AZL 88.31 HCA 121.80 SMA 195.96 ECC .25576 INC 1.6888 V1 29.512  
 RP 238.63 LAP 1.44 LOP 100.22 VP 20.858 GAP 7.90 AZP 90.89 TAL 33.59 TAP 155.39 RCA 145.84 APO 246.08 V2 23.024  
 RC 215.866 GL 10.38 GP -16.45 ZAL 37.81 ZAP 112.59 ETS 188.92 ZAE 146.62 ETE 210.99 ZAC 68.92 ETC 284.34 LVI -3.30

DISTANCE 408.259

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.555 VHL 5.344 DLA 15.45 RAL 9.66 RAD 6646.4 VEL 12.186 PTH 7.15 VHP 2.619 DPA -3.00 RAP 37.76 ECC 1.4699  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 29 3531.79 -46.60 131.06 250.79 100.46 9 17 21 2531.8 -37.36 100.79  
 60.00 8 40 33 3473.03 -39.98 127.06 252.08 95.52 9 38 26 2473.0 -33.45 98.04  
 70.00 9 12 46 3378.24 -34.12 119.85 252.55 91.72 10 9 4 2378.2 -29.85 91.96  
 80.00 10 2 8 3223.50 -29.85 108.16 252.58 89.15 10 55 52 2223.5 -27.16 81.05  
 90.00 11 15 4 2988.11 -28.23 90.81 252.54 88.20 12 4 52 1988.1 -26.13 64.00  
 100.00 12 45 0 2697.98 -29.85 69.52 252.58 89.15 13 29 58 1698.0 -27.16 42.42  
 110.00 14 12 12 2425.05 -34.12 48.77 252.55 91.72 14 52 37 1425.1 -29.85 20.87

DIFFERENTIAL CORRECTIONS

TDE -.3920 TRA -1.0302 TC3 -.4942 BAU .4748  
 RDE -.4784 RRA -.1499 RC3-1.1413 FAU .49476  
 FDE .9937 FRA-5.0374 FC-13.7877 BSP 2386  
 BDE .6185 BRA 1.0410 BC3 1.2437 FSP 2335

MID-COURSE EXECUTION ACCURACY

SGT 1330.0 SGR 1333.7 SG3 1365.2  
 RRT .5925 RRF .8713 RTF .5446  
 SGB 1883.5 R23 .2385 R13 .8555  
 SG1 1680.7 SG2 850.2 THA 45.13

ORBIT DETERMINATION ACCURACY

ST 27.2 SR 25.8 SS 23.1  
 CRT .8315 CRS .4236 CST -.1258  
 LSA 36.1 MSA 25.0 SSA 2.9  
 EL1 35.9 EL2 10.9 ALF 43.27

LAUNCH DATE SEP 1 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.872 GAL 6.83 AZL 88.27 HCA 122.75 SMA 195.88 ECC .25528 INC 1.7293 V1 29.512  
 RP 238.95 LAP 1.45 LOP 101.17 VP 20.816 GAP 7.84 AZP 90.94 TAL 33.50 TAP 156.25 RCA 145.87 APO 245.88 V2 22.991  
 RC 218.810 GL 10.65 GP -16.79 ZAL 37.94 ZAP 110.99 ETS 188.51 ZAE 144.96 ETE 209.65 ZAC 68.73 ETC 284.42 LVI -3.13

DISTANCE 412.059

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.449 VHL 5.334 DLA 15.73 RAL 9.61 RAD 6646.4 VEL 12.182 PTH 7.14 VHP 2.591 DPA -3.56 RAP 37.27 ECC 1.4682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 11 3536.57 -46.74 131.50 250.93 100.12 9 16 7 2536.6 -37.53 101.12  
 60.00 8 38 53 3478.77 -40.02 127.55 252.17 95.19 9 36 52 2478.8 -33.61 98.44  
 70.00 9 10 39 3385.27 -34.13 120.40 252.60 91.40 10 7 5 2385.3 -30.00 92.45  
 80.00 9 59 35 3231.95 -29.84 108.78 252.61 88.82 10 53 27 2231.9 -27.29 81.65  
 90.00 11 12 18 2997.24 -28.21 91.48 252.55 87.87 12 2 15 1997.2 -26.25 64.64  
 100.00 12 42 27 2706.42 -29.84 70.15 252.61 88.82 13 27 33 1706.4 -27.29 43.02  
 110.00 14 10 6 2432.09 -34.13 49.32 252.60 91.40 14 50 38 1432.1 -30.00 21.37

DIFFERENTIAL CORRECTIONS

TDE -.3918 TRA -1.0663 TC3 -.5835 BAU .5015  
 RDE -.4667 RRA -.1661 RC3-1.1824 FAU .46402  
 FDE 1.0696 FRA-5.1483 FC-14.1204 BSP 2556  
 BDE .6093 BRA 1.0791 BC3 1.3185 FSP 2393

MID-COURSE EXECUTION ACCURACY

SGT 1407.3 SGR 1369.9 SG3 1396.4  
 RRT .6311 RRF .8802 RTF .6915  
 SGB 1963.9 R23 .2340 R13 .8665  
 SG1 1773.7 SG2 843.1 THA 43.78

ORBIT DETERMINATION ACCURACY

ST 27.6 SR 25.3 SS 23.7  
 CRT .8290 CRS .4318 CST -.1198  
 LSA 36.1 MSA 25.6 SSA 2.9  
 EL1 35.8 EL2 10.9 ALF 41.98

LAUNCH DATE SEP 1 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.868 GAL 6.80 AZL 88.23 HCA 123.69 SMA 195.81 ECC .25484 INC 1.7707 V1 29.512
RP 239.26 LAP 1.47 LOP 102.12 VP 20.775 GAP 7.38 AZP 90.98 TAL 33.41 TAP 157.10 RCA 145.91 APO 245.71 V2 22.960
RC 221.744 GL 10.92 GP -17.13 ZAL 38.09 ZAP 109.39 ETS 188.09 ZAE 143.28 ETE 208.39 ZAC 88.54 ETC 284.50 LVI -2.95

DISTANCE 415.859

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.347 VHL 5.324 DLA 16.01 RAL 9.57 RAD 6846.4 VEL 12.178 PTH 7.14 VHP 2.585 DPA -4.11 RAP 38.78 ECC 1.4685
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 15 52 3541.58 -46.80 131.97 251.09 99.76 9 14 53 2541.6 -37.71 101.48
60.00 8 37 12 3484.77 -40.06 128.05 252.28 94.85 9 35 16 2484.8 -33.77 98.87
70.00 9 8 30 3392.61 -34.14 120.97 252.66 91.06 10 5 3 2392.6 -30.14 92.98
80.00 9 56 58 3240.76 -29.82 109.44 252.64 88.48 10 50 58 2240.8 -27.42 82.27
90.00 11 9 27 3006.79 -28.18 92.18 252.57 87.52 11 59 34 2006.0 -26.37 65.32
100.00 12 39 49 2715.23 -29.82 70.81 252.64 88.48 13 25 4 1715.2 -27.42 43.84
110.00 14 7 56 2439.43 -34.14 49.89 252.66 91.06 14 48 36 1439.4 -30.14 21.89

DIFFERENTIAL CORRECTIONS

TDE -.3904 TRA-1.1030 TC3 -.6750 BAU .5298
RDE -.4548 RRA -.1827 RC3-1.2242 FAU .47299
PDE 1.1433 FRA-5.2580 FC-14.4457 B8P 2735
BDE .5994 BRA 1.1180 BC3 1.3980 F8P 2439

MID-COURSE EXECUTION ACCURACY

SGT 1489.3 SGR 1407.4 SG3 1427.0
RRT .6636 RRF .8885 RTF .7240
SGB 2049.1 R23 .2290 R13 .8767
SG1 1870.7 SG2 836.2 THA 42.57

ORBIT DETERMINATION ACCURACY

ST 28.0 SR 24.7 SS 24.4
CRT .8263 CR8 .4368 CST -.1194
LSA 36.0 M8A 26.2 S8A 2.9
EL1 35.8 EL2 10.9 ALF 40.70

LAUNCH DATE SEP 1 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.865 GAL 6.57 AZL 88.19 HCA 124.64 SMA 195.75 ECC .25443 INC 1.8128 V1 29.512
RP 239.57 LAP 1.49 LOP 103.07 VP 20.735 GAP 7.13 AZP 91.03 TAL 33.30 TAP 157.94 RCA 145.95 APO 245.56 V2 22.928
RC 224.672 GL 11.21 GP -17.47 ZAL 38.25 ZAP 107.80 ETS 187.65 ZAE 141.58 ETE 207.21 ZAC 68.36 ETC 284.52 LVI -2.77

DISTANCE 419.659

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.247 VHL 5.315 DLA 16.31 RAL 9.54 RAD 6846.3 VEL 12.173 PTH 7.14 VHP 2.542 DPA -4.67 RAP 36.28 ECC 1.4649
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 14 31 3546.77 -46.86 132.46 251.26 99.39 9 13 38 2546.8 -37.89 101.82
60.00 8 35 28 3491.01 -40.09 128.58 252.40 94.50 9 33 39 2491.0 -33.94 99.31
70.00 9 6 17 3400.27 -34.15 121.57 252.74 90.71 10 2 58 2400.3 -30.29 93.52
80.00 9 54 15 3249.95 -29.80 110.12 252.68 88.12 10 48 25 2250.0 -27.55 82.92
90.00 11 6 30 3016.76 -28.15 92.91 252.61 87.16 11 56 47 2016.8 -26.49 66.02
100.00 12 37 7 2724.43 -29.80 71.49 252.68 88.12 13 22 32 1724.4 -27.55 44.29
110.00 14 5 44 2447.08 -34.15 50.49 252.74 90.71 14 46 31 1447.1 -30.29 22.44

DIFFERENTIAL CORRECTIONS

TDE -.3870 TRA-1.1398 TC3 -.7876 BAU .5598
RDE -.4433 RRA -.2001 RC3-1.2674 FAU .48192
FDE 1.2075 FRA-5.3703 FC-14.7704 B8P 2924
BDE .5885 BRA 1.1570 BC3 1.4818 F8P 2469

MID-COURSE EXECUTION ACCURACY

SGT 1574.2 SGR 1447.1 SG3 1457.5
RRT .6963 RRF .8965 RTF .7527
SGB 2138.2 R23 .2231 R13 .8866
SG1 1870.7 SG2 829.6 THA 41.55

ORBIT DETERMINATION ACCURACY

ST 28.4 SR 24.2 SS 25.0
CRT .8231 CR8 .4360 CST -.1263
LSA 35.9 M8A 26.9 S8A 2.9
EL1 35.7 EL2 10.9 ALF 39.53

LAUNCH DATE SEP 1 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.863 GAL 6.54 AZL 88.14 HCA 125.58 SMA 195.71 ECC .25405 INC 1.8559 V1 29.512
RP 239.88 LAP 1.51 LOP 104.01 VP 20.697 GAP 6.87 AZP 91.08 TAL 33.19 TAP 158.77 RCA 145.99 APO 245.43 V2 22.897
RC 227.991 GL 11.50 GP -17.81 ZAL 38.42 ZAP 106.22 ETS 187.22 ZAE 139.89 ETE 206.09 ZAC 68.17 ETC 284.64 LVI -2.58

DISTANCE 423.459

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.149 VHL 5.306 DLA 16.61 RAL 9.51 RAD 6846.3 VEL 12.169 PTH 7.13 VHP 2.521 DPA -5.23 RAP 35.80 ECC 1.4633
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 13 10 3552.20 -46.92 132.97 251.46 99.00 9 12 22 2552.2 -38.08 102.20
60.00 8 33 42 3497.53 -40.13 129.13 252.53 94.12 9 31 59 2497.5 -34.11 99.78
70.00 9 4 1 3408.28 -34.15 122.19 252.82 90.34 10 0 50 2408.3 -30.49 94.09
80.00 9 51 28 3259.58 -29.78 110.83 252.74 87.74 10 45 47 2259.6 -27.68 83.61
90.00 11 3 27 3027.20 -28.11 93.67 252.65 86.78 11 53 55 2027.2 -26.61 66.76
100.00 12 34 20 2734.05 -29.78 72.20 252.74 87.74 13 19 54 1734.0 -27.68 44.97
110.00 14 3 28 2455.07 -34.15 51.11 252.82 90.34 14 44 23 1455.1 -30.45 23.01

DIFFERENTIAL CORRECTIONS

TDE -.3885 TRA-1.1832 TC3 -.8718 BAU .5907
RDE -.4277 RRA -.2137 RC3-1.3033 FAU .48786
FDE 1.3216 FRA-5.4247 FC-15.0047 B8P 3113
BDE .5778 BRA 1.2023 BC3 1.5695 F8P 2530

MID-COURSE EXECUTION ACCURACY

SGT 1876.1 SGR 1479.7 SG3 1478.7
RRT .7241 RRF .9029 RTF .766
SGB 2235.8 R23 .2228 R13 .8929
SG1 2078.9 SG2 822.8 THA 40.10

ORBIT DETERMINATION ACCURACY

ST 29.0 SR 23.5 SS 25.8
CRT .8218 CR8 .4352 CST -.1078
LSA 36.0 M8A 27.8 S8A 2.8
EL1 35.7 EL2 10.9 ALF 37.70

LAUNCH DATE SEP 1 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.861 GAL 6.51 AZL 88.10 HCA 126.52 SMA 195.67 ECC .25371 INC 1.8998 V1 29.512
RP 240.18 LAP 1.53 LOP 104.98 VP 20.680 GAP 6.62 AZP 91.13 TAL 33.07 TAP 159.59 RCA 148.03 APO 245.31 V2 22.866
RC 230.802 GL 11.78 GP -18.15 ZAL 38.59 ZAP 104.66 ETS 186.77 ZAE 138.19 ETE 208.04 ZAC 67.99 ETC 284.71 LVI -2.39

DISTANCE 427.259

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.054 VHL 5.297 DLA 16.93 RAL 9.49 RAD 6846.2 VEL 12.186 PTH 7.13 VHP 2.502 DPA -5.78 RAP 35.32 ECC 1.4617
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 11 48 3537.85 -46.98 133.51 251.66 98.59 9 11 4 2537.8 -38.28 102.60
60.00 8 31 53 3504.30 -40.16 129.70 252.68 93.74 9 30 17 2504.3 -34.29 100.26
70.00 9 1 41 3416.57 -34.15 122.84 252.92 89.95 9 58 38 2416.6 -30.60 94.69
80.00 9 48 35 3269.61 -29.75 111.58 252.80 87.35 10 43 4 2269.8 -27.82 84.32
90.00 11 0 18 3038.09 -28.07 94.46 252.70 86.38 11 50 56 2038.1 -26.74 67.53
100.00 12 31 27 2744.08 -29.75 72.95 252.80 87.35 13 17 11 1744.1 -27.82 45.69
110.00 14 1 7 2463.39 -34.15 51.76 252.92 89.95 14 42 11 1463.4 -30.60 23.61

DIFFERENTIAL CORRECTIONS

TDE -.3858 TRA-1.2241 TC3 -.9731 BAU .6230
RDE -.4135 RRA -.2293 RC3-1.3481 FAU .49451
FDE 1.4113 FRA-5.4988 FC-15.2807 B8P 3316
BDE .5655 BRA 1.2454 BC3 1.6610 F8P 2596

MID-COURSE EXECUTION ACCURACY

SGT 1775.5 SGR 1516.8 SG3 1502.3
RRT .7484 RRF .9093 RTF .7979
SGB 2335.2 R23 .2194 R13 .9000
SG1 2187.8 SG2 816.5 THA 39.03

ORBIT DETERMINATION ACCURACY

ST 29.5 SR 22.8 SS 26.6
CRT .8195 CR8 .4611 CST -.1051
LSA 35.9 M8A 28.2 S8A 2.8
EL1 35.7 EL2 10.8 ALF 36.21

LAUNCH DATE SEP 1 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 16 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 336.42 VL 32.860 GAL 6.48 AZL 88.06 HCA 127.46 SMA 195.64 ECC .25339 INC 1.9447 V1 29.512  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.625 GAP 6.37 AZP 91.18 TAL 32.94 TAP 160.40 RCA 146.07 APO 245.22 V2 22.636  
 RC 233.405 GL 12.10 GP -18.48 ZAL 38.78 ZAP 103.10 ETS 186.31 ZAE 136.48 ETE 204.03 ZAC 67.80 ETC 284.78 LVI -2.20

Planetocentric Conic: C3 27.961 VHL 5.288 DLA 17.25 RAL 9.47 RAD 6646.2 VEL 12.162 PTH 7.13 VHP 2.485 DPA -6.33 RAP 34.85 ECC 1.4602  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 21 3563.73 -47.04 134.06 251.89 98.17 9 9 45 2563.7 -38.48 103.01  
 60.00 8 30 1 3511.36 -40.19 130.30 252.64 93.33 9 28 33 2511.4 -34.48 100.77  
 70.00 8 59 17 3425.24 -34.15 123.52 253.03 89.55 9 56 22 2425.2 -30.76 95.31  
 80.00 9 45 36 3280.08 -29.72 112.36 252.87 86.94 10 40 16 2280.1 -27.96 85.07  
 90.00 10 57 2 3049.48 -26.01 95.29 252.75 85.97 11 47 52 2049.5 -26.87 68.34  
 100.00 12 28 28 2754.55 -29.72 73.72 252.87 86.94 13 14 22 1754.6 -27.98 46.44  
 110.00 13 58 43 2472.06 -34.15 52.44 253.03 89.55 14 39 55 1472.1 -30.76 24.23

Differential Corrections: TDE -.3824 TRA-1.2661 TC3-1.0770 BAU .6568 SGT 1879.8 SGR 1884.8 S63 1824.3 ST 29.9 SR 22.1 SS 27.3  
 RDE -.3989 RRA -.2451 RC3-1.3872 FAU .50082 RRT .7700 RRF .9153 RTF .8164 CRT .8174 CR8 .4647 CST -.1048  
 FDE 1.5006 FRA-5.5663 FC-15.9002 BSP 3522 SGB 2439.0 R23 .2164 R13 .9064 LSA 35.9 MSA 28.9 SSA 2.8  
 BDE .5526 BRA 1.2896 BC3 1.7562 FSP 2634 SGI 2300.5 S62 810.4 THA 38.03 EL1 35.7 EL2 10.7 ALF 34.70

LAUNCH DATE SEP 1 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 336.42 VL 32.859 GAL 6.45 AZL 88.01 HCA 128.40 SMA 195.62 ECC .25309 INC 1.9906 V1 29.512  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.590 GAP 6.12 AZP 91.24 TAL 32.80 TAP 161.20 RCA 146.11 APO 245.14 V2 22.807  
 RC 236.297 GL 12.41 GP -18.82 ZAL 38.98 ZAP 101.56 ETS 185.84 ZAE 134.78 ETE 203.07 ZAC 67.62 ETC 284.85 LVI -2.01

Planetocentric Conic: C3 27.872 VHL 5.279 DLA 17.58 RAL 9.46 RAD 6646.2 VEL 12.158 PTH 7.12 VHP 2.471 DPA -6.88 RAP 34.39 ECC 1.4587  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 54 3569.85 -47.09 134.64 252.13 97.72 9 8 24 2569.8 -38.70 103.45  
 60.00 8 28 7 3518.70 -40.21 130.93 253.02 92.91 9 26 46 2518.7 -34.66 101.30  
 70.00 8 56 48 3434.27 -34.14 124.22 253.15 89.14 9 54 2 2434.3 -30.93 95.97  
 80.00 9 42 30 3291.01 -29.67 113.17 252.95 86.52 10 37 21 2291.0 -28.10 85.85  
 90.00 10 53 38 3061.40 -27.95 96.16 252.82 85.54 11 44 40 2061.4 -26.99 69.19  
 100.00 12 25 22 2765.49 -29.67 74.53 252.95 86.52 13 11 28 1765.5 -28.10 47.22  
 110.00 13 56 14 2481.09 -34.14 53.14 253.15 89.14 14 37 35 1481.1 -30.93 24.88

Differential Corrections: TDE -.3778 TRA-1.3089 TC3-1.1831 BAU .6909 SGT 1987.3 SGR 1991.8 S63 1543.6 ST 30.4 SR 21.4 SS 28.1  
 RDE -.3837 RRA -.2606 RC3-1.4276 FAU .50585 RRT .7890 RRF .9209 RTF .8324 CRT .8155 CR8 .4670 CST -.1054  
 FDE 1.5922 FRA-5.6227 FC-15.7122 BSP 3737 SGB 2546.2 R23 .2136 R13 .9122 LSA 35.8 MSA 29.6 SSA 2.7  
 BDE .5385 BRA 1.3346 BC3 1.8542 FSP 2670 SGI 2415.7 S62 804.5 THA 37.08 EL1 35.6 EL2 10.6 ALF 33.17

LAUNCH DATE SEP 1 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 336.42 VL 32.858 GAL 6.42 AZL 87.96 HCA 129.33 SMA 195.62 ECC .25282 INC 2.0376 V1 29.512  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.557 GAP 5.88 AZP 91.29 TAL 32.85 TAP 161.98 RCA 146.16 APO 245.07 V2 22.777  
 RC 239.179 GL 12.72 GP -19.16 ZAL 39.20 ZAP 100.04 ETS 185.36 ZAE 133.08 ETE 202.16 ZAC 67.43 ETC 284.91 LVI -1.81

Planetocentric Conic: C3 27.785 VHL 5.271 DLA 17.93 RAL 9.45 RAD 6646.1 VEL 12.155 PTH 7.12 VHP 2.458 DPA -7.43 RAP 33.94 ECC 1.4573  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 25 3576.21 -47.15 135.25 252.39 97.26 9 7 1 2576.2 -38.91 103.90  
 60.00 8 26 9 3526.34 -40.24 131.57 253.20 92.47 9 24 55 2526.3 -34.86 101.86  
 70.00 8 54 14 3443.68 -34.13 124.96 253.28 88.70 9 51 37 2443.7 -31.10 96.85  
 80.00 9 39 18 3302.44 -29.62 114.01 253.04 86.08 10 34 20 2302.4 -28.24 86.67  
 90.00 10 50 6 3073.86 -27.89 97.06 252.89 85.09 11 41 20 2073.9 -27.12 70.08  
 100.00 12 22 9 2776.91 -29.62 75.38 253.04 86.08 13 8 26 1776.9 -28.24 48.04  
 110.00 13 53 40 2490.50 -34.13 53.88 253.28 88.70 14 35 11 1490.5 -31.10 25.57

Differential Corrections: TDE -.3722 TRA-1.3524 TC3-1.2911 BAU .7262 SGT 2098.4 SGR 1629.3 S63 1561.1 ST 30.8 SR 20.7 SS 28.8  
 RDE -.3681 RRA -.2760 RC3-1.4680 FAU .51044 RRT .8059 RRF .9260 RTF .8264 CRT .8138 CR8 .4670 CST -.1082  
 FDE 1.6833 FRA-5.6712 FC-15.9042 BSP 3957 SGB 2656.7 R23 .2111 R13 .9173 LSA 35.8 MSA 30.4 SSA 2.7  
 BDE .5234 BRA 1.3803 BC3 1.9550 FSP 2699 SGI 2533.8 S62 798.8 THA 36.20 EL1 35.6 EL2 10.4 ALF 31.64

LAUNCH DATE SEP 1 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 22 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 336.42 VL 32.858 GAL 6.38 AZL 87.91 HCA 130.26 SMA 195.61 ECC .25258 INC 2.0858 V1 29.512  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.525 GAP 5.83 AZP 91.38 TAL 32.90 TAP 162.78 RCA 146.21 APO 245.02 V2 22.749  
 RC 242.049 GL 13.05 GP -19.49 ZAL 39.42 ZAP 98.53 ETS 184.88 ZAE 131.39 ETE 201.28 ZAC 67.24 ETC 284.98 LVI -1.60

Planetocentric Conic: C3 27.702 VHL 5.263 DLA 18.28 RAL 9.44 RAD 6646.1 VEL 12.151 PTH 7.12 VHP 2.448 DPA -7.97 RAP 33.50 ECC 1.4559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 54 3582.84 -47.21 135.88 252.87 96.78 9 5 36 2582.8 -39.14 104.38  
 60.00 8 24 7 3534.29 -40.28 132.25 253.41 92.01 9 23 2 2534.3 -35.06 102.44  
 70.00 8 51 34 3453.48 -34.11 125.72 253.42 88.25 9 49 8 2453.5 -31.26 97.36  
 80.00 9 35 57 3314.38 -29.56 114.89 253.14 85.62 10 31 11 2314.4 -28.38 87.53  
 90.00 10 46 25 3086.91 -27.81 98.01 252.96 84.62 11 37 52 2086.9 -27.24 71.01  
 100.00 12 18 49 2788.85 -29.56 76.28 253.14 85.62 13 5 18 1788.8 -28.38 48.90  
 110.00 13 51 1 2500.30 -34.11 54.64 253.42 88.25 14 32 41 1500.3 -31.26 26.28

Differential Corrections: TDE -.3652 TRA-1.3964 TC3-1.4006 BAU .7624 SGT 2212.4 SGR 1667.5 S63 1576.9 ST 31.3 SR 20.0 SS 29.6  
 RDE -.3522 RRA -.2918 RC3-1.5086 FAU .51449 RRT .8211 RRF .9308 RTF .8588 CRT .8125 CR8 .4634 CST -.1142  
 FDE 1.7715 FRA-5.7154 FC-16.0786 BSP 4181 SGB 2770.5 R23 .2085 R13 .9222 LSA 35.7 MSA 31.1 SSA 2.7  
 BDE .5074 BRA 1.4266 BC3 2.0585 FSP 2720 SGI 2654.4 S62 793.3 THA 35.38 EL1 35.7 EL2 10.2 ALF 30.15

LAUNCH DATE SEP 1 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC  
 RL 150.98 LAL .00 LOL 338.42 VL 32.858 GAL 6.35 AZL 87.86 HCA 131.19 SMA 195.62 ECC .29236 INC 2.1352 V1 29.912  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.494 GAP 5.39 AZP 91.41 TAL 32.34 TAP 163.53 RCA 146.26 APO 244.99 V2 22.720  
 RC 244.907 GL 13.39 GP -19.83 ZAL 39.65 ZAP 97.04 ETS 184.38 ZAE 129.70 ETE 200.43 ZAC 67.05 ETC 285.04 LVI -1.39

DISTANCE 446.260 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.622 VHL 5.256 DLA 18.64 RAL 9.43 RAD 6646.1 VEL 12.148 PTH 7.12 VHP 2.439 DPA -8.51 RAP 33.07 ECC 1.4546  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 19 3589.72 -47.26 136.54 252.96 96.28 9 4 9 2589.7 -39.37 104.88  
 60.00 8 22 2 3542.56 -40.28 132.95 253.62 91.54 9 21 4 2542.6 -35.26 103.05  
 70.00 8 48 49 3463.70 -34.09 126.52 253.57 87.78 9 46 33 2463.7 -31.44 98.11  
 80.00 9 32 28 3326.85 -29.30 115.81 253.24 85.14 10 27 55 2326.9 -28.52 88.43  
 90.00 10 42 34 3100.57 -27.71 99.00 253.05 84.14 11 34 15 2100.6 -27.37 71.99  
 100.00 12 15 20 2801.32 -29.50 77.18 253.24 85.14 13 2 2 1801.3 -28.52 49.80  
 110.00 13 48 15 2510.52 -34.09 55.44 253.57 87.78 14 30 6 1510.5 -31.44 27.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3558 TRA-1.4395 TC3-1.5093 BAU .7996 SGT 2326.0 SGR 1710.6 SG3 1595.0 ST 31.6 SR 19.4 SS 30.2  
 RDE -.3383 RRA -.3100 RC3-1.5524 FAU .51919 RRT .8351 RRF .9357 RTF .8705 CRT .8113 CRS .4479 CST -.1335  
 FDE 1.8305 FRA-5.7817 FC-16.2727 BSP 4404 SGB 2887.3 R23 .2042 R13 .9274 LSA 35.7 MSA 31.7 SSA 2.7  
 BDE .4909 BRA 1.4725 BC3 2.1652 FSP 2702 SG1 2777.7 SG2 788.0 THA 34.75 EL1 35.7 EL2 10.0 ALF 28.92

LAUNCH DATE SEP 1 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC  
 RL 150.98 LAL .00 LOL 338.42 VL 32.859 GAL 6.31 AZL 87.81 HCA 132.12 SMA 195.64 ECC .25215 INC 2.1859 V1 29.512  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.465 GAP 5.15 AZP 91.47 TAL 32.18 TAP 164.29 RCA 146.31 APO 244.97 V2 22.692  
 RC 247.751 GL 13.73 GP -20.16 ZAL 39.89 ZAP 95.58 ETS 183.88 ZAE 128.03 ETE 199.62 ZAC 66.85 ETC 285.09 LVI -1.17

DISTANCE 450.057 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.544 VHL 5.248 DLA 19.02 RAL 9.43 RAD 6646.0 VEL 12.145 PTH 7.11 VHP 2.432 DPA -9.05 RAP 32.66 ECC 1.4533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 2 42 3596.89 -47.31 137.22 253.27 95.75 9 2 39 2596.9 -39.60 105.40  
 60.00 8 19 52 3551.19 -40.29 133.69 253.84 91.04 9 19 3 2551.2 -35.47 103.69  
 70.00 8 45 57 3474.38 -34.06 127.35 253.73 87.29 9 43 51 2474.4 -31.61 98.89  
 80.00 9 28 50 3339.95 -29.42 116.78 253.35 84.64 10 24 30 2339.9 -28.65 89.38  
 90.00 10 38 32 3114.95 -27.61 100.03 253.13 83.63 11 30 27 2114.9 -27.49 73.03  
 100.00 12 11 42 2814.42 -29.42 78.15 253.35 84.64 12 58 37 1814.4 -28.65 50.75  
 110.00 13 45 23 2521.20 -34.06 56.27 253.73 87.29 14 27 25 1521.2 -31.61 27.81

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3496 TRA-1.4878 TC3-1.6270 BAU .8367 SGT 2452.4 SGR 1740.0 SG3 1598.6 ST 32.2 SR 18.3 SS 31.3  
 RDE -.3167 RRA -.3209 RC3-1.5859 FAU .51934 RRT .8463 RRF .9392 RTF .8783 CRT .8132 CRS .4557 CST -.1206  
 FDE 1.9739 FRA-5.7528 FC-16.3235 BSP 4646 SGB 3007.0 R23 .2060 R13 .9296 LSA 35.8 MSA 32.6 SSA 2.6  
 BDE .4717 BRA 1.5220 BC3 2.2721 FSP 2772 SG1 2903.2 SG2 782.9 THA 33.77 EL1 35.8 EL2 9.6 ALF 26.96

LAUNCH DATE SEP 1 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC  
 RL 150.98 LAL .00 LOL 338.42 VL 32.860 GAL 6.28 AZL 87.76 HCA 133.04 SMA 195.68 ECC .25197 INC 2.2379 V1 29.512  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.436 GAP 4.91 AZP 91.53 TAL 32.00 TAP 165.04 RCA 146.36 APO 244.96 V2 22.665  
 RC 250.580 GL 14.09 GP -20.50 ZAL 40.14 ZAP 94.14 ETS 183.37 ZAE 126.37 ETE 198.83 ZAC 66.66 ETC 285.15 LVI -.95

DISTANCE 453.856 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.470 VHL 5.241 DLA 19.41 RAL 9.43 RAD 6646.0 VEL 12.142 PTH 7.11 VHP 2.427 DPA -9.57 RAP 32.27 ECC 1.4521  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 2 3604.34 -47.36 137.94 253.59 95.20 9 1 6 2604.3 -39.85 105.95  
 60.00 8 17 37 3560.16 -40.30 134.45 254.08 90.52 9 16 57 2560.2 -35.68 104.35  
 70.00 8 42 58 3483.51 -34.02 128.22 253.90 86.78 9 41 4 2485.5 -31.79 99.71  
 80.00 9 25 2 3353.64 -29.32 117.79 253.46 84.12 10 20 56 2353.6 -28.79 90.37  
 90.00 10 34 19 3130.03 -27.49 101.12 253.22 83.10 11 26 29 2130.0 -27.61 74.12  
 100.00 12 7 54 2828.12 -29.32 79.15 253.46 84.12 12 55 2 1828.1 -28.79 51.74  
 110.00 13 42 25 2532.33 -34.02 57.14 253.90 86.78 14 24 37 1532.3 -31.79 28.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3397 TRA-1.5339 TC3-1.7418 BAU .8747 SGT 2575.3 SGR 1777.2 SG3 1607.1 ST 32.6 SR 17.3 SS 32.2  
 RDE -.2966 RRA -.3357 RC3-1.6247 FAU .52098 RRT .8570 RRF .9430 RTF .8664 CRT .8150 CRS .4449 CST -.1287  
 FDE 2.0491 FRA-5.7843 FC-16.4181 BSP 4880 SGB 3129.0 R23 .2048 R13 .9330 LSA 35.9 MSA 33.3 SSA 2.8  
 BDE .4523 BRA 1.5702 BC3 2.3819 FSP 2784 SG1 3030.7 SG2 778.2 THA 33.08 EL1 35.8 EL2 9.2 ALF 28.48

LAUNCH DATE SEP 1 1973

FLIGHT TIME 210.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC  
 RL 150.98 LAL .00 LOL 338.42 VL 32.862 GAL 6.24 AZL 87.71 HCA 133.98 SMA 195.69 ECC .25181 INC 2.2915 V1 29.512  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.409 GAP 4.68 AZP 91.59 TAL 31.82 TAP 165.79 RCA 146.41 APO 244.96 V2 22.638  
 RC 253.384 GL 14.45 GP -20.84 ZAL 40.41 ZAP 92.73 ETS 182.86 ZAE 124.72 ETE 198.07 ZAC 66.45 ETC 285.20 LVI -.71

DISTANCE 457.833 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.400 VHL 5.234 DLA 19.81 RAL 9.43 RAD 6646.0 VEL 12.139 PTH 7.11 VHP 2.424 DPA -10.10 RAP 31.90 ECC 1.4509  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 59 18 3612.10 -47.40 138.68 253.94 94.63 8 59 30 2612.1 -40.10 106.52  
 60.00 8 15 18 3569.50 -40.30 135.24 254.33 89.98 9 14 47 2569.5 -35.90 105.05  
 70.00 8 39 52 3497.13 -33.97 129.12 254.07 86.24 9 38 9 2497.1 -31.96 100.57  
 80.00 9 21 3 3368.01 -29.22 118.84 253.57 83.57 10 17 11 2368.0 -28.93 91.42  
 90.00 10 29 52 3145.89 -27.36 102.26 253.32 82.54 11 22 18 2145.9 -27.72 75.26  
 100.00 12 3 55 2842.48 -29.22 80.21 253.57 83.57 12 51 18 1842.5 -28.93 52.79  
 110.00 13 39 18 2543.95 -33.97 58.04 254.07 86.24 14 21 42 1544.0 -31.96 29.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3285 TRA-1.5806 TC3-1.8576 BAU .9132 SGT 2700.5 SGR 1813.8 SG3 1612.7 ST 33.1 SR 16.7 SS 33.0  
 RDE -.2797 RRA -.3501 RC3-1.6626 FAU .52171 RRT .8665 RRF .9466 RTF .8935 CRT .8183 CRS .4309 CST -.1376  
 FDE 2.1673 FRA-5.7626 FC-16.4842 BSP 5121 SGB 3253.0 R23 .2041 R13 .9359 LSA 36.1 MSA 33.9 SSA 2.5  
 BDE .4314 BRA 1.6189 BC3 2.4930 FSP 2795 SG1 3159.6 SG2 773.7 THA 32.37 EL1 36.0 EL2 8.8 ALF 23.98



LAUNCH DATE SEP 1 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.674 GAL 6.03 AZL 87.42 HCA 136.54 SMA 195.91 ECC .25127 INC 2.5848 V1 29.512
RP 243.74 LAP 1.71 LOP 116.89 VP 20.287 GAP 3.52 AZP 91.94 TAL 30.84 TAP 169.39 RCA 146.69 APO 245.14 V2 22.511
RC 267.212 GL 16.45 GP -22.57 ZAL 41.89 ZAP 86.06 ETS 180.18 ZAE 116.76 ETE 194.56 ZAC 65.33 ETC 285.46 LVI .57

PLANETOCENTRIC CONIC

C3 27.113 VHL 5.207 DLA 21.99 RAL 9.43 RAD 6645.9 VEL 12.127 PTH 7.10 VHP 2.432 DPA -12.65 RAP 30.34 ECC 1.4462
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 49 33 3655.96 -47.56 142.91 255.90 91.38 8 50 29 2656.0 -41.45 109.85
60.00 8 2 5 3622.57 -40.20 139.75 255.75 86.92 9 2 27 2622.6 -37.04 109.09
70.00 8 22 1 3563.85 -33.55 134.29 255.04 83.22 9 21 25 2563.8 -32.86 105.57
80.00 8 57 41 3452.02 -28.42 124.96 254.18 80.45 9 55 13 2452.0 -29.54 97.59
90.00 10 3 24 3239.84 -26.35 108.95 253.76 79.34 10 57 24 2239.8 -28.18 82.09
100.00 11 40 32 2926.50 -28.42 86.32 254.18 80.45 12 29 19 1926.5 -29.54 58.95
110.00 13 21 27 2610.67 -33.55 63.20 255.04 83.22 14 4 58 1610.7 -32.86 34.49

DIFFERENTIAL CORRECTIONS

TDE -.2522 TRA-1.8180 TC3-2.4459 BAU 1.1106
RDE -.1753 RRA -.4211 RC3-1.8451 FAU .51503
FDE 2.6496 FRA-5.6404 FC-16.4454 BSP 6348
BDE .3071 BRA 1.8662 BC3 3.0639 FSP 2779

DISTANCE 476.630

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 3349.7 SGR 1994.8 SG3 1608.6
RRT .9019 RRF .9610 RTF .9181
SGB 3898.6 R23 .2041 R13 .9466
SG1 3824.9 SG2 754.7 THA 29.50

ORBIT DETERMINATION ACCURACY

ST 35.4 SR 12.5 SS 37.6
CRT .8716 CRS .2579 CST -.2091
LSA 40.5 MSA 34.4 S8A 2.3
EL1 37.1 EL2 5.9 ALF 17.62

LAUNCH DATE SEP 1 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.877 GAL 6.01 AZL 87.35 HCA 139.46 SMA 195.98 ECC .25128 INC 2.6495 V1 29.512
RP 243.98 LAP 1.72 LOP 117.90 VP 20.266 GAP 3.29 AZP 92.01 TAL 30.63 TAP 170.08 RCA 146.75 APO 245.21 V2 22.487
RC 269.924 GL 16.89 GP -22.93 ZAL 42.22 ZAP 84.82 ETS 179.60 ZAE 115.23 ETE 193.90 ZAC 65.08 ETC 285.51 LVI .85

PLANETOCENTRIC CONIC

C3 27.071 VHL 5.203 DLA 22.47 RAL 9.43 RAD 6645.8 VEL 12.125 PTH 7.10 VHP 2.438 DPA -13.14 RAP 30.10 ECC 1.4455
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 20 3665.89 -47.57 143.87 256.35 90.64 8 48 25 2665.9 -41.74 110.62
60.00 7 59 3 3634.64 -40.15 140.78 256.07 86.23 8 59 38 2634.6 -37.28 110.03
70.00 8 17 52 3579.22 -33.42 135.47 255.24 82.53 9 17 31 2579.2 -33.03 106.73
80.00 8 52 7 3471.84 -28.19 126.38 254.29 79.74 9 49 58 2471.8 -29.64 99.05
90.00 9 56 59 3262.38 -26.05 110.53 253.83 78.60 10 51 21 2262.4 -28.24 83.74
100.00 11 34 58 2946.31 -28.19 87.75 254.29 79.74 12 24 5 1946.3 -29.64 60.42
110.00 13 17 19 2626.04 -33.42 64.38 255.24 82.53 14 1 5 1626.0 -33.03 35.65

DIFFERENTIAL CORRECTIONS

TDE -.2323 TRA-1.8659 TC3-2.5636 BAU 1.1505
RDE -.1523 RRA -.4350 RC3-1.8798 FAU .51163
FDE 2.7434 FRA-5.5923 FC-16.3623 BSP 6601
BDE .2778 BRA 1.9159 BC3 3.1789 FSP 2765

DISTANCE 480.423

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 3482.3 SGR 2030.6 SG3 1601.2
RRT .9071 RRF .9634 RTF .9215
SGB 4031.1 R23 .2048 R13 .9481
SG1 3960.4 SG2 751.7 THA 29.02

ORBIT DETERMINATION ACCURACY

ST 35.9 SR 11.8 SS 38.5
CRT .8916 CRS .1917 CST -.2288
LSA 41.7 MSA 34.3 S8A 2.2
EL1 37.5 EL2 5.1 ALF 16.64

LAUNCH DATE SEP 1 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.881 GAL 5.97 AZL 87.28 HCA 140.36 SMA 196.04 ECC .25115 INC 2.7165 V1 29.512
RP 244.22 LAP 1.73 LOP 118.81 VP 20.248 GAP 3.06 AZP 92.09 TAL 30.41 TAP 170.78 RCA 146.81 APO 245.28 V2 22.464
RC 272.618 GL 17.34 GP -23.30 ZAL 42.56 ZAP 83.61 ETS 179.03 ZAE 113.72 ETE 193.26 ZAC 64.82 ETC 285.56 LVI 1.15

PLANETOCENTRIC CONIC

C3 27.035 VHL 5.199 DLA 22.97 RAL 9.42 RAD 6645.8 VEL 12.124 PTH 7.10 VHP 2.445 DPA -13.64 RAP 29.89 ECC 1.4449
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 45 0 3676.25 -47.58 144.87 256.81 89.87 8 46 16 2676.2 -42.04 111.44
60.00 7 55 53 3647.27 -40.09 141.85 256.39 85.51 8 56 40 2647.3 -37.52 111.01
70.00 8 13 29 3595.39 -33.27 136.71 255.45 81.81 9 13 25 2595.4 -33.20 107.96
80.00 8 46 9 3492.92 -27.93 127.89 254.40 78.98 9 44 22 2492.9 -29.72 100.61
90.00 9 50 4 3286.57 -25.72 112.23 253.89 77.81 10 44 51 2286.6 -28.27 85.51
100.00 11 29 1 2967.59 -27.93 89.26 254.40 78.98 12 18 29 1967.4 -29.72 61.98
110.00 13 12 55 2642.21 -33.27 65.62 255.45 81.81 13 56 58 1642.2 -33.20 36.88

DIFFERENTIAL CORRECTIONS

TDE -.2104 TRA-1.8137 TC3-2.6808 BAU 1.1904
RDE -.1281 RRA -.4488 RC3-1.9139 FAU .50760
FDE 2.8393 FRA-5.5379 FC-16.2549 BSP 6858
BDE .2464 BRA 1.9657 BC3 3.2937 FSP 2750

DISTANCE 484.214

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 3615.3 SGR 2086.4 SG3 1591.8
RRT .9118 RRF .9656 RTF .5244
SGB 4184.2 R23 .2058 R13 .9495
SG1 4096.2 SG2 749.0 THA 28.57

ORBIT DETERMINATION ACCURACY

ST 36.5 SR 11.1 SS 39.8
CRT .9145 CRS .1092 CST -.2501
LSA 43.0 MSA 34.2 S8A 2.2
EL1 37.9 EL2 4.3 ALF 15.78

LAUNCH DATE SEP 1 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.884 GAL 5.92 AZL 87.21 HCA 141.27 SMA 196.11 ECC .25112 INC 2.7859 V1 29.512
RP 244.45 LAP 1.74 LOP 119.72 VP 20.228 GAP 2.84 AZP 92.17 TAL 30.18 TAP 171.48 RCA 146.87 APO 245.36 V2 22.441
RC 275.293 GL 17.81 GP -23.67 ZAL 42.91 ZAP 82.43 ETS 178.46 ZAE 112.24 ETE 192.63 ZAC 64.54 ETC 285.61 LVI 1.46

PLANETOCENTRIC CONIC

C3 27.006 VHL 5.197 DLA 23.48 RAL 9.41 RAD 6645.8 VEL 12.123 PTH 7.09 VHP 2.454 DPA -14.13 RAP 29.70 ECC 1.4444
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 42 33 3687.07 -47.37 145.92 257.29 89.06 8 44 0 2687.1 -42.35 112.30
60.00 7 52 32 3660.51 -40.02 142.98 256.73 84.75 8 53 32 2660.5 -37.76 112.06
70.00 8 8 50 3612.45 -33.10 138.01 255.66 81.06 9 9 3 2612.5 -33.36 109.27
80.00 8 39 46 3515.44 -27.62 129.50 254.49 78.19 9 38 21 2515.4 -29.79 102.28
90.00 9 42 34 3312.67 -25.33 114.04 253.93 76.99 10 37 46 2312.7 -28.28 87.42
100.00 11 22 38 2989.91 -27.62 90.86 254.49 78.19 12 12 28 1989.9 -29.79 63.65
110.00 13 8 17 2659.27 -33.10 66.92 255.66 81.06 13 52 36 1659.3 -33.36 38.19

DIFFERENTIAL CORRECTIONS

TDE -.1871 TRA-1.9617 TC3-2.7973 BAU 1.2307
RDE -.1035 RRA -.4629 RC3-1.9480 FAU .50311
FDE 2.9303 FRA-5.4775 FC-16.1283 BSP 7109
BDE .2138 BRA 2.0156 BC3 3.4087 FSP 2727

DISTANCE 488.005

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

SGT 3749.1 SGR 2102.8 SG3 1580.9
RRT .9161 RRF .9677 RTF .9271
SGB 4298.6 R23 .2070 R13 .9507
SG1 4233.2 SG2 746.8 THA 28.15

ORBIT DETERMINATION ACCURACY

ST 37.1 SR 10.6 SS 40.5
CRT .9379 CRS .0104 CST -.2733
LSA 44.3 MSA 34.0 S8A 2.1
EL1 38.4 EL2 3.5 ALF 15.07



LAUNCH DATE SEP 1 1973

FLIGHT TIME 229.00

ARRIVAL DATE APR 17 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 338.42 VL 32.888 GAL 5.88 AZL 87.14 HCA 142.18 SMA 196.19 ECC .25109 INC 2.8580 V1 29.512  
 RP 244.68 LAP 1.75 LOP 120.63 VP 20.208 GAP 2.82 AZP 92.26 TAL 29.96 TAP 172.14 RCA 146.93 APO 245.45 V2 22.418  
 RC 277.948 GL 18.30 GP -24.05 ZAL 43.27 ZAP 81.28 ETS 177.87 ZAE 110.78 ETE 192.01 ZAC 64.25 ETC 285.66 LVI 1.78

Planetocentric Conic: C3 26.984 VHL 5.193 DLA 24.01 RAL 9.40 RAD 6645.8 VEL 12.122 PTH 7.09 VHP 2.465 DPA -14.62 RAP 29.53 ECC 1.4441  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 59 3698.39 -47.55 147.01 257.79 88.22 8 41 37 2698.4 -42.66 113.21  
 60.00 7 48 59 3674.39 -39.92 144.13 257.07 83.96 8 50 14 2674.4 -38.00 113.15  
 70.00 8 3 54 3630.47 -32.90 139.37 255.86 80.28 9 4 24 2630.5 -33.52 110.65  
 80.00 8 32 52 3539.60 -27.28 131.21 254.58 77.36 9 31 51 2539.6 -29.84 104.08  
 90.00 9 34 21 3341.04 -24.88 115.99 253.95 76.11 10 30 2 2341.0 -28.25 89.49  
 100.00 11 15 44 3014.07 -27.28 92.58 254.58 77.36 12 5 58 2014.1 -29.84 65.44  
 110.00 13 3 20 2677.29 -32.90 68.29 255.86 80.28 13 47 57 1677.3 -33.52 39.57

Differential Corrections: TDE -.1620 TRA-2.0097 TC3-2.9131 BAU 1.2709 SGT 3083.3 SGR 2139.1 SG3 1567.8 ST 37.8 SR 10.1 SS 41.5  
 RDE -.0778 RRA -.4770 RC3-1.9812 FAU .49798 RRT .9200 RRF .9697 RTF .9294 CRT .9593 CRS -.1056 CST -.2978  
 FDE 3.0220 FRA-5.4105 FC-15.9763 BSP 7361 SGB 4433.5 R23 .2084 R13 .9510 LSA 45.8 MSA 33.9 S8A 2.1  
 BDE .1797 BRA 2.0655 BC3 3.5230 FSP 2703 SG1 4370.5 SG2 744.8 THA 27.75 EL1 39.0 EL2 2.8 ALF 14.51

LAUNCH DATE SEP 1 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 19 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 338.42 VL 32.892 GAL 5.84 AZL 87.07 HCA 143.08 SMA 196.26 ECC .25108 INC 2.9329 V1 29.512  
 RP 244.90 LAP 1.76 LOP 121.53 VP 20.190 GAP 2.40 AZP 92.35 TAL 29.73 TAP 172.81 RCA 146.99 APO 245.54 V2 22.397  
 RC 280.584 GL 18.81 GP -24.44 ZAL 43.65 ZAP 80.17 ETS 177.28 ZAE 109.35 ETE 191.40 ZAC 63.95 ETC 285.71 LVI 2.12

Planetocentric Conic: C3 26.970 VHL 5.193 DLA 24.56 RAL 9.38 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 2.476 DPA -15.11 RAP 29.40 ECC 1.4439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 16 3710.24 -47.52 148.16 258.30 87.34 8 39 6 2710.2 -42.97 114.17  
 60.00 7 45 15 3688.97 -39.81 145.36 257.41 83.14 8 46 44 2689.0 -38.25 114.32  
 70.00 7 58 37 3649.56 -32.67 140.82 256.06 79.45 8 59 27 2649.6 -33.87 112.12  
 80.00 8 25 22 3565.65 -26.87 133.04 254.64 76.47 9 24 48 2565.6 -29.86 106.01  
 90.00 9 25 17 3372.15 -24.36 118.12 253.93 75.17 10 21 29 2372.2 -28.19 91.76  
 100.00 11 8 14 3040.12 -26.87 94.41 254.64 76.47 11 58 54 2040.1 -29.86 67.38  
 110.00 12 58 4 2696.38 -32.67 69.73 256.06 79.45 13 43 0 1696.4 -33.67 41.04

Differential Corrections: TDE -.1351 TRA-2.0576 TC3-3.0278 BAU 1.3112 SGT 4017.7 SGR 2176.0 SG3 1553.2 ST 38.5 SR 9.9 SS 42.5  
 RDE -.0514 RRA -.4911 RC3-2.0143 FAU .49235 RRT .9236 RRF .9716 RTF .9314 CRT .9743 CRS -.2336 CST -.3237  
 FDE 3.1098 FRA-5.3381 FC-15.8045 BSP 7614 SGB 4569.2 R23 .2100 R13 .9528 LSA 47.3 MSA 33.8 S8A 2.0  
 BDE .1446 BRA 2.1154 BC3 3.6366 FSP 2675 SG1 4508.3 SG2 743.4 THA 27.38 EL1 39.7 EL2 2.2 ALF 14.10

LAUNCH DATE SEP 1 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 21 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 338.42 VL 32.897 GAL 5.79 AZL 86.99 HCA 143.98 SMA 196.35 ECC .25108 INC 3.0109 V1 29.512  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.173 GAP 2.18 AZP 92.44 TAL 29.50 TA 173.48 RCA 147.05 APO 245.65 V2 22.375  
 RC 283.198 GL 19.33 GP -24.85 ZAL 44.04 ZAP 79.09 ETS 176.68 ZAE 107.94 ETE 190.79 ZAC 63.63 ETC 285.77 LVI 2.47

Planetocentric Conic: C3 26.985 VHL 5.193 DLA 25.13 RAL 9.38 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 2.490 DPA -15.60 RAP 29.29 ECC 1.4438  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 24 3722.66 -47.47 149.35 258.83 86.42 8 36 26 2722.7 -43.30 115.19  
 60.00 7 41 17 3704.30 -39.68 146.64 257.77 82.28 8 43 1 2704.3 -38.49 115.55  
 70.00 7 52 59 3669.82 -32.41 142.34 256.25 78.59 8 54 9 2669.8 -33.81 113.69  
 80.00 8 17 10 3593.93 -26.41 135.01 254.67 75.54 9 17 4 2593.9 -29.84 108.11  
 90.00 9 15 8 3406.68 -23.73 120.46 253.87 74.15 10 11 53 2406.7 -28.06 94.28  
 100.00 11 0 2 3068.40 -26.41 96.38 254.67 75.54 11 51 10 2068.4 -29.84 69.48  
 110.00 12 52 25 2716.64 -32.41 71.26 256.25 78.59 13 37 42 1716.6 -33.81 42.61

Differential Corrections: TDE -.1061 TRA-2.1055 TC3-3.1407 BAU 1.3514 SGT 4151.8 SGR 2213.0 SG3 1536.6 ST 39.2 SR 9.9 SS 43.5  
 RDE -.0239 RRA -.5056 RC3-2.0464 FAU .48611 RRT .9269 RRF .9733 RTF .9333 CRT .9792 CRS -.3878 CST -.3512  
 FDE 3.1968 FRA-5.2619 FC-15.6070 BSP 7867 SGB 4704.8 R23 .2118 R13 .9536 LSA 49.0 MSA 33.6 S8A 1.9  
 BDE .1088 BRA 2.1654 BC3 3.7488 FSP 2643 SG1 4645.9 SG2 742.1 THA 27.04 EL1 40.4 EL2 1.9 ALF 13.86

LAUNCH DATE SEP 1 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 23 1974

Heliocentric Conic: RL 150.98 LAL .00 LOL 338.42 VL 32.901 GAL 5.75 AZL 86.91 HCA 144.88 SMA 196.43 ECC .25109 INC 3.0922 V1 29.512  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.158 GAP 1.96 AZP 92.53 TAL 29.26 TAP 174.14 RCA 147.11 APO 245.75 V2 22.354  
 RC 285.791 GL 19.80 GP -25.28 ZAL 44.44 ZAP 78.05 ETS 176.06 ZAE 106.56 ETE 190.19 ZAC 63.29 ETC 285.82 LVI 2.84

Planetocentric Conic: C3 26.970 VHL 5.193 DLA 25.72 RAL 9.32 RAD 6645.8 VEL 12.121 PTH 7.09 VHP 2.504 DPA -16.09 RAP 29.21 ECC 1.4439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 31 21 3735.68 -47.41 150.61 259.38 85.45 8 33 37 2735.7 -43.82 116.27  
 60.00 7 37 4 3720.45 -39.52 147.99 258.12 81.38 8 39 4 2720.5 -38.73 116.85  
 70.00 7 46 55 3691.41 -32.11 143.95 256.43 77.68 8 48 26 2691.4 -33.93 115.36  
 80.00 8 8 6 3624.90 -25.86 137.15 254.67 74.54 9 8 31 2624.9 -29.79 110.41  
 90.00 9 3 36 3445.65 -22.98 123.07 253.75 73.05 10 1 2 2445.7 -27.86 97.11  
 100.00 10 50 58 3099.37 -25.86 98.52 254.67 74.54 11 42 38 2099.4 -29.79 71.78  
 110.00 12 46 21 2738.23 -32.11 72.87 256.43 77.68 13 32 0 1738.2 -33.93 44.28

Differential Corrections: TDE -.0756 TRA-2.1538 TC3-3.2527 BAU 1.3918 SGT 4286.8 SGR 2251.2 SG3 1518.7 ST 40.1 SR 10.1 SS 44.5  
 RDE .0044 RRA -.5205 RC3-2.0787 FAU .47951 RRT .9300 RRF .9750 RTF .9349 CRT .9721 CRS -.4964 CST -.3796  
 FDE 3.2795 FRA-5.1832 FC-15.3925 BSP 8115 SGB 4842.0 R23 .2134 R13 .9544 LSA 50.7 MSA 33.5 S8A 1.9  
 BDE .0757 BRA 2.2158 BC3 3.8601 FSP 2608 SG1 4784.9 SG2 741.3 THA 26.72 EL1 41.3 EL2 2.3 ALF 13.80

LAUNCH DATE SEP 1 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

DISTANCE 506.946

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 32.906 GAL 5.70 AZL 86.82 HCA 145.78 SMA 196.52 ECC .25111 INC 3.1771 V1 29.512
RP 245.93 LAP 1.79 LOP 124.24 VP 20.143 GAP 1.74 AZP 92.63 TAL 29.01 TAP 174.79 RCA 147.17 APO 245.87 V2 22.334
RC 288.361 GL 20.45 GP -25.69 ZAL 44.86 ZAP 77.04 ETS 175.44 ZAE 105.20 ETE 189.60 ZAC 62.94 ETC 285.88 LVI 3.23

PLANETOCENTRIC CONIC

C3 26.985 VHL 5.195 DLA 26.33 RAL 9.28 RAD 6645.8 VEL 12.122 PTH 7.09 VHP 2.520 DPA -16.58 RAP 29.17 ECC 1.4441
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 28 7 3749.35 -47.33 151.92 259.93 84.45 8 30 37 2749.3 -43.95 117.42
60.00 7 32 34 3737.49 -39.34 149.40 258.48 80.44 8 34 52 2737.5 -38.96 118.24
70.00 7 40 22 3714.48 -31.76 145.66 256.60 76.72 8 42 17 2714.5 -34.03 117.15
80.00 7 57 59 3659.20 -25.22 139.49 254.62 73.46 8 58 58 2659.2 -29.67 112.95
90.00 8 50 7 3490.79 -22.06 126.05 253.54 71.84 9 48 17 2490.8 -27.54 100.38
100.00 10 40 51 3133.67 -25.22 100.86 254.62 73.46 11 33 5 2133.7 -29.67 74.32
110.00 12 39 50 2761.30 -31.76 74.57 256.60 76.72 13 25 51 1761.3 -34.03 46.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0422 TRA-2.2017 TC3-3.3620 BAU 1.4320 SGT 4420.9 SGR 2289.8 SG3 1499.1 ST 41.0 SR 10.6 SS 45.6
RDE .0341 RRA -.5358 RC3-2.1103 FAU .47240 RRT .9328 RRF .9786 RTF .9364 CRT .9543 CRS -.6123 CST -.4025
FDE 3.3622 FRA-5.1000 FC-15.1553 BSP 8373 SGB 4978.7 R23 .2153 R13 .9551 LSA 52.5 MSA 33.3 SSA 1.8
BDE .0543 BRA 2.2660 BC3 3.9695 FSP 2572 SG1 4923.2 SG2 740.8 THA 26.43 EL1 42.3 EL2 3.1 ALF 13.91

LAUNCH DATE SEP 1 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 510.731

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 32.911 GAL 5.66 AZL 86.73 HCA 146.68 SMA 196.61 ECC .25114 INC 3.2659 V1 29.512
RP 245.73 LAP 1.79 LOP 125.14 VP 20.129 GAP 1.52 AZP 92.73 TAL 28.76 TAP 175.44 RCA 147.24 APO 245.99 V2 22.314
RC 290.907 GL 21.04 GP -26.14 ZAL 45.29 ZAP 76.07 ETS 174.81 ZAE 103.88 ETE 189.01 ZAC 62.56 ETC 285.94 LVI 3.64

PLANETOCENTRIC CONIC

C3 27.012 VHL 5.197 DLA 26.96 RAL 9.23 RAD 6645.8 VEL 12.123 PTH 7.10 VHP 2.537 DPA -17.08 RAP 29.15 ECC 1.4446
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 24 41 3763.72 -47.22 153.29 260.51 83.39 8 27 25 2763.7 -44.29 118.64
60.00 7 27 46 3755.51 -39.12 150.88 258.83 79.45 8 30 21 2755.5 -39.19 119.72
70.00 7 33 17 3739.25 -31.36 147.48 256.74 75.72 8 35 36 2739.3 -34.10 119.08
80.00 7 46 29 3697.78 -24.45 142.10 254.50 72.30 8 48 7 2697.8 -29.47 115.81
90.00 8 33 38 3545.42 -20.85 129.61 253.19 70.46 9 32 43 2545.4 -27.05 104.30
100.00 10 29 21 3172.25 -24.45 103.47 254.50 72.30 11 22 13 2172.2 -29.47 77.17
110.00 12 32 43 2786.07 -31.36 76.39 256.74 75.72 13 19 9 1786.1 -34.10 48.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0068 TRA-2.2494 TC3-3.4690 BAU 1.4721 SGT 4554.4 SGR 2328.4 SG3 1477.5 ST 42.1 SR 11.3 SS 46.6
RDE .0652 RRA -.5509 RC3-2.1409 FAU .46468 RRT .9354 RRF .9780 RTF .9376 CRT .9290 CRS -.7091 CST -.4394
FDE 3.4445 FRA-5.0084 FC-14.8928 BSP 8627 SGB 5115.1 R23 .2176 R13 .9557 LSA 54.5 MSA 33.1 SSA 1.7
BDE .0656 BRA 2.3159 BC3 4.0765 FSP 2534 SG1 5061.2 SG2 740.9 THA 26.16 EL1 43.4 EL2 4.1 ALF 14.18

LAUNCH DATE SEP 1 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 514.514

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 32.915 GAL 5.61 AZL 86.64 HCA 147.57 SMA 196.71 ECC .25118 INC 3.3588 V1 29.512
RP 245.93 LAP 1.80 LOP 126.04 VP 20.115 GAP 1.31 AZP 92.84 TAL 28.51 TAP 176.09 RCA 147.30 APO 246.12 V2 22.295
RC 293.430 GL 21.65 GP -26.80 ZAL 45.74 ZAP 75.13 ETS 174.17 ZAE 102.57 ETE 188.43 ZAC 62.16 ETC 286.01 LVI 4.06

PLANETOCENTRIC CONIC

C3 27.053 VHL 5.201 DLA 27.61 RAL 9.17 RAD 6645.8 VEL 12.125 PTH 7.10 VHP 2.556 DPA -17.58 RAP 29.16 ECC 1.4452
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 21 1 3778.86 -47.10 154.73 261.09 82.29 8 24 0 2778.9 -44.63 119.94
60.00 7 22 37 3774.60 -38.88 152.44 259.18 78.42 8 25 31 2774.6 -39.41 121.29
70.00 7 25 32 3765.98 -30.89 149.42 256.86 74.66 8 28 18 2765.0 -34.15 121.17
80.00 7 33 6 3742.21 -23.49 145.06 254.29 71.03 8 35 28 2742.2 -29.17 119.07
90.00 8 11 29 3618.10 -19.13 134.24 252.58 68.77 9 11 47 2618.1 -26.21 109.45
100.00 10 15 58 3216.68 -23.49 106.42 254.29 71.03 11 9 35 2216.7 -29.17 80.44
110.00 12 24 59 2812.80 -30.89 78.34 256.86 74.66 13 11 51 1812.8 -34.15 50.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0309 TRA-2.2971 TC3-3.5737 BAU 1.5124 SGT 4687.8 SGR 2368.5 SG3 1454.7 ST 43.2 SR 12.3 SS 47.7
RDE .0974 RRA -.5867 RC3-2.1714 FAU .45663 RRT .9378 RRF .9794 RTF .9388 CRT .9021 CRS -.7848 CST -.4700
FDE 3.3222 FRA-4.9158 FC-14.6129 BSP 8883 SGB 5252.2 R23 .2198 R13 .9562 LSA 56.6 MSA 33.0 SSA 1.7
BDE .1022 BRA 2.3659 BC3 4.1817 FSP 2492 SG1 5199.6 SG2 741.4 THA 25.92 EL1 44.7 EL2 5.1 ALF 14.62

LAUNCH DATE SEP 1 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 518.297

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 32.921 GAL 5.58 AZL 86.54 HCA 148.47 SMA 196.81 ECC .25123 INC 3.4582 V1 29.512
RP 246.12 LAP 1.81 LOP 126.93 VP 20.103 GAP 1.10 AZP 92.95 TAL 28.26 TAP 176.73 RCA 147.36 APO 246.25 V2 22.276
RC 295.928 GL 22.30 GP -27.08 ZAL 46.20 ZAP 74.23 ETS 173.51 ZAE 101.30 ETE 187.85 ZAC 61.74 ETC 286.08 LVI 4.51

PLANETOCENTRIC CONIC

C3 27.108 VHL 5.206 DLA 28.29 RAL 9.10 RAD 6645.9 VEL 12.127 PTH 7.10 VHP 2.577 DPA -18.09 RAP 29.21 ECC 1.4461
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 17 6 3794.82 -46.94 156.24 261.69 81.14 8 20 21 2794.8 -44.96 121.33
60.00 7 17 5 3794.88 -38.59 154.09 259.52 77.33 8 20 19 2794.9 -39.62 122.98
70.00 7 17 2 3795.01 -30.35 151.51 256.93 73.53 8 20 17 2795.0 -34.15 123.44
80.00 7 16 54 3795.42 -22.27 148.54 253.93 69.59 8 20 9 2795.4 -28.68 122.95
89.22 7 10 41 3815.56 -14.45 146.60 250.52 65.41 8 14 17 2815.6 -23.35 123.10
100.00 9 59 46 3269.90 -22.27 109.90 253.93 69.59 10 54 16 2269.9 -28.68 84.32
110.00 12 16 28 2841.83 -30.35 80.42 256.93 73.53 13 3 50 1841.8 -34.15 52.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0704 TRA-2.3455 TC3-3.6759 BAU 1.5528 SGT 4821.8 SGR 2409.9 SG3 1430.5 ST 44.5 SR 13.5 SS 48.7
RDE .1307 RRA -.5834 RC3-2.2015 FAU .44817 RRT .9400 RRF .9807 RTF .9398 CRT .8774 CRS -.8408 CST -.5004
FDE 3.5947 FRA-4.8223 FC-14.3133 BSP 9129 SGB 5390.5 R23 .2220 R13 .9567 LSA 58.8 MSA 32.8 SSA 1.6
BDE .1464 BRA 2.4170 BC3 4.2847 FSP 2446 SG1 5339.1 SG2 742.4 THA 25.70 EL1 46.1 EL2 6.3 ALF 15.22

LAUNCH DATE SEP 1 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC										DISTANCE 522.079										EARTH TO MARS																																																																																				
RL	150.98	LAL	.00	LOL	338.42	VL	32.926	GAL	5.51	AZL	86.44	HCA	149.36	SMA	196.91	ECC	.25129	INC	3.5587	V1	29.512	RP	246.30	LAP	1.81	LOP	127.83	VP	20.092	GAP	.88	AZP	93.06	TAL	28.00	TAP	177.36	RCA	147.43	APO	246.39	V2	22.258	RC	298.401	GL	22.97	GP	-27.57	ZAL	46.68	ZAP	73.37	ETS	172.84	ZAE	100.06	ETE	187.27	ZAC	61.30	ETC	286.15	LVI	4.98																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	27.179	VHL	5.213	DLA	29.00	RAL	9.01	RAD	6645.9	VEL	12.130	PTH	7.10	VHP	2.599	DPA	-18.60	RAP	29.29	ECC	1.4473	ST	45.9	SR	14.9	SS	49.7	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																			
50.00	7	12	54	3811.67	-46.75	157.83	262.29	79.93	8	16	26	2811.7	-45.30	122.81	60.00	7	11	6	3816.48	-38.25	155.82	259.85	76.20	8	14	42	2816.5	-39.81	124.78	70.00	7	7	36	3826.80	-29.72	153.76	256.96	72.33	8	11	23	2826.8	-34.10	125.92	80.00	6	5	39	3864.43	-20.57	152.95	253.30	67.87	8	0	3	2864.4	-27.87	127.92	83.32	6	21	28	3974.27	-14.77	158.39	250.63	64.76	7	27	43	2974.3	-23.91	134.92	100.00	9	38	30	3338.91	-20.57	114.32	253.30	67.87	10	34	9	2338.9	-27.87	89.29	110.00	12	7	2	2873.62	-29.72	82.68	256.96	72.33	12	54	56	1873.6	-34.10	54.84
TDE	.1134	TRA	-2.3933	TC3	-3.7738	BAU	1.5928	SGT	4954.0	SGR	2451.9	SG3	1404.5	ST	45.9	SR	14.9	SS	49.7	RDE	.1860	RRA	-.6005	RC3	-2.2306	FAU	.43919	RRT	.9421	RRF	.9820	RTF	.9406	CRT	.8565	CRS	-.8829	CST	-.9312	FDE	3.6883	FRA	-4.7242	FC	-13.9899	BSP	9384	SG8	5827.5	R23	.2244	R13	.9571	LSA	61.1	MSA	32.6	SSA	1.5	BDE	.2011	BRA	2.4675	BC3	4.3837	FSP	2400	SG1	5477.3	SG2	743.7	THA	25.50	EL1	47.7	EL2	7.4	ALF	15.98																									

LAUNCH DATE SEP 1 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC										DISTANCE 525.860										EARTH TO MARS																																																																																				
RL	150.98	LAL	.00	LOL	338.42	VL	32.931	GAL	5.47	AZL	86.33	HCA	150.25	SMA	197.01	ECC	.25136	INC	3.6665	V1	29.812	RP	246.48	LAP	1.82	LOP	128.72	VP	20.081	GAP	.67	AZP	93.18	TAL	27.74	TAP	177.99	RCA	147.40	APO	246.53	V2	22.241	RC	300.850	GL	23.67	GP	-28.09	ZAL	47.17	ZAP	72.55	ETS	172.16	ZAE	98.84	ETE	186.88	ZAC	60.82	ETC	286.23	LVI	5.48																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	27.288	VHL	5.222	DLA	29.73	RAL	8.91	RAD	6645.9	VEL	12.134	PTH	7.10	VHP	2.622	DPA	-19.13	RAP	29.40	ECC	1.4488	ST	47.5	SR	16.6	SS	50.8	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																			
50.00	7	8	23	3829.50	-46.53	159.49	262.89	78.67	8	12	12	2829.5	-45.63	124.40	60.00	7	4	37	3839.55	-37.86	157.66	260.18	75.01	8	8	38	2839.6	-39.98	126.72	70.00	6	5	7	3861.97	-28.96	156.22	256.91	71.06	8	1	23	2862.0	-33.98	128.66	80.00	6	18	18	3984.23	-17.32	160.36	251.85	65.29	7	24	42	2984.2	-26.01	136.33	80.43	5	58	19	4048.09	-15.09	164.00	250.76	64.08	7	5	47	3048.1	-24.48	140.57	100.00	9	1	10	3458.70	-17.32	121.73	251.85	65.29	9	58	48	2458.7	-26.01	97.69	110.00	11	56	27	2908.79	-28.96	85.14	256.91	71.06	12	44	56	1908.8	-33.98	57.58
TDE	.1593	TRA	-2.4408	TC3	-3.8677	BAU	1.6328	SGT	5085.0	SGR	2495.0	SG3	1377.1	ST	47.5	SR	16.6	SS	50.8	RDE	.2032	RRA	-.6179	RC3	-2.2590	FAU	.42981	RRT	.9440	RRF	.9831	RTF	.9413	CRT	.8409	CRS	-.9135	CST	-.5616	FDE	3.7393	FRA	-4.6210	FC	-13.6462	BSP	9645	SG8	5664.1	R23	.2269	R13	.9574	LSA	63.6	MSA	32.4	SSA	1.5	BDE	.2582	BRA	2.5178	BC3	4.4791	FSP	2353	SG1	5614.8	SG2	745.7	THA	25.33	EL1	49.5	EL2	8.6	ALF	16.86																									

LAUNCH DATE SEP 1 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC										DISTANCE 529.640										EARTH TO MARS																																																																																				
RL	150.98	LAL	.00	LOL	338.42	VL	32.937	GAL	5.42	AZL	86.22	HCA	151.14	SMA	197.12	ECC	.25143	INC	3.7801	V1	29.512	RP	246.65	LAP	1.82	LOP	129.61	VP	20.071	GAP	.46	AZP	93.31	TAL	27.47	TAP	178.82	RCA	147.55	APO	246.68	V2	22.224	RC	303.274	GL	24.40	GP	-28.64	ZAL	47.09	ZAP	71.77	ETS	171.47	ZAE	97.66	ETE	186.10	ZAC	60.32	ETC	286.31	LVI	6.00																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	27.377	VHL	5.232	DLA	30.49	RAL	8.79	RAD	6646.0	VEL	12.138	PTH	7.11	VHP	2.648	DPA	-19.66	RAP	29.55	ECC	1.4506	ST	49.2	SR	18.3	SS	51.8	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																			
50.00	7	3	31	3848.40	-46.26	161.24	263.50	77.34	8	7	39	2848.4	-45.95	126.11	60.00	6	57	33	3864.30	-37.40	159.61	260.44	73.76	8	1	58	2864.3	-40.12	128.81	70.00	6	44	58	3901.48	-28.06	158.94	256.77	69.68	7	50	0	2901.5	-33.77	131.72	78.10	5	40	18	4104.96	-15.42	168.41	250.88	63.36	6	48	43	3105.0	-25.06	145.01	78.10	5	40	18	4104.96	-15.42	168.41	250.88	63.36	6	48	43	3105.0	-25.06	145.01	78.10	5	40	18	4104.96	-15.42	168.41	250.88	63.36	6	48	43	3105.0	-25.06	145.01	110.00	11	44	24	2948.30	-28.06	87.86	256.77	69.68	12	33	33	1948.3	-33.77	60.64
TDE	.2068	TRA	-2.4891	TC3	-3.9584	BAU	1.6732	SGT	5216.8	SGR	2540.0	SG3	1348.3	ST	49.2	SR	18.3	SS	51.8	RDE	.2415	RRA	-.6386	RC3	-2.2869	FAU	.42007	RRT	.9458	RRF	.9842	RTF	.9519	CRT	.8308	CRS	-.9352	CST	-.5907	FDE	3.8028	FRA	-4.5177	FC	-13.2837	BSP	9892	SG8	5802.3	R23	.2294	R13	.9577	LSA	66.3	MSA	32.3	SSA	1.4	BDE	.3180	BRA	2.5692	BC3	4.5716	FSP	2300	SG1	5753.9	SG2	748.1	THA	25.18	EL1	51.6	EL2	9.7	ALF	17.84																									

LAUNCH DATE SEP 1 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC										DISTANCE 533.419										EARTH TO MARS																																																																																				
RL	150.98	LAL	.00	LOL	338.42	VL	32.942	GAL	5.37	AZL	86.10	HCA	152.03	SMA	197.22	ECC	.25152	INC	3.9001	V1	29.512	RP	246.82	LAP	1.83	LOP	130.50	VP	20.082	GAP	.26	AZP	93.45	TAL	27.21	TAP	179.24	RCA	147.62	APO	246.83	V2	22.207	RC	305.873	GL	25.17	GP	-29.20	ZAL	46.22	ZAP	71.03	ETS	170.76	ZAE	96.50	ETE	185.52	ZAC	59.79	ETC	286.40	LVI	6.55																																							
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																				
C3	27.309	VHL	5.245	DLA	31.29	RAL	8.65	RAD	6646.0	VEL	12.143	PTH	7.11	VHP	2.675	DPA	-20.21	RAP	29.73	ECC	1.4527	ST	51.1	SR	20.2	SS	52.7	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																			
50.00	6	58	15	3868.48	-45.94	163.07	264.10	75.96	8	2	43	2868.5	-46.27	127.95	60.00	6	49	50	3890.95	-36.88	161.67	260.68	72.44	7	54	41	2891.0	-40.23	131.07	70.00	6	30	56	3946.82	-26.95	162.00	256.50	68.18	7	36	42	2946.8	-33.42	135.21	76.03	5	24	53	4153.07	-15.75	172.20	251.01	62.61	6	34	6	3153.1	-25.67	148.85	76.03	5	24	53	4153.07	-15.75	172.20	251.01	62.61	6	34	6	3153.1	-25.67	148.85	76.03	5	24	53	4153.07	-15.75	172.20	251.01	62.61	6	34	6	3153.1	-25.67	148.85	110.00	11	30	22	2993.64	-26.95	90.92	256.50	68.18	12	20	16	1993.6	-33.42	64.13
TDE	.2572	TRA	-2.5381	TC3	-4.0447	BAU	1.7139	SGT	5348.5	SGR	2587.5	SG3	1318.6	ST	51.1	SR	20.2	SS	52.7	RDE	.2817	RRA	-.6569	RC3	-2.3147	FAU	.41007	RRT	.9475	RRF	.9853	RTF	.9426	CRT	.8259	CRS	-.9508	CST	-.6193	FDE	3.8610	FRA	-4.4167	FC	-12.9054	BSP	10139	SG8	5941.5	R23	.2317	R13	.9580	LSA	69.0	MSA	32.1	SSA	1.3	BDE	.3814	BRA	2.6217	BC3	4.6602	FSP	2244	SG1	5893.8	SG2	750.9	THA	25.06	EL1	53.8	EL2	10.8	ALF	18.90																									

LAUNCH DATE SEP 1 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.948 GAL 5.32 AZL 85.97 HCA 152.92 SMA 197.33 ECC .25161 INC 4.0272 V1 28.512
RP 246.98 LAP 1.83 LOP 131.39 VP 20.054 GAP .05 AZP 93.59 TAL 26.93 TAP 179.85 RCA 147.88 APO 246.98 V2 22.191
RC 308.047 GL 25.98 GP -29.80 ZAL 48.77 ZAP 70.34 ETS 170.04 ZAE 95.38 ETE 184.93 ZAC 59.23 ETC 286.50 LVI 7.13

PLANETOCENTRIC CONIC

C3 27.667 VHL 5.260 DLA 32.11 RAL 8.48 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 2.705 DPA -20.77 RAP 29.95 ECC 1.4553
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 52 32 3889.86 -45.37 165.00 284.88 74.52 7 57 22 2889.9 -46.57 129.92
60.00 6 41.19 3919.81 -36.26 163.88 280.87 71.06 7 46 39 2919.8 -40.29 133.52
70.00 6 13 57 4000.76 -25.54 165.55 256.03 66.51 7 20 38 3000.8 -32.87 139.33
74.11 5 11 6 4195.63 -16.09 175.61 251.14 61.83 6 21 1 3195.6 -26.29 152.31
74.11 5 11 6 4195.63 -16.09 175.61 251.14 61.83 6 21 1 3195.6 -26.29 152.31
74.11 5 11 6 4195.63 -16.09 175.61 251.14 61.83 6 21 1 3195.6 -26.29 152.31
110.00 11 13 24 3047.58 -25.54 94.47 256.03 66.51 12 4 11 2047.6 -32.87 68.24

DIFFERENTIAL CORRECTIONS

TDE .3108 TRA-2.5865 TC3-4.1246 BAU 1.7542 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
RDE .3241 RRA -.6777 RC3-2.3410 FAU .39958 SGT 5477.8 SGR 2636.1 SG3 1287.1 ST 53.1 SR 22.3 SS 53.7
FDE 3.9159 FRA-4.3096 FC-12.5036 BSP 10397 RRT .9490 RRF .9862 RTF .9430 CRT .8247 CRS -.9622 CST -.8466
BDE .4490 BRA 2.6738 BC3 4.7426 FSP 2188 SGB 6079.1 R23 .2343 R13 .9582 LSA 72.0 MSA 31.9 S5A 1.3
EL1 56.3 EL2 11.9 ALF 20.01

LAUNCH DATE SEP 1 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.954 GAL 5.27 AZL 85.84 HCA 153.81 SMA 197.45 ECC .25171 INC 4.1621 V1 29.512
RP 247.14 LAP 1.84 LOP 132.28 VP 20.046 GAP -.16 AZP 93.74 TAL 26.66 TAP 180.47 RCA 147.75 APO 247.14 V2 22.176
RC 310.395 GL 26.82 GP -30.43 ZAL 49.35 ZAP 69.68 ETS 169.30 ZAE 94.29 ETE 184.34 ZAC 58.64 ETC 286.61 LVI 7.75

PLANETOCENTRIC CONIC

C3 27.854 VHL 5.278 DLA 32.98 RAL 8.29 RAD 6646.2 VEL 12.157 PTH 7.12 VHP 2.736 DPA -21.35 RAP 30.20 ECC 1.4584
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 46 19 3912.66 -45.14 167.02 265.24 73.01 7 51 32 2912.7 -46.65 132.06
60.00 6 31 52 3951.24 -35.54 166.23 260.99 69.60 7 37 43 2951.2 -40.29 136.20
70.00 5 51 57 4069.53 -23.60 169.95 255.20 64.56 6 59 47 3069.5 -31.95 144.48
72.29 4 58 25 4234.28 -16.43 178.76 251.28 61.00 6 8 59 3234.3 -26.93 155.53
72.29 4 58 25 4234.28 -16.43 178.76 251.28 61.00 6 8 59 3234.3 -26.93 155.53
72.29 4 58 25 4234.28 -16.43 178.76 251.28 61.00 6 8 59 3234.3 -26.93 155.53
110.00 10 51 24 3116.35 -23.60 98.87 255.20 64.56 11 43 20 2116.4 -31.95 73.39

DIFFERENTIAL CORRECTIONS

TDE .3608 TRA-2.6418 TC3-4.2077 BAU 1.8000 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
RDE .3601 RRA -.7088 RC3-2.3791 FAU .39118 RRT .9514 RRF .9873 RTF .9448 ST 55.3 SR 24.2 SS 54.1
FDE 3.9146 FRA-4.2551 FC-12.1583 BSP 10528 SGB 6234.4 R23 .2329 R13 .9596 CRT .8321 CRS -.9686 CST -.6737
BDE .5096 BRA 2.7352 BC3 4.8337 FSP 2074 SGT 5618.4 SGR 2702.0 SG3 1261.2 LSA 74.7 MSA 31.5 S5A 1.2
EL1 59.0 EL2 12.6 ALF 21.01

LAUNCH DATE SEP 1 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.960 GAL 5.22 AZL 85.69 HCA 154.69 SMA 197.56 ECC .25181 INC 4.3055 V1 29.512
RP 247.29 LAP 1.84 LOP 133.17 VP 20.039 GAP -.36 AZP 93.89 TAL 26.39 TAP 181.08 RCA 147.81 APO 247.31 V2 22.161
RC 312.717 GL 27.72 GP -31.08 ZAL 49.95 ZAP 69.07 ETS 168.54 ZAE 93.23 ETE 183.74 ZAC 58.00 ETC 286.73 LVI 8.40

PLANETOCENTRIC CONIC

C3 28.074 VHL 5.298 DLA 33.88 RAL 8.06 RAD 6646.2 VEL 12.166 PTH 7.13 VHP 2.770 DPA -21.95 RAP 30.49 ECC 1.4620
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 39 31 3937.11 -44.63 169.16 265.77 71.43 7 45 8 2937.1 -47.09 134.37
60.00 6 21 17 3985.81 -34.69 168.77 261.02 68.06 7 27 43 2985.8 -40.22 139.14
70.00 5 16 12 4179.40 -20.22 176.69 253.43 61.87 6 25 52 3179.4 -30.01 152.45
70.52 4 46 31 4270.09 -16.77 181.74 251.41 60.12 5 57 41 3270.1 -27.58 158.57
70.52 4 46 31 4270.09 -16.77 181.74 251.41 60.12 5 57 41 3270.1 -27.58 158.57
70.52 4 46 31 4270.09 -16.77 181.74 251.41 60.12 5 57 41 3270.1 -27.58 158.57
110.00 10 15 39 3226.22 -20.22 105.61 253.43 61.87 11 9 25 2226.2 -30.01 81.37

DIFFERENTIAL CORRECTIONS

TDE .4218 TRA-2.6905 TC3-4.2739 BAU 1.8396 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
RDE .4098 RRA -.7304 RC3-2.3997 FAU .37918 RRT .9529 RRF .9881 RTF .9447 ST 57.7 SR 26.6 SS 59.1
FDE 3.9751 FRA-4.1305 FC-11.6932 BSP 10805 SGB 6369.3 R23 .2366 R13 .9594 CRT .8330 CRS -.9757 CST -.8875
BDE .5881 BRA 2.7879 BC3 4.9015 FSP 2028 SGT 5744.6 SGR 2751.0 SG3 1224.6 LSA 78.0 MSA 31.4 S5A 1.2
EL1 62.1 EL2 13.7 ALF 22.18

LAUNCH DATE SEP 1 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

RL 150.98 LAL .00 LOL 338.42 VL 32.966 GAL 5.17 AZL 85.54 HCA 155.57 SMA 197.68 ECC .25193 INC 4.4584 V1 29.512
RP 247.44 LAP 1.84 LOP 134.06 VP 20.033 GAP -.57 AZP 94.06 TAL 26.11 TAP 181.68 RCA 147.88 APO 247.48 V2 22.147
RC 315.013 GL 28.65 GP -31.78 ZAL 50.57 ZAP 68.51 ETS 167.77 ZAE 92.21 ETE 183.14 ZAC 57.33 ETC 286.85 LVI 8.08

PLANETOCENTRIC CONIC

C3 28.331 VHL 5.323 DLA 34.82 RAL 7.81 RAD 6646.3 VEL 12.177 PTH 7.14 VHP 2.807 DPA -22.57 RAP 30.83 ECC 1.4663
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 32 2 3963.37 -44.04 171.41 266.26 69.78 7 38 5 2963.4 -47.31 136.87
60.00 6 9 16 4024.21 -33.68 171.52 260.92 66.42 7 16 21 3024.2 -40.04 142.39
68.79 4 35 11 4303.70 -17.11 184.58 251.55 59.20 5 46 54 3303.7 -28.26 161.49
68.79 4 35 11 4303.70 -17.11 184.58 251.55 59.20 5 46 54 3303.7 -28.26 161.49
68.79 4 35 11 4303.70 -17.11 184.58 251.55 59.20 5 46 54 3303.7 -28.26 161.49
68.79 4 35 11 4303.70 -17.11 184.58 251.55 59.20 5 46 54 3303.7 -28.26 161.49

DIFFERENTIAL CORRECTIONS

TDE .4859 TRA-2.7393 TC3-4.3331 BAU 1.8797 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
RDE .4617 RRA -.7336 RC3-2.4193 FAU .36694 RRT .9536 RRF .9888 RTF .9446 ST 60.3 SR 29.2 SS 56.1
FDE 4.0253 FRA-4.0058 FC-11.2129 BSP 11088 SGB 6504.5 R23 .2400 R13 .9592 CRT .8383 CRS -.9809 CST -.7198
BDE .6703 BRA 2.8411 BC3 4.9627 FSP 1978 SGT 5869.6 SGR 2802.9 SG3 1187.3 LSA 81.5 MSA 31.3 S5A 1.1
EL1 65.4 EL2 14.7 ALF 23.34

LAUNCH DATE SEP 1 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC										DISTANCE 552.297										EARTH TO MARS																																																																																																																																																																								
RL	150.98	LAL	.00	LOL	338.42	VL	32.972	GAL	9.11	AZL	85.38	HCA	158.48	SMA	197.79	ECC	.25205	INC	4.6219	V1	29.512	RP	247.58	LAP	1.84	LOP	134.94	VP	20.028	GAP	-.77	AZP	94.24	TAL	25.82	TAP	182.28	RCA	147.94	APO	247.65	V2	22.133	RC	317.282	GL	29.64	GP	-32.51	ZAL	51.22	ZAP	68.00	ETS	166.99	ZAE	91.22	ETE	182.53	ZAC	56.62	ETC	286.99	LVI	9.81																																																																																																																											
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																								
C3	28.631	VHL	5.351	DLA	35.80	RAL	7.31	RAD	6646.5	VEL	12.189	PTH	7.15	VHP	2.847	DPA	-23.21	RAP	31.21	ECC	1.4712	ST	63.1	SR	31.9	SS	96.9	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	5993.8	SGR	2857.9	SG3	1148.5	RRT	.9547	RRF	.9894	RTF	.9445	CRT	.8442	CRS	-.9848	CST	-.7406	SGB	6640.2	R23	.2433	R13	.9591	LSA	85.2	MSA	31.2	SSA	1.0	50.00	6	23	46	3991.70	-43.34	173.78	266.67	68.06	7	30	18	2991.7	-47.47	139.59	60.00	5	55	26	4067.52	-32.46	174.55	260.65	64.67	7	3	13	3087.5	-39.71	146.02	67.07	4	24	16	4335.53	-17.45	187.32	251.69	58.23	5	36	32	3335.5	-28.95	164.33	67.07	4	24	16	4335.53	-17.45	187.32	251.69	58.23	5	36	32	3335.5	-28.95	164.33	67.07	4	24	16	4335.53	-17.45	187.32	251.69	58.23	5	36	32	3335.5	-28.95	164.33	67.07	4	24	16	4335.53	-17.45	187.32	251.69	58.23	5	36	32	3335.5	-28.95	164.33	67.07	4	24	16	4335.53	-17.45	187.32	251.69	58.23	5	36	32	3335.5	-28.95	164.33
TDE	.5530	TRA	-2.7894	TC3	-4.3840	BAU	1.9200	SGT	5993.8	SGR	2857.9	SG3	1148.5	ST	63.1	SR	31.9	SS	96.9	RDE	.5164	RRA	-.7793	RC3	-2.4373	FAU	.35435	RRT	.9547	RRF	.9894	RTF	.9445	CRT	.8442	CRS	-.9848	CST	-.7406	FDE	4.0664	FRA	-3.8826	FC	-10.7144	BSP	11357	SGB	6640.2	R23	.2433	R13	.9591	LSA	85.2	MSA	31.2	SSA	1.0	BDE	.7566	BRA	2.8963	BC3	5.0160	FSP	1921	SG1	6595.1	SG2	772.8	THA	24.84	EL1	68.9	EL2	15.6	ALF	24.47																																																																																																													

LAUNCH DATE SEP 1 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC										DISTANCE 556.069										EARTH TO MARS																																																																																																																																																												
RL	150.98	LAL	.00	LOL	338.42	VL	32.978	GAL	5.06	AZL	85.20	HCA	157.34	SMA	187.91	ECC	.25217	INC	4.7972	V1	29.512	RP	247.71	LAP	1.85	LOP	135.83	VP	20.023	GAP	-.97	AZP	94.43	TAL	25.54	TAP	182.88	RCA	148.00	APO	247.82	V2	22.120	RC	319.522	GL	30.68	GP	-33.28	ZAL	51.90	ZAP	67.54	ETS	166.18	ZAE	90.27	ETE	181.91	ZAC	55.86	ETC	287.15	LVI	10.58																																																																																																															
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																												
C3	28.982	VHL	5.383	DLA	36.83	RAL	7.16	RAD	6646.8	VEL	12.203	PTH	7.16	VHP	2.890	DPA	-23.88	RAP	31.63	ECC	1.4770	ST	66.0	SR	34.8	SS	57.7	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	6117.3	SGR	2916.8	SG3	1108.7	RRT	.9558	RRF	.9900	RTF	.9443	CRT	.8512	CRS	-.9874	CST	-.7598	50.00	6	14	35	4022.40	-42.53	176.28	267.00	66.27	7	21	38	3022.4	-47.56	142.55	60.00	5	39	4	4117.52	-30.95	177.92	260.14	62.78	6	47	41	3117.5	-39.19	150.17	65.35	4	13	38	4366.06	-17.78	189.99	251.82	57.20	5	26	24	3366.1	-29.66	167.11	65.35	4	13	38	4366.06	-17.78	189.99	251.82	57.20	5	26	24	3366.1	-29.66	167.11	65.35	4	13	38	4366.06	-17.78	189.99	251.82	57.20	5	26	24	3366.1	-29.66	167.11	65.35	4	13	38	4366.06	-17.78	189.99	251.82	57.20	5	26	24	3366.1	-29.66	167.11	65.35	4	13	38	4366.06	-17.78	189.99	251.82	57.20	5	26	24	3366.1	-29.66	167.11
TDE	.6234	TRA	-2.8409	TC3	-4.4261	BAU	1.9609	SGT	6117.3	SGR	2916.8	SG3	1108.7	ST	66.0	SR	34.8	SS	57.7	RDE	.5743	RRA	-.8078	RC3	-2.4538	FAU	.34149	RRT	.9558	RRF	.9900	RTF	.9443	CRT	.8512	CRS	-.9874	CST	-.7598	FDE	4.0982	FRA	-3.7619	FC	-10.2008	BSP	11634	SGB	6777.1	R23	.2464	R13	.9589	LSA	89.1	MSA	31.1	SSA	1.0	BDE	.8476	BRA	2.9535	BC3	5.0608	FSP	1862	SG1	6732.1	SG2	779.4	THA	24.86	EL1	72.8	EL2	16.6	ALF	25.56																																																																																																	

LAUNCH DATE SEP 1 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC										DISTANCE 559.840										EARTH TO MARS																																																																																																																																													
RL	150.98	LAL	.00	LOL	338.42	VL	32.984	GAL	5.01	AZL	85.01	HCA	158.22	SMA	198.03	ECC	.25230	INC	4.9856	V1	29.512	RP	247.84	LAP	1.85	LOP	136.71	VP	20.020	GAP	-1.17	AZP	94.63	TAL	25.25	TAP	183.47	RCA	148.07	APO	248.00	V2	22.107	RC	321.734	GL	31.79	GP	-34.10	ZAL	52.61	ZAP	67.14	ETS	165.36	ZAE	89.35	ETE	181.29	ZAC	55.05	ETC	287.32	LVI	11.40																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																													
C3	29.390	VHL	5.421	DLA	37.91	RAL	6.78	RAD	6646.8	VEL	12.220	PTH	7.17	VHP	2.936	DPA	-24.58	RAP	32.10	ECC	1.4837	ST	69.2	SR	37.8	SS	58.4	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	6241.2	SGR	2979.7	SG3	1067.7	RRT	.9568	RRF	.9906	RTF	.9441	CRT	.8584	CRS	-.9894	CST	-.7769	50.00	6	4	19	4055.85	-41.58	178.93	267.21	64.40	7	11	55	3055.9	-47.57	145.79	60.00	5	18	56	4177.35	-29.01	181.83	259.25	60.71	6	28	33	3177.6	-38.35	155.05	63.63	4	3	11	4395.46	-18.11	192.61	251.95	56.11	5	16	27	3395.5	-30.38	169.87	63.63	4	3	11	4395.46	-18.11	192.61	251.95	56.11	5	16	27	3395.5	-30.38	169.87	63.63	4	3	11	4395.46	-18.11	192.61	251.95	56.11	5	16	27	3395.5	-30.38	169.87	63.63	4	3	11	4395.46	-18.11	192.61	251.95	56.11	5	16	27	3395.5	-30.38	169.87
TDE	.6958	TRA	-2.8940	TC3	-4.4599	BAU	2.0029	SGT	6241.2	SGR	2979.7	SG3	1067.7	ST	69.2	SR	37.8	SS	58.4	RDE	.6354	RRA	-.8389	RC3	-2.4687	FAU	.32834	RRT	.9568	RRF	.9906	RTF	.9441	CRT	.8584	CRS	-.9894	CST	-.7769	FDE	4.1187	FRA	-3.6400	FC3	-9.6721	BSP	11892	SGB	6916.1	R23	.2493	R13	.9587	LSA	93.0	MSA	31.1	SSA	.9	BDE	.9423	BRA	3.0132	BC3	5.0976	FSP	1795	SG1	6871.2	SG2	786.7	THA	24.90	EL1	76.9	EL2	17.4	ALF	26.60																																																																																		

LAUNCH DATE SEP 1 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC										DISTANCE 563.609										EARTH TO MARS																																																																																																																																													
RL	150.98	LAL	.00	LOL	338.42	VL	32.990	GAL	4.96	AZL	84.81	HCA	159.10	SMA	198.16	ECC	.25244	INC	5.1889	V1	29.512	RP	247.97	LAP	1.85	LOP	137.59	VP	20.017	GAP	-1.37	AZP	94.85	TAL	24.96	TAP	184.06	RCA	148.13	APO	248.18	V2	22.095	RC	323.917	GL	32.95	GP	-34.96	ZAL	53.35	ZAP	66.79	ETS	164.52	ZAE	88.48	ETE	180.65	ZAC	54.19	ETC	287.50	LVI	12.27																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																													
C3	29.865	VHL	5.465	DLA	39.04	RAL	6.30	RAD	6647.0	VEL	12.239	PTH	7.19	VHP	2.987	DPA	-25.31	RAP	32.62	ECC	1.4915	ST	72.5	SR	40.9	SS	58.9	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	6363.8	SGR	3046.3	SG3	1025.0	RRT	.9578	RRF	.9910	RTF	.9439	CRT	.8657	CRS	-.9909	CST	-.7921	50.00	5	52	42	4092.57	-40.46	181.74	267.27	62.46	7	0	55	3092.6	-47.46	149.33	60.00	4	51	57	4255.90	-26.31	186.89	257.67	58.29	6	2	53	3255.9	-36.92	161.22	61.88	3	52	51	4424.02	-18.42	195.20	252.07	54.95	5	6	35	3424.0	-31.11	172.62	61.88	3	52	51	4424.02	-18.42	195.20	252.07	54.95	5	6	35	3424.0	-31.11	172.62	61.88	3	52	51	4424.02	-18.42	195.20	252.07	54.95	5	6	35	3424.0	-31.11	172.62	61.88	3	52	51	4424.02	-18.42	195.20	252.07	54.95	5	6	35	3424.0	-31.11	172.62
TDE	.7706	TRA	-2.9488	TC3	-4.4823	BAU	2.0454	SGT	6363.8	SGR	3046.3	SG3	1025.0	ST	72.5	SR	40.9	SS	58.9	RDE	.7002	RRA	-.8733	RC3	-2.4808	FAU	.31479	RRT	.9578	RRF	.9910	RTF	.9439	CRT	.8657	CRS	-.9909	CST	-.7921	FDE	4.1272	FRA	-3.5177	FC3	-9.1254	BSP	12149	SGB	7055.3	R23	.2525	R13	.9585	LSA	97.1	MSA	31.0	SSA	.8	BDE	1.0412	BRA	3.0754	BC3	5.1230	FSP	1726	SG1	7010.4	SG2	794.6	THA	24.97	EL1	81.2	EL2	18.3	ALF	27.58																																																																																		

LAUNCH DATE SEP 1 1973 FLIGHT TIME 268.00 ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC
RL 150.98 LAL .00 LOL 338.42 VL 32.997 GAL 4.80 AZL 84.59 HCA 159.98 SMA 198.28 ECC .25259 INC 5.4090 V1 29.512
RP 248.09 LAP 1.85 LOP 138.48 VP 20.014 GAP -1.57 AZP 95.08 TAL 24.67 TAP 184.65 RCA 148.20 APO 248.38 V2 22.084
RC 326.069 GL 34.19 GP -35.87 ZAL 54.13 ZAP 66.50 ETS 163.66 ZAE 87.66 ETE 180.00 ZAC 53.28 ETC 287.71 LVI 13.19

PLANETOCENTRIC CONIC
C3 30.419 VHL 5.515 DLA 40.22 RAL 5.77 RAD 6647.2 VEL 12.262 PTH 7.21 VHP 3.042 DPA -26.08 RAP 33.19 ECC 1.5006
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 39 27 4133.24 -39.14 184.73 267.11 60.43 6 48 20 3133.2 -47.21 153.23
60.00 3 58 55 4405.86 -20.65 195.34 253.65 54.59 5 12 20 3405.9 -33.28 172.26
60.11 3 42 31 4451.94 -18.72 197.78 252.17 53.73 4 56 43 3451.9 -31.85 175.38
60.11 3 42 31 4451.94 -18.72 197.78 252.17 53.73 4 56 43 3451.9 -31.85 175.38
60.11 3 42 31 4451.94 -18.72 197.78 252.17 53.73 4 56 43 3451.9 -31.85 175.38
60.11 3 42 31 4451.94 -18.72 197.78 252.17 53.73 4 56 43 3451.9 -31.85 175.38

MID-COURSE EXECUTION ACCURACY
SGT 6485.9 SGR 3118.3 SG3 981.2
RRT .9589 RRF .9914 RTF .9436
SGB 7196.6 R23 .2552 R13 .9584
SG1 7151.7 SG2 802.6 THA 25.09
ORBIT DETERMINATION ACCURACY
ST 75.9 SR 44.2 SS 59.3
CRT .8729 CRS -.9920 CST -.8058
LSA 101.3 MSA 31.0 SSA .8
EL1 85.7 EL2 19.1 ALF 28.52

LAUNCH DATE SEP 1 1973 FLIGHT TIME 270.00 ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC
RL 150.98 LAL .00 LOL 338.42 VL 33.003 GAL 4.85 AZL 84.35 HCA 160.85 SMA 198.40 ECC .25274 INC 5.6482 V1 29.512
RP 248.20 LAP 1.85 LOP 139.36 VP 20.013 GAP -1.76 AZP 95.34 TAL 24.38 TAP 185.23 RCA 148.26 APO 248.55 V2 22.073
RC 326.191 GL 35.50 GP -36.84 ZAL 54.94 ZAP 66.27 ETS 162.79 ZAE 86.87 ETE 179.35 ZAC 52.31 ETC 287.94 LVI 14.17

PLANETOCENTRIC CONIC
C3 31.066 VHL 5.574 DLA 41.46 RAL 5.16 RAD 6647.4 VEL 12.288 PTH 7.23 VHP 3.103 DPA -26.88 RAP 33.02 ECC 1.5113
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 24 5 4178.85 -37.56 187.95 266.66 58.32 6 33 44 3178.8 -46.75 157.54
58.31 3 32 6 4479.41 -18.99 200.35 252.25 52.42 4 46 46 3479.4 -32.59 178.18
58.31 3 32 6 4479.41 -18.99 200.35 252.25 52.42 4 46 46 3479.4 -32.59 178.18
58.31 3 32 6 4479.41 -18.99 200.35 252.25 52.42 4 46 46 3479.4 -32.59 178.18
58.31 3 32 6 4479.41 -18.99 200.35 252.25 52.42 4 46 46 3479.4 -32.59 178.18
58.31 3 32 6 4479.41 -18.99 200.35 252.25 52.42 4 46 46 3479.4 -32.59 178.18

MID-COURSE EXECUTION ACCURACY
SGT 6604.6 SGR 3193.6 SG3 935.3
RRT .9599 RRF .9918 RTF .9432
SGB 7336.2 R23 .2582 R13 .9581
SG1 7291.2 SG2 811.4 THA 25.23
ORBIT DETERMINATION ACCURACY
ST 79.4 SR 47.7 SS 59.5
CRT .8796 CRS -.9929 CST -.8176
LSA 105.6 MSA 31.0 SSA .7
EL1 90.4 EL2 19.9 ALF 29.42

LAUNCH DATE SEP 1 1973 FLIGHT TIME 272.00 ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC
RL 150.98 LAL .00 LOL 338.42 VL 33.009 GAL 4.79 AZL 84.09 HCA 161.73 SMA 198.53 ECC .25289 INC 5.9092 V1 29.512
RP 248.30 LAP 1.85 LOP 140.24 VP 20.012 GAP -1.96 AZP 95.61 TAL 24.09 TAP 185.81 RCA 148.32 APO 248.74 V2 22.062
RC 330.283 GL 36.89 GP -37.87 ZAL 55.80 ZAP 66.12 ETS 161.91 ZAE 86.14 ETE 178.68 ZAC 51.27 ETC 288.20 LVI 15.21

PLANETOCENTRIC CONIC
C3 31.825 VHL 5.641 DLA 42.77 RAL 4.45 RAD 6647.7 VEL 12.319 PTH 7.25 VHP 3.171 DPA -27.72 RAP 34.50 ECC 1.5238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 5 54 4230.96 -35.63 191.45 265.82 56.10 6 16 25 3231.0 -46.02 162.36
56.47 3 21 32 4506.61 -19.24 202.93 252.30 51.04 4 36 38 3506.6 -33.33 181.03
56.47 3 21 32 4506.61 -19.24 202.93 252.30 51.04 4 36 38 3506.6 -33.33 181.03
56.47 3 21 32 4506.61 -19.24 202.93 252.30 51.04 4 36 38 3506.6 -33.33 181.03
56.47 3 21 32 4506.61 -19.24 202.93 252.30 51.04 4 36 38 3506.6 -33.33 181.03
56.47 3 21 32 4506.61 -19.24 202.93 252.30 51.04 4 36 38 3506.6 -33.33 181.03

MID-COURSE EXECUTION ACCURACY
SGT 6721.3 SGR 3273.7 SG3 887.6
RRT .9608 RRF .9920 RTF .5-27
SGB 7476.2 R23 .2612 R13 .9577
SG1 7431.0 SG2 820.5 THA 25.41
ORBIT DETERMINATION ACCURACY
ST 83.0 SR 51.3 SS 59.5
CRT .8857 CRS -.9934 CST -.8278
LSA 109.9 MSA 31.1 SSA .7
EL1 95.3 EL2 20.7 ALF 30.30

LAUNCH DATE SEP 1 1973 FLIGHT TIME 274.00 ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC
RL 150.98 LAL .00 LOL 338.42 VL 33.018 GAL 4.74 AZL 83.80 HCA 162.80 SMA 198.68 ECC .25308 INC 6.1953 V1 29.512
RP 248.40 LAP 1.85 LOP 141.12 VP 20.012 GAP -2.16 AZP 95.91 TAL 23.79 TAP 186.39 RCA 148.38 APO 248.93 V2 22.052
RC 332.344 GL 38.37 GP -38.96 ZAL 56.71 ZAP 66.03 ETS 161.02 ZAE 85.47 ETE 178.01 ZAC 50.17 ETC 288.49 LVI 16.38

PLANETOCENTRIC CONIC
C3 32.716 VHL 5.720 DLA 44.13 RAL 3.62 RAD 6648.0 VEL 12.354 PTH 7.28 VHP 3.245 DPA -28.61 RAP 35.26 ECC 1.5384
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 43 40 4292.36 -33.23 195.34 264.39 53.75 5 55 12 3292.4 -44.88 167.84
54.59 3 10 41 4533.70 -19.44 205.54 252.30 49.57 4 26 15 3533.7 -34.06 183.95
54.59 3 10 41 4533.70 -19.44 205.54 252.30 49.57 4 26 15 3533.7 -34.06 183.95
54.59 3 10 41 4533.70 -19.44 205.54 252.30 49.57 4 26 15 3533.7 -34.06 183.95
54.59 3 10 41 4533.70 -19.44 205.54 252.30 49.57 4 26 15 3533.7 -34.06 183.95
54.59 3 10 41 4533.70 -19.44 205.54 252.30 49.57 4 26 15 3533.7 -34.06 183.95

MID-COURSE EXECUTION ACCURACY
SGT 6838.0 SGR 3359.8 SG3 838.2
RRT .9618 RRF .9921 RTF .9420
SGB 7618.8 R23 .2646 R13 .9573
SG1 7573.4 SG2 830.6 THA 25.62
ORBIT DETERMINATION ACCURACY
ST 86.5 SR 55.1 SS 59.2
CRT .8906 CRS -.9938 CST -.8351
LSA 114.2 MSA 31.3 SSA .6
EL1 100.2 EL2 21.6 ALF 31.17

LAUNCH DATE SEP 1 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC

DISTANCE 582.443

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 33.022 GAL 4.68 AZL 83.49 HCA 163.48 SMA 198.78 ECC .25323 INC 6.5104 V1 29.512
RP 248.50 LAP 1.85 LOP 141.89 VP 20.013 GAP -2.35 AZP 96.24 TAL 23.49 TAP 186.97 RCA 148.43 APO 249.12 V2 22.043
RC 334.376 GL 39.95 GP -40.12 ZAL 57.66 ZAP 66.03 ETS 160.13 ZAE 84.85 ETE 177.33 ZAC 49.00 ETC 286.81 LVI 17.50

PLANETOCENTRIC CONIC

C3 33.769 VHL 5.811 DLA 45.56 RAL 2.65 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 3.329 DPA -29.54 RAP 36.08 ECC 1.5558
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 14 41 4369.19 -30.04 199.89 262.00 51.20 5 27 30 3369.2 -43.08 174.34
52.66 2 59 30 4560.86 -19.59 208.18 252.24 48.00 4 15 31 3560.9 -34.77 186.95
52.66 2 59 30 4560.86 -19.59 208.18 252.24 48.00 4 15 31 3560.9 -34.77 186.95
52.66 2 59 30 4560.86 -19.59 208.18 252.24 48.00 4 15 31 3560.9 -34.77 186.95
52.66 2 59 30 4560.86 -19.59 208.18 252.24 48.00 4 15 31 3560.9 -34.77 186.95
52.66 2 59 30 4560.86 -19.59 208.18 252.24 48.00 4 15 31 3560.9 -34.77 186.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1545 TRA-3.2668 TC3-4.3913 BAU 2.2793 SGT 6964.7 SGR 3468.0 SG3 790.7 ST 89.8 SR 58.6 SS 58.4
RDE 1.0827 RRA-1.1237 RC3-2.4912 FAU .24193 RRT .9635 RRF .9923 RTF .9427 CRT .8955 CRS -.9938 CST -.8410
FDE 3.9174 FRA-2.9176 FC3-6.2024 BSP 13257 SGB 7780.3 R23 .2641 R13 .9579 LSA 118.0 MSA 31.3 SSA .6
BDE 1.5828 BRA 3.4547 BC3 5.0487 FSP 1282 SG1 7735.3 SG2 835.8 THA 25.96 EL1 104.8 EL2 22.3 ALF 31.91

LAUNCH DATE SEP 1 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 6 1974

HELIOCENTRIC CONIC

DISTANCE 586.204

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 33.029 GAL 4.63 AZL 83.14 HCA 164.35 SMA 198.91 ECC .25340 INC 6.8594 V1 29.512
RP 248.59 LAP 1.85 LOP 142.87 VP 20.014 GAP -2.54 AZP 96.61 TAL 23.19 TAP 187.54 RCA 148.51 APO 249.32 V2 22.034
RC 336.377 GL 41.64 GP -41.36 ZAL 58.67 ZAP 66.11 ETS 159.23 ZAE 84.30 ETE 176.66 ZAC 47.75 ETC 289.18 LVI 18.78

PLANETOCENTRIC CONIC

C3 35.018 VHL 5.918 DLA 47.06 RAL 1.52 RAD 6648.9 VEL 12.447 PTH 7.35 VHP 3.423 DPA -30.53 RAP 36.99 ECC 1.5763
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 3 28 40 4486.12 -24.88 206.23 257.30 48.04 4 43 28 3486.1 -39.61 183.41
50.67 2 47 48 4588.31 -19.68 210.85 252.10 46.34 4 4 16 3588.3 -35.44 190.06
50.67 2 47 48 4588.31 -19.68 210.85 252.10 46.34 4 4 16 3588.3 -35.44 190.06
50.67 2 47 48 4588.31 -19.68 210.85 252.10 46.34 4 4 16 3588.3 -35.44 190.06
50.67 2 47 48 4588.31 -19.68 210.85 252.10 46.34 4 4 16 3588.3 -35.44 190.06
50.67 2 47 48 4588.31 -19.68 210.85 252.10 46.34 4 4 16 3588.3 -35.44 190.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2333 TRA-3.3330 TC3-4.3108 BAU 2.3242 SGT 7063.8 SGR 3554.8 SG3 734.6 ST 93.1 SR 62.8 SS 57.8
RDE 1.1850 RRA-1.1828 RC3-2.4625 FAU .22431 RRT .9639 RRF .9921 RTF .9404 CRT .8975 CRS -.9939 CST -.8439
FDE 3.8491 FRA-2.7542 FC3-5.5456 BSP 13623 SGB 7907.8 R23 .2711 R13 .9562 LSA 122.3 MSA 31.8 SSA .5
BDE 1.7103 BRA 3.5367 BC3 4.9646 FSP 1216 SG1 7861.9 SG2 850.7 THA 26.21 EL1 109.8 EL2 23.5 ALF 32.88

LAUNCH DATE SEP 1 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC

DISTANCE 589.967

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 33.035 GAL 4.57 AZL 82.75 HCA 165.22 SMA 199.04 ECC .25358 INC 7.2483 V1 29.512
RP 248.67 LAP 1.84 LOP 143.75 VP 20.016 GAP -2.74 AZP 97.01 TAL 22.89 TAP 188.11 RCA 148.57 APO 249.52 V2 22.026
RC 338.347 GL 43.44 GP -42.66 ZAL 59.73 ZAP 66.28 ETS 158.35 ZAE 83.81 ETE 175.98 ZAC 46.42 ETC 289.60 LVI 20.09

PLANETOCENTRIC CONIC

C3 36.512 VHL 6.042 DLA 48.63 RAL .19 RAD 6649.4 VEL 12.506 PTH 7.39 VHP 3.529 DPA -31.56 RAP 37.98 ECC 1.6009
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29
48.64 2 35 29 4616.18 -19.68 213.56 251.84 44.59 3 52 25 3616.2 -36.06 193.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2843 TRA-3.4205 TC3-4.2260 BAU 2.3844 SGT 7186.5 SGR 3681.4 SG3 803.3 ST 95.8 SR 66.4 SS 56.3
RDE 1.2716 RRA-1.2728 RC3-2.4498 FAU .20893 RRT .9657 RRF .9920 RTF .9408 CRT .8995 CRS -.9935 CST -.8443
FDE 3.6986 FRA-2.6450 FC3-4.9539 BSP 13688 SGB 8074.5 R23 .2710 R13 .9566 LSA 125.4 MSA 32.1 SSA .5
BDE 1.8073 BRA 3.6496 BC3 4.8848 FSP 1086 SG1 8029.0 SG2 855.8 THA 26.65 EL1 114.0 EL2 24.4 ALF 33.66

LAUNCH DATE SEP 1 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC

DISTANCE 593.722

EARTH TO MARS

RL 150.98 LAL .00 LOL 338.42 VL 33.042 GAL 4.52 AZL 82.32 HCA 166.09 SMA 199.17 ECC .25376 INC 7.6842 V1 29.512
RP 248.75 LAP 1.84 LOP 144.63 VP 20.018 GAP -2.93 AZP 97.46 TAL 22.59 TAP 188.60 RCA 148.63 APO 249.72 V2 22.019
RC 340.287 GL 45.37 GP -44.05 ZAL 60.86 ZAP 66.55 ETS 157.49 ZAE 83.41 ETE 175.31 ZAC 45.00 ETC 290.07 LVI 21.51

PLANETOCENTRIC CONIC

C3 38.308 VHL 6.189 DLA 50.26 RAL 358.62 RAD 6650.1 VEL 12.577 PTH 7.44 VHP 3.649 DPA -32.64 RAP 39.07 ECC 1.6304
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65
46.54 2 22 22 4644.72 -19.58 216.32 251.44 42.73 3 39 47 3644.7 -36.60 196.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3453 TRA-3.4900 TC3-4.0928 BAU 2.4276 SGT 7263.6 SGR 3767.8 SG3 620.6 ST 98.4 SR 70.9 SS 55.2
RDE 1.3937 RRA-1.3410 FC3-2.3911 FAU .18904 RRT .9652 RRF .9912 RTF .9359 CRT .8969 CRS -.9932 CST -.8395
FDE 3.5989 FRA-2.4440 FC3-4.2723 BSP 14214 SGB 8182.7 R23 .2841 R13 .9529 LSA 129.0 MSA 33.3 SSA .5
BDE 1.9371 BRA 3.7387 BC3 4.7401 FSP 1040 SG1 8135.3 SG2 879.2 THA 26.94 EL1 118.5 EL2 26.1 ALF 34.81

LAUNCH DATE SEP 2 1973      FLIGHT TIME 110.00      ARRIVAL DATE DEC 21 1973

EARTH TO MARS

HELIOCENTRIC CONIC      DISTANCE 270.203

RL 150.94 LAL .00 LOL 339.39 VL 33.993 GAL 7.24 AZL 89.55 HCA 84.09 SMA 220.09 ECC .33618 INC .4537 V1 29.819  
 RP 225.20 LAP .45 LOP 63.47 VP 23.993 GAP 19.60 AZP 89.95 TAL 29.24 TAP 113.33 RCA 146.10 APO 294.08 V2 24.422  
 RC 112.011 GL 2.43 GP -6.31 ZAL 41.88 ZAP 162.20 ETS 202.69 ZAE 160.47 ETE 338.08 ZAC 76.12 ETC 282.35 LVI -9.38

PLANETOCENTRIC CONIC

C3 39.833 VHL 6.311 DLA 10.52 RAL 18.67 RAD 6650.6 VEL 12.637 PTH 7.49 VHP 6.076 DPA 10.62 RAP 46.52 ECC 1.6855  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 9 53 3515.29 -46.47 129.52 263.06 101.62 10 8 29 2515.3 -36.76 99.67  
 60.00 9 37 59 3440.51 -39.74 124.33 264.60 97.36 10 35 20 2440.5 -32.53 95.77  
 70.00 10 17 18 3324.82 -33.93 115.69 265.33 94.17 11 12 43 2324.8 -28.71 88.22  
 80.00 11 13 40 3148.28 -29.79 102.57 265.60 92.09 12 6 9 2148.3 -25.91 75.82  
 90.00 12 29 51 2902.42 -28.25 84.55 265.65 91.34 13 18 13 1902.4 -24.85 58.05  
 100.00 13 56 32 2622.73 -29.79 63.93 265.60 92.09 14 40 15 1622.7 -25.91 37.18  
 110.00 15 16 45 2371.64 -33.93 44.61 265.33 94.17 15 56 16 1371.6 -28.71 17.14

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3000 TRA -.6587 TC3 .4873 BAU .2727      SGT 906.9 SGR 682.9 SG3 241.0      ST 16.4 SR 31.0 S8 5.3  
 RDE -.6800 RRA .2320 RC3 -.1572 FAU .09916      RRT -.1360 RRF .2076 RTF -.5154      CRT .7669 CRS .1888 CST -.4014  
 FDE .0221 FRA -.6678 FC3-2.1551 B5P 1087      SGB 1135.2 R23 -.0536 R13 .5310      LSA 33.7 MSA 10.8 S8A 2.3  
 BDE .7432 BRA .6983 BC3 .5120 F5P 329      SG1 917.2 SG2 668.9 THA 167.34      EL1 33.7 EL2 9.7 ALF 65.80

LAUNCH DATE SEP 2 1973      FLIGHT TIME 112.00      ARRIVAL DATE DEC 23 1973

EARTH TO MARS

HELIOCENTRIC CONIC      DISTANCE 273.629

RL 150.94 LAL .00 LOL 339.39 VL 33.914 GAL 7.24 AZL 89.51 HCA 85.15 SMA 218.14 ECC .33057 INC .4864 V1 29.519  
 RP 225.59 LAP .48 LOP 64.54 VP 23.838 GAP 19.21 AZP 89.96 TAL 29.65 TAP 114.80 RCA 146.03 APO 290.25 V2 24.380  
 RC 114.516 GL 2.62 GP -6.67 ZAL 41.40 ZAP 161.17 ETS 201.94 ZAE 160.89 ETE 336.87 ZAC 75.95 ETC 282.36 LVI -9.22

PLANETOCENTRIC CONIC

C3 39.109 VHL 6.254 DLA 10.52 RAL 18.13 RAD 6650.4 VEL 12.609 PTH 7.47 VHP 5.895 DPA 10.47 RAP 46.59 ECC 1.6436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 7 47 3510.51 -46.40 129.08 262.07 101.96 10 6 17 2510.5 -36.58 99.35  
 60.00 9 35 53 3435.71 -39.69 123.93 263.65 97.63 10 33 9 2435.7 -32.39 95.44  
 70.00 10 15 13 3319.99 -33.90 115.32 264.41 94.39 11 10 33 2320.0 -28.60 87.89  
 80.00 11 11 35 3143.40 -29.78 102.21 264.69 92.28 12 3 59 2143.4 -25.82 75.48  
 90.00 12 27 46 2897.55 -28.24 84.19 264.75 91.52 13 16 3 1897.5 -24.77 57.72  
 100.00 13 54 27 2617.87 -29.78 63.57 264.69 92.28 14 38 5 1617.9 -25.82 36.85  
 110.00 15 14 39 2366.81 -33.90 44.23 264.41 94.39 15 54 6 1366.8 -28.60 16.81

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3022 TRA -.6528 TC3 .5015 BAU .2766      SGT 916.5 SGR 689.3 SG3 256.7      ST 16.6 SR 31.2 S8 5.7  
 RDE -.6776 RRA .2283 RC3 -.1687 FAU .10445      RRT -.1423 RRF .2214 RTF -.5159      CRT .7724 CRS .1758 CST -.4098  
 FDE .0210 FRA -.7311 FC3-2.3122 B8P 1122      SGB 1146.8 R23 -.0613 R13 .5336      LSA 34.0 MSA 11.0 S8A 2.4  
 BDE .7419 BRA .6915 BC3 .5291 F5P 354      SG1 927.9 SG2 673.9 THA 166.89      EL1 34.0 EL2 9.7 ALF 65.54

LAUNCH DATE SEP 2 1973      FLIGHT TIME 114.00      ARRIVAL DATE DEC 25 1973

EARTH TO MARS

HELIOCENTRIC CONIC      DISTANCE 277.092

RL 150.94 LAL .00 LOL 339.39 VL 33.839 GAL 7.24 AZL 89.48 HCA 86.22 SMA 216.34 ECC .32534 INC .5189 V1 29.519  
 RP 225.98 LAP .52 LOP 65.60 VP 23.689 GAP 18.82 AZP 89.97 TAL 30.04 TAP 116.26 RCA 145.96 APO 286.73 V2 24.338  
 RC 117.057 GL 2.81 GP -6.84 ZAL 40.94 ZAP 160.12 ETS 201.25 ZAE 161.34 ETE 335.53 ZAC 75.78 ETC 282.37 LVI -9.06

PLANETOCENTRIC CONIC

C3 38.443 VHL 6.200 DLA 10.52 RAL 17.62 RAD 6650.1 VEL 12.583 PTH 7.45 VHP 5.719 DPA 10.31 RAP 46.65 ECC 1.6327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 5 43 3506.17 -46.34 128.88 261.13 102.26 10 4 9 2506.2 -36.42 99.05  
 60.00 9 33 50 3431.36 -39.65 123.57 262.75 97.87 10 31 1 2431.4 -32.26 95.15  
 70.00 10 13 9 3315.65 -33.88 114.98 263.54 94.59 11 8 25 2315.6 -28.50 87.59  
 80.00 11 9 32 3139.05 -29.77 101.88 263.84 92.45 12 1 51 2139.1 -25.74 75.18  
 90.00 12 25 42 2893.20 -28.23 83.88 263.90 91.67 13 13 55 1893.2 -24.70 57.42  
 100.00 13 52 23 2613.52 -29.77 63.25 263.84 92.45 14 35 57 1613.5 -25.74 36.55  
 110.00 15 12 36 2362.46 -33.88 43.90 263.54 94.59 15 51 58 1362.5 -28.50 16.51

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3040 TRA -.6470 TC3 .5147 BAU .2803      SGT 925.2 SGR 695.7 SG3 273.2      ST 16.8 SR 31.4 S8 6.0  
 RDE -.6752 RRA .2243 RC3 -.1807 FAU .11002      RRT -.1490 RRF .2357 RTF -.5.60      CRT .7776 CRS .1662 CST -.4151  
 FDE .0205 FRA -.7981 FC3-2.4775 B5P 1154      SGB 1157.6 R23 -.0689 R13 .5360      LSA 34.2 MSA 11.1 S8A 2.5  
 BDE .7405 BRA .6848 BC3 .5455 F5P 380      SG1 937.7 SG2 678.8 THA 166.38      EL1 34.2 EL2 9.7 ALF 65.31

LAUNCH DATE SEP 2 1973      FLIGHT TIME 116.00      ARRIVAL DATE DEC 27 1973

EARTH TO MARS

HELIOCENTRIC CONIC      DISTANCE 280.587

RL 150.94 LAL .00 LOL 339.39 VL 33.769 GAL 7.25 AZL 89.45 HCA 87.28 SMA 214.69 ECC .32044 INC .5511 V1 29.519  
 RP 226.37 LAP .55 LOP 66.86 VP 23.545 GAP 18.44 AZP 89.97 TAL 30.43 TAP 117.70 RCA 145.89 APO 283.48 V2 24.297  
 RC 119.833 GL 3.00 GP -7.02 ZAL 40.50 ZAP 159.06 ETS 200.63 ZAE 161.82 ETE 334.03 ZAC 75.62 ETC 282.38 LVI -8.90

PLANETOCENTRIC CONIC

C3 37.829 VHL 6.151 DLA 10.52 RAL 17.12 RAD 6649.9 VEL 12.558 PTH 7.43 VHP 5.550 DPA 10.13 RAP 46.69 ECC 1.6226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 9 3 42 3502.24 -46.28 128.32 260.25 102.54 10 2 4 2502.2 -36.28 98.79  
 60.00 9 31 48 3427.45 -39.62 123.24 261.90 98.09 10 28 56 2427.5 -32.15 94.88  
 70.00 10 11 7 3311.77 -33.86 114.68 262.71 94.77 11 6 19 2311.8 -28.41 87.32  
 80.00 11 7 29 3135.20 -29.76 101.60 263.02 92.59 11 59 44 2135.2 -25.67 74.92  
 90.00 12 23 40 2889.36 -28.23 83.60 263.09 91.81 13 11 49 1889.4 -24.64 57.16  
 100.00 13 50 21 2609.67 -29.76 62.97 263.02 92.59 14 33 51 1609.7 -25.67 36.29  
 110.00 15 10 34 2358.59 -33.86 43.60 262.71 94.77 15 49 52 1358.6 -28.41 16.24

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.3056 TRA -.6412 TC3 .5270 BAU .2839      SGT 933.0 SGR 702.1 SG3 290.6      ST 16.9 SR 31.5 S8 6.4  
 RDE -.6729 RRA .2201 RC3 -.1933 FAU .11585      RRT -.1563 RRF .2507 RTF -.5160      CRT .7825 CRS .1583 CST -.4185  
 FDE .0203 FRA -.8669 FC3-2.6513 B5P 1179      SGB 1167.7 R23 -.0764 R13 .5386      LSA 34.4 MSA 11.3 S8A 2.5  
 BDE .7391 BRA .6780 BC3 .5613 F5P 409      SG1 946.8 SG2 683.4 THA 165.76      EL1 34.4 EL2 9.6 ALF 65.11



LAUNCH DATE SEP 2 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 20 1973

HELIOCENTRIC CONIC												DISTANCE 284.112												EARTH TO MARS																																																							
RL	150.94	LAL	.00	LOL	339.39	VL	33.703	GAL	7.25	AZL	89.42	HCA	88.33	SMA	213.16	ECC	.31906	INC	.9832	V1	29.510	RP	226.76	LAP	.58	LOP	67.72	VP	23.408	GAP	18.06	AZP	89.98	TAL	30.80	TAP	119.13	RCA	145.83	APO	280.49	V2	24.255	RC	122.840	GL	3.20	GP	-7.20	ZAL	40.08	ZAP	157.97	ETS	200.08	ZAE	162.34	ETE	332.37	ZAC	75.44	ETC	282.39	LVI	-8.74														
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																							
C3	37.262	VHL	6.104	DLA	10.54	RAL	16.64	RAD	6649.7	VEL	12.536	PTH	7.41	VHP	5.388	DPA	9.95	RAP	46.71	ECC	1.8132	SGT	939.9	SGR	708.7	SG3	309.0	ST	17.1	SR	31.6	SS	6.8	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRT	.7872	CR8	.1513	CST	-.4212														
50.00	9	1	44	3498.71	-46.23	127.99	259.42	102.78	10	0	3	2498.7	-36.14	98.56	80.00	11	5	28	3131.83	-29.74	101.35	262.25	92.73	11	57	40	2131.8	-25.61	74.69	100.00	13	48	20	2606.31	-29.74	62.72	262.25	92.73	14	31	46	1606.3	-25.61	36.06	110.00	15	8	33	2355.16	-33.84	43.33	261.93	94.93	15	47	49	1355.2	-28.33	16.01																				
TDE	-.3071	TRA	-.6358	TC3	.5383	BAU	.2872	SGT	939.9	SGR	708.7	SG3	309.0	ST	17.1	SR	31.6	SS	6.8	RDE	-.6707	RRA	.2155	RC3	-.2066	FAU	.12200	RRT	-.1640	RRF	.2665	RTF	-.5155	CRT	.7872	CR8	.1513	CST	-.4212	FDE	.0201	FRA	-.9440	FC3	-2.8346	BSP	1197	SG8	1177.1	R23	-.0842	R13	.5410	LSA	34.6	MSA	11.5	SSA	2.8	BDE	.7376	BRA	.6714	BC3	.5766	FSP	439	SG1	955.3	SG2	687.9	THA	165.10	EL1	34.6	EL2	9.6	ALF	64.91

LAUNCH DATE SEP 2 1973

FLIGHT TIME 120.00

ARRIVAL DATE DEC 31 1973

HELIOCENTRIC CONIC												DISTANCE 287.663												EARTH TO MARS																																																							
RL	150.94	LAL	.00	LOL	339.39	VL	33.642	GAL	7.25	AZL	89.38	HCA	89.38	SMA	211.74	ECC	.31159	INC	.6132	V1	29.510	RP	227.15	LAP	.62	LOP	68.77	VP	23.276	GAP	17.68	AZP	89.99	TAL	31.15	TAP	120.54	RCA	145.77	APO	277.72	V2	24.214	RC	124.878	GL	3.39	GP	-7.39	ZAL	39.69	ZAP	156.87	ETS	199.53	ZAE	162.87	ETE	330.52	ZAC	75.27	ETC	282.41	LVI	-8.58														
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																							
C3	36.737	VHL	6.061	DLA	10.56	RAL	16.18	RAD	6649.5	VEL	12.515	PTH	7.40	VHP	5.232	DPA	9.76	RAP	46.71	ECC	1.6046	SGT	945.8	SGR	715.3	SG3	326.2	ST	17.2	SR	31.7	SS	7.1	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRT	.7918	CR8	.1469	CST	-.4213														
50.00	8	59	49	3495.57	-46.18	127.71	258.63	103.00	9	58	5	2495.6	-36.03	98.35	80.00	11	3	28	3128.94	-29.73	101.13	261.52	92.84	11	55	37	2128.9	-25.55	74.49	100.00	13	46	20	2603.41	-29.73	62.50	261.52	92.84	14	29	43	1603.4	-25.55	35.86	110.00	15	6	35	2352.18	-33.82	43.10	261.19	95.06	15	45	47	1352.2	-28.26	15.80																				
TDE	-.3086	TRA	-.6308	TC3	.5481	BAU	.2902	SGT	945.8	SGR	715.3	SG3	326.2	ST	17.2	SR	31.7	SS	7.1	RDE	-.6684	RRA	.2106	RC3	-.2205	FAU	.12845	RRT	-.1716	RRF	.2830	RTF	-.5140	CRT	.7918	CR8	.1469	CST	-.4213	FDE	.0207	FRA	-1.0234	FC3	-3.0269	BSP	1214	SG8	1185.9	R23	-.0925	R13	.5429	LSA	34.8	MSA	11.7	SSA	2.8	BDE	.7362	BRA	.6651	BC3	.5908	FSP	471	SG1	962.8	SG2	692.2	THA	164.38	EL1	34.8	EL2	9.6	ALF	64.70

LAUNCH DATE SEP 2 1973

FLIGHT TIME 122.00

ARRIVAL DATE JAN 2 1974

HELIOCENTRIC CONIC												DISTANCE 291.238												EARTH TO MARS																																																							
RL	150.94	LAL	.00	LOL	339.39	VL	33.584	GAL	7.25	AZL	89.35	HCA	90.43	SMA	210.43	ECC	.30758	INC	.6470	V1	29.510	RP	227.54	LAP	.65	LOP	69.82	VP	23.149	GAP	17.32	AZP	90.01	TAL	31.49	TAP	121.93	RCA	145.71	APO	275.16	V2	24.172	RC	127.544	GL	3.58	GP	-7.58	ZAL	39.32	ZAP	155.74	ETS	199.04	ZAE	163.43	ETE	328.44	ZAC	75.10	ETC	282.43	LVI	-8.42														
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																							
C3	36.252	VHL	6.021	DLA	10.59	RAL	15.74	RAD	6649.3	VEL	12.496	PTH	7.38	VHP	5.082	DPA	9.55	RAP	46.70	ECC	1.5966	SGT	950.7	SGR	722.2	SG3	348.3	ST	17.4	SR	31.8	SS	7.3	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRT	.7962	CR8	.1429	CST	-.4210														
50.00	8	57	57	3492.80	-46.14	127.45	257.90	103.19	9	56	10	2492.8	-35.92	98.17	80.00	11	1	29	3126.49	-29.73	100.95	260.84	92.93	11	53	36	2126.5	-25.51	74.32	100.00	13	44	21	2600.96	-29.73	62.32	260.84	92.93	14	27	42	1601.0	-25.51	35.69	110.00	15	4	39	2349.61	-33.81	42.90	260.50	95.18	15	43	48	1349.6	-28.20	15.63																				
TDE	-.3102	TRA	-.6285	TC3	.5563	BAU	.2927	SGT	950.7	SGR	722.2	SG3	348.3	ST	17.4	SR	31.8	SS	7.3	RDE	-.6861	RRA	.2055	RC3	-.2350	FAU	.13521	RRT	-.1793	RRF	.3002	RTF	-.5.14	CRT	.7962	CR8	.1429	CST	-.4210	FDE	.0215	FRA	-1.1088	FC3	-3.2290	BSP	1226	SG8	1193.8	R23	-.1018	R13	.5442	LSA	35.0	MSA	11.9	SSA	2.7	BDE	.7348	BRA	.6593	BC3	.6039	FSP	505	SG1	969.5	SG2	698.6	THA	163.61	EL1	35.0	EL2	9.6	ALF	64.48

LAUNCH DATE SEP 2 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 4 1974

HELIOCENTRIC CONIC												DISTANCE 294.834												EARTH TO MARS																																																							
RL	150.94	LAL	.00	LOL	339.39	VL	33.529	GAL	7.26	AZL	89.32	HCA	91.48	SMA	209.22	ECC	.30384	INC	.6787	V1	29.510	RP	227.93	LAP	.68	LOP	70.86	VP	23.026	GAP	16.95	AZP	90.02	TAL	31.82	TAP	123.30	RCA	145.65	APO	272.79	V2	24.131	RC	130.237	GL	3.78	GP	-7.78	ZAL	38.96	ZAP	154.60	ETS	198.58	ZAE	164.00	ETE	326.11	ZAC	74.92	ETC	282.45	LVI	-8.28														
PLANETOCENTRIC CONIC												MID-COURSE EXECUTION ACCURACY												ORBIT DETERMINATION ACCURACY																																																							
C3	35.801	VHL	5.983	DLA	10.62	RAL	15.32	RAD	6649.2	VEL	12.478	PTH	7.37	VHP	4.937	DPA	9.33	RAP	46.66	ECC	1.5892	SGT	954.5	SGR	729.2	SG3	369.7	ST	17.5	SR	31.9	SS	7.9	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CRT	.8006	CR8	.1402	CST	-.4193														
50.00	8	56	8	3490.39	-46.10	127.23	257.21	103.35	9	54	18	2490.4	-35.83	98.01	80.00	10	59	31	3124.49	-29.72	100.80	260.19	93.01	11	51	36	2124.5	-25.47	74.19	100.00	13	42	23	2598.96	-29.72	62.17	260.19	93.01	14	25	42	1599.0	-25.47	35.55	110.00	15	2	44	2347.48	-33.79	42.73	259.84	95.28	15	41	51	1347.5	-28.15	15.48																				
TDE	-.3119	TRA	-.6226	TC3	.5630	BAU	.2949	SGT	954.5	SGR	729.2	SG3	369.7	ST	17.5	SR	31.9	SS	7.9	RDE	-.6639	RRA	.1999	RC3	-.2503	FAU	.14230	RRT	-.1868	RRF	.3181	RTF	-.5078	CRT	.8006	CR8	.1402	CST	-.4193	FDE	.0229	FRA	-1.1955	FC3	-3.4411	BSP	1237	SG8	1201.2	R23	-.1114	R13	.5451	LSA	35.1	MSA	12.1	SSA	2.7	BDE	.7335	BRA	.6539	BC3	.6161	FSP	541	SG1	975.4	SG2	701.0	THA	162.78	EL1	35.1	EL2	9.5	ALF	64.25

LAUNCH DATE SEP 2 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 6 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 33.478 GAL 7.26 AZL 89.29 HCA 92.52 SMA 208.10 ECC .30034 INC .7103 V1 29.519  
 RC 226.32 LAP .71 LOP 71.91 VP 22.909 GAP 16.59 AZP 90.03 TAL 32.13 TAP 124.65 RCA 145.60 APO 270.60 V2 24.090  
 RP 132.954 GL 3.97 GP -7.98 ZAL 38.63 ZAP 153.43 ETS 198.16 ZAE 164.57 ETE 323.50 ZAC 74.74 ETC 282.48 LVI -8.10

Distance 298.451 Earth to Mars

Planetocentric Conic: C3 35.383 VHL 5.948 DLA 10.67 RAL 14.92 RAD 6649.0 VEL 12.461 PTH 7.36 VHP 4.799 DPA 9.10 RAP 46.61 ECC 1.5823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 54 21 3488.32 -46.07 127.04 256.57 103.50 9 52 29 2488.3 -35.75 97.67  
 60.00 9 22 17 3413.99 -39.48 122.12 259.34 98.84 10 19 11 2414.0 -31.75 93.97  
 70.00 10 1 24 3298.89 -33.78 113.68 259.22 95.35 10 56 23 2298.9 -28.11 86.44  
 80.00 10 57 34 3122.91 -29.71 100.69 259.58 93.07 11 49 37 2122.9 -25.44 74.08  
 90.00 12 13 40 2877.35 -28.20 82.72 259.66 92.25 13 1 37 1877.3 -24.43 56.34  
 100.00 13 40 26 2597.38 -29.71 62.05 259.58 93.07 14 23 44 1597.4 -25.44 35.45  
 110.00 15 0 50 2345.71 -33.78 42.60 259.22 95.35 15 39 56 1345.7 -28.11 15.36

Differential Corrections: TDE -.3138 TRA -.6197 TC3 .5677 BAU .2966 SGT 957.3 SGR 736.6 SG3 392.1 ST 17.7 SR 32.0 SS 8.3  
 RDE -.6616 RRA .1939 RC3 -.2663 FAU .14972 RRT -.1940 RRF .3367 RTF -.5026 CRT .6047 CR8 .1384 CST -.4170  
 FDE .0248 FRA -1.2687 FC3 -3.6634 BSP 1245 SGB 1207.9 R23 -.1223 R13 .5451 LSA 35.3 MSA 12.3 SSA 2.8  
 BDE .7322 BRA .6493 BC3 .6270 F8P 578 SG1 980.3 SG2 705.6 THA 161.90 EL1 35.3 EL2 9.5 ALF 64.00

LAUNCH DATE SEP 2 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 8 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 33.430 GAL 7.26 AZL 89.26 HCA 93.56 SMA 207.06 ECC .29706 INC .7419 V1 29.519  
 RC 226.70 LAP .74 LOP 72.94 VP 22.795 GAP 16.24 AZP 90.05 TAL 32.43 TAP 125.99 RCA 145.55 APO 268.57 V2 24.049  
 RP 135.894 GL 4.16 GP -8.20 ZAL 38.32 ZAP 152.25 ETS 197.76 ZAE 165.15 ETE 320.97 ZAC 74.56 ETC 282.51 LVI -7.94

Distance 302.086 Earth to Mars

Planetocentric Conic: C3 34.993 VHL 5.915 DLA 10.72 RAL 14.53 RAD 6648.9 VEL 12.446 PTH 7.35 VHP 4.685 DPA 8.85 RAP 46.54 ECC 1.5759  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 37 3488.59 -46.04 126.88 255.97 103.62 9 50 44 2486.6 -35.69 97.76  
 60.00 9 20 29 3412.42 -39.47 121.99 257.75 98.92 10 17 22 2412.4 -31.70 93.86  
 70.00 9 59 32 3297.52 -33.77 113.57 258.65 95.42 10 54 30 2297.5 -28.08 86.35  
 80.00 10 55 39 3121.75 -29.71 100.60 259.00 93.12 11 47 40 2121.7 -25.42 74.00  
 90.00 12 11 42 2876.28 -28.19 82.64 259.08 92.29 12 59 38 1876.3 -24.41 56.27  
 100.00 13 38 30 2596.22 -29.71 61.97 259.00 93.12 14 21 47 1596.2 -25.42 35.37  
 110.00 14 58 58 2344.54 -33.77 42.49 258.65 95.42 15 38 3 1344.3 -28.08 15.27

Differential Corrections: TDE -.3158 TRA -.6176 TC3 .5702 BAU .2978 SGT 958.8 SGR 744.3 SG3 415.3 ST 17.8 SR 32.0 SS 8.7  
 RDE -.6592 RRA .1876 RC3 -.2830 FAU .15744 RRT -.2006 RRF .3559 RTF -.4959 CRT .6087 CR8 .1380 CST -.4133  
 FDE .0275 FRA -1.3854 FC3 -3.6931 BSP 1252 SGB 1213.8 R23 -.1342 R13 .5445 LSA 35.4 MSA 12.6 SSA 2.8  
 BDE .7310 BRA .6455 BC3 .6388 F8P 618 SG1 984.3 SG2 710.3 THA 180.96 EL1 35.4 EL2 9.5 ALF 63.73

LAUNCH DATE SEP 2 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 10 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 33.385 GAL 7.26 AZL 89.23 HCA 94.59 SMA 206.09 ECC .29400 INC .7735 V1 29.519  
 RC 229.09 LAP .77 LOP 73.98 VP 22.686 GAP 15.88 AZP 90.06 TAL 32.71 TAP 127.30 RCA 145.50 APO 266.68 V2 24.008  
 RP 138.457 GL 4.36 GP -8.41 ZAL 38.04 ZAP 151.05 ETS 197.36 ZAE 165.70 ETE 317.27 ZAC 74.37 ETC 282.54 LVI -7.78

Distance 305.737 Earth to Mars

Planetocentric Conic: C3 34.630 VHL 5.885 DLA 10.78 RAL 14.17 RAD 6648.8 VEL 12.431 PTH 7.34 VHP 4.537 DPA 8.59 RAP 46.45 ECC 1.5699  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 50 56 3485.16 -46.02 126.75 255.41 103.71 9 49 1 2485.2 -35.63 97.67  
 60.00 9 18 44 3411.18 -39.45 121.89 257.20 98.99 10 15 35 2411.2 -31.66 93.78  
 70.00 9 57 42 3296.52 -33.77 113.50 258.10 95.46 10 52 38 2296.5 -28.05 86.28  
 80.00 10 53 44 3120.99 -29.71 100.54 258.46 93.15 11 45 45 2121.0 -25.40 73.99  
 90.00 12 9 45 2875.83 -28.19 82.59 258.54 92.32 12 57 41 1875.6 -24.40 56.22  
 100.00 13 36 36 2595.46 -29.71 61.91 258.46 93.15 14 19 51 1595.5 -25.40 35.32  
 110.00 14 57 8 2343.33 -33.77 42.42 258.10 95.46 15 36 11 1343.3 -28.05 15.20

Differential Corrections: TDE -.3179 TRA -.6181 TC3 .5711 BAU .2980 SGT 959.4 SGR 752.4 SG3 439.7 ST 18.0 SR 32.1 SS 9.2  
 RDE -.6588 RRA .1809 RC3 -.3003 FAU .16554 RRT -.2088 RRF .3759 RTF -.4080 CRT .6125 CR8 .1387 CST -.4087  
 FDE .0310 FRA -1.4877 FC3 -4.1385 BSP 1253 SGB 1219.3 R23 -.1489 R13 .5418 LSA 35.6 MSA 12.9 SSA 2.9  
 BDE .7297 BRA .6421 BC3 .6454 F8P 639 SG1 987.4 SG2 715.3 THA 159.94 EL1 35.6 EL2 9.5 ALF 63.48

LAUNCH DATE SEP 2 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 12 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 33.343 GAL 7.26 AZL 89.19 HCA 95.62 SMA 205.19 ECC .29113 INC .8049 V1 29.519  
 RC 229.48 LAP .80 LOP 75.01 VP 22.581 GAP 15.54 AZP 90.08 TAL 32.97 TAP 128.59 RCA 145.46 APO 264.93 V2 23.987  
 RP 141.241 GL 4.53 GP -8.64 ZAL 37.77 ZAP 149.82 ETS 197.01 ZAE 166.24 ETE 313.87 ZAC 74.19 ETC 282.58 LVI -7.63

Distance 309.404 Earth to Mars

Planetocentric Conic: C3 34.291 VHL 5.856 DLA 10.85 RAL 13.82 RAD 6648.6 VEL 12.418 PTH 7.33 VHP 4.415 DPA 8.32 RAP 46.34 ECC 1.5643  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 17 3484.04 -46.00 126.65 254.89 103.79 9 47 21 2484.0 -35.59 97.59  
 60.00 9 17 0 3410.27 -39.44 121.81 256.69 99.04 10 13 50 2410.3 -31.63 93.71  
 70.00 9 55 53 3295.87 -33.76 113.45 257.59 95.49 10 50 49 2295.9 -28.04 86.24  
 80.00 10 51 49 3120.62 -29.71 100.52 257.96 93.16 11 43 50 2120.6 -25.40 73.92  
 90.00 12 7 48 2875.39 -28.19 82.58 258.04 92.32 12 55 44 1875.4 -24.40 56.20  
 100.00 13 34 41 2595.09 -29.71 61.88 257.96 93.16 14 17 56 1595.1 -25.40 35.29  
 110.00 14 55 19 2342.69 -33.76 42.37 257.59 95.49 15 34 22 1342.7 -28.04 15.15

Differential Corrections: TDE -.3203 TRA -.6159 TC3 .5695 BAU .2992 SGT 958.9 SGR 761.1 SG3 465.2 ST 18.2 SR 32.1 SS 9.6  
 RDE -.6543 RRA .1737 RC3 -.3189 FAU .17397 RRT -.2119 RRF .3964 RTF -.4778 CRT .6162 CR8 .1395 CST -.4042  
 FDE .0351 FRA -1.5945 FC3 -4.3922 BSP 1255 SGB 1224.2 R23 -.1612 R13 .5418 LSA 35.7 MSA 13.1 SSA 2.9  
 BDE .7284 BRA .6399 BC3 .6527 F8P 703 SG1 989.6 SG2 720.7 THA 158.66 EL1 35.7 EL2 9.5 ALF 63.14

LAUNCH DATE SEP 2 1973 FLIGHT TIME 134.00 ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC DISTANCE 313.064 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.304 GAL 7.25 AZL 89.16 HCA 96.65 SMA 204.38 ECC .28844 INC .8366 V1 29.919  
 RP 229.86 LAP .83 LOP 76.04 VP 22.479 GAP 15.19 AZP 90.10 TAL 33.22 TAP 129.87 RCA 145.42 APO 263.31 V2 23.927  
 RC 144.046 GL 4.75 GP -8.67 ZAL 37.52 ZAP 146.58 ETS 196.67 ZAE 166.73 ETE 309.43 ZAC 74.00 ETC 282.62 LVI -7.47

PLANETOCENTRIC CONIC  
 C3 33.973 VHL 5.829 DLA 10.92 RAL 13.49 RAD 6648.5 VEL 12.405 PTH 7.32 VHP 4.297 DPA 6.04 RAP 46.21 ECC 1.5591  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 40 3483.21 -45.99 126.58 254.41 103.85 9 45 44 2483.2 -35.56 97.54  
 60.00 9 15 18 3409.67 -39.44 121.76 256.22 99.08 10 12 8 2409.7 -31.62 93.67  
 70.00 9 54 5 3295.58 -33.76 113.42 257.12 95.50 10 49 1 2295.6 -28.03 86.22  
 80.00 10 49 56 3120.62 -29.71 100.52 257.48 93.16 11 41 56 2120.6 -25.40 73.92  
 90.00 12 5 52 2875.54 -28.19 82.59 257.56 92.32 12 53 48 1875.5 -24.40 56.21  
 100.00 13 32 48 2595.09 -29.71 61.88 257.48 93.16 14 16 3 1595.1 -25.40 35.29  
 110.00 14 53 31 2342.39 -33.76 42.34 257.12 95.50 15 32 34 1342.4 -28.03 15.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3229 TRA -.6164 TC3 .5656 BAU .2993 SGT 957.2 SGR 770.2 SG3 491.7 ST 18.4 SR 32.1 SS 10.0  
 RDE -.6516 RRA .1662 RC3 -.3380 FAU .18272 RRT -.2159 RRF .4173 RTF -.4659 CRT .8197 CRS .1433 CST -.3969  
 FDE .0413 FRA -1.7060 FC3 -4.6562 BSP 1255 SGB 1228.6 R23 -.1765 R13 .5395 LSA 35.8 MSA 13.5 SSA 2.9  
 BDE .7272 BRA .6384 BC3 .6589 FSP 749 SG1 990.7 SG2 726.6 THA 157.71 EL1 35.8 EL2 9.5 ALF 62.80

LAUNCH DATE SEP 2 1973 FLIGHT TIME 136.00 ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC DISTANCE 316.776 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.267 GAL 7.25 AZL 89.13 HCA 97.67 SMA 203.59 ECC .28592 INC .8681 V1 29.519  
 RP 230.25 LAP .86 LOP 77.06 VP 22.382 GAP 14.86 AZP 90.12 TAL 33.45 TAP 131.13 RCA 145.38 APO 261.80 V2 23.887  
 RC 146.870 GL 4.94 GP -9.11 ZAL 37.29 ZAP 147.31 ETS 196.33 ZAE 167.18 ETE 304.83 ZAC 73.81 ETC 282.66 LVI -7.31

PLANETOCENTRIC CONIC  
 C3 33.675 VHL 5.803 DLA 11.01 RAL 13.17 RAD 6648.4 VEL 12.393 PTH 7.31 VHP 4.183 DPA 7.74 RAP 46.05 ECC 1.5542  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 46 6 3482.67 -45.98 126.53 253.96 103.88 9 44 9 2482.7 -35.54 97.50  
 60.00 9 13 38 3409.38 -39.43 121.74 255.77 99.09 10 10 28 2409.4 -31.61 93.65  
 70.00 9 52 18 3295.61 -33.76 113.43 256.68 95.50 10 47 14 2295.6 -28.03 86.22  
 80.00 10 48 3 3121.00 -29.71 100.54 257.04 93.15 11 40 4 2121.0 -25.40 73.95  
 90.00 12 3 56 2876.07 -28.19 82.63 257.12 92.30 12 51 52 1876.1 -24.41 56.25  
 100.00 13 30 55 2595.47 -29.71 61.91 257.04 93.15 14 14 10 1595.5 -25.40 35.32  
 110.00 14 51 45 2342.43 -33.76 42.35 256.68 95.50 15 30 47 1342.4 -28.03 15.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3255 TRA -.6181 TC3 .5593 BAU .2990 SGT 954.5 SGR 779.9 SG3 519.3 ST 18.6 SR 32.1 SS 10.4  
 RDE -.6488 RRA .1582 RC3 -.3580 FAU .19182 RRT -.2186 RRF .4387 RTF -.4516 CRT .8229 CRS .1463 CST -.3908  
 FDE .0478 FRA -1.8223 FC3 -4.9313 BSP 1252 SGB 1232.6 R23 -.1931 R13 .5367 LSA 35.9 MSA 13.8 SSA 2.9  
 BDE .7259 BRA .6380 BC3 .6641 FSP 797 SG1 991.0 SG2 733.1 THA 156.47 EL1 35.9 EL2 9.5 ALF 62.44

LAUNCH DATE SEP 2 1973 FLIGHT TIME 138.00 ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC DISTANCE 320.480 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.232 GAL 7.25 AZL 89.10 HCA 98.69 SMA 202.87 ECC .28357 INC .8998 V1 29.519  
 RP 230.63 LAP .89 LOP 78.08 VP 22.287 GAP 14.52 AZP 90.14 TAL 33.67 TAP 132.36 RCA 145.35 APO 260.40 V2 23.847  
 RC 149.713 GL 5.14 GP -9.35 ZAL 37.08 ZAP 146.02 ETS 196.01 ZAE 167.55 ETE 299.75 ZAC 73.62 ETC 282.71 LVI -7.16

PLANETOCENTRIC CONIC  
 C3 33.396 VHL 5.779 DLA 11.10 RAL 12.88 RAD 6648.3 VEL 12.382 PTH 7.30 VHP 4.075 DPA 7.43 RAP 45.88 ECC 1.5496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 34 3482.39 -45.97 126.50 253.55 103.90 9 42 37 2482.4 -35.53 97.49  
 60.00 9 12 0 3409.39 -39.43 121.74 255.36 99.09 10 8 50 2409.4 -31.61 93.65  
 70.00 9 50 33 3295.98 -33.76 113.46 256.27 95.49 10 45 29 2296.0 -28.04 86.24  
 80.00 10 46 10 3121.73 -29.71 100.60 256.62 93.12 11 38 12 2121.7 -25.42 74.00  
 90.00 12 2 0 2876.97 -28.20 82.69 256.71 92.27 12 49 57 1877.0 -24.42 56.31  
 100.00 13 29 2 2596.20 -29.71 61.97 256.62 93.12 14 12 18 1596.2 -25.42 35.37  
 110.00 14 49 59 2342.80 -33.76 42.37 256.27 95.49 15 29 2 1342.8 -28.04 15.16

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3283 TRA -.6207 TC3 .5508 BAU .2984 SGT 950.9 SGR 790.4 SG3 548.0 ST 18.8 SR 32.1 SS 10.9  
 RDE -.6439 RRA .1497 RC3 -.3790 FAU .20128 RRT -.2197 RRF .4808 RTF -.4332 CRT .8260 CRS .1499 CST -.3842  
 FDE .0534 FRA -1.9430 FC3 -5.2179 BSP 1246 SGB 1238.5 R23 -.2109 R13 .5337 LSA 36.0 MSA 14.1 SSA 3.0  
 BDE .7243 BRA .6383 BC3 .6684 FSP 847 SG1 990.3 SG2 740.4 THA 155.11 EL1 36.0 EL2 9.5 ALF 62.06

LAUNCH DATE SEP 2 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 324.194 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.199 GAL 7.24 AZL 89.07 HCA 99.71 SMA 202.21 ECC .28136 INC .9315 V1 29.519  
 RP 231.01 LAP .92 LOP 79.10 VP 22.196 GAP 14.19 AZP 90.16 TAL 33.87 TAP 133.58 RCA 145.31 APO 259.10 V2 23.807  
 RC 152.572 GL 5.34 GP -9.80 ZAL 36.89 ZAP 144.71 ETS 195.70 ZAE 167.83 ETE 294.21 ZAC 73.43 ETC 282.76 LVI -7.01

PLANETOCENTRIC CONIC  
 C3 33.133 VHL 5.756 DLA 11.19 RAL 12.60 RAD 6648.2 VEL 12.371 PTH 7.29 VHP 3.971 DPA 7.10 RAP 45.69 ECC 1.5453  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 43 4 3482.36 -45.97 126.50 253.18 103.91 9 41 7 2482.4 -35.53 97.48  
 60.00 9 10 23 3409.66 -39.44 121.76 254.98 99.08 10 7 13 2409.7 -31.62 93.67  
 70.00 9 48 48 3296.65 -33.77 113.51 255.88 95.46 10 43 45 2296.6 -28.06 86.29  
 80.00 10 44 18 3122.79 -29.71 100.68 256.24 93.08 11 36 21 2122.8 -25.44 74.07  
 90.00 12 0 5 2878.22 -28.20 82.78 256.32 92.22 12 48 3 1878.2 -24.45 56.40  
 100.00 13 27 10 2597.26 -29.71 62.05 256.24 93.08 14 10 27 1597.3 -25.44 35.44  
 110.00 14 48 14 2343.46 -33.77 42.43 255.88 95.46 15 27 18 1343.5 -28.06 15.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3231 TRA -.6164 TC3 .5489 BAU .3012 SGT 945.5 SGR 802.3 SG3 578.8 ST 18.6 SR 32.1 SS 11.4  
 RDE -.6433 RRA .1404 RC3 -.4013 FAU .21141 RRT -.2308 RRF .4840 RTF -.4293 CRT .8259 CRS .1420 CST -.3922  
 FDE .0565 FRA -2.0763 FC3 -5.5240 BSP 1151 SGB 1240.0 R23 -.2145 R13 .5429 LSA 35.9 MSA 14.4 SSA 3.0  
 BDE .7199 BRA .6321 BC3 .6800 FSP 890 SG1 992.0 SG2 744.0 THA 152.77 EL1 35.9 EL2 9.4 ALF 62.32

LAUNCH DATE SEP 2 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.169 GAL 7.24 AZL 89.04 HCA 100.73 SMA 201.59 ECC .27930 INC .9631 V1 29.519
RP 231.39 LAP .95 LOP 80.11 VP 22.109 GAP 13.86 AZP 90.18 TAL 34.05 TAP 134.78 RCA 145.29 APO 257.90 V2 23.767
RC 155.447 GL 5.54 GP -9.86 ZAL 36.72 ZAP 143.38 ETS 195.39 ZAE 168.00 ETE 288.26 ZAC 73.24 ETC 282.81 LVI -6.85

PLANETOCENTRIC CONIC

C3 32.884 VHL 5.734 DLA 11.30 RAL 12.33 RAD 6648.1 VEL 12.361 PTH 7.28 VHP 3.871 DPA 6.76 RAP 45.47 ECC 1.5412
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 41 37 3482.60 -45.98 126.52 252.83 103.89 9 39 39 2482.6 -35.54 97.50
60.00 9 8 48 3410.23 -39.44 121.81 254.63 99.05 10 5 38 2410.2 -31.63 93.71
70.00 9 47 4 3297.64 -33.77 113.58 255.53 95.41 10 42 2 2297.6 -28.08 86.38
80.00 10 42 26 3124.21 -29.72 100.78 255.88 93.02 11 34 30 2124.2 -25.46 74.17
90.00 11 58 9 2879.84 -28.20 82.90 255.96 92.16 12 46 9 1879.8 -24.47 56.51
100.00 13 25 18 2598.68 -29.72 62.15 255.88 93.02 14 8 36 1598.7 -25.46 35.54
110.00 14 46 30 2344.45 -33.77 42.50 255.53 95.41 15 25 35 1344.5 -28.08 15.27

DIFFERENTIAL CORRECTIONS

TDE -.3296 TRA -.6247 TC3 .5309 BAW .2987
RDE -.6398 RRA .1312 RC3 -.4239 FAU .22141
FDE .0702 FRA -2.2033 FC3 -5.8290 BSP 1179
BDE .7197 BRA .6384 BC3 .6793 FSP 947

MID-COURSE EXECUTION ACCURACY

SGT 940.4 SGR 814.2 S63 609.3
RRT -.2227 RRF .9059 RTF -.4017
SGB 1243.9 R23 -.2406 R13 .5348
SG1 988.4 S62 755.2 THA 151.49

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 32.0 SS 11.8
CRT .8297 CRS .1524 CST -.3784
LSA 36.1 MSA 14.8 SBA 3.0
EL1 36.1 EL2 9.5 ALF 61.61

LAUNCH DATE SEP 2 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.141 GAL 7.23 AZL 89.00 HCA 101.74 SMA 201.02 ECC .27737 INC .9950 V1 29.519
RP 231.77 LAP .97 LOP 81.12 VP 22.024 GAP 13.54 AZP 90.20 TAL 34.22 TAP 135.96 RCA 145.26 APO 256.78 V2 23.728
RC 158.336 GL 5.74 GP -10.12 ZAL 36.57 ZAP 142.03 ETS 195.09 ZAE 168.04 ETE 282.05 ZAC 73.04 ETC 282.87 LVI -6.70

PLANETOCENTRIC CONIC

C3 32.649 VHL 5.714 DLA 11.41 RAL 12.08 RAD 6648.0 VEL 12.352 PTH 7.28 VHP 3.776 DPA 6.41 RAP 45.24 ECC 1.5373
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 40 11 3483.08 -45.99 126.57 252.52 103.86 9 38 14 2483.1 -35.55 97.53
60.00 9 7 14 3411.07 -39.45 121.88 254.32 99.00 10 4 5 2411.1 -31.66 93.77
70.00 9 45 21 3298.92 -33.78 113.68 255.20 95.35 10 40 20 2298.9 -28.11 86.44
80.00 10 40 34 3125.96 -29.72 100.91 255.55 92.95 11 32 40 2126.0 -25.50 74.29
90.00 11 56 13 2881.81 -28.21 83.04 255.63 92.09 12 44 14 1881.8 -24.51 56.64
100.00 13 23 26 2600.43 -29.72 62.28 255.55 92.95 14 6 46 1600.4 -25.50 35.66
110.00 14 44 47 2345.74 -33.78 42.60 255.20 95.35 15 23 53 1345.7 -28.11 15.36

DIFFERENTIAL CORRECTIONS

TDE -.3351 TRA -.6332 TC3 .5111 BAW .2965
RDE -.6362 RRA .1215 RC3 -.4474 FAU .23170
FDE .0850 FRA -2.3347 FC3 -6.1439 BSP 1194
BDE .7191 BRA .6447 BC3 .6793 FSP 1006

MID-COURSE EXECUTION ACCURACY

SGT 934.7 SGR 827.0 S63 640.8
RRT -.2132 RRF .5280 RTF -.3726
SGB 1248.0 R23 -.2655 R13 .5283
SG1 984.3 S62 767.2 THA 149.96

ORBIT DETERMINATION ACCURACY

ST 19.4 SR 32.0 SS 12.3
CRT .8328 CRS .1621 CST -.3680
LSA 36.2 MSA 15.2 SBA 3.0
EL1 36.2 EL2 9.5 ALF 60.96

LAUNCH DATE SEP 2 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.115 GAL 7.22 AZL 88.97 HCA 102.74 SMA 200.49 ECC .27556 INC 1.0271 V1 29.519
RP 232.14 LAP 1.00 LOP 82.13 VP 21.942 GAP 13.22 AZP 90.23 TAL 34.38 TAP 137.12 RCA 145.24 APO 255.74 V2 23.689
RC 161.238 GL 5.94 GP -10.39 ZAL 36.43 ZAP 140.66 ETS 194.79 ZAE 167.95 ETE 275.65 ZAC 72.85 ETC 282.92 LVI -6.55

PLANETOCENTRIC CONIC

C3 32.425 VHL 5.894 DLA 11.53 RAL 11.85 RAD 6647.9 VEL 12.343 PTH 7.27 VHP 3.685 DPA 6.04 RAP 44.99 ECC 1.5336
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 38 47 3483.79 -46.00 126.63 252.23 103.81 9 36 51 2483.8 -35.56 97.58
60.00 9 5 42 3412.16 -39.46 121.97 254.02 98.94 10 2 34 2412.2 -31.69 93.84
70.00 9 43 38 3300.50 -33.79 113.81 254.90 95.28 10 38 39 2300.5 -20.15 86.55
80.00 10 38 42 3128.04 -29.73 101.07 255.24 92.87 11 30 50 2128.0 -25.54 74.43
90.00 11 54 16 2884.12 -28.21 83.21 255.32 92.01 12 42 20 1884.1 -24.55 56.80
100.00 13 21 33 2602.51 -29.73 62.43 255.24 92.87 14 4 58 1602.5 -25.54 35.80
110.00 14 43 5 2347.32 -33.79 42.72 254.90 95.28 15 22 12 1347.3 -28.13 15.47

DIFFERENTIAL CORRECTIONS

TDE -.3397 TRA -.6421 TC3 .4898 BAW .2948
RDE -.6325 RRA .1114 RC3 -.4719 FAU .24233
FDE .1007 FRA -2.4709 FC3 -6.4701 BSP 1199
BDE .7180 BRA .6517 BC3 .6800 FSP 1066

MID-COURSE EXECUTION ACCURACY

SGT 928.8 SGR 840.8 S63 673.4
RRT -.2017 RRF .9902 RTF -.1112
SGB 1252.8 R23 -.2892 R13 .5238
SG1 980.1 S62 780.4 THA 148.15

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 31.9 SS 12.7
CRT .8332 CRS .1709 CST -.3553
LSA 36.3 MSA 15.6 SBA 3.0
EL1 36.3 EL2 9.6 ALF 60.36

LAUNCH DATE SEP 2 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.090 GAL 7.22 AZL 88.94 HCA 103.75 SMA 200.00 ECC .27386 INC 1.0592 V1 29.519
RP 232.51 LAP 1.03 LOP 83.14 VP 21.863 GAP 12.91 AZP 90.25 TAL 34.51 TAP 138.26 RCA 145.23 APO 254.77 V2 23.630
RC 164.190 GL 6.14 GP -10.66 ZAL 36.31 ZAP 139.26 ETS 194.50 ZAE 167.70 ETE 269.25 ZAC 72.65 ETC 282.99 LVI -6.39

PLANETOCENTRIC CONIC

C3 32.214 VHL 5.876 DLA 11.66 RAL 11.63 RAD 6647.9 VEL 12.334 PTH 7.26 VHP 3.597 DPA 5.88 RAP 44.71 ECC 1.5302
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 37 24 3484.73 -46.01 126.72 251.98 103.74 9 35 29 2484.7 -35.62 97.64
60.00 9 4 10 3413.50 -39.48 122.08 253.76 98.86 10 1 4 2413.5 -31.73 93.93
70.00 9 41 56 3302.36 -33.80 113.95 254.63 95.20 10 36 59 2302.4 -28.19 86.88
80.00 10 36 49 3130.42 -29.74 101.24 254.96 92.78 11 29 0 2130.4 -25.58 74.59
90.00 11 52 19 2886.73 -28.22 83.41 255.03 91.91 12 40 26 1886.8 -24.59 56.98
100.00 13 19 41 2604.90 -29.74 62.61 254.96 92.78 14 3 6 1604.9 -25.58 35.96
110.00 14 41 23 2349.18 -33.80 42.87 254.63 95.20 15 20 32 1349.2 -28.19 15.60

DIFFERENTIAL CORRECTIONS

TDE -.3441 TRA -.6518 TC3 .4658 BAW .2935
RDE -.6265 RRA .1007 RC3 -.4975 FAU .25329
FDE .1188 FRA -2.6116 FC3 -6.8071 BSP 1198
BDE .7165 BRA .6595 BC3 .6815 FSP 1127

MID-COURSE EXECUTION ACCURACY

SGT 922.8 SGR 855.7 S63 707.0
RRT -.1873 RRF .9724 RTF -.3070
SGB 1258.5 R23 -.3113 R13 .5216
SG1 975.4 S62 795.2 THA 146.00

ORBIT DETERMINATION ACCURACY

ST 20.1 SR 31.8 SS 13.2
CRT .8373 CRS .1804 CST -.3442
LSA 36.4 MSA 16.0 SBA 3.0
EL1 36.3 EL2 9.6 ALF 59.76

LAUNCH DATE SEP 2 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC										DISTANCE 342.889										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	33.067	GAL	7.21	AZL	88.91	HCA	104.75	SMA	199.58	ECC	.27228	INC	1.0915	V1	29.519	RP	232.89	LAP	1.08	LOP	84.14	VP	21.787	GAP	12.59	AZP	90.28	TAL	34.64	TAP	139.38	RCA	145.21	APO	253.88	V2	23.612	RC	167.073	GL	6.34	GP	-10.94	ZAL	36.21	ZAP	137.85	ETS	194.20	ZAE	167.30	ETE	263.00	ZAC	72.45	ETC	283.05	LVI	-6.24
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.012	VHL	5.658	DLA	11.80	RAL	11.42	RAD	6647.8	VEL	12.326	PTH	7.26	VHP	3.514	DPA	5.26	RAP	44.42	ECC	1.5260	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																												
50.00	8	36	3	3485.89	-46.03	126.82	251.75	103.66	9	34	9	2485.9	-35.66	97.71	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
60.00	9	2	40	3415.09	-39.49	122.21	253.52	98.78	9	59	35	2415.1	-31.78	94.04	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
70.00	9	40	15	3304.50	-33.82	114.11	254.38	95.10	10	35	19	2304.5	-28.24	86.83	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
80.00	10	34	57	3133.12	-29.75	101.44	254.70	92.68	11	27	10	2133.1	-25.63	74.78	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
90.00	11	50	22	2889.72	-28.23	83.62	254.77	91.80	12	30	32	1889.7	-24.64	57.18	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
100.00	13	17	49	2607.60	-29.75	62.81	254.70	92.68	14	1	16	1607.6	-25.63	36.15	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
110.00	14	39	41	2351.31	-33.82	43.03	254.38	95.10	15	18	52	1351.3	-28.24	15.74	SGT	917.2	SGR	871.7	SG3	741.5	ST	20.4	SR	31.7	SS	13.7																																							
TDE	-.3483	TRA	-.6628	TC3	.4389	BAU	.2925	RRT	-.1690	RRF	.5944	RTF	-.2687	CRT	.8389	CRS	.1893	CST	-.3345																																														
RDE	-.6243	RRA	.0896	RC3	-.5240	FAU	.26450	SGB	1265.3	R23	-.3311	R13	.5223	L8A	36.4	M8A	16.4	S8A	3.0																																														
FDE	.1380	FRA	-2.7551	FC3	-7.1532	BSP	1197	SG1	970.4	SG2	812.1	THA	143.39	EL1	36.4	EL2	9.7	ALF	59.16																																														
BDE	.7149	BRA	.6688	BC3	.6835	FSP	1190																																																										

LAUNCH DATE SEP 2 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC										DISTANCE 346.648										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	33.046	GAL	7.19	AZL	88.88	HCA	105.75	SMA	199.12	ECC	.27079	INC	1.1241	V1	29.519	RP	233.25	LAP	1.08	LOP	85.13	VP	21.713	GAP	12.29	AZP	90.31	TAL	34.74	TAP	140.49	RCA	145.20	APO	253.05	V2	23.573	RC	170.003	GL	6.55	GP	-11.22	ZAL	36.13	ZAP	136.41	ETS	193.91	ZAE	166.75	ETE	257.03	ZAC	72.26	ETC	283.12	LVI	-6.09
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.820	VHL	5.641	DLA	11.94	RAL	11.23	RAD	6647.7	VEL	12.316	PTH	7.25	VHP	3.435	DPA	4.86	RAP	44.10	ECC	1.5237	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																												
50.00	8	34	44	3487.27	-46.05	126.95	251.55	103.57	9	32	51	2487.3	-35.71	97.80	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
60.00	9	1	10	3416.91	-39.51	122.37	253.30	98.68	9	58	7	2416.9	-31.83	94.16	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
70.00	9	38	33	3306.90	-33.83	114.30	254.15	94.99	10	33	40	2306.9	-28.30	86.99	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
80.00	10	33	4	3136.13	-29.76	101.67	254.47	92.56	11	25	20	2136.1	-25.69	74.98	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
90.00	11	48	24	2893.00	-28.23	83.86	254.53	91.68	12	36	37	1893.0	-24.70	57.41	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
100.00	13	15	56	2610.60	-29.76	63.03	254.47	92.56	13	59	26	1610.6	-25.69	36.35	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
110.00	14	37	59	2353.72	-33.83	43.22	254.15	94.99	15	17	13	1353.7	-28.30	15.91	SGT	912.2	SGR	888.8	SG3	776.9	ST	20.8	SR	31.5	SS	14.1																																							
TDE	-.3522	TRA	-.6747	TC3	.4095	BAU	.2922	RRT	-.1466	RRF	.6161	RTF	-.2268	CRT	.8403	CRS	.1989	CST	-.3243																																														
RDE	-.6198	RRA	.0780	RC3	-.5514	FAU	.27594	SGB	1273.6	R23	-.3451	R13	.5286	L8A	36.5	M8A	16.9	S8A	3.0																																														
FDE	.1600	FRA	-2.9029	FC3	-7.5078	BSP	1193	SG1	965.3	SG2	830.8	THA	140.03	EL1	36.5	EL2	9.7	ALF	58.54																																														
BDE	.7129	BRA	.6792	BC3	.6869	FSP	1254																																																										

LAUNCH DATE SEP 2 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC										DISTANCE 350.412										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	33.026	GAL	7.18	AZL	88.84	HCA	106.74	SMA	198.74	ECC	.26949	INC	1.1568	V1	29.519	RP	233.62	LAP	1.11	LOP	86.13	VP	21.642	GAP	11.98	AZP	90.33	TAL	34.84	TAP	141.58	RCA	145.20	APO	252.28	V2	23.536	RC	172.941	GL	6.75	GP	-11.52	ZAL	36.06	ZAP	134.96	ETS	193.61	ZAE	166.06	ETE	251.45	ZAC	72.06	ETC	283.19	LVI	-5.94
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.636	VHL	5.625	DLA	12.09	RAL	11.05	RAD	6647.6	VEL	12.311	PTH	7.24	VHP	3.359	DPA	4.44	RAP	43.77	ECC	1.5206	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																												
50.00	8	33	26	3488.85	-46.08	127.09	251.38	103.46	9	31	35	2488.9	-35.77	97.91	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
60.00	8	59	41	3418.97	-39.53	122.54	253.11	98.56	9	56	40	2419.0	-31.90	94.30	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
70.00	9	36	52	3309.58	-33.85	114.51	253.95	94.87	10	32	1	2309.6	-28.36	87.17	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
80.00	10	31	10	3139.43	-29.77	101.91	254.25	92.43	11	23	30	2139.4	-25.75	75.21	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
90.00	11	48	24	2896.61	-28.24	84.13	254.31	91.55	12	34	41	1896.6	-24.76	57.65	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
100.00	13	14	2	2613.91	-29.77	63.28	254.25	92.43	13	57	36	1613.9	-25.75	36.58	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
110.00	14	36	18	2356.40	-33.85	43.43	253.95	94.87	15	15	34	1356.4	-28.36	16.09	SGT	908.4	SGR	907.2	SG3	813.1	ST	21.1	SR	31.4	SS	14.6																																							
TDE	-.3562	TRA	-.6882	TC3	.3766	BAU	.2925	RRT	-.1193	RRF	.6374	RTF	-.1000	CRT	.8413	CRS	.2081	CST	-.3152																																														
RDE	-.6151	RRA	.0659	RC3	-.5800	FAU	.28764	SGB	1283.8	R23	-.3477	R13	.5444	L8A	36.5	M8A	17.3	S8A	3.0																																														
FDE	.1835	FRA	-3.0534	FC3	-7.8715	BSP	1196	SG1	960.4	SG2	851.9	THA	135.32	EL1	36.5	EL2	9.8	ALF	57.90																																														
BDE	.7108	BRA	.6913	BC3	.6915	FSP	1319																																																										

LAUNCH DATE SEP 2 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC										DISTANCE 354.182										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	33.008	GAL	7.17	AZL	88.81	HCA	107.73	SMA	198.38	ECC	.26809	INC	1.1898	V1	29.519	RP	233.99	LAP	1.13	LOP	87.12	VP	21.573	GAP	11.68	AZP	90.36	TAL	34.92	TAP	142.65	RCA	145.19	APO	251.56	V2	23.498	RC	175.886	GL	6.96	GP	-11.81	ZAL	36.01	ZAP	133.49	ETS	193.31	ZAE	165.24	ETE	246.30	ZAC	71.86	ETC	283.26	LVI	-5.79
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	31.459	VHL	5.609	DLA	12.25	RAL	10.88	RAD	6647.6	VEL	12.304	PTH	7.24	VHP	3.																																																		

LAUNCH DATE SEP 2 1973										FLIGHT TIME 158.00										ARRIVAL DATE FEB 7 1974																																																																																																																					
HELIOCENTRIC CONIC										DISTANCE 357.953										EARTH TO MARS																																																																																																																					
RL	150.94	LAL	.00	LOL	339.39	VL	32.891	GAL	7.16	AZL	88.78	HCA	108.72	SMA	198.05	ECC	.26688	INC	1.2530	V1	29.519	RP	234.35	LAP	1.18	LOP	88.11	VP	21.506	GAP	11.38	AZP	90.39	TAL	34.98	TAP	143.70	RCA	145.19	APO	250.90	V2	23.461	RC	178.836	GL	7.18	GP	-12.11	ZAL	35.97	ZAP	131.99	ET8	193.01	ZAE	164.30	ETE	241.62	ZAC	71.67	ETC	283.34	LVI	-5.64																																																																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																					
C3	31.290	VHL	5.594	DLA	12.41	RAL	10.72	RAD	8647.5	VEL	12.297	PTH	7.23	VHP	3.218	DPA	3.58	RAP	43.05	ECC	1.8150	ST	21.8	SR	31.0	SS	18.6	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR1	.8426	CR8	.2282	C8T	-.2980	50.00	8	30	53	3492.63	-46.14	127.44	251.10	103.20	9	29	6	2492.6	-35.92	98.16	RRT	-.0485	RRF	.6784	RTF	-.0724	60.00	8	58	45	3423.78	-39.58	122.94	252.79	98.29	9	53	49	2423.8	-32.04	94.63	LSA	36.6	MSA	18.2	88A	3.0	70.00	9	33	28	3315.71	-33.88	114.98	253.60	94.59	10	28	44	2315.7	-28.50	87.59	EL1	36.6	EL2	10.0	ALF	56.50	80.00	10	27	21	3146.94	-29.79	102.47	253.88	92.14	11	19	48	2146.9	-25.88	75.72
90.00	11	42	23	2904.76	-28.25	84.72	253.93	91.25	12	30	48	1904.8	-24.69	58.21																																																																																																																											
100.00	13	10	12	2621.41	-29.79	63.84	253.88	92.14	13	53	54	1621.4	-23.88	37.09																																																																																																																											
110.00	14	32	55	2362.53	-33.88	43.90	253.60	94.59	15	12	17	1362.5	-28.50	16.51																																																																																																																											

LAUNCH DATE SEP 2 1973										FLIGHT TIME 160.00										ARRIVAL DATE FEB 9 1974																																																																																																																					
HELIOCENTRIC CONIC										DISTANCE 361.733										EARTH TO MARS																																																																																																																					
RL	150.94	LAL	.00	LOL	339.39	VL	32.978	GAL	7.14	AZL	88.74	HCA	109.70	SMA	197.74	ECC	.26573	INC	1.2566	V1	29.519	RP	234.71	LAP	1.18	LOP	89.09	VP	21.442	GAP	11.08	AZP	90.42	TAL	35.04	TAP	144.74	RCA	145.20	APO	250.29	V2	23.424	RC	181.791	GL	7.39	GP	-12.41	ZAL	35.94	ZAP	130.49	ETS	192.71	ZAE	163.25	ETE	237.40	ZAC	71.47	ETC	283.41	LVI	-5.49																																																																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																					
C3	31.127	VHL	5.579	DLA	12.58	RAL	10.58	RAD	8647.4	VEL	12.290	PTH	7.23	VHP	3.153	DPA	3.10	RAP	42.67	ECC	1.5123	ST	22.2	SR	30.8	SS	16.1	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR1	.8426	CR8	.2387	C8T	-.2868	50.00	8	29	38	3494.81	-46.17	127.64	250.99	103.05	9	27	53	2494.8	-36.00	98.30	RRT	-.0053	RRF	.6978	RTF	-.0123	60.00	8	55	18	3426.51	-39.61	123.16	252.67	98.14	9	52	24	2426.5	-32.12	94.82	LSA	36.6	MSA	18.7	88A	3.0	70.00	9	31	46	3319.16	-33.90	115.25	253.45	94.43	10	27	6	2319.2	-28.58	87.83	EL1	36.6	EL2	10.1	ALF	58.74	80.00	10	25	24	3151.13	-29.80	102.78	253.72	91.97	11	17	56	2151.1	-25.96	76.01
90.00	11	40	20	2909.30	-28.26	85.05	253.77	91.09	12	28	49	1909.3	-24.97	58.53																																																																																																																											
100.00	13	8	16	2625.60	-29.80	64.15	253.72	91.97	13	52	2	1625.6	-25.96	37.38																																																																																																																											
110.00	14	31	13	2365.98	-33.90	44.17	253.45	94.43	15	10	39	1366.0	-28.58	16.75																																																																																																																											

LAUNCH DATE SEP 2 1973										FLIGHT TIME 162.00										ARRIVAL DATE FEB 11 1974																																																																																																																					
HELIOCENTRIC CONIC										DISTANCE 365.514										EARTH TO MARS																																																																																																																					
RL	150.94	LAL	.00	LOL	339.39	VL	32.981	GAL	7.13	AZL	88.71	HCA	110.69	SMA	197.46	ECC	.26467	INC	1.2904	V1	29.519	RP	235.06	LAP	1.21	LOP	90.08	VP	21.379	GAP	10.79	AZP	90.46	TAL	35.08	TAP	145.76	RCA	145.20	APO	249.73	V2	23.367	RC	184.750	GL	7.61	GP	-12.72	ZAL	35.93	ZAP	128.96	ETS	192.39	ZAE	162.10	ETE	233.59	ZAC	71.28	ETC	283.49	LVI	-5.34																																																																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																					
C3	30.971	VHL	5.565	DLA	12.78	RAL	10.44	RAD	8647.4	VEL	12.284	PTH	7.22	VHP	3.092	DPA	2.63	RAP	42.26	ECC	1.5097	ST	22.2	SR	30.6	SS	16.0	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR1	.8408	CR8	.2311	C8T	-.2898	50.00	8	28	24	3497.18	-46.21	127.85	250.91	102.89	9	28	41	2497.2	-36.09	98.46	RRT	.0303	RRF	.7182	RTF	-.01	60.00	8	53	50	3429.46	-39.64	123.41	252.56	97.98	9	51	0	2429.5	-32.21	95.02	LSA	36.5	MSA	19.2	88A	3.0	70.00	9	30	4	3322.85	-33.92	115.54	253.33	94.26	10	25	27	2322.9	-28.66	88.09	EL1	36.5	EL2	10.1	ALF	58.87	80.00	10	23	27	3155.60	-29.81	103.11	253.58	91.80	11	16	3	2155.6	-26.04	78.32
90.00	11	38	18	2914.14	-28.27	85.41	253.62	90.91	12	26	50	1914.1	-25.04	58.68																																																																																																																											
100.00	13	6	19	2630.07	-29.81	64.46	253.58	91.80	13	50	9	1630.1	-26.04	37.89																																																																																																																											
110.00	14	29	30	2369.67	-33.92	44.46	253.33	94.26	15	9	0	1369.7	-28.66	17.00																																																																																																																											

LAUNCH DATE SEP 2 1973										FLIGHT TIME 164.00										ARRIVAL DATE FEB 13 1974																																																																																																																					
HELIOCENTRIC CONIC										DISTANCE 369.288										EARTH TO MARS																																																																																																																					
RL	150.94	LAL	.00	LOL	339.39	VL	32.948	GAL	7.11	AZL	88.88	HCA	111.67	SMA	197.21	ECC	.26367	INC	1.3245	V1	29.519	RP	235.42	LAP	1.23	LOP	91.06	VP	21.319	GAP	10.50	AZP	90.49	TAL	35.10	TAP	146.77	RCA	145.21	APO	249.21	V2	23.331	RC	187.714	GL	7.83	GP	-13.03	ZAL	35.94	ZAP	127.42	ETS	192.08	ZAE	160.67	ETE	230.18	ZAC	71.08	ETC	283.57	LVI	-5.18																																																																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																					
C3	30.818	VHL	5.551	DLA	12.95	RAL	10.32	RAD	8647.3	VEL	12.278	PTH	7.22	VHP	3.034	DPA	2.18	RAP	41.85	ECC	1.5072	ST	22.9	SR	30.3	SS	17.1	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR1	.8418	CR8	.2555	C8T	-.2738	50.00	8	27	10	3499.75	-46.25	128.09	250.85	102.71	9	25	30	2499.8	-36.18	98.63	RRT	.0924	RRF	.7349	RTF	.1156	60.00	8	52	23	3432.64	-39.67	123.67	252.48	97.80	9	49	36	2432.6	-32.30	95.23	LSA	36.6	MSA	19.7	88A	3.0	70.00	9	28	21	3326.82	-33.94	115.85	253.22	94.08	10	23	48	2326.8	-28.75	88.36	EL1	36.6	EL2	10.3	ALF	54.27	80.00	10	21	28	3160.38	-29.82	103.47	253.46	91.61	11	14	8	2160.4	-26.13	76.65
90.00	11	36	10	2919.32	-28.27	85.79	253.50	90.72	12	24	49	1919.3	-25.13	59.22																																																																																																																											
100.00	13	4	20	2634.86	-29.82	64.83	253.46	91.61	13	48	15	1634.9	-26.13	38.02																																																																																																																											
110.00	14	27	47	2373.64	-33.94	44.76	253.22	94.08	15	7	21	1373.6	-28.75	17.28																																																																																																																											



LAUNCH DATE SEP 2 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC

DISTANCE 388.254

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.897 GAL 7.01 AZL 88.50 HCA 118.32 SMA 198.24 ECC .25957 INC 1.5015 V1 29.519
RP 237.14 LAP 1.34 LOP 95.91 VP 21.047 GAP 9.10 AZP 90.87 TAL 33.03 TAP 151.57 RCA 145.30 APO 247.17 V2 23.174
RC 202.557 GL 8.97 GP -14.83 ZAL 36.16 ZAP 119.55 ETS 190.58 ZAE 153.77 ETE 217.55 ZAC 70.14 ETC 283.97 LVI -4.43

PLANETOCENTRIC CONIC

C3 30.125 VHL 5.489 DLA 14.00 RAL 9.85 RAD 6647.1 VEL 12.250 PTH 7.20 VHP 2.789 DPA -.37 RAP 39.57 ECC 1.4958
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 21 9 3515.39 -46.47 129.53 250.85 101.82 9 19 44 2515.4 -36.76 99.67
60.00 8 45 5 3491.71 -39.83 125.27 252.32 96.73 9 42 36 2451.7 -32.85 96.55
70.00 9 19 30 3350.38 -34.04 117.68 252.93 93.00 10 15 21 2350.4 -29.27 90.00
80.00 10 11 7 3188.66 -29.85 105.57 253.09 90.51 11 4 16 2188.7 -26.61 78.61
90.00 11 25 7 2949.85 -28.28 88.02 253.09 89.60 12 14 16 1949.8 -25.59 61.33
100.00 12 53 59 2663.13 -29.85 66.93 253.09 90.51 13 38 22 1663.1 -26.61 39.98
110.00 14 18 57 2397.20 -34.04 46.60 252.93 93.00 14 58 54 1397.2 -29.27 18.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3918 TRA -.9076 TC3 -.1421 BAU .3725 SGT 1070.0 SGR 1158.5 SG3 1191.3 ST 25.2 SR 28.7 SS 19.8
RDE -.5493 RRA -.0757 RC3 -.9140 FAU .40768 RRT .3796 RRF .8116 RTF .4459 CRT .8364 CR8 .3115 CST -.2321
PDE .5708 FRA -4.5858 FC -11.7160 BSP 1723 SGB 1577.0 R23 .2547 R13 .7849 LSA 36.7 MSA 22.3 SSA 3.0
BDE .6747 BRA .9107 BC3 .9250 FSP 1997 SGI 1313.1 SG2 873.4 THA 50.92 EL1 36.6 EL2 10.8 ALF 49.53

LAUNCH DATE SEP 2 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC

DISTANCE 392.050

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.890 GAL 6.99 AZL 88.46 HCA 117.48 SMA 198.10 ECC .25891 INC 1.5382 V1 29.519
RP 237.48 LAP 1.36 LOP 96.88 VP 20.998 GAP 8.83 AZP 90.71 TAL 35.00 TAP 152.48 RCA 145.32 APO 246.87 V2 23.140
RC 205.523 GL 9.21 GP -14.96 ZAL 36.25 ZAP 117.95 ETS 190.02 ZAE 152.22 ETE 215.68 ZAC 69.96 ETC 284.03 LVI -4.27

PLANETOCENTRIC CONIC

C3 29.997 VHL 5.477 DLA 14.23 RAL 9.78 RAD 6647.0 VEL 12.245 PTH 7.19 VHP 2.749 DPA -.90 RAP 39.09 ECC 1.4937
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 19 57 3519.08 -46.52 129.87 250.91 101.36 9 18 36 2519.1 -36.90 99.92
60.00 8 43 35 3456.17 -39.86 125.64 252.34 96.48 9 41 11 2456.2 -32.98 96.86
70.00 9 17 40 3355.66 -34.06 118.11 252.92 92.75 10 13 36 2355.9 -29.39 90.38
80.00 10 8 56 3195.22 -29.86 106.05 253.05 90.25 11 2 11 2195.2 -26.72 79.07
90.00 11 22 46 2956.93 -28.27 88.54 253.05 89.34 12 12 3 1956.9 -25.69 61.82
100.00 12 51 48 2669.69 -29.86 67.42 253.05 90.25 13 36 18 1669.7 -26.72 40.44
110.00 14 17 6 2402.68 -34.06 47.02 252.92 92.75 14 57 9 1402.7 -29.39 19.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3977 TRA -.9415 TC3 -.2181 BAU .3909 SGT 1123.7 SGR 1187.8 SG3 1225.4 ST 25.8 SR 28.3 SS 20.3
RDE -.5394 RRA -.0904 RC3 -.9501 FAU .41827 RRT .4364 RRF .8238 RTF .5049 CRT .8356 CR8 .3323 CST -.2130
PDE .6425 FRA -4.7120 PC -12.0716 BSP 1844 SGB 1635.1 R23 .2553 R13 .7997 LSA 36.8 MSA 22.8 SSA 3.0
BDE .6702 BRA .9459 BC3 .9748 FSP 2079 SGI 1387.1 SG2 865.8 THA 48.82 EL1 36.7 EL2 10.9 ALF 48.17

LAUNCH DATE SEP 2 1973

FLIGHT TIME 178.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC

DISTANCE 395.848

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.883 GAL 6.98 AZL 88.42 HCA 118.44 SMA 199.97 ECC .25829 INC 1.5756 V1 29.519
RP 237.81 LAP 1.39 LOP 97.84 VP 20.950 GAP 8.56 AZP 90.75 TAL 34.94 TAP 153.58 RCA 145.35 APO 246.59 V2 23.106
RC 208.485 GL 9.45 GP -15.28 ZAL 36.34 ZAP 118.33 ETS 189.64 ZAE 150.63 ETE 213.96 ZAC 69.77 ETC 284.13 LVI -4.12

PLANETOCENTRIC CONIC

C3 29.873 VHL 5.466 DLA 14.47 RAL 9.72 RAD 6647.0 VEL 12.240 PTH 7.19 VHP 2.711 DPA -1.43 RAP 38.60 ECC 1.4918
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 18 45 3522.94 -46.57 130.23 250.98 101.08 9 17 28 2522.9 -37.04 100.10
60.00 8 42 5 3460.84 -39.90 126.04 252.37 96.21 9 39 46 2460.8 -33.11 97.18
70.00 9 15 48 3361.60 -34.07 118.55 252.93 92.49 10 11 50 2361.6 -29.51 90.78
80.00 10 6 43 3202.09 -29.86 106.56 253.03 89.99 11 0 5 2202.1 -26.83 79.59
90.00 11 20 22 2964.55 -28.27 89.08 253.02 89.07 12 9 46 1964.4 -25.80 62.34
100.00 12 49 34 2676.56 -29.86 67.93 253.03 89.99 13 34 11 1676.6 -26.83 40.92
110.00 14 15 14 2408.42 -34.07 47.47 252.93 92.49 14 55 23 1408.4 -29.51 19.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4004 TRA -.9742 TC3 -.2938 BAU .4115 SGT 1179.7 SGR 1219.8 SG3 1260.4 ST 26.3 SR 27.8 SS 20.8
RDE -.5299 RRA -.1060 RC3 -.9878 FAU .42906 RRT .4872 RRF .8388 RTF .5071 CRT .8338 CR8 .3446 CST -.2042
PDE .7051 FRA -4.8458 FC -12.4345 BSP 1976 SGB 1696.7 R23 .2509 R13 .8183 LSA 36.8 MSA 23.3 SSA 2.9
BDE .6841 BRA .9800 BC3 1.0303 FSP 2145 SGI 1463.5 SG2 858.5 THA 46.98 EL1 36.7 EL2 11.0 ALF 47.01

LAUNCH DATE SEP 2 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

DISTANCE 399.846

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.877 GAL 6.94 AZL 88.39 HCA 119.40 SMA 199.86 ECC .25771 INC 1.6135 V1 29.519
RP 238.14 LAP 1.41 LOP 98.79 VP 20.904 GAP 8.29 AZP 90.79 TAL 34.88 TAP 154.28 RCA 145.38 APO 246.33 V2 23.073
RC 211.443 GL 9.70 GP -15.61 ZAL 36.45 ZAP 114.75 ETS 189.26 ZAE 149.01 ETE 212.38 ZAC 69.59 ETC 284.21 LVI -3.96

PLANETOCENTRIC CONIC

C3 29.751 VHL 5.454 DLA 14.72 RAL 9.68 RAD 6646.9 VEL 12.235 PTH 7.18 VHP 2.677 DPA -1.97 RAP 38.11 ECC 1.4896
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 17 33 3527.00 -46.62 130.61 251.07 100.80 9 16 20 2527.0 -37.19 100.46
60.00 8 40 33 3465.73 -39.94 126.45 252.42 95.94 9 38 19 2465.7 -33.25 97.33
70.00 9 13 54 3367.60 -34.09 119.02 252.94 92.21 10 10 2 2367.6 -29.64 91.21
80.00 10 4 26 3209.27 -29.86 107.10 253.03 89.70 10 57 55 2209.3 -26.94 80.05
90.00 11 17 54 2972.11 -28.28 89.65 253.00 88.79 12 7 27 1972.1 -25.91 62.88
100.00 12 47 18 2683.74 -29.86 68.47 253.03 89.70 13 32 1 1683.7 -26.94 41.42
110.00 14 13 20 2414.42 -34.09 47.94 252.94 92.21 14 53 35 1414.4 -29.64 20.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4026 TRA -1.0083 TC3 -.3728 BAU .4340 SGT 1242.4 SGR 1251.9 SG3 1294.3 ST 26.8 SR 27.4 SS 21.5
RDE -.5199 RRA -.1217 RC3 -1.0255 FAU .43944 RRT .5341 RRF .8466 RTF .6042 CRT .8317 CR8 .3567 CST -.1959
PDE .7707 FRA -4.9732 FC -12.7874 BSP 2120 SGB 1763.7 R23 .2461 R13 .8298 LSA 36.8 MSA 23.9 SSA 2.9
BDE .6575 BRA 1.0157 BC3 1.0911 FSP 2208 SGI 1544.7 SG2 851.2 THA 45.41 EL1 36.7 EL2 11.1 ALF 45.82



LAUNCH DATE SEP 2 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.872 GAL 6.91 AZL 88.35 HCA 120.38 SMA 195.76 ECC .25718 INC 1.6520 V1 29.519  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.860 GAP 8.02 AZP 90.84 TAL 34.80 TAP 135.15 RCA 148.42 APO 246.11 V2 23.040  
 RC 214.394 GL 9.95 GP -15.93 ZAL 36.57 ZAP 113.14 ETS 188.87 ZAE 147.37 ETE 210.91 ZAC 68.42 ETC 284.29 LVI -3.60

DISTANCE 403.446

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.632 VHL 5.444 DLA 14.97 RAL 9.62 RAD 6646.9 VEL 12.230 PTH 7.18 VHP 2.649 DPA -2.51 RAP 37.61 ECC 1.4877  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 20 3531.25 -46.68 131.01 251.18 100.50 9 15 11 2531.2 -37.34 100.75  
 60.00 8 39 1 3470.85 -39.97 126.88 252.49 95.64 9 36 52 2470.8 -33.39 97.89  
 70.00 9 11 58 3373.67 -34.11 119.51 252.97 91.92 10 8 12 2373.9 -29.77 91.65  
 80.00 10 2 6 3216.78 -29.85 107.66 253.03 89.41 10 55 43 2216.8 -27.06 80.58  
 90.00 11 15 23 2980.23 -28.24 90.24 253.00 88.49 12 5 3 1980.2 -26.02 63.45  
 100.00 12 44 58 2691.25 -29.85 69.02 253.03 89.41 13 29 49 1691.3 -27.06 41.95  
 110.00 14 11 24 2420.69 -34.11 48.43 252.97 91.92 14 51 45 1420.7 -29.77 20.56

DIFFERENTIAL CORRECTIONS

TDE -.4044 TRA-1.0437 TC3 -.4550 BAU .4584  
 RDE -.5095 RRA -.1375 RC3-1.0638 FAU .44943  
 FDE .8387 FRA-5.0946 FC-13.1303 B8P 2274  
 BDE .6504 BRA 1.0528 BC3 1.1570 F8P 2270

MID-COURSE EXECUTION ACCURACY

SGT 1311.4 SGR 1285.0 SG3 1327.1  
 RRT .9770 RRF .8569 RTF .8463  
 SGB 1836.1 R23 .2412 R13 .8430  
 SG1 1630.5 SG2 844.1 THA 43.99

ORBIT DETERMINATION ACCURACY

ST 27.3 SR 27.0 SS 22.1  
 CRT .8295 CRS .3680 CST -.1884  
 LSA 36.8 MSA 24.5 S8A 2.9  
 EL1 36.7 EL2 11.2 ALF 44.59

LAUNCH DATE SEP 2 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.868 GAL 6.88 AZL 88.31 HCA 121.30 SMA 195.68 ECC .25668 INC 1.6911 V1 29.519  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.817 GAP 7.76 AZP 90.88 TAL 34.72 TAP 156.02 RCA 145.45 APO 245.90 V2 23.008  
 RC 217.340 GL 10.21 GP -16.26 ZAL 36.70 ZAP 111.54 ETS 188.47 ZAE 145.71 ETE 209.55 ZAC 69.24 ETC 284.37 LVI -3.64

DISTANCE 407.246

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.517 VHL 5.433 DLA 15.24 RAL 9.58 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 2.615 DPA -3.05 RAP 37.11 ECC 1.4858  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 6 3535.69 -46.73 131.42 251.31 100.18 9 14 2 2535.7 -37.50 101.05  
 60.00 8 37 27 3476.19 -40.01 127.33 252.57 95.34 9 35 23 2476.2 -33.54 98.26  
 70.00 9 9 59 3380.42 -34.12 120.02 253.02 91.62 10 6 20 2380.4 -29.90 92.11  
 80.00 9 59 42 3224.62 -29.85 108.24 253.05 89.10 10 53 27 2224.6 -27.18 81.13  
 90.00 11 12 48 2988.71 -28.23 90.86 253.00 88.18 12 2 37 1988.7 -26.13 64.04  
 100.00 12 42 34 2699.10 -29.85 69.61 253.05 89.10 13 27 33 1699.1 -27.18 42.50  
 110.00 14 9 26 2427.24 -34.12 48.94 253.02 91.62 14 49 53 1427.2 -29.90 21.03

DIFFERENTIAL CORRECTIONS

TDE -.4055 TRA-1.0805 TC3 -.5403 BAU .4845  
 RDE -.4986 RRA -.1534 RC3-1.1025 FAU .45899  
 FDE .9081 FRA-5.2099 FC-13.4623 B8P 2438  
 BDE .6427 BRA 1.0913 BC3 1.2278 F8P 2327

MID-COURSE EXECUTION ACCURACY

SGT 1386.5 SGR 1319.0 SG3 1358.8  
 RRT .6159 RRF .8665 RTF .6835  
 SGB 1913.6 R23 .2362 R13 .8552  
 SG1 1720.7 SG2 837.3 THA 42.68

ORBIT DETERMINATION ACCURACY

ST 27.8 SR 26.5 SS 22.7  
 CRT .8271 CRS .3782 CST -.1825  
 LSA 36.8 MSA 25.0 S8A 2.9  
 EL1 36.7 EL2 11.3 ALF 43.33

LAUNCH DATE SEP 2 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.864 GAL 6.86 AZL 88.27 HCA 122.25 SMA 195.61 ECC .25622 INC 1.7310 V1 29.519  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.775 GAP 7.50 AZP 90.92 TAL 34.62 TAP 156.87 RCA 145.49 APO 245.72 V2 22.975  
 RC 220.278 GL 10.47 GP -16.59 ZAL 36.83 ZAP 109.94 ETS 188.06 ZAE 144.03 ETE 208.27 ZAC 69.07 ETC 284.44 LVI -3.47

DISTANCE 411.047

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.403 VHL 5.422 DLA 15.51 RAL 9.54 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 2.588 DPA -3.59 RAP 36.61 ECC 1.4839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 51 3540.32 -46.79 131.86 251.45 99.85 9 12 52 2540.3 -37.66 101.37  
 60.00 8 35 51 3481.76 -40.04 127.80 252.66 95.02 9 33 53 2481.8 -33.69 98.66  
 70.00 9 7 58 3387.25 -34.13 120.55 253.07 91.31 10 4 25 2387.2 -30.04 92.59  
 80.00 9 57 15 3232.81 -29.84 108.85 253.07 88.79 10 51 8 2232.8 -27.30 81.71  
 90.00 11 10 8 2997.56 -28.21 91.50 253.02 87.86 12 0 6 1997.6 -26.25 64.67  
 100.00 12 40 7 2707.28 -29.84 70.22 253.07 88.79 13 25 14 1707.3 -27.30 43.08  
 110.00 14 7 24 2434.07 -34.13 49.47 253.07 91.31 14 47 58 1434.1 -30.04 21.51

DIFFERENTIAL CORRECTIONS

TDE -.4060 TRA-1.1183 TC3 -.6285 BAU .5122  
 RDE -.4873 RRA -.1694 RC3-1.1412 FAU .46796  
 FDE .9813 FRA-5.3189 FC-13.7784 B8P 2611  
 BDE .8342 BRA 1.1311 BC3 1.3029 F8P 2379

MID-COURSE EXECUTION ACCURACY

SGT 1467.2 SGR 1353.3 SG3 1388.8  
 RRT .8509 RRF .8755 RTF .7163  
 SGB 1996.0 R23 .2313 R13 .8661  
 SG1 1815.0 SG2 830.5 THA 41.46

ORBIT DETERMINATION ACCURACY

ST 28.3 SR 26.0 SS 23.3  
 CRT .8247 CRS .3881 CST -.1767  
 LSA 36.8 MSA 25.6 S8A 2.9  
 EL1 36.7 EL2 11.3 ALF 42.04

LAUNCH DATE SEP 2 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.861 GAL 6.83 AZL 88.23 HCA 123.20 SMA 195.54 ECC .25579 INC 1.7718 V1 29.519  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.735 GAP 7.24 AZP 90.97 TAL 34.52 TAP 157.72 RCA 145.53 APO 245.56 V2 22.944  
 RC 223.209 GL 10.74 GP -16.91 ZAL 36.99 ZAP 108.35 ETS 187.64 ZAE 142.34 ETE 207.08 ZAC 68.89 ETC 284.51 LVI -3.30

DISTANCE 414.848

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.293 VHL 5.412 DLA 15.79 RAL 9.51 RAD 6646.7 VEL 12.216 PTH 7.17 VHP 2.563 DPA -4.13 RAP 36.12 ECC 1.4821  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 36 3545.15 -46.84 132.31 251.61 99.51 9 11 41 2545.2 -37.84 101.71  
 60.00 8 34 14 3487.57 -40.07 128.29 252.77 94.69 9 32 21 2487.6 -33.85 99.07  
 70.00 9 5 54 3394.36 -34.14 121.11 253.14 90.98 10 2 28 2394.4 -30.18 93.10  
 80.00 9 54 43 3241.35 -29.82 109.48 253.11 88.45 10 48 45 2241.4 -27.43 82.31  
 90.00 11 7 23 3006.81 -28.18 92.18 253.05 87.52 11 57 30 2006.8 -26.37 65.32  
 100.00 12 37 35 2715.82 -29.82 70.85 253.11 88.45 13 22 51 1715.8 -27.43 43.88  
 110.00 14 5 20 2441.18 -34.14 50.03 253.14 90.98 14 46 1 1441.2 -30.18 22.02

DIFFERENTIAL CORRECTIONS

TDE -.4050 TRA-1.1565 TC3 -.7185 BAU .5413  
 RDE -.4760 RRA -.1860 RC3-1.1809 FAU .47674  
 FDE 1.0485 FRA-5.4283 FC-14.0897 B8P 2797  
 BDE .6250 BRA 1.1714 BC3 1.3823 F8P 2422

MID-COURSE EXECUTION ACCURACY

SGT 1551.6 SGR 1389.1 SG3 1418.4  
 RRT .6822 RRF .8839 RTF .7453  
 SGB 2082.6 R23 .2258 R13 .8765  
 SG1 1912.7 SG2 823.9 THA 40.39

ORBIT DETERMINATION ACCURACY

ST 28.7 SR 25.5 SS 23.9  
 CRT .8218 CRS .3933 CST -.1765  
 LSA 36.7 MSA 26.2 S8A 2.8  
 EL1 36.7 EL2 11.4 ALF 40.81

LAUNCH DATE SEP 2 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 11 1974

Table with columns for Heliocentric Conic, Planetary Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCX, and various correction values.

LAUNCH DATE SEP 2 1973 FLIGHT TIME 192.00 ARRIVAL DATE MAR 13 1974

Table with columns for Heliocentric Conic, Planetary Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCX, and various correction values.

LAUNCH DATE SEP 2 1973 FLIGHT TIME 194.00 ARRIVAL DATE MAR 15 1974

Table with columns for Heliocentric Conic, Planetary Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCX, and various correction values.

LAUNCH DATE SEP 2 1973 FLIGHT TIME 196.00 ARRIVAL DATE MAR 17 1974

Table with columns for Heliocentric Conic, Planetary Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCX, and various correction values.

LAUNCH DATE SEP 2 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 190.94 LAL .00 LOL 339.39 VL 32.853 GAL 6.87 AZL 88.01 MCA 127.89 SMA 195.40 ECC .25409 INC 1.9872 V1 29.519  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.855 GAP 5.98 AZP 91.22 TAL 33.87 TAP 161.77 RCA 145.75 APO 245.05 V2 22.792  
 RC 237.739 GL 12.18 GP -18.32 ZAL 37.90 ZAP 100.56 ETS 185.41 ZAE 133.84 ETE 202.00 ZAC 68.04 ETC 284.85 LVI -2.42

Distance 433.853 Earth to Mars

Planetocentric Conic: C3 28.777 VHL 5.364 DLA 17.33 RAL 9.44 RAD 6646.5 VEL 12.195 PTH 7.15 VHP 2.474 DPA -6.83 RAP 33.73 ECC 1.4736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 59 3572.49 -47.12 134.89 252.65 97.53 9 5 31 2572.5 -38.79 103.63  
 60.00 8 25 33 3520.40 -40.22 131.07 253.51 92.81 9 24 13 2520.4 -34.71 101.43  
 70.00 8 54 40 3434.66 -34.14 124.26 253.64 89.12 9 51 55 2434.7 -30.94 95.99  
 80.00 9 40 51 3289.93 -29.68 113.09 253.44 86.56 10 35 41 2289.9 -28.08 85.77  
 90.00 10 52 13 3059.56 -27.96 96.02 253.30 85.61 11 43 12 2059.6 -26.97 69.06  
 100.00 12 23 43 2764.41 -29.68 74.45 253.44 86.56 13 9 47 1764.4 -28.08 47.14  
 110.00 13 54 6 2481.48 -34.14 53.17 253.64 89.12 14 35 28 1481.5 -30.94 24.91

Differential Corrections: TDE -.3987 TRA-1.3713 TC3-1.2183 BAU .7058 SGT 2059.6 SGR 1582.4 SG3 1526.7 ST 31.3 SR 22.3 SS 27.3  
 RDE -.4089 RRA -.2623 RC3-1.3718 FAU .50797 RRT .7950 RRF .9166 RTF .8416 CRT .8105 CRS .4365 CST -.1501  
 FDE 1.4832 FRA-5.7727 FC-15.2819 BSP 3807 SGB 2985.1 R23 .2104 R13 .9113 LSA 36.9 MSA 29.3 SSA 2.7  
 BDE .5692 BRA 1.3961 BC3 1.8347 FSP 2643 SG1 2460.4 SG2 793.4 THA 35.30 EL1 36.8 EL2 11.1 ALF 33.39

LAUNCH DATE SEP 2 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 190.94 LAL .00 LOL 339.39 VL 32.853 GAL 6.64 AZL 87.97 HCA 128.83 SMA 195.40 ECC .25383 INC 2.0332 V1 29.519  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.523 GAP 5.74 AZP 91.28 TAL 33.72 TAP 162.54 RCA 145.80 APO 244.99 V2 22.763  
 RC 240.615 GL 12.49 GP -18.84 ZAL 38.11 ZAP 99.05 ETS 184.94 ZAE 132.15 ETE 201.12 ZAC 67.86 ETC 284.90 LVI -2.23

Distance 437.654 Earth to Mars

Planetocentric Conic: C3 28.681 VHL 5.355 DLA 17.66 RAL 9.44 RAD 6646.5 VEL 12.191 PTH 7.15 VHP 2.462 DPA -7.35 RAP 33.29 ECC 1.4720  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 34 3578.63 -47.17 135.48 252.90 97.09 9 4 12 2578.6 -38.99 104.07  
 60.00 8 23 40 3527.78 -40.24 131.70 253.69 92.39 9 22 28 2527.8 -34.89 101.96  
 70.00 8 52 12 3443.75 -34.13 124.96 253.77 88.70 9 49 36 2443.7 -31.10 96.65  
 80.00 9 37 46 3300.95 -29.63 113.90 253.53 86.14 10 32 47 2300.9 -28.22 86.56  
 90.00 10 48 50 3071.57 -27.90 96.89 253.38 85.17 11 40 1 2071.6 -27.10 69.92  
 100.00 12 20 38 2775.42 -29.63 75.27 253.53 86.14 13 6 53 1775.4 -28.22 47.93  
 110.00 13 51 39 2490.56 -34.13 53.88 253.77 88.70 14 33 9 1490.6 -31.10 25.97

Differential Corrections: TDE -.3920 TRA-1.4165 TC3-1.3244 BAU .7416 SGT 2172.0 SGR 1597.3 SG3 1544.8 ST 31.8 SR 21.6 SS 28.0  
 RDE -.3917 RRA -.2774 RC3-1.4094 FAU .51217 RRT .8107 RRF .9218 RTF .8542 CRT .8086 CRS .4398 CST -.1496  
 FDE 1.5722 FRA-5.8161 FC-15.4597 BSP 4028 SGB 2696.1 R23 .2081 R13 .9164 LSA 36.9 MSA 29.9 SSA 2.7  
 BDE .5541 BRA 1.4434 BC3 1.9340 FSP 2672 SG1 2578.5 SG2 787.8 THA 34.47 EL1 36.9 EL2 11.0 ALF 31.88

LAUNCH DATE SEP 2 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 190.94 LAL .00 LOL 339.39 VL 32.853 GAL 6.60 AZL 87.92 HCA 129.76 SMA 195.40 ECC .25360 INC 2.0804 V1 29.519  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.491 GAP 5.49 AZP 91.33 TAL 33.56 TAP 163.32 RCA 145.85 APO 244.96 V2 22.734  
 RC 243.479 GL 12.80 GP -19.16 ZAL 38.34 ZAP 97.56 ETS 184.46 ZAE 130.46 ETE 200.28 ZAC 67.69 ETC 284.96 LVI -2.03

Distance 441.455 Earth to Mars

Planetocentric Conic: C3 28.589 VHL 5.347 DLA 18.01 RAL 9.44 RAD 6646.5 VEL 12.187 PTH 7.15 VHP 2.452 DPA -7.88 RAP 32.85 ECC 1.4705  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 7 3585.01 -47.22 136.09 253.17 96.62 9 2 52 2585.0 -39.21 104.93  
 60.00 8 21 44 3535.45 -40.26 132.35 253.89 91.95 9 20 39 2535.4 -35.08 102.93  
 70.00 8 49 40 3493.20 -34.11 125.70 253.91 88.26 9 47 13 2453.2 -31.26 97.34  
 80.00 9 34 34 3312.45 -29.57 114.75 253.62 85.69 10 29 47 2312.4 -28.35 87.39  
 90.00 10 45 18 3084.12 -27.82 97.80 253.46 84.72 11 36 42 2084.1 -27.22 70.81  
 100.00 12 17 26 2786.92 -29.57 76.12 253.62 85.69 13 3 33 1786.9 -28.35 48.76  
 110.00 13 49 6 2500.02 -34.11 54.62 253.91 88.26 14 30 46 1500.0 -31.26 26.26

Differential Corrections: TDE -.3857 TRA-1.4616 TC3-1.4313 BAU .7782 SGT 2286.0 SGR 1634.1 SG3 1560.5 ST 32.3 SR 20.9 SS 28.6  
 RDE -.3768 RRA -.2931 RC3-1.4481 FAU .51623 RRT .8248 RRF .9289 RTF .8594 CRT .8069 CRS .4377 CST -.1548  
 FDE 1.6517 FRA-5.8609 FC-15.6325 BSP 4252 SGB 2810.0 R23 .2054 R13 .9213 LSA 36.9 MSA 30.5 SSA 2.7  
 BDE .5392 BRA 1.4907 BC3 2.0361 FSP 2684 SG1 2698.9 SG2 782.6 THA 33.74 EL1 36.9 EL2 10.8 ALF 30.48

LAUNCH DATE SEP 2 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 190.94 LAL .00 LOL 339.39 VL 32.854 GAL 6.57 AZL 87.87 HCA 130.88 SMA 195.42 ECC .25338 INC 2.1287 V1 29.519  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.461 GAP 5.25 AZP 91.39 TAL 33.39 TAP 164.08 RCA 145.90 APO 244.93 V2 22.706  
 RC 246.330 GL 13.13 GP -19.48 ZAL 38.57 ZAP 96.08 ETS 183.98 ZAE 128.78 ETE 199.47 ZAC 67.51 ETC 285.02 LVI -1.83

Distance 445.256 Earth to Mars

Planetocentric Conic: C3 28.500 VHL 5.339 DLA 18.38 RAL 9.44 RAD 6646.4 VEL 12.184 PTH 7.14 VHP 2.444 DPA -8.40 RAP 32.43 ECC 1.4690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 37 3591.65 -47.27 136.72 253.46 96.13 9 1 29 2591.6 -39.43 105.02  
 60.00 8 19 44 3543.42 -40.28 133.03 254.10 91.49 9 18 47 2543.4 -35.28 103.11  
 70.00 8 47 2 3463.05 -34.09 126.47 254.05 87.81 9 44 45 2463.0 -31.43 98.06  
 80.00 9 31 15 3324.45 -29.51 115.64 253.73 85.23 10 26 39 2324.4 -28.49 88.26  
 90.00 10 41 38 3097.25 -27.74 98.76 253.54 84.26 11 33 15 2097.2 -27.34 71.76  
 100.00 12 14 7 2798.92 -29.51 77.00 253.73 85.23 13 0 45 1798.9 -28.49 49.63  
 110.00 13 46 28 2509.87 -34.09 55.39 254.05 87.81 14 28 18 1509.9 -31.43 26.98

Differential Corrections: TDE -.3768 TRA-1.5056 TC3-1.5368 BAU .8156 SGT 2398.8 SGR 1676.0 SG3 1578.8 ST 32.7 SR 20.4 SS 29.2  
 RDE -.3642 RRA -.3117 RC3-1.4902 FAU .52104 RRT .8380 RRF .9320 RTF .8763 CRT .8050 CRS .4220 CST -.1752  
 FDE 1.6974 FRA-5.9318 FC-15.8274 BSP 4474 SGB 2926.3 R23 .2009 R13 .9267 LSA 37.0 MSA 30.9 SSA 2.6  
 BDE .5241 BRA 1.5375 BC3 2.1407 FSP 2656 SG1 2821.1 SG2 777.7 THA 33.19 EL1 37.0 EL2 10.7 ALF 29.36



LAUNCH DATE SEP 2 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC										DISTANCE 464.244										EARTH TO MARS																																													
RL	130.94	LAL	.00	LOL	339.39	VL	32.863	GAL	6.38	AZL	87.61	HCA	135.29	SMA	195.58	ECC	.25239	INC	2.3906	V1	29.519	RP	243.12	LAP	1.68	LOP	114.70	VP	20.328	GAP	4.07	AZP	91.70	TAL	32.46	TAP	167.76	RCA	146.18	APO	244.99	V2	22.573	RC	260.356	GL	14.89	GP	-21.09	ZAL	39.89	ZAP	89.09	ETS	181.45	ZAE	120.82	ETE	195.78	ZAC	66.55	ETC	285.27	LVI	-.73
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.101	VHL	5.301	DLA	20.31	RAL	9.48	RAD	6646.3	VEL	12.168	PTH	7.13	VHP	2.430	DPA	-10.82	RAP	30.60	ECC	1.4625	SGT	3028.6	SGR	1837.9	SG3	1596.0	ST	35.2	SR	16.1	SS	33.4																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8830	RRF	.9496	RTF	.9074	CRT	.8174	CR8	.3955	CST	-.1790																												
50.00	7	53	21	3629.04	-47.48	140.31	255.13	93.38	8	53	50	2629.0	-40.63	107.79	SG8	3542.6	R23	.2015	R13	.9395	LSA	38.4	MSA	33.8	SSA	2.4																																							
60.00	8	8	35	3588.49	-40.29	136.86	255.33	88.88	9	8	24	2588.5	-36.32	106.48	SG1	3461.3	SG2	754.8	THA	29.74	EL1	37.8	EL2	8.7	ALF	21.70																																							
70.00	8	32	9	3519.09	-33.86	130.83	254.92	85.24	9	30	48	2519.1	-32.28	102.20																																																			
80.00	9	12	11	3393.60	-29.01	120.71	254.31	82.61	10	8	44	2393.6	-29.15	93.29																																																			
90.00	10	20	22	3173.48	-27.10	104.24	254.01	81.58	11	13	15	2173.5	-27.90	77.26																																																			
100.00	11	55	3	2868.07	-29.01	82.08	254.31	82.61	12	42	51	1868.1	-29.15	54.66																																																			
110.00	13	31	35	2565.91	-33.86	59.75	254.92	85.24	14	14	21	1565.9	-32.28	31.12																																																			

LAUNCH DATE SEP 2 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC										DISTANCE 468.040										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	32.866	GAL	6.34	AZL	87.55	HCA	136.21	SMA	195.64	ECC	.25248	INC	2.4476	V1	29.519	RP	243.37	LAP	1.69	LOP	115.62	VP	20.304	GAP	3.84	AZP	91.77	TAL	32.26	TAP	168.47	RCA	146.24	APO	245.03	V2	22.548	RC	263.112	GL	15.28	GP	-21.42	ZAL	40.19	ZAP	87.77	ETS	180.92	ZAE	119.04	ETE	195.11	ZAC	66.34	ETC	285.32	LVI	-.49
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.033	VHL	5.295	DLA	20.74	RAL	9.49	RAD	6646.2	VEL	12.165	PTH	7.13	VHP	2.432	DPA	-11.41	RAP	30.30	ECC	1.4614	SGT	3157.8	SGR	1871.7	SG3	1594.7	ST	35.7	SR	15.3	SS	34.3																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8896	RRF	.9526	RTF	.9118	CRT	.8248	CR8	.3730	CST	-.1888																												
50.00	7	51	31	3637.45	-47.52	141.12	255.92	92.75	8	52	8	2637.5	-40.89	108.43	SG8	3670.8	R23	.2018	R13	.9416	LSA	39.0	MSA	34.1	SSA	2.4																																							
60.00	8	6	5	3598.66	-40.27	137.72	255.61	88.30	9	6	3	2598.7	-36.54	107.26	SG1	3593.1	SG2	751.2	THA	29.20	EL1	38.0	EL2	8.1	ALF	20.41																																							
70.00	8	28	46	3531.84	-33.78	131.82	255.11	84.66	9	27	38	2531.8	-32.46	103.16																																																			
80.00	9	7	46	3409.56	-28.86	121.88	254.44	82.01	10	4	36	2409.6	-29.27	94.46																																																			
90.00	10	15	23	3191.25	-26.91	105.51	254.11	80.97	11	8	35	2191.3	-27.99	78.55																																																			
100.00	11	50	38	2884.03	-28.86	83.25	254.44	82.01	12	38	42	1884.0	-29.27	55.83																																																			
110.00	13	28	12	2578.66	-33.78	60.73	255.11	84.66	14	11	11	1578.7	-32.46	32.07																																																			

LAUNCH DATE SEP 2 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC										DISTANCE 471.835										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	32.869	GAL	6.30	AZL	87.49	HCA	137.12	SMA	195.89	ECC	.25239	INC	2.5065	V1	29.519	RP	243.62	LAP	1.71	LOP	116.53	VP	20.282	GAP	3.61	AZP	91.84	TAL	32.05	TAP	169.17	RCA	146.30	APO	245.08	V2	22.523	RC	265.850	GL	15.67	GP	-21.75	ZAL	40.49	ZAP	86.48	ETS	180.38	ZAE	117.48	ETE	194.45	ZAC	66.12	ETC	285.38	LVI	-.24
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.969	VHL	5.289	DLA	21.17	RAL	9.50	RAD	6646.2	VEL	12.162	PTH	7.13	VHP	2.435	DPA	-11.89	RAP	30.02	ECC	1.4603	SGT	3287.9	SGR	1905.2	SG3	1591.3	ST	36.2	SR	14.5	SS	35.2																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.8957	RRF	.9554	RTF	.9157	CRT	.8349	CR8	.3430	CST	-.2007																												
50.00	7	49	35	3646.21	-47.54	141.97	255.92	92.10	8	50	22	2646.2	-41.16	109.10	SG8	3800.0	R23	.2023	R13	.9434	LSA	39.7	MSA	34.3	SSA	2.3																																							
60.00	8	3	28	3609.27	-40.25	138.83	255.90	87.69	9	3	37	2609.3	-36.77	108.07	SG1	3725.8	SG2	747.6	THA	28.69	EL1	38.3	EL2	7.5	ALF	19.20																																							
70.00	8	25	13	3545.19	-33.69	132.85	255.31	84.06	9	24	18	2545.2	-32.63	104.16																																																			
80.00	9	3	7	3426.38	-28.70	123.10	254.56	81.39	10	0	13	2426.4	-29.39	95.70																																																			
90.00	10	10	7	3210.07	-26.71	106.85	254.20	80.33	11	3	37	2210.1	-28.08	79.92																																																			
100.00	11	45	58	2900.86	-28.70	84.47	254.56	81.39	12	34	19	1900.9	-29.39	57.06																																																			
110.00	13	24	39	2592.01	-33.69	61.77	255.31	84.06	14	7	51	1592.0	-32.63	33.08																																																			

LAUNCH DATE SEP 2 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC										DISTANCE 475.629										EARTH TO MARS																																													
RL	150.94	LAL	.00	LOL	339.39	VL	32.872	GAL	6.26	AZL	87.43	HCA	138.03	SMA	195.75	ECC	.25231	INC	2.5674	V1	29.519	RP	243.86	LAP	1.72	LOP	117.45	VP	20.280	GAP	3.38	AZP	91.91	TAL	31.84	TAP	169.87	RCA	146.36	APO	245.19	V2	22.499	RC	268.570	GL	16.08	GP	-22.09	ZAL	40.81	ZAP	85.22	ETS	179.84	ZAE	115.94	ETE	193.80	ZAC	65.90	ETC	285.41	LVI	.02
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	27.911	VHL	5.283	DLA	21.63	RAL	9.51	RAD	6646.2	VEL	12.160	PTH	7.12	VHP	2.440	DPA	-12.37	RAP	29.76	ECC	1.4593	SGT	3418.8	SGR	1938.7	SG3	1585.9	ST	36.7	SR	13.6	SS	36.0																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9012	RRF	.9581	RTF	.9191	CRT	.8480	CR8	.3050	CST	-.2139																												
50.00	7	47	35	3655.34	-47.58	142.85	256.34	91.42	8	48	30	2655.3	-41.43	109.80	SG8	3930.3	R23	.2031	R13	.9451	LSA	40.6	MSA	34.4	SSA	2.3																																							
60.00	8	0	43	3620.34	-40.21	139.57	256.20	87.05	9	1	4	2620.3	-36.99	108.92	SG1	3859.1	SG2	744.3	THA	28.21	EL1	38.6	EL2	6.9	ALF	18.07																																							
70.00	8	21	29	3559.18	-33.59	133.93	255.51	83.43	9	20	48	2559.2	-32.80	105.21																																																			
80.00	8	58	10	3444.15	-28.51	124.39	254.69	80.74	9	55	34	2444.1	-29.50	97.01																																																			
90.00	10	4	29	3230.04	-26.47	108.26	254.29	79.66	10	58	19	2230.0	-28.15	81.38																																																			
100.00	11	41	2	2918.62	-28.51	85.75	254.69	80.74	12	29	41	1918.6	-29.50	58.37																																																			
110.00	13	20	55	2606.00	-33.59	62.84	255.51	83.43	14	4	21	1606.0	-32.80	34.13																																																			

LAUNCH DATE SEP 2 1973 FLIGHT TIME 222.00 ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.875 GAL 6.21 AZL 87.37 HCA 130.94 SMA 195.82 ECC .25225 INC 2.6303 V1 29.519  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.240 GAP 3.15 AZP 91.98 TAL 31.62 TAP 170.56 RCA 146.42 APO 245.22 V2 22.475  
 RC 271.273 GL 16.51 GP -22.43 ZAL 41.14 ZAP 83.99 ETS 179.30 ZAE 114.43 ETE 193.17 ZAC 65.66 ETC 285.45 LVI .30

DISTANCE 479.422 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.858 VHL 5.278 DLA 22.09 RAL 9.51 RAD 6646.2 VEL 12.158 PTH 7.12 VHP 2.446 DPA -12.85 RAP 29.53 ECC 1.4588  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 45 29 3664.86 -47.57 143.77 256.77 90.71 8 46 34 2664.9 -41.71 110.54  
 60.00 7 57 51 3631.91 -40.17 140.55 256.51 86.39 8 58 23 2631.9 -37.22 109.82  
 70.00 8 17 33 3573.87 -33.47 135.06 255.72 82.77 9 17 7 2573.9 -32.97 106.33  
 80.00 8 52 55 3462.95 -28.30 125.74 254.81 80.06 9 50 36 2463.0 -29.60 98.39  
 90.00 9 58 28 3251.32 -26.20 109.76 254.37 78.96 10 52 40 2251.3 -28.21 82.93  
 100.00 11 35 47 2937.42 -28.30 87.11 254.81 80.06 12 24 45 1937.4 -29.60 59.76  
 110.00 13 17 0 2620.69 -33.47 63.97 255.72 82.77 14 0 40 1620.7 -32.97 35.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2645 TRA-1.9428 TC3-2.5672 BAU 1.1669 SGT 3550.7 SGR 1972.6 SG3 1570.8 ST 37.3 SR 12.8 SS 36.9  
 RDE -.1836 RRA -.4319 RC3-1.7962 FAU .51141 RRT .9063 RRF .9606 RTF .9222 CRT .8645 CRS .2562 CST -.2291  
 FDE 2.5998 FRA-5.6927 FC-15.8931 B8P 6659 SGB 4061.8 R23 .2041 R13 .9466 LSA 41.5 MSA 34.5 SSA 2.2  
 BDE .3220 BRA 1.9902 BC3 3.1332 F8P 2726 SG1 3993.6 SG2 741.3 THA 27.76 EL1 38.9 EL2 6.2 ALF 17.04

LAUNCH DATE SEP 2 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.879 GAL 6.17 AZL 87.30 HCA 139.85 SMA 195.89 ECC .25220 INC 2.6954 V1 29.519  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.220 GAP 2.93 AZP 92.06 TAL 31.40 TAP 171.25 RCA 146.49 APO 245.29 V2 22.452  
 RC 273.957 GL 16.95 GP -22.78 ZAL 41.47 ZAP 82.79 ETS 178.74 ZAE 112.93 ETE 192.55 ZAC 65.41 ETC 285.50 LVI .58

DISTANCE 483.214 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.810 VHL 5.274 DLA 22.58 RAL 9.52 RAD 6646.1 VEL 12.156 PTH 7.12 VHP 2.453 DPA -13.32 RAP 29.32 ECC 1.4577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 16 3674.79 -47.58 144.73 257.22 89.97 8 44 31 2674.8 -42.00 111.32  
 60.00 7 54 50 3644.01 -40.11 141.37 256.83 85.69 8 55 34 2644.0 -37.46 110.76  
 70.00 8 13 24 3589.30 -33.33 136.24 255.92 82.08 9 13 13 2589.3 -33.14 107.50  
 80.00 8 47 20 3482.91 -28.05 127.18 254.92 79.34 9 45 23 2482.9 -29.89 99.67  
 90.00 9 52 1 3274.06 -25.89 111.35 254.44 78.22 10 46 35 2274.1 -28.26 84.59  
 100.00 11 30 11 2957.38 -28.05 88.54 254.92 79.34 12 19 29 1957.4 -29.69 61.24  
 110.00 13 12 50 2636.12 -33.33 65.16 255.92 82.08 13 56 47 1636.1 -33.14 36.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2445 TRA-1.9918 TC3-2.6820 BAU 1.2069 SGT 3683.1 SGR 2006.4 SG3 1569.8 ST 37.8 SR 12.1 SS 37.8  
 RDE -.1808 RRA -.4456 RC3-1.8287 FAU .50742 RRT .9109 RRF .9629 RTF .9250 CRT .8843 CRS .1950 CST -.2462  
 FDE 2.6902 FRA-5.6370 FC-15.7958 B8P 6908 SGB 4194.1 R23 .2052 R13 .9479 LSA 42.6 MSA 34.3 SSA 2.2  
 BDE .2926 BRA 2.0410 BC3 3.2461 F8P 2708 SG1 4128.6 SG2 738.5 THA 27.34 EL1 39.3 EL2 5.4 ALF 16.12

LAUNCH DATE SEP 2 1973 FLIGHT TIME 226.00 ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.883 GAL 6.13 AZL 87.24 HCA 140.76 SMA 195.97 ECC .25218 INC 2.7628 V1 29.519  
 RP 244.56 LAP 1.75 LOP 120.18 VP 20.201 GAP 2.70 AZP 92.14 TAL 31.17 TAP 171.93 RCA 146.55 APO 245.38 V2 22.430  
 RC 276.623 GL 17.40 GP -23.14 ZAL 41.82 ZAP 81.63 ETS 178.18 ZAE 111.47 ETE 191.94 ZAC 65.14 ETC 285.54 LVI .88

DISTANCE 487.005 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.789 VHL 5.270 DLA 23.08 RAL 9.52 RAD 6646.1 VEL 12.154 PTH 7.12 VHP 2.462 DPA -13.79 RAP 29.14 ECC 1.4570  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 40 58 3685.17 -47.57 145.73 257.69 89.20 8 42 23 2685.2 -42.29 112.15  
 60.00 7 51 39 3656.67 -40.04 142.64 257.15 84.97 8 52 36 2656.7 -37.69 111.75  
 70.00 8 9 0 3605.56 -33.17 137.48 256.13 81.36 9 9 6 2605.6 -33.30 108.74  
 80.00 8 41 20 3504.16 -27.78 128.69 255.02 78.59 9 39 44 2504.2 -29.76 101.44  
 90.00 9 45 2 3298.50 -25.54 113.06 254.49 77.43 10 40 0 2298.5 -28.28 86.38  
 100.00 11 24 12 2978.63 -27.78 90.06 255.02 76.59 12 13 51 1978.6 -29.76 62.81  
 110.00 13 8 27 2652.37 -33.17 66.40 256.13 81.36 13 52 39 1652.4 -33.30 37.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2226 TRA-2.0406 TC3-2.7959 BAU 1.2488 SGT 3815.5 SGR 2040.0 SG3 1558.7 ST 38.4 SR 11.4 SS 38.8  
 RDE -.1388 RRA -.4591 RC3-1.8606 FAU .50281 RRT .9151 RRF .9651 RTF .9273 CRT .9069 CRS .1195 CST -.2646  
 FDE 2.7818 FRA-5.5720 FC-15.6758 B8P 7158 SGB 4326.6 R23 .2067 R13 .9491 LSA 43.8 MSA 34.5 SSA 2.1  
 BDE .2613 BRA 2.0916 BC3 3.3584 F8P 2687 SG1 4283.5 SG2 738.2 THA 26.94 EL1 39.8 EL2 4.6 ALF 15.30

LAUNCH DATE SEP 2 1973 FLIGHT TIME 228.00 ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.887 GAL 6.08 AZL 87.17 HCA 141.66 SMA 196.05 ECC .25214 INC 2.8328 V1 29.519  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.183 GAP 2.48 AZP 92.22 TAL 30.94 TAP 172.60 RCA 146.61 APO 245.48 V2 22.407  
 RC 279.288 GL 17.87 GP -23.50 ZAL 42.19 ZAP 80.50 ETS 177.61 ZAE 110.02 ETE 191.33 ZAC 64.87 ETC 285.59 LVI 1.19

DISTANCE 490.785 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.735 VHL 5.266 DLA 23.59 RAL 9.51 RAD 6646.1 VEL 12.153 PTH 7.12 VHP 2.473 DPA -14.25 RAP 28.99 ECC 1.4568  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 32 3696.00 -47.56 146.78 258.17 88.40 8 40 8 2696.0 -42.59 113.02  
 60.00 7 48 18 3669.94 -39.95 143.76 257.49 84.21 8 49 28 2669.9 -37.93 112.80  
 70.00 8 4 21 3622.70 -32.99 138.78 256.34 80.62 9 4 43 2622.7 -33.46 110.05  
 80.00 8 34 53 3526.87 -27.46 130.31 255.12 77.79 9 33 40 2526.9 -29.82 103.13  
 90.00 9 37 26 3320.91 -25.14 114.88 254.53 76.60 10 32 51 2324.9 -28.27 88.31  
 100.00 11 17 45 3001.34 -27.46 91.68 255.12 77.79 12 7 47 2001.3 -29.82 64.50  
 110.00 13 3 47 2689.52 -32.99 67.70 256.34 80.61 13 48 16 1689.5 -33.46 38.97

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1989 TRA-2.0892 TC3-2.9092 BAU 1.2866 SGT 3948.1 SGR 2074.3 SG3 1546.2 ST 39.0 SR 10.8 SS 39.7  
 RDE -.1123 RRA -.4727 RC3-1.8924 FAU .49776 RRT .9190 RRF .9672 RTF .9295 CRT .9307 CRS .0278 CST -.2850  
 FDE 2.8709 FRA-5.5028 FC-15.5371 B8P 7412 SGB 4459.8 R23 .2083 R13 .9501 LSA 45.1 MSA 34.4 SSA 2.1  
 BDE .2285 BRA 2.1420 BC3 3.4705 F8P 2664 SG1 4399.0 SG2 734.2 THA 26.57 EL1 40.3 EL2 3.8 ALF 14.61

LAUNCH DATE SEP 2 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 20 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.892 GAL 6.04 AZL 87.09 HCA 142.96 SMA 196.13 ECC .25212 INC 2.9055 V1 29.819  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.166 GAP 2.26 AZP 92.31 TAL 30.70 TAP 173.26 RCA 146.68 APO 245.58 V2 22.386  
 RC 281.893 GL 18.36 GP -23.88 ZAL 42.96 ZAP 79.40 ETS 177.03 ZAE 108.60 ETE 190.74 ZAC 64.58 ETC 285.64 LVI 1.51

PLANETOCENTRIC CONIC: C3 27.709 VHL 5.264 DLA 24.12 RAL 9.51 RAD 6646.1 VEL 12.152 PTH 7.12 VHP 2.484 DPA -14.72 RAP 28.86 ECC 1.4560  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 57 3707.34 -47.53 147.88 258.67 87.55 8 37 45 2707.3 -42.90 113.93  
 60.00 7 44 46 3683.86 -39.85 144.93 257.83 83.43 8 46 10 2683.9 -38.16 113.91  
 70.00 7 59 23 3640.82 -32.78 140.16 256.54 79.83 9 0 3 2640.8 -33.60 111.45  
 80.00 8 27 56 3551.25 -27.10 132.03 255.19 76.96 9 27 7 2551.3 -29.85 104.94  
 90.00 9 29 7 3353.63 -24.67 116.86 254.54 75.72 10 25 1 2353.6 -28.23 90.41  
 100.00 11 10 47 3025.73 -27.10 93.40 255.19 76.96 12 1 13 2025.7 -29.85 66.31  
 110.00 12 58 49 2687.63 -32.78 69.07 256.54 79.83 13 43 37 1687.6 -33.60 40.36

Differential Corrections: TDE -.1738 TRA-2.1381 TC3-3.0214 BAU 1.3268 SGT 4081.1 SGR 2108.7 SG3 1531.7 ST 39.7 SR 10.4 SS 40.7  
 RDE -.0870 RRA -.4866 RC3-1.9235 FAU .49209 RRT .9225 RRF .9692 RTF .9314 CRT .9535 CRS -.0799 CST -.3067  
 FDE 2.9576 FRA-5.4292 FC-15.3748 BSP 7660 SGB 4593.7 R23 .2101 R13 .9511 LSA 46.4 MSA 34.3 SSA 2.0  
 BDE .1944 BRA 2.1927 BC3 3.5817 FSP 2637 SG1 4534.9 SG2 732.4 THA 26.22 EL1 40.9 EL2 3.0 ALF 14.06

LAUNCH DATE SEP 2 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 22 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.896 GAL 5.99 AZL 87.02 HCA 143.47 SMA 196.21 ECC .25212 INC 2.9812 V1 29.519  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.150 GAP 2.04 AZP 92.40 TAL 30.46 TAP 173.92 RCA 146.74 APO 245.68 V2 22.365  
 RC 284.497 GL 18.87 GP -24.26 ZAL 42.95 ZAP 78.33 ETS 176.44 ZAE 107.21 ETE 190.16 ZAC 64.27 ETC 285.69 LVI 1.85

PLANETOCENTRIC CONIC: C3 27.691 VHL 5.262 DLA 24.67 RAL 9.49 RAD 6646.1 VEL 12.151 PTH 7.12 VHP 2.497 DPA -15.19 RAP 28.76 ECC 1.4557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 15 3719.21 -47.49 149.02 259.18 86.67 8 35 14 2719.2 -43.21 114.91  
 60.00 7 41 1 3698.49 -39.73 146.15 258.18 82.60 8 42 40 2698.5 -38.40 115.08  
 70.00 7 54 5 3660.01 -32.54 141.60 256.74 79.00 8 55 5 2660.0 -33.74 112.93  
 80.00 8 20 21 3577.58 -26.68 133.87 255.25 76.08 9 19 58 2577.6 -29.86 106.90  
 90.00 9 19 55 3385.21 -24.12 119.01 254.51 74.78 10 16 20 2385.2 -28.14 92.71  
 100.00 11 3 13 3052.05 -26.68 95.24 255.25 76.08 11 54 5 2052.1 -29.86 68.27  
 110.00 12 53 31 2706.83 -32.54 70.52 256.74 79.00 13 38 38 1706.8 -33.74 41.85

Differential Corrections: TDE -.1470 TRA-2.1869 TC3-3.1329 BAU 1.3671 SGT 4214.6 SGR 2144.4 SG3 1516.3 ST 40.4 SR 10.1 SS 41.6  
 RDE -.0611 RRA -.5009 RC3-1.9551 FAU .48617 RRT .9258 RRF .9711 RTF .9331 CRT .9713 CRS -.2005 CST -.3303  
 FDE 3.0403 FRA-5.3527 FC-15.2000 BSP 7905 SGB 4728.8 R23 .2119 R13 .9519 LSA 47.9 MSA 34.2 SSA 2.0  
 BDE .1591 BRA 2.2435 BC3 3.6929 FSP 2604 SG1 4671.9 SG2 731.1 THA 25.90 EL1 41.6 EL2 2.3 ALF 13.66

LAUNCH DATE SEP 2 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 24 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.901 GAL 5.95 AZL 86.94 HCA 144.37 SMA 196.30 ECC .25213 INC 3.0599 V1 29.519  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.135 GAP 1.82 AZP 92.49 TAL 30.21 TAP 174.58 RCA 146.81 APO 245.80 V2 22.344  
 RC 287.079 GL 19.39 GP -24.66 ZAL 43.34 ZAP 77.30 ETS 175.85 ZAE 105.84 ETE 189.58 ZAC 63.95 ETC 285.74 LVI 2.20

PLANETOCENTRIC CONIC: C3 27.681 VHL 5.261 DLA 25.24 RAL 9.47 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 2.511 DPA -15.65 RAP 28.69 ECC 1.4556  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 23 3731.85 -47.43 150.22 259.71 85.75 8 32 34 2731.6 -43.52 115.93  
 60.00 7 37 3 3713.88 -39.59 147.44 258.53 81.74 8 38 58 2713.9 -38.63 116.32  
 70.00 7 48 24 3680.41 -32.27 143.13 256.93 78.14 8 49 44 2680.4 -33.87 114.51  
 80.00 8 12 2 3606.21 -26.20 135.86 255.27 75.14 9 12 9 2606.2 -29.83 109.03  
 90.00 9 9 35 3420.34 -23.48 121.38 254.44 73.76 10 8 38 2420.3 -28.00 95.27  
 100.00 10 54 54 3080.68 -26.20 97.23 255.27 75.14 11 46 15 2080.7 -29.83 70.39  
 110.00 12 47 50 2727.23 -32.27 72.05 256.93 78.14 13 33 17 1727.2 -33.87 43.43

Differential Corrections: TDE -.1176 TRA-2.2352 TC3-3.2418 BAU 1.4088 SGT 4346.8 SGR 2179.1 SG3 1498.3 ST 41.2 SR 10.0 SS 42.6  
 RDE -.0333 RRA -.5149 RC3-1.9850 FAU .47942 RRT .9288 RRF .9728 RTF .9348 CRT .9805 CRS -.3304 CST -.3548  
 FDE 3.1261 FRA-5.2673 FC-14.9938 BSP 8161 SGB 4862.5 R23 .2141 R13 .9528 LSA 49.4 MSA 34.1 SSA 1.9  
 BDE .1223 BRA 2.2936 BC3 3.8013 FSP 2574 SG1 4807.4 SG2 730.1 THA 25.60 EL1 42.3 EL2 1.9 ALF 13.39

LAUNCH DATE SEP 2 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 26 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.906 GAL 5.90 AZL 86.86 HCA 145.26 SMA 196.40 ECC .25215 INC 3.1421 V1 29.519  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.121 GAP 1.60 AZP 92.56 TAL 29.96 TAP 175.23 RCA 146.88 APO 245.92 V2 22.324  
 RC 289.637 GL 19.94 GP -25.07 ZAL 43.76 ZAP 76.30 ETS 175.24 ZAE 104.50 ETE 189.00 ZAC 63.60 ETC 285.79 LVI 2.57

PLANETOCENTRIC CONIC: C3 27.682 VHL 5.261 DLA 25.83 RAL 9.44 RAD 6646.1 VEL 12.150 PTH 7.12 VHP 2.527 DPA -16.12 RAP 28.65 ECC 1.4556  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 27 20 3744.70 -47.36 151.47 260.26 84.79 8 29 45 2744.7 -43.84 117.03  
 60.00 7 32 49 3730.09 -39.42 148.78 258.88 80.84 8 34 59 2730.1 -38.86 117.64  
 70.00 7 42 17 3702.15 -31.95 144.75 257.10 77.23 8 44 0 2702.1 -33.98 116.20  
 80.00 8 2 51 3637.62 -25.63 138.02 255.26 74.13 9 3 29 2637.6 -29.75 111.36  
 90.00 8 57 47 3460.17 -22.69 124.03 254.30 72.66 9 55 27 2460.2 -27.77 98.16  
 100.00 10 45 43 3112.09 -25.63 99.39 255.26 74.13 11 37 35 2112.1 -29.75 72.72  
 110.00 12 41 44 2748.97 -31.95 73.66 257.10 77.23 13 27 33 1749.0 -33.98 45.11

Differential Corrections: TDE -.0868 TRA-2.2839 TC3-3.3504 BAU 1.4471 SGT 4480.4 SGR 2216.1 SG3 1479.9 ST 42.1 SR 10.1 SS 43.6  
 RDE -.0054 RRA -.5296 RC3-2.0160 FAU .47259 RRT .9316 RRF .9745 RTF .9359 CRT .9781 CRS -.4581 CST -.3807  
 FDE 3.2064 FRA-5.1817 FC-14.7796 BSP 8405 SGB 4998.5 R23 .2163 R13 .9533 LSA 51.1 MSA 34.0 SSA 1.8  
 BDE .0869 BRA 2.3445 BC3 3.9102 FSP 2536 SG1 4945.0 SG2 729.6 THA 25.33 EL1 43.2 EL2 2.1 ALF 13.29

LAUNCH DATE SEP 2 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 509.732

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.911 GAL 5.85 AZL 86.77 MCA 146.18 SMA 196.49 ECC .25218 INC 3.2279 V1 29.519
RP 245.83 LAP 1.80 LOP 125.59 VP 20.108 GAP 1.39 AZP 92.68 TAL 29.71 TAP 175.87 RCA 146.84 APO 246.04 V2 22.305
RC 292.172 GL 20.31 GP -25.49 ZAL 44.18 ZAP 75.34 ETS 174.62 ZAE 103.18 ETE 188.43 ZAC 63.24 ETC 285.85 LVI 2.96

PLANETOCENTRIC CONIC

C3 27.694 VHL 5.263 DLA 26.44 RAL 9.41 RAD 6646.1 VEL 12.151 PTH 7.12 VHP 2.544 DPA -16.60 RAP 28.64 ECC 1.4558
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 24 6 3758.40 -47.27 152.79 260.82 83.78 8 26 44 2758.4 -44.17 118.19
60.00 7 28 18 3747.21 -39.23 150.20 259.23 79.90 8 30 45 2747.2 -39.09 119.04
70.00 7 35 41 3725.41 -31.59 146.46 257.26 76.28 8 37 47 2725.4 -34.06 118.01
80.00 7 52 33 3672.48 -24.96 140.39 255.20 73.08 8 53 45 2672.5 -29.61 113.94
90.00 8 43 54 3506.58 -21.72 127.09 254.07 71.43 9 42 20 2506.6 -27.41 101.51
100.00 10 35 25 3146.96 -24.96 101.76 255.20 73.06 11 27 51 2147.0 -29.61 79.51
110.00 12 35 8 2772.22 -31.59 75.38 257.26 76.28 13 21 20 1772.2 -34.06 46.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0532 TRA-2.3321 TC3-3.4558 BAU 1.4869 SGT 4812.4 SGR 2252.7 SG3 1459.2 ST 43.0 SR 10.5 SS 44.6
RDE .0241 RRA -.5444 RC3-2.0457 FAU .46505 RRT .9342 RRF .9761 RTF .9371 CRT .9643 CRS -.5764 CST -.4078
PDE 3.2868 FRA-5.0899 FC-14.5376 BSP 8657 SGB 5133.1 R23 .2187 R13 .9539 LSA 52.9 MSA 33.9 SSA 1.8
BDE .0584 BRA 2.3948 BC3 4.0159 FSP 2499 SG1 5081.0 SG2 729.4 THA 25.08 EL1 44.2 EL2 2.7 ALF 13.33

LAUNCH DATE SEP 2 1973

FLIGHT TIME 240.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

DISTANCE 513.516

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.916 GAL 5.81 AZL 86.68 HCA 147.06 SMA 196.59 ECC .25221 INC 3.3177 V1 29.519
RP 246.02 LAP 1.80 LOP 126.48 VP 20.095 GAP 1.18 AZP 92.79 TAL 29.45 TAP 176.51 RCA 147.01 APO 246.18 V2 22.286
RC 294.682 GL 21.10 GP -25.94 ZAL 44.62 ZAP 74.42 ETS 174.00 ZAE 101.90 ETE 187.86 ZAC 62.86 ETC 285.91 LVI 3.37

PLANETOCENTRIC CONIC

C3 27.719 VHL 5.263 DLA 27.08 RAL 9.36 RAD 6646.1 VEL 12.152 PTH 7.12 VHP 2.582 DPA -17.07 RAP 28.66 ECC 1.4582
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 20 39 3772.82 -47.15 154.16 261.39 82.73 8 23 32 2772.8 -44.49 119.42
60.00 7 23 28 3765.32 -39.00 151.68 259.58 78.92 8 26 13 2765.3 -39.31 120.53
70.00 7 28 31 3750.40 -31.17 148.29 257.39 75.27 8 31 2 2750.4 -34.13 119.95
80.00 7 40 48 3711.85 -24.15 143.04 255.06 71.89 8 42 40 2711.9 -29.59 116.84
90.00 8 26 43 3583.42 -20.44 130.76 253.68 70.02 9 26 7 2583.4 -26.86 105.58
100.00 10 23 40 3186.32 -24.15 104.41 255.06 71.89 11 16 46 2186.3 -29.39 78.21
110.00 12 27 58 2797.22 -31.17 77.21 257.39 75.27 13 14 35 1797.2 -34.13 48.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0174 TRA-2.3803 TC3-3.5587 BAU 1.5265 SGT 4744.0 SGR 2290.3 SG3 1437.2 ST 44.0 SR 11.2 SS 45.8
RDE .0548 RRA -.5597 RC3-2.0750 FAU .45711 RRT .9368 RRF .9776 RTF .9381 CRT .9419 CRS -.6778 CST -.4357
PDE 3.3656 FRA-4.9958 FC-14.2771 BSP 8911 SGB 5267.9 R23 .2212 R13 .9544 LSA 54.8 MSA 33.8 SSA 1.7
BDE .0576 BRA 2.4452 BC3 4.1194 FSP 2460 SG1 5217.1 SG2 729.7 THA 24.85 EL1 45.3 EL2 3.7 ALF 13.58

LAUNCH DATE SEP 2 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

DISTANCE 517.299

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.921 GAL 5.78 AZL 86.59 HCA 147.95 SMA 196.69 ECC .25226 INC 3.4117 V1 29.519
RP 246.21 LAP 1.81 LOP 127.38 VP 20.083 GAP .96 AZP 92.89 TAL 29.19 TAP 177.14 RCA 147.08 APO 246.31 V2 22.287
RC 297.167 GL 21.72 GP -26.39 ZAL 45.08 ZAP 73.53 ETS 173.36 ZAE 100.64 ETE 187.29 ZAC 62.45 ETC 285.97 LVI 3.80

PLANETOCENTRIC CONIC

C3 27.736 VHL 5.268 DLA 27.73 RAL 9.31 RAD 6646.1 VEL 12.153 PTH 7.12 VHP 2.582 DPA -17.56 RAP 28.71 ECC 1.4588
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 16 58 3788.01 -47.01 155.60 261.97 81.63 8 20 8 2788.0 -44.82 120.74
60.00 7 18 17 3784.52 -38.74 153.25 259.93 77.89 8 21 21 2784.5 -39.52 122.12
70.00 7 20 41 3777.40 -30.68 150.24 257.50 74.21 8 23 39 2777.4 -34.15 122.06
80.00 7 27 2 3757.45 -23.15 146.06 254.82 70.80 8 29 40 2757.4 -29.04 120.19
90.00 8 2 55 3641.44 -18.55 135.70 252.97 68.26 9 3 36 2641.4 -25.89 111.08
100.00 10 9 54 3231.92 -23.15 107.43 254.82 70.80 11 3 46 2231.9 -29.04 81.55
110.00 12 20 8 2824.22 -30.68 79.16 257.50 74.21 13 7 12 1824.2 -34.15 50.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0203 TRA-2.4286 TC3-3.6596 BAU 1.5665 SGT 4875.8 SGR 2329.3 SG3 1414.0 ST 45.1 SR 12.1 SS 46.8
RDE .0867 RRA -.5757 RC3-2.1043 FAU .44887 RRT .9389 RRF .9790 RTF .9390 CRT .9158 CRS -.7586 CST -.4641
PDE 3.4396 FRA-4.8994 FC-14.0005 BSP 9160 SGB 5403.6 R23 .2237 R13 .9548 LSA 56.8 MSA 33.6 SSA 1.8
BDE .0891 BRA 2.4959 BC3 4.2214 FSP 2417 SG1 5354.0 SG2 730.4 THA 24.85 EL1 46.5 EL2 4.7 ALF 13.81

LAUNCH DATE SEP 2 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

DISTANCE 521.081

EARTH TO MARS

RL 150.94 LAL .00 LOL 339.39 VL 32.927 GAL 5.71 AZL 86.49 HCA 148.84 SMA 196.80 ECC .25231 INC 3.5104 V1 29.519
RP 246.39 LAP 1.82 LOP 128.27 VP 20.072 GAP .75 AZP 93.01 TAL 28.93 TAP 177.77 RCA 147.14 APO 246.45 V2 22.240
RC 299.628 GL 22.38 GP -26.87 ZAL 45.55 ZAP 72.68 ETS 172.71 ZAE 99.41 ETE 186.73 ZAC 62.02 ETC 286.04 LVI 4.26

PLANETOCENTRIC CONIC

C3 27.809 VHL 5.273 DLA 28.41 RAL 9.23 RAD 6646.1 VEL 12.156 PTH 7.12 VHP 2.603 DPA -18.05 RAP 28.79 ECC 1.4577
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 13 2 3804.04 -46.84 157.11 262.56 80.47 8 16 26 2804.0 -45.15 122.14
60.00 7 12 42 3804.92 -38.43 154.90 260.26 76.80 8 16 6 2804.9 -39.71 123.82
70.00 7 12 4 3806.78 -30.12 152.35 257.56 73.08 8 15 31 2806.8 -34.14 124.36
80.00 7 10 13 3812.61 -21.88 149.65 254.42 69.14 8 13 45 2812.6 -28.50 124.20
87.11 6 49 34 3879.33 -14.33 151.21 251.09 65.20 7 54 14 2879.3 -23.33 127.76
100.00 9 53 4 3287.09 -21.88 111.01 254.42 69.14 10 47 51 2287.1 -28.50 85.56
110.00 12 11 30 2853.60 -30.12 81.26 257.56 73.08 12 59 4 1853.6 -34.14 53.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0605 TRA-2.4770 TC3-3.7576 BAU 1.6065 SGT 5007.4 SGR 2369.5 SG3 1389.8 ST 46.4 SR 13.2 SS 47.8
RDE .1201 RRA -.5923 RC3-2.1333 FAU .44023 RRT .9409 RRF .9803 RTF .9398 CRT .8898 CRS -.8209 CST -.4928
PDE 3.5122 FRA-4.8005 FC-13.7050 BSP 9411 SGB 5539.7 R23 .2263 R13 .9552 LSA 58.9 MSA 33.5 SSA 1.6
BDE .1345 BRA 2.5469 BC3 4.3210 FSP 2373 SG1 5491.2 SG2 731.6 THA 24.46 EL1 47.9 EL2 5.8 ALF 14.43



LAUNCH DATE SEP 2 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.932 GAL 5.66 AZL 86.39 HCA 149.73 SMA 186.91 ECC .25238 INC 3.6143 V1 29.519  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.062 GAP .54 AZP 93.12 TAL 20.67 TAP 178.40 RCA 147.21 APO 246.60 V2 22.232  
 RC 302.065 GL 23.03 GP -27.37 ZAL 46.04 ZAP 71.87 ETS 172.05 ZAE 98.20 ETE 186.16 ZAC 61.57 ETC 286.11 LVI 4.74

DISTANCE 524.862 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.879 VHL 5.280 DLA 29.12 RAL 9.15 RAD 6646.2 VEL 12.158 PTH 7.12 VHP 2.626 DPA -18.55 RAP 28.90 ECC 1.4588  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 8 48 3820.97 -46.64 158.70 263.15 79.27 8 12 29 2821.0 -45.47 123.64  
 60.00 7 6 39 3826.68 -38.08 156.64 260.58 75.67 8 10 26 2826.7 -39.89 125.64  
 70.00 7 2 29 3839.00 -29.46 154.62 257.57 71.89 8 6 28 2839.0 -34.07 126.87  
 80.00 6 47 35 3885.90 -20.01 154.30 253.71 67.37 7 52 21 2885.9 -27.58 129.45  
 82.73 6 13 24 3995.67 -14.64 159.90 251.20 64.54 7 20 0 2995.7 -23.88 136.49  
 100.00 9 30 27 3360.37 -20.01 115.67 253.71 67.37 10 26 27 2360.4 -27.58 90.61  
 110.00 12 1 55 2885.82 -29.46 83.54 257.57 71.89 12 50 1 1885.8 -34.07 55.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1035 TRA-2.5249 TC3-3.8517 BAU 1.6462 SGT 5137.5 SGR 2410.7 SG3 1363.5 ST 47.8 SR 14.5 SS 48.6  
 RDE .1590 RRA -.6092 RC3-2.1615 FAU .43116 RRT .9428 RRF .9816 RTF .9404 CRT .8671 CRS -.8673 CST -.5217  
 FDE 3.5817 FRA-4.6966 FC-13.3889 BSP 9664 SGB 5874.9 R23 .2291 R13 .9555 LSA 61.2 MSA 33.3 SSA 1.5  
 BDE .1864 BRA 2.5973 BC3 4.4168 FSP 2326 SG1 5827.3 SG2 733.4 THA 24.30 EL1 49.4 EL2 7.0 ALF 15.09

LAUNCH DATE SEP 2 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.938 GAL 5.61 AZL 86.28 HCA 150.62 SMA 197.01 ECC .25245 INC 3.7235 V1 29.519  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.053 GAP .33 AZP 93.25 TAL 28.40 TAP 179.02 RCA 147.28 APO 246.75 V2 22.215  
 RC 304.476 GL 23.74 GP -27.89 ZAL 46.54 ZAP 71.09 ETS 171.37 ZAE 97.03 ETE 185.60 ZAC 61.09 ETC 286.19 LVI 5.24

DISTANCE 528.643 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 27.967 VHL 5.288 DLA 29.86 RAL 9.05 RAD 6646.2 VEL 12.162 PTH 7.13 VHP 2.651 DPA -19.06 RAP 29.05 ECC 1.4603  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 4 15 3838.90 -46.40 160.36 263.75 78.01 8 8 14 2838.9 -45.80 125.25  
 60.00 7 0 6 3849.94 -37.67 158.48 260.88 74.48 8 4 16 2849.9 -40.05 127.60  
 70.00 6 51 42 3874.74 -28.68 157.11 257.50 70.60 7 56 17 2874.7 -33.92 129.65  
 79.99 5 51 33 4065.19 -14.96 165.21 251.32 63.85 6 59 19 3065.2 -24.45 141.83  
 79.99 5 51 33 4065.19 -14.96 165.21 251.32 63.85 6 59 19 3065.2 -24.45 141.83  
 79.99 5 51 33 4065.19 -14.96 165.21 251.32 63.85 6 59 19 3065.2 -24.45 141.83  
 110.00 11 51 9 2921.56 -28.68 86.03 257.50 70.60 12 39 50 1921.6 -33.92 58.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1491 TRA-2.5733 TC3-3.9425 BAU 1.6861 SGT 5267.7 SGR 2453.4 SG3 1336.2 ST 49.3 SR 16.1 SS 49.6  
 RDE .1917 RRA -.6273 RC3-2.1893 FAU .42170 RRT .9446 RRF .9827 RTF .9410 CRT .8491 CRS -.9014 CST -.5504  
 FDE 3.6492 FRA-4.5929 FC-13.0540 BSP 9911 SGB 5811.0 R23 .2319 R13 .9558 LSA 63.6 MSA 33.2 SSA 1.4  
 BDE .2429 BRA 2.6487 BC3 4.5096 FSP 2277 SG1 5764.3 SG2 735.6 THA 24.17 EL1 51.2 EL2 8.2 ALF 15.88

LAUNCH DATE SEP 2 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.944 GAL 5.56 AZL 86.16 HCA 151.51 SMA 197.13 ECC .25253 INC 3.8389 V1 29.519  
 RP 246.90 LAP 1.83 LOP 130.95 VP 20.045 GAP .12 AZP 93.38 TAL 28.12 TAP 179.63 RCA 147.35 APO 246.91 V2 22.199  
 RC 306.863 GL 24.48 GP -28.43 ZAL 47.07 ZAP 70.36 ETS 170.68 ZAE 95.88 ETE 185.03 ZAC 60.58 ETC 286.28 LVI 5.77

DISTANCE 532.422 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 28.077 VHL 5.299 DLA 30.63 RAL 8.93 RAD 6646.2 VEL 12.167 PTH 7.13 VHP 2.677 DPA -19.58 RAP 29.23 ECC 1.4621  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 59 20 3857.92 -46.11 162.11 264.35 76.69 8 3 38 2857.9 -46.11 126.96  
 60.00 6 52 58 3874.91 -37.20 160.43 261.14 73.23 7 57 33 2874.9 -40.17 129.71  
 70.00 6 39 23 3915.03 -27.74 159.86 257.34 69.22 7 44 38 2915.0 -33.68 132.77  
 77.72 5 34 10 4119.94 -15.29 169.46 251.45 63.13 6 42 50 3119.9 -25.04 146.13  
 77.72 5 34 10 4119.94 -15.29 169.46 251.45 63.13 6 42 50 3119.9 -25.04 146.13  
 77.72 5 34 10 4119.94 -15.29 169.46 251.45 63.13 6 42 50 3119.9 -25.04 146.13  
 110.00 11 38 49 2961.85 -27.74 88.78 257.34 69.22 12 28 11 1961.8 -33.68 61.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1970 TRA-2.6221 TC3-4.0292 BAU 1.7262 SGT 3397.6 SGR 2498.4 SG3 1307.9 ST 51.0 SR 17.8 SS 50.8  
 RDE .2297 RRA -.6465 RC3-2.2170 FAU .41200 RRT .9464 RRF .9839 RTF .5415 CRT .8368 CRS -.9258 CST -.5787  
 FDE 3.7095 FRA-4.4891 FC-12.7038 BSP 10159 SGB 5947.8 R23 .2348 R13 .9560 LSA 66.2 MSA 33.0 SSA 1.4  
 BDE .3026 BRA 2.7006 BC3 4.5988 FSP 2224 SG1 5901.8 SG2 738.3 THA 24.06 EL1 53.2 EL2 9.3 ALF 16.78

LAUNCH DATE SEP 2 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC  
 RL 150.94 LAL .00 LOL 339.39 VL 32.949 GAL 5.51 AZL 86.04 HCA 152.40 SMA 197.24 ECC .25262 INC 3.9608 V1 29.519  
 RP 247.06 LAP 1.83 LOP 131.84 VP 20.037 GAP -.08 AZP 93.51 TAL 27.85 TAP 180.25 RCA 147.41 APO 247.06 V2 22.183  
 RC 309.224 GL 25.25 GP -29.01 ZAL 47.61 ZAP 69.66 ETS 169.97 ZAE 94.76 ETE 184.45 ZAC 60.04 ETC 286.37 LVI 6.33

DISTANCE 536.201 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 28.211 VHL 5.311 DLA 31.43 RAL 8.78 RAD 6646.3 VEL 12.172 PTH 7.13 VHP 2.705 DPA -20.11 RAP 29.45 ECC 1.4643  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 54 1 3878.12 -45.78 163.94 264.93 75.31 7 58 39 2878.1 -46.41 128.83  
 60.00 6 45 8 3901.81 -36.65 162.51 261.37 71.92 7 50 10 2901.8 -40.26 131.99  
 70.00 6 24 58 3961.44 -26.58 162.97 257.03 67.71 7 31 0 2961.4 -33.29 136.33  
 75.69 5 19 8 4166.78 -15.62 173.16 251.57 62.38 6 28 35 3166.8 -25.64 149.88  
 75.69 5 19 8 4166.78 -15.62 173.16 251.57 62.38 6 28 35 3166.8 -25.64 149.88  
 75.69 5 19 8 4166.78 -15.62 173.16 251.57 62.38 6 28 35 3166.8 -25.64 149.88  
 110.00 11 24 24 3008.26 -26.58 91.89 257.03 67.71 12 14 33 2008.3 -33.29 65.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2393 TRA-2.6782 TC3-4.1207 BAU 1.7724 SGT 5539.9 SGR 2563.4 SG3 1287.4 ST 52.8 SR 19.3 SS 50.8  
 RDE .2590 RRA -.6775 RC3-2.2592 FAU .40312 RRT .9490 RRF .9852 RTF .9437 CRT .8395 CRS -.9383 CST -.6088  
 FDE 3.6984 FRA-4.4524 FC-12.4321 BSP 10258 SGB 6104.3 R23 .2325 R13 .9578 LSA 68.5 MSA 32.5 SSA 1.3  
 BDE .3526 BRA 2.7625 BC3 4.6994 FSP 2096 SG1 6059.4 SG2 738.8 THA 24.09 EL1 55.3 EL2 10.0 ALF 17.67

LAUNCH DATE SEP 2 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.955 GAL 5.46 AZL 85.91 HCA 183.28 SMA 197.35 ECC .25271 INC 4.0901 V1 29.519
RP 247.22 LAP 1.84 LOP 132.73 VP 20.030 GAP -.29 AZP 93.65 TAL 27.57 TAP 180.85 RCA 147.48 APO 247.23 V2 22.168
RC 311.559 GL 26.06 GP -29.61 ZAL 48.17 ZAP 69.01 ETS 169.25 ZAE 93.68 ETE 183.88 ZAC 59.46 ETC 286.47 LVI 6.92

PLANETOCENTRIC CONIC

C3 28.371 VHL 5.326 DLA 32.26 RAL 8.62 RAD 6646.4 VEL 12.179 PTH 7.14 VHP 2.735 DPA -20.67 RAP 29.70 ECC 1.4689
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 48 14 3899.67 -45.39 165.87 265.51 73.86 7 53 14 2899.7 -46.69 130.44
60.00 6 36 30 3931.02 -36.01 164.72 261.54 70.53 7 42 1 2931.0 -40.30 134.48
70.00 6 7 22 4017.24 -25.08 166.62 256.49 66.02 7 14 19 3017.2 -32.67 140.57
73.79 5 5 35 4208.51 -15.95 176.52 251.71 61.58 6 15 43 3208.5 -26.26 153.29
73.79 5 5 35 4208.51 -15.95 176.52 251.71 61.58 6 15 43 3208.5 -26.26 153.29
73.79 5 5 35 4208.51 -15.95 176.52 251.71 61.58 6 15 43 3208.5 -26.26 153.29
110.00 11 6 48 3064.06 -25.08 95.54 256.49 66.02 11 57 52 2064.1 -32.67 69.49

DIFFERENTIAL CORRECTIONS

TDE .2948 TRA-2.7257 TC3-4.1955 BAU 1.8114
RDE .3039 RRA -.6962 RC3-2.2816 FAU .39378
FDE 3.7707 FRA-4.3246 FC-12.0160 BSP 10540
BDE .4234 BRA 2.8132 BC3 4.7757 FSP 2060

MID-COURSE EXECUTION ACCURACY

SGT 5665.5 SGR 2607.5 SG3 1253.7
RRT .9502 RRF .9861 RTF .9435
SGB 6236.7 R23 .2365 R13 .9575
SG1 6192.3 SG2 743.2 THA 23.99

ORBIT DETERMINATION ACCURACY

ST 54.8 SR 21.4 SS 51.9
CRT .8322 CR8 -.9538 CST -.6342
LSA 71.4 MSA 32.4 S8A 1.3
EL1 57.7 EL2 11.2 ALF 18.73

LAUNCH DATE SEP 2 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.962 GAL 5.41 AZL 85.77 HCA 154.17 SMA 197.47 ECC .25281 INC 4.2273 V1 29.519
RP 247.37 LAP 1.84 LOP 133.61 VP 20.024 GAP -.49 AZP 93.81 TAL 27.29 TAP 181.46 RCA 147.55 APO 247.39 V2 22.154
RC 313.869 GL 26.91 GP -30.24 ZAL 48.76 ZAP 68.40 ETS 168.51 ZAE 92.63 ETE 183.29 ZAC 58.85 ETC 286.58 LVI 7.54

PLANETOCENTRIC CONIC

C3 28.561 VHL 5.344 DLA 33.13 RAL 8.42 RAD 6646.4 VEL 12.186 PTH 7.15 VHP 2.768 DPA -21.24 RAP 29.99 ECC 1.4700
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 41 56 3922.70 -44.93 167.91 266.05 72.35 7 47 19 2922.7 -46.95 133.00
60.00 6 26 53 3962.90 -35.26 167.09 261.63 69.07 7 32 56 2962.9 -40.28 137.19
70.00 5 44 2 4089.92 -22.99 171.23 255.56 64.02 6 52 12 3089.9 -31.63 145.98
71.98 4 53 4 4246.58 -16.29 179.63 251.84 60.75 6 3 50 3246.6 -26.90 156.46
71.98 4 53 4 4246.58 -16.29 179.63 251.84 60.75 6 3 50 3246.6 -26.90 156.46
71.98 4 53 4 4246.58 -16.29 179.63 251.84 60.75 6 3 50 3246.6 -26.90 156.46
110.00 10 43 29 3136.74 -22.99 100.15 255.56 64.02 11 35 45 2136.7 -31.63 74.90

DIFFERENTIAL CORRECTIONS

TDE .3533 TRA-2.7736 TC3-4.2637 BAU 1.8504
RDE .3507 RRA -.7186 RC3-2.3034 FAU .38218
FDE 3.8340 FRA-4.1989 FC-11.5844 BSP 10824
BDE .4978 BRA 2.8647 BC3 4.8461 FSP 2019

MID-COURSE EXECUTION ACCURACY

SGT 5789.7 SGR 2654.1 SG3 1219.2
RRT .9514 RRF .9869 RTF .9434
SGB 6369.1 R23 .2403 R13 .9573
SG1 6325.0 SG2 748.1 THA 23.92

ORBIT DETERMINATION ACCURACY

ST 56.0 SR 23.6 SS 53.0
CRT .8296 CR8 -.9647 CST -.6590
LSA 74.6 MSA 32.3 S8A 1.2
EL1 60.4 EL2 12.4 ALF 19.84

LAUNCH DATE SEP 2 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.968 GAL 5.35 AZL 85.63 HCA 155.05 SMA 197.59 ECC .25292 INC 4.3735 V1 29.519
RP 247.51 LAP 1.84 LOP 134.50 VP 20.018 GAP -.70 AZP 93.97 TAL 27.01 TAP 182.06 RCA 147.62 APO 247.56 V2 22.140
RC 316.151 GL 27.81 GP -30.90 ZAL 49.37 ZAP 67.84 ETS 167.76 ZAE 91.61 ETE 182.70 ZAC 58.20 ETC 286.69 LVI 8.21

PLANETOCENTRIC CONIC

C3 28.786 VHL 5.365 DLA 34.04 RAL 8.19 RAD 6646.5 VEL 12.195 PTH 7.15 VHP 2.802 DPA -21.83 RAP 30.32 ECC 1.4737
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 35 2 3947.38 -44.40 170.04 266.56 70.78 7 40 49 2947.4 -47.18 135.34
60.00 6 16 5 3998.01 -34.38 169.65 261.63 67.53 7 22 43 2998.0 -40.17 140.17
70.00 5 1 19 4220.80 -18.87 179.14 253.31 60.99 6 11 40 3220.8 -29.15 155.36
70.22 4 41 17 4281.91 -16.63 182.57 251.97 59.86 5 52 39 3281.9 -27.56 159.48
70.22 4 41 17 4281.91 -16.63 182.57 251.97 59.86 5 52 39 3281.9 -27.56 159.48
70.22 4 41 17 4281.91 -16.63 182.57 251.97 59.86 5 52 39 3281.9 -27.56 159.48
110.00 10 0 45 3267.62 -18.87 100.06 253.31 60.99 10 55 13 2267.6 -29.15 84.28

DIFFERENTIAL CORRECTIONS

TDE .4146 TRA-2.8223 TC3-4.3260 BAU 1.8899
RDE .3998 RRA -.7388 RC3-2.3242 FAU .37030
FDE 3.8899 FRA-4.0738 FC-11.1367 BSP 11095
BDE .5760 BRA 2.9174 BC3 4.9108 FSP 1970

MID-COURSE EXECUTION ACCURACY

SGT 5913.7 SGR 2703.5 SG3 1183.5
RRT .9525 RRF .9877 RTF .5-32
SGB 6502.4 R23 .2441 R13 .9571
SG1 6458.6 SG2 753.5 THA 23.88

ORBIT DETERMINATION ACCURACY

ST 59.3 SR 26.0 SS 34.0
CRT .8304 CR8 -.9726 CST -.6826
LSA 77.8 MSA 32.2 S8A 1.1
EL1 63.3 EL2 13.5 ALF 20.88

LAUNCH DATE SEP 2 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 32.974 GAL 5.30 AZL 85.47 HCA 155.93 SMA 197.71 ECC .25303 INC 4.5294 V1 29.519
RP 247.65 LAP 1.85 LOP 135.38 VP 20.014 GAP -.90 AZP 94.14 TAL 26.72 TAP 182.65 RCA 147.68 APO 247.74 V2 22.126
RC 318.406 GL 28.75 GP -31.61 ZAL 50.01 ZAP 67.32 ETS 166.98 ZAE 90.63 ETE 182.11 ZAC 57.51 ETC 286.82 LVI 8.91

PLANETOCENTRIC CONIC

C3 29.050 VHL 5.390 DLA 34.99 RAL 7.93 RAD 6646.6 VEL 12.206 PTH 7.16 VHP 2.840 DPA -22.44 RAP 30.69 ECC 1.4781
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 27 26 3973.94 -43.78 172.30 267.02 69.13 7 33 40 2973.9 -47.37 137.68
60.00 6 3 48 4037.13 -33.32 172.43 261.50 65.89 7 11 5 3037.1 -39.95 143.48
68.49 4 30 2 4315.14 -16.96 185.39 252.11 58.93 5 41 57 3315.1 -28.23 162.38
68.49 4 30 2 4315.14 -16.96 185.39 252.11 58.93 5 41 57 3315.1 -28.23 162.38
68.49 4 30 2 4315.14 -16.96 185.39 252.11 58.93 5 41 57 3315.1 -28.23 162.38
68.49 4 30 2 4315.14 -16.96 185.39 252.11 58.93 5 41 57 3315.1 -28.23 162.38
68.49 4 30 2 4315.14 -16.96 185.39 252.11 58.93 5 41 57 3315.1 -28.23 162.38

DIFFERENTIAL CORRECTIONS

TDE .4792 TRA-2.8713 TC3-4.3807 BAU 1.9298
RDE .4517 RRA -.7629 RC3-2.3440 FAU .35814
FDE 3.9385 FRA-3.9489 FC-10.6731 BSP 11380
BDE .6585 BRA 2.9709 BC3 4.9684 FSP 1921

MID-COURSE EXECUTION ACCURACY

SGT 6036.5 SGR 2755.9 SG3 1146.7
RRT .9536 RRF .9884 RTF .9430
SGB 6635.8 R23 .2477 R13 .9569
SG1 6592.2 SG2 759.6 THA 23.86

ORBIT DETERMINATION ACCURACY

ST 61.8 SR 28.5 SS 54.9
CRT .8337 CR8 -.9783 CST -.7050
LSA 81.3 MSA 32.1 S8A 1.1
EL1 66.5 EL2 14.6 ALF 22.14

LAUNCH DATE SEP 2 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 22 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.980 GAL 5.25 AZL 85.30 HCA 156.81 SMA 197.83 ECC .25315 INC 4.6963 V1 29.519  
 RP 247.78 LAP 1.85 LOP 136.27 VP 20.010 GAP -1.10 AZP 94.32 TAL 26.43 TAP 183.24 RCA 147.75 APO 247.91 V2 22.113  
 RC 320.632 GL 29.75 GP -32.35 ZAL 50.67 ZAP 66.86 ETS 186.19 ZAE 89.68 ETE 181.50 ZAC 56.78 ETC 206.96 LVI 9.65

Planetocentric Conic: C3 29.360 VHL 5.418 DLA 35.98 RAL 7.63 RAD 6646.8 VEL 12.219 PTH 7.17 VHP 2.880 DPA -23.08 RAP 31.11 ECC 1.4832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 19 1 4002.62 -43.06 174.68 267.41 67.42 7 25 44 3002.6 -47.51 140.64  
 80.00 5 49 34 4081.42 -32.05 175.50 261.18 64.13 6 57 36 3081.4 -39.58 147.18  
 66.77 4 19 10 4346.72 -17.30 188.11 252.24 57.95 5 31 37 3346.7 -28.92 165.21  
 66.77 4 19 10 4346.72 -17.30 188.11 252.24 57.95 5 31 37 3346.7 -28.92 165.21  
 66.77 4 19 10 4346.72 -17.30 188.11 252.24 57.95 5 31 37 3346.7 -28.92 165.21  
 66.77 4 19 10 4346.72 -17.30 188.11 252.24 57.95 5 31 37 3346.7 -28.92 165.21

Differential Corrections: TDE .5459 TRA-2.9222 TC3-4.4280 BAU 1.9701 SGT 6159.5 SGR 2812.5 SG3 1109.1 ST 64.5 SR 31.1 SS 55.7  
 RDE .5058 RRA -.7900 RC3-2.3632 FAU .34580 RRT .9547 RRF .9891 RTF .9429 CRT .8391 CRS -.9824 CST -.7259  
 FDE 3.9747 FRA-3.8284 FC-10.1966 BSP 11635 SGB 6771.2 R23 .2510 R13 .9567 LSA 84.9 MSA 32.0 SSA 1.0  
 BDE .7442 BRA 3.0271 BC3 5.0191 FSP 1860 SG1 6727.8 SG2 766.0 THA 23.88 EL1 69.9 EL2 15.6 ALF 23.27

LAUNCH DATE SEP 2 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 24 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.986 GAL 5.19 AZL 85.12 HCA 157.69 SMA 197.96 ECC .25328 INC 4.8754 V1 29.519  
 RP 247.91 LAP 1.85 LOP 137.15 VP 20.007 GAP -1.30 AZP 94.51 TAL 26.14 TAP 183.83 RCA 147.82 APO 248.09 V2 22.101  
 RC 322.829 GL 30.81 GP -33.13 ZAL 51.37 ZAP 66.44 ETS 165.38 ZAE 88.77 ETE 180.88 ZAC 56.00 ETC 287.12 LVI 10.44

Planetocentric Conic: C3 29.722 VHL 5.452 DLA 37.02 RAL 7.27 RAD 6646.9 VEL 12.233 PTH 7.18 VHP 2.924 DPA -23.75 RAP 31.56 ECC 1.4891  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 40 4033.74 -42.22 177.19 267.71 65.63 7 16 53 3033.7 -47.57 143.65  
 60.00 5 32 40 4132.85 -30.47 178.94 260.60 62.23 6 41 32 3132.8 -39.00 151.43  
 65.05 4 8 35 4376.98 -17.63 190.77 252.37 56.91 5 21 32 3377.0 -29.63 167.98  
 65.05 4 8 35 4376.98 -17.63 190.77 252.37 56.91 5 21 32 3377.0 -29.63 167.98  
 65.05 4 8 35 4376.98 -17.63 190.77 252.37 56.91 5 21 32 3377.0 -29.63 167.98  
 65.05 4 8 35 4376.98 -17.63 190.77 252.37 56.91 5 21 32 3377.0 -29.63 167.98

Differential Corrections: TDE .6142 TRA-2.9753 TC3-4.4681 BAU 2.0119 SGT 6283.9 SGR 2873.6 SG3 1070.6 ST 67.4 SR 33.9 SS 56.4  
 RDE .5623 RRA -.8201 RC3-2.3816 FAU .33328 RRT .9547 RRF .9891 RTF .9429 CRT .8454 CRS -.9854 CST -.7446  
 FDE 3.9986 FRA-3.7100 FC3-9.7077 BSP 11879 SGB 6909.8 R23 .2542 R13 .9566 LSA 88.6 MSA 32.0 SSA .9  
 BDE .8327 BRA 3.0862 BC3 5.0632 FSP 1794 SG1 6866.4 SG2 773.1 THA 23.93 EL1 73.6 EL2 16.6 ALF 24.36

LAUNCH DATE SEP 2 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 26 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.993 GAL 5.14 AZL 84.93 HCA 158.57 SMA 198.08 ECC .25341 INC 5.0683 V1 29.519  
 RP 248.03 LAP 1.85 LOP 138.03 VP 20.004 GAP -1.50 AZP 94.72 TAL 25.85 TAP 184.42 RCA 147.89 APO 248.28 V2 22.089  
 RC 324.997 GL 31.92 GP -33.96 ZAL 52.09 ZAP 66.08 ETS 164.56 ZAE 87.90 ETE 180.26 ZAC 55.17 ETC 287.29 LVI 11.28

Planetocentric Conic: C3 30.145 VHL 5.490 DLA 38.10 RAL 6.87 RAD 6647.1 VEL 12.251 PTH 7.20 VHP 2.972 DPA -24.45 RAP 32.07 ECC 1.4961  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 59 9 4067.73 -41.23 179.83 267.88 63.76 7 6 57 3067.7 -47.55 146.94  
 60.00 5 11 37 4195.27 -28.42 182.95 259.80 60.13 6 21 32 3195.3 -38.06 156.47  
 63.32 3 58 9 4406.22 -17.95 193.38 252.49 55.81 5 11 35 3406.2 -30.35 170.74  
 63.32 3 58 9 4406.22 -17.95 193.38 252.49 55.81 5 11 35 3406.2 -30.35 170.74  
 63.32 3 58 9 4406.22 -17.95 193.38 252.49 55.81 5 11 35 3406.2 -30.35 170.74  
 63.32 3 58 9 4406.22 -17.95 193.38 252.49 55.81 5 11 35 3406.2 -30.35 170.74

Differential Corrections: TDE .6875 TRA-3.0279 TC3-4.4962 BAU 2.0533 SGT 6404.3 SGR 2936.5 SG3 1030.0 ST 70.5 SR 36.9 SS 57.0  
 RDE .6240 RRA -.8518 RC3-2.3982 FAU .32011 RRT .9568 RRF .9902 RTF .5-23 CRT .8522 CRS -.9878 CST -.7622  
 FDE 4.0202 FRA-3.5844 FC3-9.1933 BSP 12149 SGB 7045.5 R23 .2577 R13 .9563 LSA 92.5 MSA 31.9 SSA .9  
 BDE .9264 BRA 3.1454 BC3 5.0949 FSP 1732 SG1 7002.0 SG2 781.1 THA 24.00 EL1 77.6 EL2 17.5 ALF 25.44

LAUNCH DATE SEP 2 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 28 1974

Heliocentric Conic: RL 150.94 LAL .00 LOL 339.39 VL 32.999 GAL 5.09 AZL 84.72 HCA 159.45 SMA 198.21 ECC .25355 INC 5.2766 V1 29.519  
 RP 248.14 LAP 1.85 LOP 138.92 VP 20.002 GAP -1.69 AZP 94.94 TAL 25.35 TAP 185.00 RCA 147.95 APO 248.46 V2 22.078  
 RC 327.134 GL 33.10 GP -34.84 ZAL 52.85 ZAP 65.78 ETS 163.72 ZAE 87.07 ETE 179.62 ZAC 54.29 ETC 287.48 LVI 12.16

Planetocentric Conic: C3 30.639 VHL 5.535 DLA 39.24 RAL 6.39 RAD 6647.3 VEL 12.271 PTH 7.21 VHP 3.024 DPA -25.18 RAP 32.62 ECC 1.5042  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 47 16 4105.11 -40.06 182.67 267.88 61.82 6 55 41 3105.1 -47.40 150.54  
 60.00 4 42 39 4278.95 -25.47 188.07 257.81 57.65 5 53 58 3279.0 -36.44 162.98  
 61.57 3 47 47 4434.68 -18.25 195.97 252.59 54.64 5 1 42 3434.7 -31.08 173.49  
 61.57 3 47 47 4434.68 -18.25 195.97 252.59 54.64 5 1 42 3434.7 -31.08 173.49  
 61.57 3 47 47 4434.68 -18.25 195.97 252.59 54.64 5 1 42 3434.7 -31.08 173.49  
 61.57 3 47 47 4434.68 -18.25 195.97 252.59 54.64 5 1 42 3434.7 -31.08 173.49

Differential Corrections: TDE .7619 TRA-3.0832 TC3-4.5139 BAU 2.0957 SGT 6524.9 SGR 3004.3 SG3 988.1 ST 73.7 SR 40.0 SS 57.5  
 RDE .6885 RRA -.8874 RC3-2.4088 FAU .30666 RRT .9578 RRF .9907 RTF .9419 CRT .8592 CRS -.9895 CST -.7777  
 FDE 4.0260 FRA-3.4627 FC3-8.6650 BSP 12406 SGB 7183.3 R23 .2609 R13 .9560 LSA 96.6 MSA 31.9 SSA .8  
 BDE 1.0269 BRA 3.2084 BC3 5.1164 FSP 1663 SG1 7139.9 SG2 789.3 THA 24.11 EL1 81.8 EL2 18.4 ALF 26.47

LAUNCH DATE SEP 2 1973

FLIGHT TIME 270.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.006 GAL 5.03 AZL 84.50 HCA 160.33 SMA 198.34 ECC .25369 INC 9.5025 V1 29.519  
 RP 248.25 LAP 1.85 LOP 139.80 VP 20.001 GAP -1.89 AZP 95.18 TAL 25.25 TAP 165.58 RCA 148.02 APO 248.65 V2 22.067  
 RC 329.241 GL 34.35 GP -35.77 ZAL 53.65 ZAP 65.54 ETS 162.86 ZAE 86.29 ETE 178.97 ZAC 53.35 ETC 267.69 LVI 13.11

DISTANCE 570.154

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.216 VHL 5.587 DLA 40.44 RAL 5.85 RAD 8647.5 VEL 12.294 PTH 7.23 VHP 3.081 DPA -25.95 RAP 33.23 ECC 1.5137  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 33 38 4146.63 -38.68 189.69 267.65 59.79 6 42 45 3146.6 -47.09 154.50  
 59.79 3 37 25 4462.54 -18.54 198.54 252.68 53.39 4 51 47 3462.5 -31.81 176.26  
 59.79 3 37 25 4462.54 -18.54 198.54 252.68 53.39 4 51 47 3462.5 -31.81 176.26  
 59.79 3 37 25 4462.54 -18.54 198.54 252.68 53.39 4 51 47 3462.5 -31.81 176.26  
 59.79 3 37 25 4462.54 -18.54 198.54 252.68 53.39 4 51 47 3462.5 -31.81 176.26  
 59.79 3 37 25 4462.54 -18.54 198.54 252.68 53.39 4 51 47 3462.5 -31.81 176.26

DIFFERENTIAL CORRECTIONS

TDE .8384 TRA-3.1405 TC3-4.5194 BAU 2.1393  
 RDE .7570 RRA -.9273 RC3-2.4190 FAU .29290  
 FDE 4.0182 FRA-3.3411 FC3-8.1231 B8P 12652  
 BDE 1.1298 BRA 3.2748 BC3 5.1261 F8P 1586

MID-COURSE EXECUTION ACCURACY

SGT 8644.5 SGR 3077.4 S63 945.0  
 RRT .9588 RRF .9911 RTF .9416  
 SGB 7322.6 R23 .2638 R13 .9558  
 S61 7279.0 S62 797.9 THA 24.26

ORBIT DETERMINATION ACCURACY

ST 77.0 BR 43.3 S8 57.8  
 CRT .8662 CRS -.9907 CST -.7915  
 LSA 100.7 MSA 31.9 S8A .8  
 EL1 86.2 EL2 19.3 ALF 27.45

LAUNCH DATE SEP 2 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.012 GAL 4.98 AZL 84.25 HCA 161.20 SMA 198.46 ECC .25384 INC 9.7483 V1 29.519  
 RP 248.35 LAP 1.85 LOP 140.68 VP 20.001 GAP -2.09 AZP 95.44 TAL 24.96 TAP 186.18 RCA 148.09 APO 248.84 V2 22.057  
 RC 331.317 GL 35.68 GP -36.76 ZAL 54.49 ZAP 65.56 ETS 161.98 ZAE 85.55 ETE 178.32 ZAC 52.35 ETC 267.93 LVI 14.11

DISTANCE 573.921

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.893 VHL 5.647 DLA 41.70 RAL 5.21 RAD 8647.7 VEL 12.321 PTH 7.25 VHP 3.143 DPA -26.76 RAP 33.90 ECC 1.5249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 46 4193.38 -37.03 188.94 267.12 57.68 6 27 40 3193.4 -46.57 159.90  
 57.98 3 26 57 4489.94 -18.81 201.11 252.75 52.07 4 41 47 3489.9 -32.55 179.07  
 57.98 3 26 57 4489.94 -18.81 201.11 252.75 52.07 4 41 47 3489.9 -32.55 179.07  
 57.98 3 26 57 4489.94 -18.81 201.11 252.75 52.07 4 41 47 3489.9 -32.55 179.07  
 57.98 3 26 57 4489.94 -18.81 201.11 252.75 52.07 4 41 47 3489.9 -32.55 179.07  
 57.98 3 26 57 4489.94 -18.81 201.11 252.75 52.07 4 41 47 3489.9 -32.55 179.07

DIFFERENTIAL CORRECTIONS

TDE .9167 TRA-3.1999 TC3-4.5108 BAU 2.1836  
 RDE .8304 RRA -.9713 RC3-2.4249 FAU .27863  
 FDE 3.9983 FRA-3.2163 FC3-7.5634 B8P 12905  
 BDE 1.2368 BRA 3.3440 BC3 5.1213 F8P 1509

MID-COURSE EXECUTION ACCURACY

SGT 8762.1 SGR 3154.8 S63 900.1  
 RRT .9598 RRF .9914 RTF .9411  
 SGB 7461.8 R23 .2670 R13 .9554  
 S61 7418.0 S62 807.2 THA 24.43

ORBIT DETERMINATION ACCURACY

ST 80.5 BR 46.7 S8 58.0  
 CRT .8728 CRS -.9916 CST -.8035  
 LSA 104.9 MSA 31.9 S8A .7  
 EL1 90.8 EL2 20.2 ALF 28.41

LAUNCH DATE SEP 2 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.019 GAL 4.92 AZL 83.98 HCA 162.08 SMA 198.58 ECC .25400 INC 8.0171 V1 29.519  
 RP 248.45 LAP 1.85 LOP 141.58 VP 20.002 GAP -2.28 AZP 95.73 TAL 24.65 TAP 186.73 RCA 148.15 APO 249.04 V2 22.048  
 RC 333.364 GL 37.10 GP -37.82 ZAL 55.37 ZAP 65.26 ETS 161.10 ZAE 84.87 ETE 177.83 ZAC 51.29 ETC 268.19 LVI 15.18

DISTANCE 577.687

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.887 VHL 5.717 DLA 43.01 RAL 4.48 RAD 8648.0 VEL 12.355 PTH 7.28 VHP 3.213 DPA -27.61 RAP 34.62 ECC 1.5378  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 58 53 4247.05 -35.02 192.49 266.16 55.46 6 9 40 3247.1 -45.75 163.82  
 56.13 3 16 17 4517.18 -19.04 203.70 252.78 50.67 4 31 34 3517.2 -33.29 181.94  
 56.13 3 16 17 4517.18 -19.04 203.70 252.78 50.67 4 31 34 3517.2 -33.29 181.94  
 56.13 3 16 17 4517.18 -19.04 203.70 252.78 50.67 4 31 34 3517.2 -33.29 181.94  
 56.13 3 16 17 4517.18 -19.04 203.70 252.78 50.67 4 31 34 3517.2 -33.29 181.94  
 56.13 3 16 17 4517.18 -19.04 203.70 252.78 50.67 4 31 34 3517.2 -33.29 181.94

DIFFERENTIAL CORRECTIONS

TDE .9981 TRA-3.2805 TC3-4.4859 BAU 2.2283  
 RDE .9094 RRA -1.0192 RC3-2.4250 FAU .26371  
 FDE 3.9847 FRA-3.0853 FC3-6.9848 B8P 13173  
 BDE 1.3488 BRA 3.4181 BC3 5.0991 F8P 1430

MID-COURSE EXECUTION ACCURACY

SGT 6875.5 SGR 3235.9 S63 852.8  
 RRT .9807 RRF .9915 RTF .9404  
 SGB 7598.9 R23 .2705 R13 .9549  
 S61 7554.9 S62 817.3 THA 24.64

ORBIT DETERMINATION ACCURACY

ST 83.9 BR 50.3 S8 58.0  
 CRT .8786 CRS -.9923 CST -.8134  
 LSA 109.1 MSA 32.0 S8A .7  
 EL1 95.6 EL2 21.1 ALF 29.35

LAUNCH DATE SEP 2 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC

RL 150.94 LAL .00 LOL 339.39 VL 33.026 GAL 4.86 AZL 83.69 HCA 162.95 SMA 198.72 ECC .25416 INC 6.3122 V1 29.519  
 RP 248.54 LAP 1.85 LOP 142.43 VP 20.003 GAP -2.47 AZP 96.04 TAL 24.35 TAP 187.30 RCA 148.22 APO 249.23 V2 22.039  
 RC 335.380 GL 38.80 GP -38.93 ZAL 56.30 ZAP 65.25 ETS 160.20 ZAE 84.24 ETE 176.97 ZAC 50.15 ETC 268.49 LVI 16.32

DISTANCE 581.454

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.625 VHL 5.799 DLA 44.40 RAL 3.62 RAD 8648.4 VEL 12.391 PTH 7.30 VHP 3.290 DPA -28.51 RAP 35.41 ECC 1.5534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 35 35 4310.86 -32.48 196.46 264.56 53.10 5 47 25 3310.9 -44.49 169.44  
 54.23 3 5 21 4544.30 -19.23 206.31 252.76 49.18 4 21 5 3544.3 -34.01 184.87  
 54.23 3 5 21 4544.30 -19.23 206.31 252.76 49.18 4 21 5 3544.3 -34.01 184.87  
 54.23 3 5 21 4544.30 -19.23 206.31 252.76 49.18 4 21 5 3544.3 -34.01 184.87  
 54.23 3 5 21 4544.30 -19.23 206.31 252.76 49.18 4 21 5 3544.3 -34.01 184.87  
 54.23 3 5 21 4544.30 -19.23 206.31 252.76 49.18 4 21 5 3544.3 -34.01 184.87

DIFFERENTIAL CORRECTIONS

TDE 1.0638 TRA-3.3349 TC3-4.4546 BAU 2.2818  
 RDE .9833 RRA -1.0843 RC3-2.4326 FAU .24994  
 FDE 3.8803 FRA-2.9884 FC3-6.4353 B8P 13263  
 BDE 1.4485 BRA 3.5067 BC3 5.0756 F8P 1312

MID-COURSE EXECUTION ACCURACY

SGT 7004.4 SGR 3339.4 S63 808.1  
 RRT .9624 RRF .9918 RTF .9410  
 SGB 7759.9 R23 .2704 R13 .9555  
 S61 7715.9 S62 823.4 THA 24.95

ORBIT DETERMINATION ACCURACY

ST 87.2 BR 53.7 S8 57.4  
 CRT .8843 CRS -.9925 CST -.8210  
 LSA 112.9 MSA 32.0 S8A .6  
 EL1 100.1 EL2 21.9 ALF 30.15

LAUNCH DATE SEP 2 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC DISTANCE 585.215 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.032 GAL 4.81 AZL 83.36 MCA 183.82 SMA 198.86 ECC .23432 INC 6.6379 V1 29.519  
 RP 248.63 LAP 1.85 LOP 143.31 VP 20.004 GAP -2.67 AZP 96.38 TAL 24.05 TAP 187.87 RCA 148.28 APO 249.43 V2 22.030  
 RC 337.366 GL 40.21 GP -40.12 ZAL 57.28 ZAP 65.28 ETS 159.31 ZAE 83.68 ETE 176.29 ZAC 48.94 ETC 288.82 LVI 17.93

PLANETOCENTRIC CONIC  
 C3 34.733 VHL 5.893 DLA 45.85 RAL 2.61 RAD 6648.8 VEL 12.435 PTH 7.34 VHP 3.378 DPA -29.45 RAP 36.28 ECC 1.5716  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 4 30 4392.53 -29.04 201.21 261.85 50.50 5 17 42 3392.5 -42.45 176.23  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91  
 52.28 2 53 59 4571.61 -19.36 208.96 252.68 47.59 4 10 11 3571.6 -34.71 187.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1448 TRA-3.3966 TC3-4.3868 BAU 2.3245 SGT 7102.6 SGR 3420.5 SG3 754.1 ST 90.6 SR 57.8 SS 57.1  
 RDE 1.0806 RRA-1.1370 RC3-2.4112 FAU .23275 RRT .9627 RRF .9916 RTF .9386 CRT .8871 CRS -.9928 CST -.8258  
 FDE 3.8348 FRA-2.8233 FC3-5.8013 BSP 13640 SGB 7883.3 R23 .2778 R13 .9537 LSA 117.3 MSA 32.5 SSA .6  
 BDE 1.5743 BRA 3.5818 BC3 5.0058 FSP 1254 SGI 7838.6 SG2 838.7 THA 25.18 EL1 105.0 EL2 23.0 ALF 31.18

LAUNCH DATE SEP 2 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC DISTANCE 588.980 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.039 GAL 4.75 AZL 83.00 HCA 164.69 SMA 198.99 ECC .25450 INC 6.9996 V1 29.519  
 RP 248.71 LAP 1.84 LOP 144.19 VP 20.007 GAP -2.86 AZP 96.75 TAL 23.75 TAP 188.44 RCA 148.35 APO 249.63 V2 22.023  
 RC 339.321 GL 41.93 GP -41.39 ZAL 58.31 ZAP 65.41 ETS 158.41 ZAE 83.17 ETE 175.60 ZAC 47.66 ETC 289.20 LVI 18.82

PLANETOCENTRIC CONIC  
 C3 36.058 VHL 6.005 DLA 47.38 RAL 1.43 RAD 6649.3 VEL 12.488 PTH 7.38 VHP 3.473 DPA -30.45 RAP 37.23 ECC 1.5934  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 8 54 4532.47 -22.75 208.58 255.87 47.01 4 24 27 3532.5 -38.04 186.73  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04  
 50.28 2 42 7 4599.19 -19.43 211.64 252.50 45.91 3 58 46 3599.2 -35.37 191.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1990 TRA-3.4817 TC3-4.3191 BAU 2.3842 SGT 7229.8 SGR 3546.2 SG3 706.6 ST 93.5 SR 61.2 SS 55.8  
 RDE 1.1601 RRA-1.2233 RC3-2.4106 FAU .21841 RRT .9647 RRF .9917 RTF .9396 CRT .8908 CRS -.9925 CST -.8269  
 FDE 3.6983 FRA-2.7285 FC3-5.2442 BSP 13671 SGB 8052.7 R23 .2761 R13 .9547 LSA 120.6 MSA 32.6 SSA .5  
 BDE 1.6683 BRA 3.6904 BC3 4.9462 FSP 1119 SGI 8008.5 SG2 842.6 THA 25.63 EL1 109.2 EL2 23.8 ALF 31.96

LAUNCH DATE SEP 2 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC DISTANCE 592.737 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.048 GAL 4.69 AZL 82.60 HCA 165.56 SMA 199.12 ECC .25467 INC 7.4033 V1 29.519  
 RP 248.78 LAP 1.84 LOP 145.07 VP 20.010 GAP -3.05 AZP 97.17 TAL 23.44 TAP 189.00 RCA 148.41 APO 249.63 V2 22.015  
 RC 341.246 GL 43.77 GP -42.73 ZAL 59.42 ZAP 65.65 ETS 157.53 ZAE 82.75 ETE 174.92 ZAC 46.28 ETC 289.63 LVI 20.20

PLANETOCENTRIC CONIC  
 C3 37.639 VHL 6.135 DLA 48.95 RAL .05 RAD 6649.8 VEL 12.551 PTH 7.42 VHP 3.583 DPA -31.50 RAP 38.27 ECC 1.6194  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31  
 48.22 2 29 34 4627.30 -19.41 214.37 252.20 44.12 3 46 41 3627.3 -35.97 194.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.2661 TRA-3.5492 TC3-4.2049 BAU 2.4279 SGT 7314.2 SGR 3633.0 SG3 647.2 ST 96.4 SR 65.7 SS 59.0  
 RDE 1.2741 RRA-1.2875 RC3-2.3663 FAU .19940 RRT .9645 RRF .9910 RTF .9553 CRT .8896 CRS -.9924 CST -.8268  
 FDE 3.6187 FRA-2.5372 FC3-4.5864 BSP 14136 SGB 8166.8 R23 .2877 R13 .9514 LSA 124.5 MSA 33.5 SSA .5  
 BDE 1.7962 BRA 3.7755 BC3 4.8250 FSP 1070 SGI 8121.0 SG2 863.8 THA 29.91 EL1 113.8 EL2 25.4 ALF 33.08

LAUNCH DATE SEP 2 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC DISTANCE 598.495 EARTH TO MARS  
 RL 150.94 LAL .00 LOL 339.39 VL 33.053 GAL 4.64 AZL 82.14 HCA 166.43 SMA 199.28 ECC .25485 INC 7.8576 V1 29.519  
 RP 248.85 LAP 1.84 LOP 145.94 VP 20.014 GAP -3.24 AZP 97.84 TAL 23.13 TAP 189.56 RCA 148.47 APO 250.04 V2 22.009  
 RC 343.139 GL 45.74 GP -44.16 ZAL 60.58 ZAP 65.98 ETS 156.67 ZAE 82.41 ETE 174.25 ZAC 44.82 ETC 290.12 LVI 21.68

PLANETOCENTRIC CONIC  
 C3 39.554 VHL 6.289 DLA 50.61 RAL 358.40 RAD 6630.5 VEL 12.626 PTH 7.48 VHP 3.709 DPA -32.61 RAP 39.41 ECC 1.6510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70  
 46.10 2 16 8 4656.14 -19.28 217.14 251.72 42.24 3 33 44 3656.1 -36.48 197.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.3112 TRA-3.6251 TC3-4.0694 BAU 2.4772 SGT 7396.8 SGR 3739.6 SG3 588.6 ST 98.6 SR 69.8 SS 53.5  
 RDE 1.3848 RRA-1.3710 RC3-2.3205 FAU .18094 RRT .9649 RRF .9901 RTF .9317 CRT .8875 CRS -.9917 CST -.8213  
 FDE 3.4861 FRA-2.3639 FC3-3.9602 BSP 14535 SGB 8288.4 R23 .2971 R13 .9487 LSA 127.5 MSA 34.5 SSA .4  
 BDE 1.9071 BRA 3.8757 BC3 4.6845 FSP 991 SGI 8241.4 SG2 881.3 THA 26.33 EL1 117.7 EL2 26.9 ALF 34.17

LAUNCH DATE SEP 3 1973

FLIGHT TIME 114.00

ARRIVAL DATE DEC 26 1973

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.799 GAL 7.55 AZL 89.46 HCA 85.78 SMA 215.24 ECC .32414 INC .9356 V1 29.527
RP 226.17 LAP .53 LOP 66.13 VP 23.601 GAP 18.70 AZP 89.96 TAL 31.45 TAP 117.23 RCA 145.47 APO 285.01 V2 24.318
RC 118.341 GL 2.85 GP -6.05 ZAL 39.41 ZAP 159.47 ETS 200.56 ZAE 161.75 ETE 334.78 ZAC 75.80 ETC 282.39 LVI -9.10

PLANETOCENTRIC CONIC

C3 39.576 VHL 6.291 DLA 10.34 RAL 17.06 RAD 6630.5 VEL 12.627 PTH 7.48 VHP 5.662 DPA 10.25 RAP 46.50 ECC 1.6513
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 9 0 15 3509.93 -46.40 129.03 261.11 102.00 9 58 45 2509.9 -36.56 99.31
60.00 9 26 34 3434.58 -39.68 123.84 262.70 97.69 10 25 48 2434.6 -32.36 95.37
70.00 10 8 8 3310.17 -33.89 115.18 263.47 94.48 11 3 26 2318.2 -28.56 87.76
80.00 11 4 44 3140.88 -29.77 102.02 263.76 92.37 11 57 4 2140.9 -25.77 75.31
90.00 12 21 0 2894.70 -28.24 83.99 263.82 91.62 13 9 15 1894.7 -24.73 57.52
100.00 13 47 35 2615.35 -29.77 63.39 263.76 92.37 14 31 11 1615.4 -25.77 36.68
110.00 15 7 34 2364.99 -33.89 44.09 263.47 94.48 15 46 59 1365.0 -28.56 16.68

DIFFERENTIAL CORRECTIONS

TDE -.3058 TRA -.6478 TC3 .4997 BAU .2808
RDE -.6875 RRA .2257 RC3 -.1789 FAU .11266
FDE .0009 FRA -.8713 FC3 -2.4844 B8P 1120
BDE .7525 BRA .6860 BC3 .5307 F8P 387

MID-COURSE EXECUTION ACCURACY

SGT 912.4 SGR 697.4 SG3 276.8
RRT -.1452 RRF .2366 RTF -.5014
SG8 1148.4 R23 -.0720 R13 .5231
SG1 925.0 SG2 680.6 THA 185.95

ORBIT DETERMINATION ACCURACY

ST 16.6 SR 31.5 S8 6.3
CRT .7799 CR8 .0923 CST -.4828
LSA 34.3 M8A 11.2 S8A 2.5
EL1 34.3 EL2 9.5 ALF 65.62

LAUNCH DATE SEP 3 1973

FLIGHT TIME 116.00

ARRIVAL DATE DEC 28 1973

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.731 GAL 7.55 AZL 89.43 HCA 86.84 SMA 213.64 ECC .31939 INC .9677 V1 29.527
RP 226.96 LAP .57 LOP 67.19 VP 23.460 GAP 18.31 AZP 89.97 TAL 31.83 TAP 118.67 RCA 145.41 APO 281.88 V2 24.276
RC 120.933 GL 3.04 GP -7.03 ZAL 38.99 ZAP 158.39 ETS 199.99 ZAE 162.26 ETE 333.19 ZAC 75.64 ETC 282.40 LVI -8.94

PLANETOCENTRIC CONIC

C3 38.967 VHL 6.242 DLA 10.35 RAL 16.58 RAD 6650.3 VEL 12.603 PTH 7.46 VHP 5.495 DPA 10.07 RAP 46.52 ECC 1.6413
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 58 18 3506.19 -46.34 128.68 260.26 102.26 9 56 44 2506.2 -36.42 99.06
60.00 9 26 36 3430.87 -39.65 123.53 261.89 97.90 10 23 47 2430.9 -32.25 95.11
70.00 10 6 10 3314.49 -33.87 114.89 262.68 94.65 11 1 24 2314.5 -28.47 87.51
80.00 11 2 45 3137.23 -29.76 101.75 262.98 92.52 11 55 2 2137.2 -25.71 75.06
90.00 12 19 1 2891.07 -28.23 83.72 263.05 91.75 13 7 12 1891.1 -24.67 57.28
100.00 13 45 37 2611.71 -29.76 63.12 262.98 92.52 14 29 8 1611.7 -25.71 36.43
110.00 15 5 36 2361.31 -33.87 43.81 262.68 94.65 15 44 57 1361.3 -28.47 16.43

DIFFERENTIAL CORRECTIONS

TDE -.3075 TRA -.6428 TC3 .5108 BAU .2841
RDE -.6885 RRA .2214 RC3 -.1912 FAU .11867
FDE -.0005 FRA -.9460 FC3 -2.6364 B8P 1142
BDE .7513 BRA .6798 BC3 .5454 F8P 415

MID-COURSE EXECUTION ACCURACY

SGT 919.6 SGR 703.8 SG3 294.4
RRT -.1521 RRF .2517 RTF -.5008
SG8 1158.1 R23 -.0798 R13 .5254
SG1 933.5 SG2 685.4 THA 185.32

ORBIT DETERMINATION ACCURACY

ST 16.8 SR 31.6 S8 6.7
CRT .7846 CR8 .0881 CST -.4843
LSA 34.5 M8A 11.4 S8A 2.5
EL1 34.5 EL2 9.5 ALF 65.42

LAUNCH DATE SEP 3 1973

FLIGHT TIME 118.00

ARRIVAL DATE DEC 30 1973

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.687 GAL 7.55 AZL 89.40 HCA 87.89 SMA 212.16 ECC .31495 INC .9986 V1 29.527
RP 226.95 LAP .60 LOP 68.24 VP 23.324 GAP 17.93 AZP 89.98 TAL 32.20 TAP 120.09 RCA 145.34 APO 278.98 V2 24.234
RC 123.556 GL 3.23 GP -7.21 ZAL 38.59 ZAP 157.29 ETS 199.45 ZAE 162.79 ETE 331.41 ZAC 75.47 ETC 282.42 LVI -8.79

PLANETOCENTRIC CONIC

C3 38.404 VHL 6.197 DLA 10.36 RAL 16.12 RAD 6630.1 VEL 12.581 PTH 7.45 VHP 5.334 DPA 9.88 RAP 46.52 ECC 1.6320
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 56 24 3502.84 -46.29 128.37 259.46 102.49 9 54 47 2502.8 -36.30 98.83
60.00 9 24 41 3427.56 -39.62 123.25 261.12 98.08 10 21 49 2427.6 -32.15 94.89
70.00 10 4 13 3311.26 -33.86 114.64 261.93 94.79 10 59 24 2311.3 -28.40 87.29
80.00 11 0 47 3134.06 -29.75 101.51 262.24 92.64 11 53 1 2134.1 -25.65 74.84
90.00 12 17 3 2887.93 -28.22 83.49 262.31 91.87 13 5 11 1887.9 -24.61 57.06
100.00 13 43 39 2608.53 -29.75 62.88 262.24 92.64 14 27 7 1608.5 -25.65 36.21
110.00 15 3 40 2358.07 -33.86 43.56 261.93 94.79 15 42 58 1358.1 -28.40 16.21

DIFFERENTIAL CORRECTIONS

TDE -.3092 TRA -.6379 TC3 .5204 BAU .2870
RDE -.6835 RRA .2167 RC3 -.2041 FAU .12496
FDE -.0015 FRA -1.0251 FC3 -2.8169 B8P 1160
BDE .7502 BRA .6737 BC3 .5390 F8P 446

MID-COURSE EXECUTION ACCURACY

SGT 925.8 SGR 710.5 SG3 312.9
RRT -.1590 RRF .2673 RTF -.4991
SG8 1167.1 R23 -.0882 R13 .5269
SG1 941.2 SG2 690.0 THA 184.65

ORBIT DETERMINATION ACCURACY

ST 16.9 SR 31.7 S8 7.1
CRT .7892 CR8 .0820 CST -.4841
LSA 34.7 M8A 11.6 S8A 2.6
EL1 34.7 EL2 9.5 ALF 65.21

LAUNCH DATE SEP 3 1973

FLIGHT TIME 120.00

ARRIVAL DATE JAN 1 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.606 GAL 7.55 AZL 89.37 HCA 88.94 SMA 210.80 ECC .31080 INC .8313 V1 29.527
RP 227.34 LAP .63 LOP 69.30 VP 23.194 GAP 17.56 AZP 89.99 TAL 32.55 TAP 121.48 RCA 145.28 APO 276.31 V2 24.193
RC 126.208 GL 3.42 GP -7.39 ZAL 38.21 ZAP 156.17 ETS 198.95 ZAE 163.35 ETE 329.42 ZAC 75.30 ETC 282.44 LVI -8.63

PLANETOCENTRIC CONIC

C3 37.882 VHL 6.155 DLA 10.39 RAL 15.88 RAD 6649.9 VEL 12.560 PTH 7.43 VHP 5.180 DPA 9.68 RAP 46.51 ECC 1.6234
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 54 33 3499.86 -46.25 128.10 258.71 102.70 9 52 53 2499.9 -36.19 98.63
60.00 9 22 49 3424.66 -39.59 123.01 260.39 98.24 10 19 53 2424.7 -32.06 94.69
70.00 10 2 19 3308.45 -33.84 114.42 261.22 94.92 10 57 27 2308.4 -28.33 87.10
80.00 10 58 51 3131.34 -29.74 101.31 261.54 92.74 11 51 2 2131.3 -25.60 74.66
90.00 12 15 6 2885.25 -28.22 83.30 261.61 91.96 13 3 11 1885.3 -24.57 56.88
100.00 13 41 43 2605.81 -29.74 62.68 261.54 92.74 14 25 8 1605.8 -25.60 36.02
110.00 15 1 45 2355.26 -33.84 43.34 261.22 94.92 15 41 0 1355.3 -28.33 16.01

DIFFERENTIAL CORRECTIONS

TDE -.3108 TRA -.6337 TC3 .5288 BAU .2896
RDE -.6816 RRA .2116 RC3 -.2177 FAU .13158
FDE -.0026 FRA -1.1086 FC3 -3.0070 B8P 1173
BDE .7491 BRA .6681 BC3 .5719 F8P 478

MID-COURSE EXECUTION ACCURACY

SGT 931.2 SGR 717.3 SG3 332.4
RRT -.1662 RRF .2839 RTF -.4967
SG8 1175.5 R23 -.0970 R13 .5282
SG1 948.3 SG2 694.6 THA 183.90

ORBIT DETERMINATION ACCURACY

ST 17.1 SR 31.9 S8 7.5
CRT .7935 CR8 .0775 CST -.4843
LSA 34.9 M8A 11.8 S8A 2.6
EL1 34.9 EL2 9.5 ALF 65.01

LAUNCH DATE SEP 3 1973

FLIGHT TIME 122.00

ARRIVAL DATE JAN 3 1974

HELIOCENTRIC CONIC DISTANCE 290.088 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.38 VL 33.950 GAL 7.55 AZL 89.34 HCA 89.99 SMA 209.33 ECC .30892 INC .6627 V1 29.827  
 RP 227.73 LAP .69 LOP 70.34 VP 23.068 GAP 17.19 AZP 90.00 TAL 32.89 TAP 122.87 RCA 145.22 APO 273.84 V2 24.152  
 RC 128.887 GL 3.61 GP -7.59 ZAL 37.85 ZAP 155.03 ETS 198.48 ZAE 163.92 ETE 327.19 ZAC 75.13 ETC 282.46 LVI -8.48

PLANETOCENTRIC CONIC  
 C3 37.399 VHL 6.115 DLA 10.42 RAL 19.26 RAD 6649.6 VEL 12.541 PTH 7.42 VHP 5.032 DPA 9.47 RAP 46.48 ECC 1.6155  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 52 45 3497.25 -46.21 127.86 258.01 102.88 9 51 2 2497.2 -36.09 98.46  
 60.00 9 20 58 3422.14 -39.57 122.80 259.71 98.38 10 18 1 2422.1 -31.99 94.52  
 70.00 10 0 26 3306.05 -33.83 114.24 260.55 95.03 10 55 32 2306.0 -28.28 86.93  
 80.00 10 56 56 3129.07 -29.74 101.14 260.88 92.83 11 49 5 2129.1 -25.56 74.50  
 90.00 12 13 10 2883.04 -28.21 83.13 260.96 92.05 13 1 13 1883.0 -24.53 56.73  
 100.00 13 39 47 2603.54 -29.74 62.51 260.88 92.83 14 23 11 1603.5 -25.56 35.87  
 110.00 14 59 52 2352.87 -33.83 43.15 260.55 95.03 15 39 5 1352.9 -28.28 15.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3126 TRA -.6302 TC3 .5355 BAU .2918 SGT 935.5 SGR 724.2 SG3 392.9 ST 17.2 SR 32.0 SS 7.9  
 RDE -.6796 RRA .2062 RC3 -.2319 FAU .13852 RRT -.1731 RRF .3009 RTF -.4931 CRT .7978 CRS .0762 CST -.4816  
 FDE -.0026 FRA -1.1966 FC3 -3.2066 BSP 1184 SGB 1183.0 R23 -.1066 R13 .5288 LSA 35.1 MSA 12.0 SSA 2.7  
 BDE .7480 BRA .6630 BC3 .5836 FSP 512 SG1 934.3 SG2 699.2 THA 163.11 EL1 35.1 EL2 9.5 ALF 64.79

LAUNCH DATE SEP 3 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 5 1974

HELIOCENTRIC CONIC DISTANCE 293.675 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.497 GAL 7.55 AZL 89.31 HCA 91.03 SMA 208.36 ECC .30329 INC .6942 V1 29.527  
 RP 228.12 LAP .69 LOP 71.39 VP 22.948 GAP 16.82 AZP 90.01 TAL 33.21 TAP 124.24 RCA 145.17 APO 271.55 V2 24.110  
 RC 131.592 GL 3.80 GP -7.78 ZAL 37.52 ZAP 153.87 ETS 198.04 ZAE 164.90 ETE 324.69 ZAC 74.96 ETC 282.46 LVI -8.33

PLANETOCENTRIC CONIC  
 C3 36.949 VHL 6.079 DLA 10.46 RAL 14.86 RAD 6649.6 VEL 12.523 PTH 7.40 VHP 4.889 DPA 9.25 RAP 46.43 ECC 1.6081  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 0 3494.97 -46.17 127.65 257.35 103.04 9 49 15 2495.0 -36.00 98.31  
 60.00 9 19 10 3419.99 -39.54 122.62 259.07 98.50 10 16 10 2420.0 -31.93 94.37  
 70.00 9 58 35 3304.05 -33.81 114.08 259.92 95.12 10 53 39 2304.0 -28.23 86.79  
 80.00 10 55 1 3127.22 -29.73 101.01 260.26 92.90 11 47 9 2127.2 -25.52 74.37  
 90.00 12 11 14 2881.26 -28.21 83.00 260.34 92.11 12 59 15 1881.3 -24.50 56.60  
 100.00 13 37 53 2601.69 -29.73 62.37 260.26 92.90 14 21 15 1601.7 -25.52 35.74  
 110.00 14 58 1 2350.86 -33.81 43.00 259.92 95.12 15 37 12 1350.9 -28.23 15.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3144 TRA -.6272 TC3 .5408 BAU .2936 SGT 938.7 SGR 731.4 SG3 374.3 ST 17.4 SR 32.1 SS 8.3  
 RDE -.6776 RRA .2005 RC3 -.2468 FAU .14577 RRT -.1798 RRF .3188 RTF -.4882 CRT .8019 CRS .0735 CST -.4801  
 FDE -.0030 FRA -1.2894 FC3 -3.4153 BSP 1192 SGB 1190.0 R23 -.1171 R13 .5289 LSA 35.2 MSA 12.3 SSA 2.7  
 BDE .7470 BRA .6584 BC3 .5943 FSP 548 SG1 959.5 SG2 703.9 THA 162.26 EL1 35.2 EL2 9.4 ALF 64.56

LAUNCH DATE SEP 3 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 7 1974

HELIOCENTRIC CONIC DISTANCE 297.303 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.447 GAL 7.55 AZL 89.27 HCA 92.07 SMA 207.28 ECC .29990 INC .7256 V1 29.527  
 RP 228.51 LAP .73 LOP 72.42 VP 22.832 GAP 16.46 AZP 90.03 TAL 33.51 TAP 125.58 RCA 145.11 APO 269.44 V2 24.069  
 RC 134.321 GL 3.98 GP -7.99 ZAL 37.21 ZAP 152.69 ETS 197.63 ZAE 165.08 ETE 321.87 ZAC 74.78 ETC 282.51 LVI -8.17

PLANETOCENTRIC CONIC  
 C3 36.532 VHL 6.044 DLA 10.50 RAL 14.47 RAD 6649.4 VEL 12.507 PTH 7.39 VHP 4.752 DPA 9.01 RAP 46.36 ECC 1.6012  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 17 3493.03 -46.14 127.47 256.74 103.17 9 47 30 2493.0 -35.93 98.18  
 60.00 9 17 24 3418.19 -39.53 122.47 258.47 98.60 10 14 23 2418.2 -31.87 94.25  
 70.00 9 56 45 3302.43 -33.80 113.95 259.33 95.19 10 51 48 2302.4 -28.19 86.68  
 80.00 10 53 8 3125.79 -29.72 100.90 259.68 92.96 11 45 14 2125.8 -25.49 74.28  
 90.00 12 9 19 2879.91 -28.20 82.91 259.75 92.16 12 57 19 1879.9 -24.48 56.51  
 100.00 13 36 0 2600.26 -29.72 62.27 259.68 92.96 14 19 20 1600.3 -25.49 35.84  
 110.00 14 56 11 2349.25 -33.80 42.87 259.33 95.19 15 35 21 1349.2 -28.19 15.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3164 TRA -.6251 TC3 .5439 BAU .2949 SGT 941.0 SGR 738.8 SG3 396.7 ST 17.5 SR 32.1 SS 8.7  
 RDE -.6756 RRA .1943 RC3 -.2624 FAU .15335 RRT -.1861 RRF .3372 RTF -.4920 CRT .8058 CRS .0744 CST -.4756  
 FDE -.0018 FRA -1.3843 FC3 -3.6342 BSP 1197 SGB 1196.3 R23 -.1284 R13 .5285 LSA 35.4 MSA 12.5 SSA 2.7  
 BDE .7460 BRA .6546 BC3 .6039 FSP 587 SG1 963.9 SG2 708.6 THA 161.35 EL1 35.4 EL2 9.4 ALF 64.31

LAUNCH DATE SEP 3 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 9 1974

HELIOCENTRIC CONIC DISTANCE 300.949 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.400 GAL 7.54 AZL 89.24 HCA 93.11 SMA 206.27 ECC .29873 INC .7570 V1 29.527  
 RP 228.90 LAP .76 LOP 73.46 VP 22.720 GAP 16.10 AZP 90.04 TAL 33.80 TAP 126.91 RCA 145.06 APO 267.48 V2 24.028  
 RC 137.073 GL 4.17 GP -8.20 ZAL 36.92 ZAP 151.49 ETS 197.24 ZAE 165.65 ETE 318.70 ZAC 74.61 ETC 282.54 LVI -8.02

PLANETOCENTRIC CONIC  
 C3 36.142 VHL 6.012 DLA 10.56 RAL 14.11 RAD 6649.3 VEL 12.491 PTH 7.38 VHP 4.621 DPA 8.76 RAP 46.27 ECC 1.5948  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 37 3491.41 -46.12 127.33 256.16 103.28 9 45 49 2491.4 -35.87 98.08  
 60.00 9 15 41 3416.73 -39.51 122.35 257.91 98.69 10 12 38 2416.7 -31.83 94.15  
 70.00 9 54 57 3301.18 -33.80 113.86 258.78 95.25 10 49 58 2301.2 -28.16 86.60  
 80.00 10 51 16 3124.76 -29.72 100.82 259.13 93.00 11 43 21 2124.8 -25.47 74.20  
 90.00 12 7 25 2878.98 -28.20 82.84 259.21 92.19 12 55 24 1879.0 -24.46 56.45  
 100.00 13 34 8 2599.23 -29.72 62.19 259.13 93.00 14 17 27 1599.2 -25.47 35.57  
 110.00 14 54 23 2348.00 -33.80 42.78 258.78 95.25 15 33 31 1348.0 -28.16 15.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3185 TRA -.6240 TC3 .5451 BAU .2958 SGT 942.1 SGR 746.6 SG3 420.2 ST 17.7 SR 32.2 SS 9.1  
 RDE -.6734 RRA .1878 RC3 -.2787 FAU .16126 RRT -.1918 RRF .3563 RTF -.4738 CRT .8095 CRS .0752 CST -.4713  
 FDE -.0004 FRA -1.4883 FC3 -3.8629 BSP 1201 SGB 1202.0 R23 -.1411 R13 .5270 LSA 35.5 MSA 12.8 SSA 2.8  
 BDE .7450 BRA .6516 BC3 .6122 FSP 627 SG1 967.3 SG2 713.6 THA 160.38 EL1 35.5 EL2 9.4 ALF 64.04

LAUNCH DATE SEP 3 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 11 1974

Heliocentric Conic: RL 130.90 LAL .00 LOL 340.35 VL 33.356 GAL 7.54 AZL 89.21 HCA 94.14 SMA 205.34 ECC .29378 INC .7882 V1 29.827  
 RP 229.28 LAP .79 LOP 74.49 VP 22.812 GAP 15.75 AZP 90.06 TAL 34.08 TAP 128.22 RCA 145.02 APO 265.66 V2 23.988  
 RC 139.847 GL 4.38 GP -0.41 ZAL 36.64 ZAP 130.27 ETS 196.88 ZAE 166.20 ETE 315.14 ZAC 74.43 ETC 282.58 LVI -7.87

Distance 304.610 Earth to Mars

Planetocentric Conic: C3 35.778 VHL 5.981 DLA 10.62 RAL 13.78 RAD 6649.2 VEL 12.477 PTH 7.37 VHP 4.495 DPA 8.50 RAP 46.16 ECC 1.5888  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 46 0 3490.09 -46.10 127.20 255.63 103.36 9 44 10 2490.1 -35.82 97.99  
 60.00 9 13 59 3415.60 -39.50 122.26 257.39 98.75 10 10 55 2415.6 -31.79 94.07  
 70.00 9 53 10 3300.29 -33.79 113.79 258.26 95.29 10 48 11 2300.3 -28.14 86.54  
 80.00 10 49 25 3124.11 -29.72 100.76 258.61 93.03 11 41 29 2124.1 -25.46 74.16  
 90.00 12 5 32 2878.45 -28.20 82.80 258.69 92.21 12 53 31 1878.5 -24.45 56.41  
 100.00 13 32 17 2598.58 -29.72 62.14 258.61 93.03 14 15 35 1598.6 -25.46 35.53  
 110.00 14 52 37 2347.11 -33.79 42.71 258.26 95.29 15 31 44 1347.1 -28.14 15.46

Differential Corrections: TDE -.3209 TRA -.6236 TC3 .5442 BAU .2963 SGT 942.2 SGR 754.8 SG3 444.8 ST 17.9 SR 32.3 SS 9.9  
 RDE -.6712 RRA .1809 RC3 -.2957 FAU .16953 RRT -.1966 RRF .3761 RTF -.4640 CRT .8132 CRS .0763 CBT -.4666  
 FDE .0016 FRA -1.5952 FC3 -4.1022 B8P 1202 SGB 1207.2 R23 -.1549 R13 .5251 LSA 35.7 MSA 13.1 SSA 2.8  
 BDE .7440 BRA .6493 BC3 .6194 F8P 669 SG1 969.7 SG2 719.0 THA 159.34 EL1 35.7 EL2 9.4 ALF 63.75

LAUNCH DATE SEP 3 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 13 1974

Heliocentric Conic: RL 130.90 LAL .00 LOL 340.35 VL 33.313 GAL 7.54 AZL 89.18 HCA 95.17 SMA 204.47 ECC .29098 INC .8195 V1 29.827  
 RP 229.67 LAP .82 LOP 75.52 VP 22.509 GAP 15.40 AZP 90.07 TAL 34.33 TAP 129.90 RCA 144.98 APO 263.97 V2 23.947  
 RC 142.641 GL 4.55 GP -0.64 ZAL 36.39 ZAP 149.02 ETS 196.52 ZAE 166.72 ETE 311.14 ZAC 74.25 ETC 282.62 LVI -7.72

Distance 308.265 Earth to Mars

Planetocentric Conic: C3 35.438 VHL 5.953 DLA 10.89 RAL 13.43 RAD 6649.1 VEL 12.463 PTH 7.36 VHP 4.373 DPA 8.22 RAP 46.03 ECC 1.5832  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 25 3469.07 -46.08 127.11 255.14 103.45 9 42 34 2489.1 -35.78 97.92  
 60.00 9 12 19 3414.79 -39.49 122.19 256.90 98.79 10 9 14 2414.8 -31.77 94.02  
 70.00 9 51 25 3299.75 -33.79 113.75 257.78 95.32 10 46 25 2299.8 -28.13 86.50  
 80.00 10 47 34 3123.85 -29.72 100.76 258.13 93.04 11 39 38 2123.8 -25.46 74.14  
 90.00 12 3 39 2878.31 -28.20 82.79 258.21 92.22 12 51 37 1878.3 -24.45 56.40  
 100.00 13 30 26 2598.32 -29.72 62.12 258.13 93.04 14 13 45 1598.3 -25.46 35.51  
 110.00 14 50 52 2346.97 -33.79 42.67 257.78 95.32 15 29 58 1346.6 -28.13 15.42

Differential Corrections: TDE -.3235 TRA -.6243 TC3 .5412 BAU .2963 SGT 941.3 SGR 763.4 SG3 470.4 ST 18.1 SR 32.3 SS 9.9  
 RDE -.6689 RRA .1735 RC3 -.3136 FAU .17814 RRT -.2005 RRF .3964 RTF -.4523 CRT .8166 CRS .0781 CBT -.4608  
 FDE .0048 FRA -1.7067 FC3 -4.3520 B8P 1202 SGB 1212.0 R23 -.1699 R13 .5226 LSA 35.8 MSA 13.4 SSA 2.8  
 BDE .7430 BRA .6480 BC3 .6258 F8P 713 SG1 971.4 SG2 724.8 THA 158.23 EL1 35.8 EL2 9.4 ALF 63.43

LAUNCH DATE SEP 3 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 15 1974

Heliocentric Conic: RL 130.90 LAL .00 LOL 340.35 VL 33.277 GAL 7.53 AZL 89.15 HCA 96.19 SMA 203.67 ECC .28838 INC .8506 V1 29.827  
 RP 230.05 LAP .85 LOP 76.55 VP 22.409 GAP 15.06 AZP 90.09 TAL 34.57 TAP 130.77 RCA 144.94 APO 262.40 V2 23.907  
 RC 145.456 GL 4.74 GP -0.86 ZAL 36.18 ZAP 147.78 ETS 196.19 ZAE 167.19 ETE 308.67 ZAC 74.07 ETC 282.66 LVI -7.58

Distance 311.974 Earth to Mars

Planetocentric Conic: C3 35.118 VHL 5.926 DLA 10.76 RAL 13.11 RAD 6648.9 VEL 12.451 PTH 7.35 VHP 4.257 DPA 7.94 RAP 45.88 ECC 1.5780  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 32 3488.32 -46.07 127.04 254.68 103.50 9 41 1 2488.3 -35.75 97.67  
 60.00 9 10 42 3414.28 -39.49 122.15 256.45 98.82 10 7 38 2414.3 -31.75 93.96  
 70.00 9 49 41 3299.55 -33.79 113.73 257.33 95.32 10 44 41 2299.5 -28.12 86.48  
 80.00 10 45 45 3123.94 -29.72 100.76 257.68 93.03 11 37 48 2123.9 -25.46 74.13  
 90.00 12 1 47 2878.55 -28.20 82.81 257.76 92.21 12 49 45 1878.6 -24.45 56.42  
 100.00 13 28 38 2598.42 -29.72 62.13 257.68 93.03 14 11 55 1598.4 -25.46 35.52  
 110.00 14 49 8 2346.36 -33.79 42.65 257.33 95.32 15 28 14 1346.4 -28.12 15.40

Differential Corrections: TDE -.3262 TRA -.6261 TC3 .5358 BAU .2960 SGT 939.4 SGR 772.6 SG3 497.1 ST 18.3 SR 32.3 SS 10.3  
 RDE -.6665 RRA .1637 RC3 -.3322 FAU .18708 RRT -.2029 RRF .4172 RTF -.4482 CRT .8198 CRS .0819 CBT -.4850  
 FDE .0087 FRA -1.8229 FC3 -4.6119 B8P 1199 SGB 1216.3 R23 -.1885 R13 .5193 LSA 35.9 MSA 13.7 SSA 2.9  
 BDE .7421 BRA .6477 BC3 .6304 F8P 759 SG1 972.0 SG2 731.1 THA 157.05 EL1 35.9 EL2 9.4 ALF 63.09

LAUNCH DATE SEP 3 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 17 1974

Heliocentric Conic: RL 130.90 LAL .00 LOL 340.35 VL 33.241 GAL 7.53 AZL 89.12 HCA 97.22 SMA 202.93 ECC .28594 INC .8819 V1 29.827  
 RP 230.44 LAP .87 LOP 77.57 VP 22.313 GAP 14.72 AZP 90.11 TAL 34.80 TAP 132.01 RCA 144.90 APO 260.95 V2 23.867  
 RC 148.289 GL 4.93 GP -9.10 ZAL 35.95 ZAP 146.48 ETS 195.86 ZAE 167.60 ETE 301.71 ZAC 73.89 ETC 282.70 LVI -7.43

Distance 318.674 Earth to Mars

Planetocentric Conic: C3 34.818 VHL 5.901 DLA 10.85 RAL 12.82 RAD 6648.8 VEL 12.439 PTH 7.34 VHP 4.146 DPA 7.63 RAP 45.71 ECC 1.5730  
 LNCM AZMTH LNCM TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 22 3487.85 -46.06 127.00 254.26 103.53 9 39 30 2487.8 -35.73 97.64  
 60.00 9 9 5 3414.07 -39.48 122.13 256.03 98.83 10 5 59 2414.1 -31.75 93.97  
 70.00 9 47 58 3299.66 -33.79 113.74 256.91 95.32 10 42 58 2299.7 -28.13 86.49  
 80.00 10 43 55 3124.40 -29.72 100.80 257.26 93.01 11 36 0 2124.4 -25.47 74.18  
 90.00 11 59 54 2879.16 -28.20 82.85 257.33 92.19 12 47 53 1879.2 -24.46 56.46  
 100.00 13 26 47 2598.87 -29.72 62.16 257.26 93.01 14 10 6 1598.9 -25.47 35.53  
 110.00 14 47 25 2346.48 -33.79 42.66 256.91 95.32 15 26 31 1346.5 -28.13 15.41

Differential Corrections: TDE -.3291 TRA -.6289 TC3 .5281 BAU .2953 SGT 936.6 SGR 782.4 SG3 524.8 ST 18.5 SR 32.3 SS 10.8  
 RDE -.6639 RRA .1575 RC3 -.3517 FAU .19635 RRT -.2040 RRF .4384 RTF -.4220 CRT .8228 CRS .0862 CBT -.4481  
 FDE .0140 FRA -1.9433 FC3 -4.8822 B8P 1194 SGB 1220.3 R23 -.2041 R13 .5157 LSA 36.0 MSA 14.0 SSA 2.9  
 BDE .7410 BRA .6483 BC3 .6345 F8P 808 SG1 971.8 SG2 738.2 THA 155.78 EL1 36.0 EL2 9.4 ALF 62.73



LAUNCH DATE SEP 3 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC DISTANCE 319.385 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.207 GAL 7.52 AZL 89.09 HCA 98.24 SMA 202.23 ECC .28366 INC .9132 V1 29.527  
 RP 230.82 LAP .90 LOP 78.59 VP 22.220 GAP 14.39 AZP 90.13 TAL 35.01 TAP 133.24 RCA 144.87 APO 259.60 V2 23.827  
 RC 151.140 GL 5.12 GP -9.34 ZAL 35.75 ZAP 145.17 ETS 195.54 ZAE 167.92 ETE 296.25 ZAC 73.70 ETC 282.75 LVI -7.28

PLANETOCENTRIC CONIC  
 C3 34.937 VHL 5.877 DLA 10.94 RAL 12.54 RAD 6648.7 VEL 12.427 PTH 7.33 VHP 4.039 DPA 7.32 RAP 45.52 ECC 1.5884  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 54 3487.62 -46.06 126.98 253.86 103.55 9 38 1 2487.6 -35.73 97.83  
 60.00 9 7 31 3414.12 -39.48 122.13 255.64 98.83 10 4 25 2414.1 -31.75 93.97  
 70.00 9 46 16 3300.07 -33.79 113.77 256.51 95.30 10 41 16 2300.1 -28.14 86.52  
 80.00 10 42 6 3125.17 -29.72 100.85 256.86 92.98 11 34 11 2125.2 -25.48 74.23  
 90.00 11 58 2 2880.11 -28.20 82.92 256.94 92.15 12 46 2 1880.1 -24.48 56.53  
 100.00 13 24 58 2599.64 -29.72 62.22 256.86 92.98 14 8 18 1599.6 -25.48 35.60  
 110.00 14 45 43 2346.89 -33.79 42.69 256.51 95.30 15 24 50 1346.9 -28.14 15.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3209 TRA -.6215 TC3 .5310 BAU .2995 SGT 931.8 SGR 793.6 SG3 555.0 ST 18.2 SR 32.3 S8 11.3  
 RDE -.6619 RRA .1482 RC3 -.3726 FAU .20647 RRT -.2195 RRF .4618 RTF -.4218 CRT .8215 CRS .0740 CST -.4610  
 FDE .0095 FRA -2.0802 FC3 -5.1754 BSP 1085 SGB 1224.0 R23 -.2019 R13 .5295 LSA 35.9 MSA 14.3 S8A 2.9  
 BDE .7355 BRA .6389 BC3 .6487 FSP 846 SG1 974.9 SG2 740.1 THA 153.14 EL1 35.9 EL2 9.3 ALF 63.24

LAUNCH DATE SEP 3 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC DISTANCE 323.106 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.176 GAL 7.52 AZL 89.06 HCA 99.25 SMA 201.60 ECC .28153 INC .9445 V1 29.527  
 RP 231.20 LAP .93 LOP 79.61 VP 22.130 GAP 14.05 AZP 90.15 TAL 35.20 TAP 134.45 RCA 144.84 APO 258.35 V2 23.787  
 RC 154.008 GL 5.31 GP -9.59 ZAL 35.58 ZAP 143.85 ETS 195.24 ZAE 168.14 ETE 290.38 ZAC 73.52 ETC 282.80 LVI -7.13

PLANETOCENTRIC CONIC  
 C3 34.270 VHL 5.854 DLA 11.04 RAL 12.27 RAD 6648.6 VEL 12.417 PTH 7.32 VHP 3.937 DPA 6.99 RAP 45.31 ECC 1.5840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 28 3487.66 -46.06 126.98 253.51 103.54 9 36 35 2487.7 -35.73 97.83  
 60.00 9 5 58 3414.47 -39.49 122.16 255.28 98.81 10 2 52 2414.5 -31.76 94.00  
 70.00 9 44 35 3300.82 -33.79 113.83 256.15 95.27 10 39 36 2300.8 -28.15 86.57  
 80.00 10 40 18 3126.31 -29.73 100.94 256.50 92.94 11 32 24 2126.3 -25.50 74.31  
 90.00 11 56 10 2881.44 -28.21 83.02 256.57 92.10 12 44 12 1881.4 -24.50 56.62  
 100.00 13 23 10 2600.78 -29.73 62.31 256.50 92.94 14 6 30 1600.8 -25.50 35.68  
 110.00 14 44 2 2347.63 -33.79 42.75 256.15 95.27 15 23 9 1347.6 -28.15 15.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3285 TRA -.6311 TC3 .5132 BAU .2963 SGT 927.6 SGR 804.6 SG3 584.4 ST 18.7 SR 32.3 S8 11.7  
 RDE -.6588 RRA .1393 RC3 -.3936 FAU .21625 RRT -.2104 RRF .4631 RTF -.3929 CRT .8257 CRS .0845 CST -.4473  
 FDE .0202 FRA -2.2066 FC3 -5.4629 BSP 1105 SGB 1228.0 R23 -.2300 R13 .5188 LSA 36.1 MSA 14.7 S8A 2.9  
 BDE .7362 BRA .6463 BC3 .6468 FSP 901 SG1 971.4 SG2 751.2 THA 152.08 EL1 36.1 EL2 9.4 ALF 62.47

LAUNCH DATE SEP 3 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC DISTANCE 326.835 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.147 GAL 7.51 AZL 89.02 HCA 100.26 SMA 201.00 ECC .27954 INC .9759 V1 29.527  
 RP 231.58 LAP .96 LOP 80.62 VP 22.044 GAP 13.75 AZP 90.17 TAL 35.37 TAP 135.64 RCA 144.82 APO 257.19 V2 23.748  
 RC 156.890 GL 5.51 GP -9.84 ZAL 35.43 ZAP 142.50 ETS 194.93 ZAE 168.24 ETE 284.15 ZAC 73.33 ETC 282.86 LVI -8.99

PLANETOCENTRIC CONIC  
 C3 34.017 VHL 5.832 DLA 11.14 RAL 12.02 RAD 6648.5 VEL 12.407 PTH 7.32 VHP 3.839 DPA 6.65 RAP 45.08 ECC 1.5598  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 4 3487.94 -46.06 127.01 253.19 103.52 9 35 12 2487.9 -35.74 97.85  
 60.00 9 4 26 3415.08 -39.49 122.21 254.95 98.78 10 1 22 2415.1 -31.78 94.04  
 70.00 9 42 55 3301.85 -33.80 113.91 255.82 95.22 10 37 57 2301.8 -28.18 86.84  
 80.00 10 38 29 3127.78 -29.73 101.05 256.16 92.88 11 30 37 2127.8 -25.53 74.41  
 90.00 11 54 18 2883.10 -28.21 83.14 256.23 92.04 12 42 21 1883.1 -24.53 56.73  
 100.00 13 21 21 2602.25 -29.73 62.41 256.16 92.88 14 4 43 1602.2 -25.53 35.78  
 110.00 14 42 22 2348.67 -33.80 42.83 255.82 95.22 15 21 30 1348.7 -28.18 15.56

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3348 TRA -.6404 TC3 .4944 BAU .2937 SGT 923.0 SGR 816.5 SG3 614.9 ST 19.1 SR 32.3 S8 12.1  
 RDE -.6536 RRA .1299 RC3 -.4135 FAU .22641 RRT -.2005 RRF .5047 RTF -.3531 CRT .8290 CRS .0953 CST -.4342  
 FDE .0324 FRA -2.3381 FC3 -5.7620 BSP 1127 SGB 1232.3 R23 -.2567 R13 .5102 LSA 36.3 MSA 15.1 S8A 2.9  
 BDE .7361 BRA .6535 BC3 .6458 FSP 938 SG1 967.7 SG2 762.9 THA 150.76 EL1 36.3 EL2 9.5 ALF 61.79

LAUNCH DATE SEP 3 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC DISTANCE 330.573 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.119 GAL 7.50 AZL 88.99 HCA 101.27 SMA 200.45 ECC .27767 INC 1.0075 V1 29.527  
 RP 231.95 LAP .99 LOP 81.63 VP 21.960 GAP 13.40 AZP 90.20 TAL 35.53 TAP 136.81 RCA 144.79 APO 256.11 V2 23.708  
 RC 159.785 GL 5.70 GP -10.10 ZAL 35.29 ZAP 141.13 ETS 194.64 ZAE 168.19 ETE 277.69 ZAC 73.14 ETC 282.91 LVI -8.85

PLANETOCENTRIC CONIC  
 C3 33.778 VHL 5.812 DLA 11.26 RAL 11.79 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 3.745 DPA 6.29 RAP 44.82 ECC 1.5559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 35 42 3488.45 -46.07 127.06 252.89 103.49 9 33 50 2488.5 -35.76 97.88  
 60.00 9 2 56 3415.94 -39.50 122.28 254.65 98.73 9 59 52 2415.9 -31.80 94.10  
 70.00 9 41 16 3303.17 -33.81 114.01 255.51 95.16 10 36 19 2303.2 -28.21 86.73  
 80.00 10 36 41 3129.56 -29.74 101.18 255.85 92.81 11 28 51 2129.6 -25.56 74.53  
 90.00 11 52 26 2885.10 -28.22 83.28 255.92 91.97 12 40 31 1885.1 -24.56 56.87  
 100.00 13 19 33 2604.03 -29.74 62.55 255.85 92.81 14 2 57 1604.0 -25.56 35.90  
 110.00 14 40 42 2349.99 -33.81 42.93 255.51 95.16 15 19 52 1350.0 -28.21 15.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3403 TRA -.6499 TC3 .4739 BAU .2915 SGT 918.0 SGR 829.1 SG3 646.4 ST 19.4 SR 32.2 S8 12.6  
 RDE -.6522 RRA .1200 RC3 -.4383 FAU .23685 RRT -.1888 RRF .5265 RTF -.3316 CRT .8318 CRS .1056 CST -.4221  
 FDE .0459 FRA -2.4743 FC3 -6.0705 BSP 1138 SGB 1237.0 R23 -.2823 R13 .5034 LSA 36.4 MSA 15.5 S8A 2.9  
 BDE .7358 BRA .6608 BC3 .6455 FSP 1017 SG1 963.6 SG2 775.7 THA 149.19 EL1 36.4 EL2 9.6 ALF 61.16

LAUNCH DATE SEP 3 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.084 GAL 7.49 AZL 88.96 HCA 102.20 SMA 199.04 ECC .27592 INC 1.0391 V1 29.527  
 RP 232.33 LAP 1.02 LOP 82.63 VP 21.880 GAP 13.08 AZP 90.22 TAL 35.68 TAP 137.96 RCA 144.78 APO 255.11 V2 23.670  
 RC 162.693 GL 5.90 GP -10.36 ZAL 35.17 ZAP 139.74 ETS 194.34 ZAE 168.00 ETE 271.17 ZAC 72.96 ETC 282.97 LVI -6.70

PLANETOCENTRIC CONIC

C3 33.981 VHL 5.792 DLA 11.38 RAL 11.57 RAD 6648.4 VEL 12.388 PTH 7.30 VHP 3.655 DPA 5.92 RAP 44.95 ECC 1.5522  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 34 21 3489.19 -46.08 127.12 252.63 103.44 9 32 30 2489.2 -35.79 97.93  
 60.00 9 1 27 3417.06 -39.51 122.38 254.37 98.67 9 58 24 2417.1 -31.84 94.17  
 70.00 9 39 37 3304.76 -33.82 114.14 255.23 95.09 10 34 42 2304.8 -28.25 86.84  
 80.00 10 34 53 3131.65 -29.74 101.33 255.56 92.73 11 27 4 2131.6 -25.60 74.68  
 90.00 11 50 33 2887.42 -28.22 83.45 255.63 91.89 12 38 41 1887.4 -24.60 57.03  
 100.00 13 17 45 2606.12 -29.74 62.70 255.56 92.73 14 1 11 1606.1 -25.60 36.04  
 110.00 14 39 4 2351.58 -33.82 43.05 255.23 95.09 15 18 15 1351.6 -28.25 15.76

DIFFERENTIAL CORRECTIONS

TDE -.3452 TRA -.6601 TC3 .4513 BAU .2897  
 RDE -.6488 RRA .1095 RC3 -.4621 FAU .24766  
 FDE .0593 FRA -2.6160 FC3 -6.3904 B8P 1140  
 BDE .7348 BRA .6691 BC3 .6459 F8P 1076

MID-COURSE EXECUTION ACCURACY

SGT 913.0 SGR 842.9 SG3 679.1  
 RRT -.1747 RRF .5485 RTF -.2972  
 SGB 1242.6 R23 -.3069 R13 .4985  
 SG1 959.1 SG2 790.0 TMA 147.31

ORBIT DETERMINATION ACCURACY

ST 19.8 SR 32.1 S8 13.0  
 CRT .8340 CR8 .1139 CST -.4127  
 LSA 36.5 MSA 15.9 S8A 3.0  
 EL1 36.5 EL2 9.6 ALF 60.56

LAUNCH DATE SEP 3 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.070 GAL 7.48 AZL 88.93 HCA 103.28 SMA 199.47 ECC .27428 INC 1.0709 V1 29.527  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.802 GAP 12.77 AZP 90.25 TAL 35.81 TAP 139.09 RCA 144.76 APO 254.19 V2 23.631  
 RC 165.610 GL 6.09 GP -10.63 ZAL 35.06 ZAP 138.33 ETS 194.05 ZAE 167.66 ETE 264.75 ZAC 72.77 ETC 283.04 LVI -6.56

PLANETOCENTRIC CONIC

C3 33.334 VHL 5.774 DLA 11.50 RAL 11.38 RAD 6648.3 VEL 12.379 PTH 7.30 VHP 3.570 DPA 5.54 RAP 44.26 ECC 1.5486  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 2 3490.14 -46.10 127.21 252.39 103.37 9 31 13 2490.1 -35.82 97.99  
 60.00 9 0 0 3418.41 -39.53 122.49 254.12 98.59 9 56 58 2418.4 -31.88 94.26  
 70.00 9 37 39 3306.63 -33.83 114.28 254.97 95.00 10 33 5 2306.6 -28.29 86.97  
 80.00 10 33 4 3134.04 -29.75 101.51 255.29 92.64 11 25 18 2134.0 -25.65 74.84  
 90.00 11 48 40 2890.06 -28.23 83.65 255.36 91.79 12 36 50 1890.1 -24.65 57.21  
 100.00 13 15 58 2608.51 -29.75 62.88 255.29 92.64 13 59 25 1608.5 -25.65 36.21  
 110.00 14 37 25 2353.45 -33.83 43.20 254.97 95.00 15 16 39 1353.5 -28.29 15.89

DIFFERENTIAL CORRECTIONS

TDE -.3497 TRA -.6713 TC3 .4263 BAU .2884  
 RDE -.6449 RRA .0987 RC3 -.4888 FAU .25873  
 FDE .0751 FRA -2.7805 FC3 -6.7195 B8P 1139  
 BDE .7336 BRA .6785 BC3 .6470 F8P 1138

MID-COURSE EXECUTION ACCURACY

SGT 908.3 SGR 857.6 SG3 712.6  
 RRT -.1573 RRF .5704 RTF -.2596  
 SGB 1249.1 R23 -.3296 R13 .4962  
 SG1 954.3 SG2 806.1 TMA 145.03

ORBIT DETERMINATION ACCURACY

ST 20.1 SR 32.0 S8 13.5  
 CRT .8357 CR8 .1230 CST -.4029  
 LSA 36.6 MSA 16.3 S8A 3.0  
 EL1 36.6 EL2 9.7 ALF 59.97

LAUNCH DATE SEP 3 1973

FLIGHT TIME 150.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.048 GAL 7.47 AZL 88.90 HCA 104.28 SMA 199.04 ECC .27274 INC 1.1029 V1 29.527  
 RP 233.07 LAP 1.07 LOP 84.84 VP 21.727 GAP 12.45 AZP 90.27 TAL 35.92 TAP 140.28 RCA 144.75 APO 253.33 V2 23.593  
 RC 168.537 GL 6.29 GP -10.90 ZAL 34.97 ZAP 136.90 ETS 193.75 ZAE 167.16 ETE 258.58 ZAC 72.58 ETC 283.10 LVI -6.42

PLANETOCENTRIC CONIC

C3 33.128 VHL 5.756 DLA 11.64 RAL 11.17 RAD 6648.2 VEL 12.371 PTH 7.29 VHP 3.488 DPA 5.14 RAP 43.95 ECC 1.5452  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 31 45 3491.31 -46.12 127.32 252.18 103.29 9 29 56 2491.3 -35.87 98.07  
 60.00 8 58 33 3420.00 -39.54 122.62 253.90 98.50 9 55 33 2420.0 -31.93 94.37  
 70.00 9 36 21 3308.77 -33.84 114.45 254.74 94.91 10 31 30 2308.8 -28.34 87.12  
 80.00 10 31 16 3136.73 -29.76 101.71 255.05 92.54 11 23 32 2136.7 -25.70 75.02  
 90.00 11 46 46 2893.02 -28.23 83.86 255.11 91.68 12 34 59 1893.0 -24.70 57.41  
 100.00 13 14 7 2611.21 -29.76 63.08 255.05 92.54 13 57 39 1611.2 -25.70 36.39  
 110.00 14 35 47 2355.58 -33.84 43.36 254.74 94.91 15 15 3 1355.6 -28.34 16.04

DIFFERENTIAL CORRECTIONS

TDE -.3542 TRA -.6837 TC3 .3985 BAU .2875  
 RDE -.6408 RRA .0873 RC3 -.5124 FAU .27005  
 FDE .0931 FRA -2.9081 FC3 -7.0571 B8P 1138  
 BDE .7322 BRA .6893 BC3 .6491 F8P 1200

MID-COURSE EXECUTION ACCURACY

SGT 904.2 SGR 873.3 SG3 746.9  
 RRT -.1399 RRF .5920 RTF -.2.01  
 SGB 1257.1 R23 -.3488 R13 .4991  
 SG1 949.2 SG2 824.2 TMA 142.18

ORBIT DETERMINATION ACCURACY

ST 20.5 SR 31.9 S8 13.8  
 CRT .8371 CR8 .1320 CST -.3929  
 LSA 36.7 MSA 16.7 S8A 3.0  
 EL1 36.7 EL2 9.8 ALF 59.35

LAUNCH DATE SEP 3 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.028 GAL 7.45 AZL 88.86 HCA 105.27 SMA 198.84 ECC .27131 INC 1.1390 V1 29.527  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.654 GAP 12.15 AZP 90.30 TAL 36.02 TAP 141.29 RCA 144.74 APO 252.53 V2 23.554  
 RC 171.472 GL 6.49 GP -11.18 ZAL 34.90 ZAP 135.45 ETS 193.46 ZAE 166.52 ETE 252.79 ZAC 72.39 ETC 283.17 LVI -6.27

PLANETOCENTRIC CONIC

C3 32.930 VHL 5.738 DLA 11.78 RAL 10.99 RAD 6648.1 VEL 12.363 PTH 7.28 VHP 3.410 DPA 4.73 RAP 43.82 ECC 1.5420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 29 3492.68 -46.14 127.44 251.99 103.20 9 28 42 2492.7 -35.92 98.16  
 60.00 8 57 7 3421.82 -39.56 122.77 253.70 98.40 9 54 8 2421.8 -31.98 94.50  
 70.00 9 34 43 3311.16 -33.86 114.63 254.52 94.80 10 29 54 2311.2 -28.40 87.28  
 80.00 10 29 26 3139.72 -29.77 101.93 254.83 92.42 11 21 46 2139.7 -25.75 75.23  
 90.00 11 44 52 2896.28 -28.24 84.10 254.89 91.56 12 33 8 1896.3 -24.75 57.63  
 100.00 13 12 18 2614.19 -29.77 63.30 254.83 92.42 13 55 52 1614.2 -25.75 36.60  
 110.00 14 34 9 2357.98 -33.86 43.55 254.52 94.80 15 13 27 1358.0 -28.40 16.20

DIFFERENTIAL CORRECTIONS

TDE -.3585 TRA -.6973 TC3 .3678 BAU .2872  
 RDE -.6386 RRA .0755 RC3 -.5389 FAU .28162  
 FDE .1123 FRA -3.0597 FC3 -7.4039 B8P 1137  
 BDE .7306 BRA .7014 BC3 .6525 F8P 1264

MID-COURSE EXECUTION ACCURACY

SGT 901.2 SGR 890.2 SG3 782.2  
 RRT -.1101 RRF .6135 RTF -.1725  
 SGB 1266.7 R23 -.3592 R13 .5085  
 SG1 944.0 SG2 844.6 TMA 138.18

ORBIT DETERMINATION ACCURACY

ST 20.8 SR 31.8 S8 14.4  
 CRT .8382 CR8 .1419 CST -.3840  
 LSA 36.7 MSA 17.2 S8A 3.0  
 EL1 36.7 EL2 9.8 ALF 58.72

LAUNCH DATE SEP 3 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 4 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 33.009 GAL 7.44 AZL 88.83 HCA 106.27 SMA 198.27 ECC .26996 INC 1.1673 V1 29.827  
 RP 233.80 LAP 1.12 LOP 86.63 VP 21.584 GAP 11.84 AZP 90.33 TAL 36.10 TAP 142.37 RCA 144.74 APO 251.79 V2 23.917  
 RC 174.413 GL 6.69 GP -11.47 ZAL 34.84 ZAP 133.99 ETS 193.18 ZAE 165.73 ETE 247.43 ZAC 72.21 ETC 283.24 LVI -6.13

Planetocentric Conic: C3 32.741 VHL 5.722 DLA 11.93 RAL 10.83 RAD 6648.1 VEL 12.355 PTH 7.28 VHP 3.336 DPA 4.31 RAP 43.27 ECC 1.9388  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 14 3494.25 -46.16 127.58 251.83 103.09 9 27 29 2494.3 -35.98 98.26  
 60.00 8 55 41 3423.86 -39.58 122.94 253.52 98.29 9 52 45 2423.9 -32.04 94.64  
 70.00 9 33 5 3313.81 -33.87 114.84 254.33 94.68 10 28 19 2313.8 -28.46 87.46  
 80.00 10 27 37 3143.00 -29.78 102.18 254.62 92.29 11 20 0 2143.0 -25.81 75.45  
 90.00 11 42 57 2899.85 -28.25 84.36 254.68 91.43 12 31 17 1899.9 -24.81 57.88  
 100.00 13 10 29 2617.47 -29.78 63.54 254.62 92.29 13 54 6 1617.5 -25.81 36.82  
 110.00 14 32 32 2360.63 -33.87 43.75 254.33 94.68 15 11 52 1360.6 -28.46 16.38

Differential Corrections: TDE -.3629 TRA -.7126 TC3 .3339 BAW .2878 SGT 899.9 SGR 908.2 SG3 818.0 ST 21.2 SR 31.7 SS 14.9  
 RDE -.6320 RRA .0633 RC3 -.5664 FAU .29337 RRT -.0795 RRF .6345 RTF -.1224 CRT .8389 CRS .1512 CST -.3753  
 FDE .1337 FRA -3.2130 FC3 -7.7574 BSP 1143 SGB 1278.6 R23 -.3474 R13 .5359 LSA 36.8 MSA 17.6 SSA 3.0  
 BDE .7288 BRA .7154 BC3 .6575 FSP 1329 SG1 939.6 SG2 867.2 THA 131.71 EL1 36.8 EL2 9.9 ALF 58.07

LAUNCH DATE SEP 3 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 6 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 32.991 GAL 7.43 AZL 88.80 HCA 107.26 SMA 197.92 ECC .26870 INC 1.1999 V1 29.527  
 RP 234.17 LAP 1.15 LOP 87.62 VP 21.517 GAP 11.54 AZP 90.36 TAL 36.17 TAP 143.43 RCA 144.74 APO 251.11 V2 23.479  
 RC 177.360 GL 6.90 GP -11.76 ZAL 34.80 ZAP 132.50 ETS 192.87 ZAE 164.82 ETE 242.56 ZAC 72.02 ETC 283.31 LVI -5.99

Planetocentric Conic: C3 32.559 VHL 5.706 DLA 12.09 RAL 10.67 RAD 6648.0 VEL 12.348 PTH 7.27 VHP 3.266 DPA 3.88 RAP 42.90 ECC 1.5358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 1 3496.02 -46.19 127.75 251.69 102.97 9 26 17 2496.0 -36.04 98.38  
 60.00 8 54 17 3426.13 -39.60 123.13 253.37 98.16 9 51 23 2426.1 -32.11 94.79  
 70.00 9 31 27 3316.72 -33.89 115.06 254.16 94.54 10 26 44 2316.7 -28.52 87.66  
 80.00 10 25 46 3146.56 -29.79 102.44 254.44 92.15 11 18 13 2146.6 -25.88 75.70  
 90.00 11 41 1 2903.72 -28.25 84.65 254.49 91.29 12 29 24 1903.7 -24.87 58.14  
 100.00 13 8 38 2621.03 -29.79 63.81 254.44 92.15 13 52 19 1621.0 -25.88 37.07  
 110.00 14 30 54 2363.53 -33.89 43.98 254.16 94.54 15 10 17 1363.5 -28.52 16.38

Differential Corrections: TDE -.3675 TRA -.7294 TC3 .2965 BAW .2892 SGT 900.9 SGR 927.3 SG3 854.4 ST 21.6 SR 31.5 SS 15.3  
 RDE -.6271 RRA .0506 RC3 -.5947 FAU .30524 RRT -.0434 RRF .6549 RTF -.0676 CRT .8395 CRS .1623 CST -.3653  
 FDE .1590 FRA -3.3688 FC3 -8.1163 BSP 1156 SGB 1292.9 R23 -.2622 R13 .6015 LSA 36.9 MSA 18.1 SSA 3.0  
 BDE .7269 BRA .7311 BC3 .6645 FSP 1397 SG1 937.7 SG2 890.1 THA 118.20 EL1 36.9 EL2 10.0 ALF 57.36

LAUNCH DATE SEP 3 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 8 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 32.975 GAL 7.41 AZL 88.77 HCA 108.24 SMA 197.61 ECC .26752 INC 1.2326 V1 29.527  
 RP 234.93 LAP 1.17 LOP 88.60 VP 21.451 GAP 11.24 AZP 90.39 TAL 36.23 TAP 144.47 RCA 144.74 APO 250.47 V2 23.442  
 RC 180.313 GL 7.10 GP -12.05 ZAL 34.77 ZAP 131.00 ETS 192.56 ZAE 163.80 ETE 238.15 ZAC 71.84 ETC 283.39 LVI -5.85

Planetocentric Conic: C3 32.384 VHL 5.691 DLA 12.25 RAL 10.53 RAD 6647.9 VEL 12.341 PTH 7.27 VHP 3.199 DPA 3.44 RAP 42.52 ECC 1.5330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 26 49 3497.98 -46.22 127.93 251.57 102.83 9 25 6 2498.0 -36.12 98.31  
 60.00 8 52 52 3428.60 -39.63 123.34 253.23 98.02 9 50 1 2428.6 -32.18 94.96  
 70.00 9 29 49 3319.87 -33.90 115.31 254.01 94.40 10 25 9 2319.9 -28.60 87.86  
 80.00 10 23 55 3150.40 -29.80 102.73 254.28 92.00 11 16 25 2150.4 -25.95 75.96  
 90.00 11 39 3 2907.90 -28.26 84.95 254.33 91.14 12 27 31 1907.9 -24.94 58.43  
 100.00 13 6 47 2624.87 -29.80 64.09 254.28 92.00 13 50 32 1624.9 -25.95 37.33  
 110.00 14 29 16 2366.69 -33.90 44.22 254.01 94.40 15 8 43 1366.7 -28.60 16.80

Differential Corrections: TDE -.3718 TRA -.7477 TC3 .2561 BAW .2920 SGT 904.7 SGR 947.6 SG3 891.3 ST 22.0 SR 31.3 SS 15.8  
 RDE -.6221 RRA .0376 RC3 -.6239 FAU .31728 RRT -.0027 RRF .6749 RTF -.1191 CRT .8397 CRS .1719 CST -.3571  
 FDE .1849 FRA -3.5259 FC3 -8.4820 BSP 1174 SGB 1310.1 R23 -.0112 R13 .6748 LSA 36.9 MSA 18.5 SSA 3.0  
 BDE .7247 BRA .7486 BC3 .6744 FSP 1463 SG1 947.6 SG2 904.7 THA 91.64 EL1 36.9 EL2 10.1 ALF 56.64

LAUNCH DATE SEP 3 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 10 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 32.980 GAL 7.39 AZL 88.73 HCA 109.23 SMA 197.32 ECC .26842 INC 1.2657 V1 29.527  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.388 GAP 10.94 AZP 90.42 TAL 36.27 TAP 145.50 RCA 144.75 APO 249.89 V2 23.405  
 RC 183.270 GL 7.31 GP -12.35 ZAL 34.76 ZAP 129.48 ETS 192.26 ZAE 162.68 ETE 234.19 ZAC 71.65 ETC 283.46 LVI -5.71

Planetocentric Conic: C3 32.214 VHL 5.676 DLA 12.42 RAL 10.40 RAD 6647.9 VEL 12.334 PTH 7.26 VHP 3.135 DPA 2.98 RAP 42.11 ECC 1.5302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 37 3500.12 -46.25 128.12 251.48 102.68 9 23 57 2500.1 -36.20 98.65  
 60.00 8 51 28 3431.30 -39.65 123.56 253.12 97.87 9 48 40 2431.3 -32.26 95.14  
 70.00 9 28 11 3323.26 -33.92 115.57 253.88 94.25 10 23 34 2323.3 -28.67 88.11  
 80.00 10 22 3 3154.53 -29.81 103.03 254.13 91.84 11 14 37 2154.5 -26.02 76.25  
 90.00 11 37 5 2912.37 -28.26 85.28 254.18 90.97 12 25 37 1912.4 -25.01 58.74  
 100.00 13 4 55 2629.00 -29.81 64.40 254.13 91.84 13 48 44 1629.0 -26.02 37.62  
 110.00 14 27 38 2370.08 -33.92 44.49 253.88 94.25 15 7 8 1370.1 -28.67 17.03

Differential Corrections: TDE -.3765 TRA -.7678 TC3 .212J BAW .2960 SGT 912.3 SGR 968.9 SG3 928.4 ST 22.4 SR 31.1 SS 16.3  
 RDE -.6165 RRA .0242 RC3 -.6538 FAU .32931 RRT .0431 RRF .6940 RTF .0531 CRT .8397 CRS .1839 CST -.3468  
 FDE .2160 FRA -3.6821 FC3 -8.8499 BSP 1205 SGB 1330.8 R23 .1757 R13 .6718 LSA 37.0 MSA 19.0 SSA 3.0  
 BDE .7224 BRA .7682 BC3 .6873 FSP 1532 SG1 975.2 SG2 905.6 THA 72.23 EL1 37.0 EL2 10.3 ALF 55.85

LAUNCH DATE SEP 3 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.946 GAL 7.36 AZL 86.70 HCA 110.21 SMA 197.03 ECC .26539 INC 1.2991 V1 29.527  
 RP 235.24 LAP 1.22 LOP 90.87 VP 21.327 GAP 10.65 AZP 90.45 TAL 36.30 TAP 146.51 RCA 144.76 APO 249.35 V2 23.369  
 RC 186.232 GL 7.32 GP -12.65 ZAL 34.76 ZAP 127.94 ETS 191.94 ZAE 161.48 ETE 230.64 ZAC 71.47 ETC 263.54 LVI -5.57

DISTANCE 364.475

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.052 VHL 5.661 DLA 12.60 RAL 10.27 RAD 6647.8 VEL 12.328 PTH 7.26 VHP 3.075 DPA 2.51 RAP 41.70 ECC 1.5275  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 26 3502.45 -46.29 128.34 251.41 102.52 9 22 49 2502.4 -36.28 98.61  
 60.00 8 50 5 3434.19 -39.68 123.80 253.02 97.71 9 47 19 2434.2 -32.35 95.34  
 70.00 9 26 32 3326.89 -33.94 115.65 253.76 94.08 10 21 59 2326.9 -28.75 88.37  
 80.00 10 20 9 3158.92 -29.82 103.36 254.00 91.67 11 12 48 2158.9 -26.10 76.59  
 90.00 11 35 5 2917.12 -28.27 85.62 254.04 90.80 12 23 42 1917.1 -25.09 59.06  
 100.00 13 3 1 2633.39 -29.82 64.73 254.00 91.67 13 46 55 1633.4 -26.10 37.92  
 110.00 14 25 59 2373.71 -33.94 44.77 253.76 94.08 15 5 33 1373.7 -28.75 17.28

DIFFERENTIAL CORRECTIONS

TDE -.3756 TRA -.7840 TC3 .1714 BAW .3030  
 RDE -.6117 RRA .0094 RC3 -.6860 FAU .34223  
 FDE .2326 FRA-3.8566 FC3-9.2438 B8P 1223  
 BDE .7176 BRA .7841 BC3 .7071 F8P 1582

MID-COURSE EXECUTION ACCURACY

SGT 918.3 SGR 993.3 8G3 988.3  
 RRT .0841 RRF .7137 RTF .1099  
 SGB 1352.7 R23 .2107 R13 .6838  
 SGI 1009.9 SGI 899.9 THA 86.54

ORBIT DETERMINATION ACCURACY

ST 22.6 SR 31.0 SS 16.8  
 CRT .8380 CR8 .1815 CST -.3330  
 LSA 36.9 MSA 19.5 SSA 3.0  
 EL1 36.9 EL2 10.3 ALF 55.48

LAUNCH DATE SEP 3 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.934 GAL 7.36 AZL 86.67 HCA 111.19 SMA 196.81 ECC .26442 INC 1.3328 V1 29.527  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.268 GAP 10.36 AZP 90.48 TAL 36.32 TAP 147.50 RCA 144.77 APO 248.85 V2 23.332  
 RC 189.197 GL 7.73 GP -12.95 ZAL 34.78 ZAP 126.39 ETS 191.63 ZAE 160.19 ETE 227.46 ZAC 71.29 ETC 263.62 LVI -5.43

DISTANCE 368.281

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.893 VHL 5.647 DLA 12.78 RAL 10.16 RAD 6647.7 VEL 12.321 PTH 7.25 VHP 3.018 DPA 2.04 RAP 41.27 ECC 1.3249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 23 16 3504.96 -46.32 128.97 251.36 102.35 9 21 41 2505.0 -36.38 98.97  
 60.00 8 48 41 3437.30 -39.71 124.06 252.94 97.54 9 45 59 2437.3 -32.44 95.55  
 70.00 9 24 53 3330.78 -33.96 116.15 253.66 93.90 10 20 24 2330.8 -28.84 88.63  
 80.00 10 18 15 3163.61 -29.82 103.71 253.89 91.49 11 10 58 2163.6 -26.16 76.87  
 90.00 11 33 3 2922.20 -28.27 86.00 253.93 90.61 12 21 45 1922.2 -25.17 59.41  
 100.00 13 1 7 2638.09 -29.82 65.07 253.89 91.49 13 45 5 1638.1 -26.18 38.24  
 110.00 14 24 20 2377.60 -33.96 45.07 253.66 93.90 15 3 87 1377.6 -28.84 17.88

DIFFERENTIAL CORRECTIONS

TDE -.3843 TRA -.8115 TC3 .1182 BAW .3098  
 RDE -.8047 RRA -.0040 RC3 -.7167 FAU .38376  
 FDE .2812 FRA-4.0011 FC3-9.6030 B8P 1293  
 BDE .7168 BRA .8115 BC3 .7259 F8P 1666

MID-COURSE EXECUTION ACCURACY

SGT 939.0 SGR 1015.7 SGI 1004.1  
 RRT .1440 RRF .7305 RTF .1825  
 SGB 1363.2 R23 .2585 R13 .6876  
 SGI 1055.0 SGI 894.5 THA 89.32

ORBIT DETERMINATION ACCURACY

ST 23.2 SR 30.7 SS 17.2  
 CRT .8387 CR8 .2041 CST -.3316  
 LSA 37.1 MSA 20.0 SSA 3.0  
 EL1 37.1 EL2 10.5 ALF 54.28

LAUNCH DATE SEP 3 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.922 GAL 7.34 AZL 86.63 HCA 112.16 SMA 196.89 ECC .26352 INC 1.3669 V1 29.527  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.211 GAP 10.07 AZP 90.52 TAL 36.32 TAP 148.48 RCA 144.79 APO 248.40 V2 23.297  
 RC 192.165 GL 7.95 GP -13.25 ZAL 34.81 ZAP 124.83 ETS 191.30 ZAE 168.84 ETE 224.60 ZAC 71.11 ETC 263.70 LVI -5.29

DISTANCE 372.051

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.739 VHL 5.634 DLA 12.97 RAL 10.08 RAD 6647.7 VEL 12.315 PTH 7.25 VHP 2.988 DPA 1.95 RAP 40.82 ECC 1.5223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 7 3507.88 -46.36 128.82 251.33 102.18 9 20 34 2507.7 -36.48 99.15  
 60.00 8 47 18 3440.62 -39.74 124.34 252.89 97.35 9 44 38 2440.6 -32.53 95.78  
 70.00 9 23 13 3334.91 -33.98 118.47 253.58 93.71 10 18 48 2334.9 -28.93 88.92  
 80.00 10 16 18 3168.59 -29.83 104.07 253.80 91.29 11 9 7 2168.6 -26.27 77.22  
 90.00 11 30 59 2927.58 -28.28 86.39 253.82 90.42 12 19 47 1927.6 -25.25 59.78  
 100.00 12 59 10 2643.05 -29.83 65.44 253.80 91.29 13 43 13 1643.1 -26.27 38.59  
 110.00 14 22 40 2381.72 -33.98 45.39 253.58 93.71 15 2 21 1381.7 -28.93 17.84

DIFFERENTIAL CORRECTIONS

TDE -.3898 TRA -.8375 TC3 .0596 BAW .3187  
 RDE -.5978 RRA -.0181 RC3 -.7488 FAU .38584  
 FDE .3240 FRA-4.1326 FC3-9.9736 B8P 1361  
 BDE .7137 BRA .8377 BC3 .7311 F8P 1739

MID-COURSE EXECUTION ACCURACY

SGT 982.1 SGR 1040.1 SGI 1041.0  
 RRT .2008 RRF .7471 RTF .2204  
 SGB 1416.8 R23 .2703 R13 .7040  
 SGI 1104.2 SGI 887.8 THA 95.62

ORBIT DETERMINATION ACCURACY

ST 23.8 SR 30.4 SS 17.7  
 CRT .8383 CR8 .2182 CST -.3188  
 LSA 37.1 MSA 20.4 SSA 2.9  
 EL1 37.1 EL2 10.6 ALF 53.29

LAUNCH DATE SEP 3 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.912 GAL 7.32 AZL 86.60 HCA 113.13 SMA 196.39 ECC .26267 INC 1.4013 V1 29.527  
 RP 236.29 LAP 1.28 LOP 93.49 VP 21.155 GAP 9.79 AZP 90.55 TAL 36.31 TAP 149.45 RCA 144.81 APO 247.98 V2 23.281  
 RC 195.134 GL 8.17 GP -13.56 ZAL 34.85 ZAP 123.25 ETS 190.97 ZAE 157.43 ETE 222.03 ZAC 70.93 ETC 263.78 LVI -5.15

DISTANCE 375.843

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.590 VHL 5.620 DLA 13.17 RAL 9.97 RAD 6647.6 VEL 12.309 PTH 7.24 VHP 2.914 DPA 1.06 RAP 40.36 ECC 1.5199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 58 3510.53 -46.40 129.08 251.32 101.96 9 19 28 2510.5 -36.58 99.35  
 60.00 8 45 54 3444.13 -39.77 124.64 252.85 97.15 9 43 18 2444.1 -32.64 96.02  
 70.00 9 21 32 3339.26 -33.99 116.81 253.52 93.51 10 17 12 2339.3 -29.03 89.22  
 80.00 10 14 21 3173.82 -29.84 104.46 253.72 91.09 11 7 15 2173.8 -26.36 77.58  
 90.00 11 28 53 2933.22 -28.28 86.80 253.74 90.21 12 17 47 1933.2 -25.34 60.18  
 100.00 12 57 13 2648.29 -29.84 65.83 253.72 91.09 13 41 21 1648.3 -26.36 38.95  
 110.00 14 20 59 2386.08 -33.99 45.73 253.52 93.51 15 0 45 1386.1 -29.03 18.14

DIFFERENTIAL CORRECTIONS

TDE -.3916 TRA -.8614 TC3 .0049 BAW .3306  
 RDE -.5915 RRA -.0334 RC3 -.7827 FAU .37807  
 FDE .3563 FRA-4.3164 FC3-10.3613 B8P 1435  
 BDE .7094 BRA .8621 BC3 .7827 F8P 1796

MID-COURSE EXECUTION ACCURACY

SGT 986.3 SGR 1067.2 SGI 1079.9  
 RRT .2541 RRF .7637 RTF .3137  
 SGB 1453.1 R23 .2660 R13 .7265  
 SGI 1155.8 SGI 880.8 THA 93.63

ORBIT DETERMINATION ACCURACY

ST 24.1 SR 30.2 SS 18.2  
 CRT .8366 CR8 .2240 CST -.3179  
 LSA 37.1 MSA 20.9 SSA 2.9  
 EL1 37.1 EL2 10.7 ALF 52.57

LAUNCH DATE SEP 3 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 379.636

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.803 GAL 7.29 AZL 88.56 HCA 114.10 SMA 196.21 ECC .26188 INC 1.4361 V1 29.527  
 RP 236.63 LAP 1.31 LOP 94.46 VP 21.102 GAP 9.51 AZP 90.59 TAL 36.29 TAP 150.39 RCA 144.83 APO 247.60 V2 23.228  
 RC 198.104 GL 8.39 GP -13.87 ZAL 34.90 ZAP 121.67 ETS 190.63 ZAE 155.97 ETE 219.71 ZAC 70.75 ETC 283.86 LVI -5.01

PLANETOCENTRIC CONIC

C3 31.444 VHL 5.607 DLA 13.38 RAL 9.89 RAD 6647.6 VEL 12.303 PTH 7.24 VHP 2.866 DPA .56 RAP 39.90 ECC 1.5175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 49 3513.58 -46.45 129.36 251.32 101.74 9 18 22 2513.6 -36.70 99.55  
 60.00 8 44 30 3447.86 -39.80 124.95 252.82 96.94 9 41 58 2447.9 -32.74 96.28  
 70.00 9 19 50 3343.87 -34.01 117.17 253.47 93.30 10 15 34 2343.9 -29.13 89.54  
 80.00 10 12 21 3179.35 -29.85 104.87 253.65 90.87 11 5 20 2179.3 -26.45 77.96  
 90.00 11 26 46 2939.19 -28.28 87.24 253.66 89.99 12 15 45 1939.2 -25.43 60.59  
 100.00 12 35 13 2653.82 -29.85 66.24 253.65 90.87 13 39 27 1653.8 -26.45 39.33  
 110.00 14 19 17 2390.69 -34.01 46.09 253.47 93.30 14 59 7 1390.7 -29.13 18.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3985 TRA -.8924 TC3 -.0600 BAU .3437 SGT 1024.1 SGR 1092.9 SG3 1115.3 ST 24.7 SR 29.8 SS 18.7  
 RDE -.5834 RRA -.0477 RC3 -.8153 FAU .38935 RRT .3139 RRF .7783 RTF .3801 CRT .8362 CRS .2442 CST -.2999  
 FDE .4122 FRA -4.4566 FC-10.7199 BSP 1530 SGB 1497.7 R23 .2692 R13 .7441 LSA 37.2 MSA 21.4 SSA 2.9  
 BDE .7065 BRA .8937 BC3 .8177 FSP 1877 SG1 1216.7 SG2 873.4 THA 50.85 EL1 37.2 EL2 10.9 ALF 51.36

LAUNCH DATE SEP 3 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

DISTANCE 383.431

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.894 GAL 7.27 AZL 88.53 HCA 115.07 SMA 196.05 ECC .26115 INC 1.4713 V1 29.527  
 RP 236.98 LAP 1.33 LOP 95.43 VP 21.051 GAP 9.23 AZP 90.62 TAL 36.26 TAP 151.33 RCA 144.85 APO 247.25 V2 23.191  
 RC 201.073 GL 8.61 GP -14.18 ZAL 34.97 ZAP 120.08 ETS 190.28 ZAE 154.46 ETE 217.60 ZAC 70.58 ETC 283.94 LVI -4.86

PLANETOCENTRIC CONIC

C3 31.302 VHL 5.595 DLA 13.59 RAL 9.81 RAD 6647.5 VEL 12.297 PTH 7.23 VHP 2.822 DPA .05 RAP 39.42 ECC 1.5152  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 40 3516.80 -46.49 129.66 251.35 101.52 9 17 17 2516.8 -36.81 99.77  
 60.00 8 43 6 3451.79 -39.83 125.28 252.82 96.72 9 40 38 2451.8 -32.85 96.55  
 70.00 9 18 7 3348.72 -34.03 117.55 253.44 93.08 10 13 56 2348.7 -29.24 89.88  
 80.00 10 10 19 3185.15 -29.85 105.31 253.60 90.65 11 3 25 2185.2 -26.55 78.37  
 90.00 11 24 35 2945.46 -28.28 87.70 253.60 89.76 12 13 41 1945.5 -25.53 61.02  
 100.00 12 33 11 2659.62 -29.85 66.67 253.60 90.65 13 37 31 1659.6 -26.55 39.74  
 110.00 14 17 34 2395.53 -34.03 46.47 253.44 93.08 14 57 29 1395.5 -29.24 18.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4019 TRA -.9216 TC3 -.1241 BAU .3595 SGT 1063.7 SGR 1121.1 SG3 1152.2 ST 25.2 SR 29.5 SS 19.2  
 RDE -.5757 RRA -.0630 RC3 -.8501 FAU .40108 RRT .3683 RRF .7927 RTF .4401 CRT .8347 CRS .2554 CST -.2924  
 FDE .4591 FRA -4.6065 FC-11.0928 BSP 1633 SGB 1545.4 R23 .2640 R13 .7643 LSA 37.2 MSA 21.9 SSA 2.9  
 BDE .7021 BRA .9237 BC3 .8591 FSP 1940 SG1 1279.8 SG2 866.3 THA 49.06 EL1 37.2 EL2 11.0 ALF 50.39

LAUNCH DATE SEP 3 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

DISTANCE 387.229

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.886 GAL 7.25 AZL 88.49 HCA 116.03 SMA 195.90 ECC .26046 INC 1.5070 V1 29.527  
 RP 237.31 LAP 1.35 LOP 96.39 VP 21.001 GAP 8.96 AZP 90.66 TAL 36.22 TAP 152.25 RCA 144.88 APO 246.92 V2 23.157  
 RC 204.040 GL 8.64 GP -14.49 ZAL 35.04 ZAP 118.48 ETS 189.93 ZAE 152.91 ETE 215.68 ZAC 70.41 ETC 284.01 LVI -4.72

PLANETOCENTRIC CONIC

C3 31.165 VHL 5.583 DLA 13.82 RAL 9.74 RAD 6647.5 VEL 12.292 PTH 7.23 VHP 2.780 DPA -.46 RAP 38.94 ECC 1.5129  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 32 3520.20 -46.54 129.98 251.39 101.28 9 16 12 2520.2 -36.94 100.00  
 60.00 8 41 41 3455.91 -39.86 125.62 252.82 96.49 9 39 17 2455.9 -32.97 96.84  
 70.00 9 16 23 3353.80 -34.03 117.94 253.42 92.85 10 12 16 2353.8 -29.34 90.24  
 80.00 10 8 16 3191.24 -29.86 105.76 253.56 90.41 11 1 27 2191.2 -26.65 78.79  
 90.00 11 22 23 2952.03 -28.28 88.18 253.56 89.52 12 11 35 1952.0 -25.62 61.48  
 100.00 12 31 7 2665.71 -29.86 67.13 253.56 90.41 13 35 33 1665.7 -26.65 40.18  
 110.00 14 15 49 2400.62 -34.03 46.86 253.42 92.85 14 55 50 1400.6 -29.34 19.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4023 TRA -.9496 TC3 -.1881 BAU .3775 SGT 1105.4 SGR 1151.8 SG3 1190.4 ST 25.6 SR 29.2 SS 19.7  
 RDE -.3688 RRA -.0795 RC3 -.8862 FAU .41312 RRT .4187 RRF .8069 RTF .4449 CRT .8321 CRS .2574 CST -.2956  
 FDE .4949 FRA -4.7668 FC-11.4761 BSP 1753 SGB 1596.4 R23 .2547 R13 .7850 LSA 37.2 MSA 22.4 SSA 2.9  
 BDE .6965 BRA .9529 BC3 .9060 FSP 1989 SG1 1345.3 SG2 859.5 THA 47.80 EL1 37.2 EL2 11.1 ALF 49.61

LAUNCH DATE SEP 3 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

DISTANCE 391.026

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.879 GAL 7.22 AZL 88.46 HCA 116.99 SMA 195.77 ECC .25982 INC 1.5432 V1 29.527  
 RP 237.65 LAP 1.38 LOP 97.36 VP 20.952 GAP 8.68 AZP 90.70 TAL 36.16 TAP 153.16 RCA 144.91 APO 246.64 V2 23.123  
 RC 207.005 GL 9.07 GP -14.81 ZAL 35.13 ZAP 118.89 ETS 189.56 ZAE 151.33 ETE 213.93 ZAC 70.24 ETC 284.09 LVI -4.58

PLANETOCENTRIC CONIC

C3 31.029 VHL 5.570 DLA 14.04 RAL 9.69 RAD 6647.4 VEL 12.286 PTH 7.22 VHP 2.741 DPA -.98 RAP 38.45 ECC 1.5107  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 23 3523.78 -46.58 130.31 251.46 101.03 9 15 7 2523.8 -37.07 100.24  
 60.00 8 40 15 3460.26 -39.90 125.99 252.85 96.25 9 37 55 2460.3 -33.09 97.14  
 70.00 9 14 37 3359.14 -34.07 118.36 253.41 92.60 10 10 36 2359.1 -29.46 90.61  
 80.00 10 6 9 3197.64 -29.86 106.23 253.53 90.16 10 59 27 2197.6 -26.76 79.24  
 90.00 11 20 7 2958.94 -28.27 88.68 253.52 89.27 12 9 26 1958.9 -25.72 61.96  
 100.00 12 49 1 2672.11 -29.86 67.60 253.53 90.16 13 33 33 1672.1 -26.76 40.61  
 110.00 14 14 3 2405.96 -34.07 47.28 253.41 92.60 14 54 9 1406.0 -29.46 19.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4099 TRA -.9867 TC3 -.2652 BAU .3971 SGT 1166.0 SGR 1179.0 SG3 1222.5 ST 26.3 SR 28.8 SS 20.2  
 RDE -.5585 RRA -.0936 RC3 -.9198 FAU .42320 RRT .4719 RRF .8187 RTF .5490 CRT .8315 CRS .2830 CST -.2720  
 FDE .5698 FRA -4.8852 FC-11.8077 BSP 1877 SGB 1658.2 R23 .2541 R13 .7998 LSA 37.3 MSA 22.9 SSA 2.9  
 BDE .6928 BRA .9912 BC3 .9573 FSP 2075 SG1 1422.6 SG2 852.0 THA 45.67 EL1 37.3 EL2 11.3 ALF 48.15

LAUNCH DATE SEP 3 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

DISTANCE 394.826

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.873 GAL 7.20 AZL 88.42 HCA 117.95 SMA 195.66 ECC .25922 INC 1.5799 V1 29.527
RP 237.98 LAP 1.40 LOP 98.31 VP 20.906 GAP 8.41 AZP 90.74 TAL 36.10 TAP 154.05 RCA 144.94 APO 246.37 V2 23.050
RC 209.985 GL 9.31 GP -15.12 ZAL 35.24 ZAP 115.28 ETS 189.19 ZAE 149.72 ETE 212.51 ZAC 70.07 ETC 264.17 LVI -4.43

PLANETOCENTRIC CONIC

C3 30.897 VHL 5.558 DLA 14.28 RAL 9.63 RAD 6647.4 VEL 12.281 PTH 7.22 VHP 2.705 DPA -1.50 RAP 37.95 ECC 1.5085
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 15 15 3527.54 -46.63 130.66 251.53 100.76 9 14 2 2527.5 -37.20 100.50
60.00 8 38 49 3464.80 -39.93 126.37 252.89 95.99 9 36 33 2464.8 -33.22 97.46
70.00 9 12 49 3364.72 -34.08 118.80 253.42 92.34 10 8 54 2364.7 -29.58 91.00
80.00 10 4 0 3204.32 -29.86 106.73 253.52 89.90 10 57 25 2204.3 -26.86 79.71
90.00 11 17 48 2966.15 -28.26 89.21 253.50 89.00 12 7 14 1966.2 -25.83 62.47
100.00 12 46 52 2678.79 -29.86 68.10 253.52 89.90 13 31 31 1678.8 -26.86 41.08
110.00 14 12 15 2411.54 -34.08 47.71 253.42 92.34 14 52 27 1411.5 -29.58 19.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4131 TRA-1.0212 TC3 -.3403 BAU .4189 SGT 1226.5 SGR 1209.2 SG3 1256.4 ST 26.8 SR 28.4 SS 20.7
RDE -.5494 RRA -.1092 RC3 -.9553 FAU .43375 RRT .5185 RRF .8305 RTF .5962 CRT .8297 CRS .2957 CST -.2633
PDE .6284 FRA-5.0181 FC-12.1538 B8P 2017 SGB 1722.3 R23 .2463 R13 .8158 L8A 37.4 M8A 23.5 S8A 2.9
BDE .6874 BRA 1.0270 BC3 1.0141 F8P 2139 SG1 1500.9 SG2 844.9 THA 44.21 EL1 37.4 EL2 11.4 ALF 46.99

LAUNCH DATE SEP 3 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

DISTANCE 398.626

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.868 GAL 7.17 AZL 88.38 HCA 118.91 SMA 195.55 ECC .25866 INC 1.6172 V1 29.527
RP 238.30 LAP 1.42 LOP 99.27 VP 20.861 GAP 8.15 AZP 90.78 TAL 36.02 TAP 154.93 RCA 144.97 APO 246.14 V2 23.056
RC 212.919 GL 9.55 GP -15.43 ZAL 35.35 ZAP 113.88 ETS 188.81 ZAE 148.09 ETE 210.82 ZAC 69.90 ETC 284.24 LVI -4.28

PLANETOCENTRIC CONIC

C3 30.787 VHL 5.547 DLA 14.52 RAL 9.59 RAD 6647.3 VEL 12.276 PTH 7.22 VHP 2.672 DPA -2.03 RAP 37.45 ECC 1.5064
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 14 5 3531.48 -46.68 131.03 251.63 100.48 9 12 57 2931.5 -37.35 100.77
60.00 8 37 21 3469.56 -39.96 126.77 252.94 95.72 9 35 11 2469.6 -33.36 97.80
70.00 9 10 59 3370.56 -34.10 119.25 253.44 92.08 10 7 10 2370.6 -29.70 91.41
80.00 10 1 49 3211.31 -29.86 107.25 253.52 89.62 10 55 20 2211.3 -26.97 80.20
90.00 11 15 26 2973.70 -28.25 89.76 253.49 88.73 12 5 0 1973.7 -25.93 62.99
100.00 12 44 41 2685.78 -29.86 68.62 253.52 89.62 13 29 26 1685.8 -26.97 41.56
110.00 14 10 26 2417.38 -34.10 48.17 253.44 92.08 14 50 43 1417.4 -29.70 20.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4161 TRA-1.0574 TC3 -.4189 BAU .4428 SGT 1293.7 SGR 1239.8 SG3 1288.9 ST 27.4 SR 28.0 SS 21.3
RDE -.5395 RRA -.1246 RC3 -.9911 FAU .44383 RRT .5614 RRF .8414 RTF .6384 CRT .8276 CRS .3100 CST -.2930
PDE .6932 FRA-5.1419 FC-12.4884 B8P 2188 SGB 1791.9 R23 .2429 R13 .8302 L8A 37.4 M8A 24.0 S8A 2.9
BDE .6814 BRA 1.0647 BC3 1.0780 F8P 2202 SG1 1583.8 SG2 838.0 THA 42.83 EL1 37.4 EL2 11.8 ALF 48.78

LAUNCH DATE SEP 3 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

DISTANCE 402.427

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.863 GAL 7.14 AZL 88.34 HCA 119.88 SMA 195.47 ECC .25814 INC 1.6950 V1 29.527
RP 238.63 LAP 1.44 LOP 100.22 VP 20.817 GAP 7.88 AZP 90.82 TAL 35.94 TAP 155.80 RCA 145.01 APO 245.92 V2 23.024
RC 215.868 GL 9.80 GP -15.73 ZAL 35.47 ZAP 112.08 ETS 188.42 ZAE 146.43 ETE 209.44 ZAC 89.74 ETC 284.32 LVI -4.13

PLANETOCENTRIC CONIC

C3 30.641 VHL 5.535 DLA 14.78 RAL 9.55 RAD 6647.3 VEL 12.271 PTH 7.21 VHP 2.641 DPA -2.56 RAP 38.95 ECC 1.5043
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 12 56 3535.59 -46.73 131.41 251.74 100.19 9 11 52 2935.8 -37.49 101.05
60.00 8 35 52 3474.52 -39.99 127.19 253.01 95.44 9 33 47 2474.5 -33.49 98.14
70.00 9 9 8 3376.66 -34.11 119.73 253.48 91.79 10 5 24 2376.7 -29.82 91.84
80.00 9 59 34 3218.61 -29.85 107.79 253.53 89.34 10 53 13 2218.6 -27.09 80.71
90.00 11 13 0 2981.58 -28.24 90.34 253.49 88.44 12 2 42 1981.6 -26.04 63.54
100.00 12 42 26 2693.08 -29.85 69.16 253.53 89.34 13 27 19 1693.1 -27.09 42.08
110.00 14 8 34 2423.47 -34.11 48.64 253.48 91.79 14 48 57 1423.5 -29.82 20.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4184 TRA-1.0948 TC3 -.3002 BAU .4681 SGT 1366.4 SGR 1271.5 SG3 1320.8 ST 27.9 SR 27.5 SS 21.8
RDE .5295 RRA -.1404 RC3-1.0274 FAU .45362 RRT .6005 RRF .8918 RTF .1.60 CRT .8254 CRS .3216 CST -.2457
PDE .7588 FRA-5.2632 FC-12.8166 B8P 2327 SGB 1866.5 R23 .2372 R13 .8436 L8A 37.5 M8A 24.5 S8A 2.9
BDE .6748 BRA 1.1036 BC3 1.1427 F8P 2259 SG1 1671.1 SG2 831.3 THA 41.58 EL1 37.5 EL2 11.6 ALF 44.98

LAUNCH DATE SEP 3 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

DISTANCE 408.228

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.859 GAL 7.11 AZL 88.31 HCA 120.81 SMA 196.39 ECC .25786 INC 1.6935 V1 29.527
RP 238.95 LAP 1.45 LOP 101.18 VP 20.775 GAP 7.62 AZP 90.87 TAL 35.84 TAP 156.65 RCA 145.05 APO 245.74 V2 22.991
RC 218.810 GL 10.05 GP -16.06 ZAL 35.61 ZAP 110.48 ETS 188.02 ZAE 144.78 ETE 208.15 ZAC 89.58 ETC 284.39 LVI -3.98

PLANETOCENTRIC CONIC

C3 30.517 VHL 5.524 DLA 15.03 RAL 9.52 RAD 6647.2 VEL 12.266 PTH 7.21 VHP 2.613 DPA -3.09 RAP 38.45 ECC 1.5022
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 11 48 3539.90 -46.78 131.82 251.87 99.88 9 10 46 2939.9 -37.65 101.34
60.00 8 34 22 3479.71 -40.03 127.83 253.09 95.14 9 32 22 2479.7 -33.63 98.51
70.00 9 7 14 3383.01 -34.12 120.22 253.52 91.50 10 3 37 2383.0 -29.95 92.29
80.00 9 57 16 3226.22 -29.84 108.36 253.55 89.04 10 51 2 2226.2 -27.20 81.25
90.00 11 10 30 2989.82 -28.22 90.94 253.50 88.14 12 0 20 1989.8 -26.15 64.12
100.00 12 40 8 2700.70 -29.84 69.73 253.55 89.04 13 25 8 1700.7 -27.20 42.61
110.00 14 6 40 2429.83 -34.12 49.14 253.52 91.50 14 47 10 1429.8 -29.95 21.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4202 TRA-1.1332 TC3 -.5846 BAU .4952 SGT 1445.0 SGR 1303.5 SG3 1351.1 ST 28.4 SR 27.1 SS 22.3
RDE -.5189 RRA -.1561 RC3-1.0638 FAU .46286 RRT .6358 RRF .8614 RTF .7091 CRT .8230 CRS .3336 CST -.2380
PDE .8245 FRA-5.3758 FC-13.1309 B8P 2496 SGB 1946.1 R23 .2319 R13 .8555 L8A 37.5 M8A 25.0 S8A 2.8
BDE .6677 BRA 1.1439 BC3 1.2139 F8P 2314 SG1 1762.7 SG2 824.8 THA 40.39 EL1 37.5 EL2 11.7 ALF 43.30

LAUNCH DATE SEP 3 1973 FLIGHT TIME 186.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 410.030 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.856 GAL 7.09 AZL 88.27 HCA 121.76 SMA 195.33 ECC .25721 INC 1.7326 V1 29.527  
 RP 239.26 LAP 1.47 LOP 102.12 VP 20.735 GAP 7.36 AZP 90.91 TAL 35.74 TAP 157.50 RCA 145.09 APO 245.57 V2 22.960  
 RC 221.744 GL 10.30 GP -16.37 ZAL 35.75 ZAP 108.89 ETS 187.61 ZAE 143.08 ETE 206.94 ZAC 69.42 ETC 284.46 LVI -3.83

PLANETOCENTRIC CONIC  
 C3 30.396 VHL 5.513 DLA 15.30 RAL 9.50 RAD 6647.2 VEL 12.261 PTH 7.20 VHP 2.587 DPA -3.62 RAP 35.95 ECC 1.5002  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 35 3544.38 -46.83 132.24 252.01 99.56 9 9 39 2544.4 -37.81 101.66  
 60.00 8 32 51 3485.11 -40.06 126.08 253.19 94.83 9 30 56 2485.1 -33.78 98.89  
 70.00 9 5 17 3389.64 -34.14 120.74 253.58 91.20 10 1 47 2389.6 -30.08 92.76  
 80.00 9 54 54 3234.17 -29.83 108.95 253.58 88.73 10 48 48 2234.2 -27.32 81.81  
 90.00 11 7 57 2998.41 -28.20 91.57 253.52 87.83 11 57 55 1998.4 -26.26 64.73  
 100.00 12 37 46 2708.64 -29.83 70.32 253.58 88.73 13 22 54 1708.6 -27.32 43.17  
 110.00 14 4 43 2436.46 -34.14 49.66 253.58 91.20 14 45 20 1436.5 -30.08 21.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4211 TRA-1.1726 TC3 -.6714 BAU .5239 SGT 1528.4 SGR 1336.4 SG3 1380.3 ST 29.0 SR 26.6 SS 22.9  
 RDE -.5081 RRA -.1720 RC3-1.1006 FAU .47169 RRT .6677 RRF .8704 RTF .7383 CRT .8204 CRS .3434 CST -.2328  
 FDE .8914 FRA-5.4841 FC-13.4349 BSP 2674 SGB 2030.2 R23 .2266 R13 .8665 LSA 37.6 MSA 25.6 SSA 2.8  
 BDE .6599 BRA 1.1852 BC3 1.2893 FSP 2362 SG1 1858.0 SGT 818.4 THA 39.30 EL1 37.5 EL2 11.7 ALF 42.04

LAUNCH DATE SEP 3 1973 FLIGHT TIME 188.00 ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC DISTANCE 413.833 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.853 GAL 7.06 AZL 88.23 HCA 122.70 SMA 195.28 ECC .25680 INC 1.7425 V1 29.527  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.695 GAP 7.10 AZP 90.96 TAL 35.63 TAP 158.33 RCA 145.13 APO 245.52 V2 22.928  
 RC 224.672 GL 10.56 GP -16.68 ZAL 35.91 ZAP 107.30 ETS 187.19 ZAE 141.39 ETE 205.80 ZAC 69.26 ETC 284.53 LVI -3.67

PLANETOCENTRIC CONIC  
 C3 30.277 VHL 5.502 DLA 15.58 RAL 9.48 RAD 6647.1 VEL 12.256 PTH 7.20 VHP 2.563 DPA -4.15 RAP 35.45 ECC 1.4983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 23 3549.06 -46.89 132.68 252.17 99.23 9 8 32 2549.1 -37.97 101.98  
 60.00 8 31 18 3490.74 -40.09 126.56 253.30 94.51 9 29 28 2490.7 -33.93 99.29  
 70.00 9 3 18 3396.54 -34.14 121.28 253.65 90.88 9 59 54 2396.5 -30.22 93.25  
 80.00 9 52 28 3242.45 -29.82 109.56 253.62 88.41 10 46 31 2242.4 -27.44 82.39  
 90.00 11 5 18 3007.36 -28.18 92.22 253.55 87.50 11 55 25 2007.4 -26.37 65.36  
 100.00 12 35 20 2716.92 -29.82 70.93 253.62 88.41 13 20 37 1716.9 -27.44 43.76  
 110.00 14 2 44 2443.36 -34.14 50.20 253.65 90.88 14 43 27 1443.4 -30.22 22.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4207 TRA-1.2125 TC3 -.7600 BAU .5539 SGT 1615.3 SGR 1370.2 SG3 1408.5 ST 29.5 SR 26.1 SS 23.4  
 RDE -.4972 RRA -.1882 RC3-1.1379 FAU .48014 RRT .6961 RRF .8790 RTF .7640 CRT .8175 CRS .3499 CST -.2314  
 FDE .9547 FRA-5.5883 FC-13.7291 BSP 2862 SGB 2118.2 R23 .2212 R13 .8767 LSA 37.6 MSA 26.1 SSA 2.8  
 BDE .6513 BRA 1.2270 BC3 1.3884 FSP 2400 SG1 1956.3 SGT 812.3 THA 38.32 EL1 37.6 EL2 11.8 ALF 40.82

LAUNCH DATE SEP 3 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC DISTANCE 417.636 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.851 GAL 7.02 AZL 88.19 HCA 123.65 SMA 195.23 ECC .25641 INC 1.8130 V1 29.527  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.658 GAP 6.84 AZP 91.00 TAL 35.51 TAP 159.15 RCA 145.17 APO 245.30 V2 22.897  
 RC 227.991 GL 10.83 GP -16.99 ZAL 36.07 ZAP 105.72 ETS 186.77 ZAE 139.69 ETE 204.73 ZAC 69.10 ETC 284.60 LVI -3.51

PLANETOCENTRIC CONIC  
 C3 30.161 VHL 5.492 DLA 15.86 RAL 9.46 RAD 6647.1 VEL 12.251 PTH 7.20 VHP 2.542 DPA -4.68 RAP 34.95 ECC 1.4964  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 10 3553.93 -46.94 133.14 252.35 98.88 9 7 24 2553.9 -38.14 102.32  
 60.00 8 29 42 3496.59 -40.12 129.05 253.42 94.18 9 27 59 2496.6 -34.09 99.71  
 70.00 9 1 16 3403.72 -34.15 121.84 253.73 90.55 9 57 59 2403.7 -30.36 93.77  
 80.00 9 49 58 3251.07 -29.80 110.20 253.67 88.07 10 44 9 2251.1 -27.57 83.00  
 90.00 11 2 35 3018.70 -28.15 92.90 253.59 87.16 11 52 52 2018.7 -26.49 66.02  
 100.00 12 32 50 2725.54 -29.80 71.57 253.67 88.07 13 18 16 1725.5 -27.57 44.37  
 110.00 14 0 42 2450.54 -34.15 50.76 253.73 90.55 14 41 32 1450.5 -30.36 22.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4184 TRA-1.2521 TC3 -.8492 BAU .5852 SGT 1704.3 SGR 1407.0 SG3 1437.8 ST 29.9 SR 25.7 SS 23.9  
 RDE -.4872 RRA -.2057 RC3-1.1771 FAU .48887 RRT .7218 RRF .8973 RTF .770 CRT .8142 CRS .3474 CST -.2399  
 FDE 1.0022 FRA-5.7038 FC-14.0327 BSP 3060 SGB 2210.0 R23 .2149 R13 .8866 LSA 37.6 MSA 26.6 SSA 2.8  
 BDE .6422 BRA 1.2889 BC3 1.4314 FSP 2416 SG1 2057.6 SGT 806.8 THA 37.52 EL1 37.6 EL2 11.9 ALF 39.74

LAUNCH DATE SEP 3 1973 FLIGHT TIME 192.00 ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC DISTANCE 421.437 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.849 GAL 6.99 AZL 88.15 HCA 124.59 SMA 195.20 ECC .25608 INC 1.8544 V1 29.527  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.621 GAP 6.59 AZP 91.05 TAL 35.38 TAP 159.96 RCA 145.22 APO 245.19 V2 22.866  
 RC 230.502 GL 11.10 GP -17.30 ZAL 36.25 ZAP 104.16 ETS 186.34 ZAE 137.99 ETE 203.72 ZAC 68.94 ETC 284.66 LVI -3.55

PLANETOCENTRIC CONIC  
 C3 30.045 VHL 5.481 DLA 16.15 RAL 9.45 RAD 6647.0 VEL 12.247 PTH 7.19 VHP 2.523 DPA -5.20 RAP 34.47 ECC 1.4945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 56 3559.00 -46.99 133.62 252.54 98.51 9 6 15 2559.0 -38.32 102.68  
 60.00 8 28 5 3502.70 -40.15 129.57 253.56 93.83 9 26 28 2502.7 -34.25 100.15  
 70.00 8 59 10 3411.21 -34.15 122.42 253.82 90.20 9 56 1 2411.2 -30.50 94.30  
 80.00 9 47 24 3260.08 -29.78 110.87 253.73 87.72 10 41 44 2260.1 -27.69 83.64  
 90.00 10 59 46 3026.48 -28.11 93.61 253.64 86.80 11 50 13 2026.5 -26.61 66.71  
 100.00 12 30 15 2734.56 -29.78 72.24 253.73 87.72 13 15 50 1734.6 -27.69 45.01  
 110.00 13 58 36 2458.03 -34.15 51.34 253.82 90.20 14 39 34 1458.0 -30.50 23.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4226 TRA-1.3003 TC3 -.9513 BAU .6179 SGT 1812.5 SGR 1433.5 SG3 1454.4 ST 30.7 SR 24.9 SS 24.7  
 RDE -.4709 RRA -.2177 RC3-1.2089 FAU .49349 RRT .7447 RRF .8934 RTF .8052 CRT .8130 CRS .3806 CST -.2074  
 FDE 1.1295 FRA-5.7344 FC-14.2197 BSP 3250 SGB 2310.8 R23 .2152 R13 .8921 LSA 37.7 MSA 27.2 SSA 2.8  
 BDE .6327 BRA 1.3184 BC3 1.5383 FSP 2511 SG1 2168.0 SGT 799.9 THA 36.18 EL1 37.7 EL2 11.8 ALF 37.82

LAUNCH DATE SEP 3 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 190.98 LAL .00 LOL 340.35 VL 32.848 GAL 6.96 AZL 88.10 HCA 125.92 SMA 195.18 ECC .25873 INC 1.8966 V1 29.927  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.586 GAP 6.34 AZP 91.10 TAL 35.24 TAP 160.76 RCA 145.27 APO 245.10 V2 22.836  
 RC 233.405 GL 11.38 GP -17.60 ZAL 36.43 ZAP 102.61 ETS 185.90 ZAE 136.29 ETE 202.78 ZAC 68.78 ETC 284.72 LVI -3.18

Distance 429.230 Earth to Mars

Planetocentric Conic: C3 29.933 VHL 5.471 DLA 16.45 RAL 9.45 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 2.506 DPA -5.73 RAP 34.00 ECC 1.4928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 41 3564.28 -47.04 134.11 252.74 98.13 9 5 5 2564.3 -38.50 103.05  
 60.00 8 26 26 3509.04 -40.18 130.11 253.71 93.46 9 24 55 2509.0 -34.42 100.61  
 70.00 8 57 1 3419.00 -34.15 123.03 253.92 89.84 9 54 0 2419.0 -30.65 94.86  
 80.00 9 44 44 3269.46 -29.75 111.57 253.80 87.36 10 39 13 2269.5 -27.82 84.31  
 90.00 10 56 52 3036.65 -28.07 94.38 253.69 86.43 11 47 28 2036.6 -26.72 67.43  
 100.00 12 27 36 2743.93 -29.75 72.94 253.60 87.36 13 13 20 1743.9 -27.82 45.68  
 110.00 13 56 27 2465.82 -34.15 51.95 253.92 89.84 14 37 33 1465.8 -30.65 23.78

Differential Corrections: TDE -.4218 TRA-1.3448 TC3-1.0492 BAU .6516 SGT 1915.4 SGR 1486.5 SCS 1475.7 ST 31.2 SR 24.4 SS 25.3  
 RDE -.4577 RRA -.2329 RC3-1.2451 FAU .49959 RRT .7651 RRF .9000 RTF .8221 CRT .8106 CRS .3900 CST -.2018  
 FDE 1.2105 FRA-5.8027 FC-14.4492 BSP 3455 SGB 2412.3 R23 .2119 R13 .8990 LSA 37.8 MSA 27.7 SSA 2.8  
 BDE .6222 BRA 1.3647 BC3 1.6262 FSP 2549 SGI 2277.9 SGI 794.0 THA 35.27 EL1 37.8 EL2 11.8 ALF 36.39

LAUNCH DATE SEP 3 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 190.90 LAL .00 LOL 340.35 VL 32.848 GAL 6.93 AZL 88.06 HCA 126.46 SMA 195.17 ECC .25543 INC 1.9398 V1 29.527  
 RP 240.78 LAP 1.58 LOP 106.83 VP 20.552 GAP 6.09 AZP 91.15 TAL 35.09 TAP 161.55 RCA 145.32 APO 245.02 V2 22.807  
 RC 236.297 GL 11.66 GP -17.91 ZAL 36.63 ZAP 101.07 ETS 185.45 ZAE 134.59 ETE 201.84 ZAC 68.63 ETC 284.78 LVI -3.01

Distance 429.041 Earth to Mars

Planetocentric Conic: C3 29.824 VHL 5.461 DLA 16.78 RAL 9.44 RAD 6646.9 VEL 12.238 PTH 7.19 VHP 2.491 DPA -6.25 RAP 33.53 ECC 1.4908  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 24 3589.76 -47.09 134.63 252.96 97.73 9 3 53 2589.8 -38.69 103.44  
 60.00 8 24 44 3515.63 -40.20 130.67 253.87 93.09 9 23 19 2515.6 -34.59 101.08  
 70.00 8 54 48 3427.10 -34.15 123.66 254.03 89.47 9 51 55 2427.1 -30.80 95.45  
 80.00 9 41 59 3279.23 -29.72 112.29 253.87 86.98 10 36 38 2279.2 -27.95 85.01  
 90.00 10 53 51 3047.27 -28.03 95.13 253.75 86.05 11 44 38 2047.3 -26.84 68.18  
 100.00 12 24 51 2753.71 -29.72 73.66 253.87 86.98 13 10 45 1753.7 -27.95 46.38  
 110.00 13 54 15 2473.92 -34.15 52.58 254.03 89.47 14 35 28 1473.9 -30.80 24.38

Differential Corrections: TDE -.4195 TRA-1.3898 TC3-1.1492 BAU .6861 SGT 2021.9 SGR 1499.3 SCS 1494.8 ST 31.8 SR 23.7 SS 25.9  
 RDE -.4440 RRA -.2478 RC3-1.2808 FAU .50490 RRT .7833 RRF .9082 RTF .8368 CRT .8081 CRS .3987 CST -.1968  
 FDE 1.2938 FRA-5.8599 FC-14.6564 BSP 3667 SGB 2517.1 R23 .2090 R13 .9031 LSA 37.9 MSA 28.3 SSA 2.7  
 BDE .6108 BRA 1.4117 BC3 1.7208 FSP 2585 SGI 2390.5 SGI 788.4 THA 34.41 EL1 37.9 EL2 11.7 ALF 34.85

LAUNCH DATE SEP 3 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 190.90 LAL .00 LOL 340.35 VL 32.848 GAL 6.89 AZL 88.02 HCA 127.39 SMA 195.17 ECC .25515 INC 1.9838 V1 29.527  
 RP 241.07 LAP 1.59 LOP 107.76 VP 20.519 GAP 5.84 AZP 91.21 TAL 34.94 TAP 162.34 RCA 145.37 APO 244.97 V2 22.777  
 RC 239.179 GL 11.95 GP -18.21 ZAL 36.84 ZAP 99.56 ETS 184.99 ZAE 132.89 ETE 200.96 ZAC 68.47 ETC 284.84 LVI -2.84

Distance 432.843 Earth to Mars

Planetocentric Conic: C3 29.717 VHL 5.451 DLA 17.08 RAL 9.45 RAD 6646.9 VEL 12.233 PTH 7.18 VHP 2.478 DPA -6.78 RAP 33.07 ECC 1.4891  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 5 3575.47 -47.14 135.18 253.20 97.32 9 2 40 2575.5 -38.89 103.85  
 60.00 8 22 59 3522.49 -40.23 131.25 254.04 92.69 9 21 41 2522.5 -34.76 101.58  
 70.00 8 52 31 3435.53 -34.14 124.32 254.16 89.08 9 49 47 2435.5 -30.95 96.08  
 80.00 9 39 8 3289.42 -29.68 113.05 253.96 86.58 10 33 58 2289.4 -28.08 85.74  
 90.00 10 50 44 3058.35 -27.97 95.93 253.82 85.65 11 41 42 2058.3 -26.96 68.97  
 100.00 12 22 0 2783.89 -29.68 74.42 253.96 86.58 13 8 4 1783.9 -28.08 47.11  
 110.00 13 51 58 2482.34 -34.14 53.24 254.16 89.08 14 33 20 1482.3 -30.95 24.97

Differential Corrections: TDE -.4187 TRA-1.4358 TC3-1.2511 BAU .7213 SGT 2131.9 SGR 1532.3 SCS 1512.1 ST 32.3 SR 23.1 SS 26.5  
 RDE -.4299 RRA -.2628 RC3-1.3165 FAU .50958 RRT .7998 RRF .9120 RTF .8497 CRT .8059 CRS .4053 CST -.1938  
 FDE 1.3763 FRA-5.9103 FC-14.8454 BSP 3881 SGB 2625.4 R23 .2065 R13 .9107 LSA 38.0 MSA 28.8 SSA 2.7  
 BDE .5988 BRA 1.4597 BC3 1.8161 FSP 2614 SGI 2506.0 SGI 782.8 THA 33.59 EL1 38.0 EL2 11.6 ALF 33.50

LAUNCH DATE SEP 3 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 22 1974

Heliocentric Conic: RL 190.90 LAL .00 LOL 340.35 VL 32.848 GAL 6.86 AZL 87.97 HCA 128.32 SMA 195.17 ECC .25489 INC 2.0289 V1 29.527  
 RP 241.38 LAP 1.59 LOP 108.70 VP 20.488 GAP 5.59 AZP 91.26 TAL 34.78 TAP 163.11 RCA 145.42 APO 244.92 V2 22.749  
 RC 242.049 GL 12.25 GP -18.52 ZAL 37.05 ZAP 98.06 ETS 184.53 ZAE 131.21 ETE 200.12 ZAC 68.31 ETC 284.89 LVI -2.86

Distance 436.644 Earth to Mars

Planetocentric Conic: C3 29.612 VHL 5.442 DLA 17.41 RAL 9.45 RAD 6646.9 VEL 12.229 PTH 7.18 VHP 2.467 DPA -7.27 RAP 32.63 ECC 1.4873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 44 3581.39 -47.19 135.74 253.45 96.88 9 1 26 2581.4 -39.09 104.27  
 60.00 8 21 11 3529.61 -40.25 131.85 254.22 92.28 9 20 1 2529.6 -34.94 102.10  
 70.00 8 50 10 3444.30 -34.13 125.01 254.29 88.67 9 47 34 2444.3 -31.11 96.69  
 80.00 9 36 11 3300.05 -29.63 113.83 254.05 86.17 10 31 12 2300.0 -28.21 86.50  
 90.00 10 47 29 3069.91 -27.91 96.77 253.90 85.23 11 38 39 2069.9 -27.08 69.80  
 100.00 12 19 3 2774.52 -29.63 75.20 254.05 86.17 13 5 18 1774.5 -28.21 47.87  
 110.00 13 49 36 2491.11 -34.13 53.92 254.29 88.67 14 31 7 1491.1 -31.11 25.61

Differential Corrections: TDE -.4127 TRA-1.4823 TC3-1.3547 BAU .7577 SGT 2244.5 SGR 1565.4 SCS 1527.6 ST 32.8 SR 22.4 SS 27.2  
 RDE -.4152 RRA -.2778 RC3-1.3521 FAU .51365 RRT .8142 RRF .9173 RTF .8610 CRT .8037 CRS .4111 CST -.1909  
 FDE 1.4619 FRA-5.9515 FC-15.0169 BSP 4103 SGB 2736.5 R23 .2042 R13 .9157 LSA 38.1 MSA 29.4 SSA 2.7  
 BDE .5854 BRA 1.5080 BC3 1.9140 FSP 2639 SGI 2623.7 SGI 777.5 THA 32.83 EL1 38.1 EL2 11.5 ALF 32.06



LAUNCH DATE SEP 3 1973 FLIGHT TIME 202.00 ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC DISTANCE 440.445 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.849 GAL 6.82 AZL 87.92 HCA 129.25 SMA 195.19 ECC .25466 INC 2.0790 V1 29.527  
 RP 241.64 LAP 1.61 LOP 109.63 VP 20.457 GAP 5.35 AZP 91.31 TAL 34.62 TAP 163.87 RCA 145.48 APO 244.89 V2 22.720  
 RC 244.907 GL 12.36 GP -18.82 ZAL 37.28 ZAP 96.57 ETS 184.06 ZAE 129.53 ETE 199.31 ZAC 68.15 ETC 284.95 LVI -2.48

PLANETOCENTRIC CONIC  
 C3 29.311 VHL 5.432 DLA 17.75 RAL 9.46 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 2.458 DPA -7.76 RAP 32.20 ECC 1.4857  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 21 3587.55 -47.24 136.33 253.72 96.44 9 0 9 2587.5 -39.29 104.72  
 60.00 8 19 20 3537.01 -40.27 132.48 254.42 91.86 9 18 17 2537.0 -35.12 102.64  
 70.00 8 47 44 3453.42 -34.11 125.72 254.43 88.25 9 45 17 2453.4 -31.26 97.36  
 80.00 9 33 8 3311.13 -29.58 114.65 254.15 85.74 10 28 19 2311.1 -28.34 87.30  
 90.00 10 44 7 3082.00 -27.84 97.65 253.98 84.80 11 35 29 2082.0 -27.20 70.66  
 100.00 12 16 0 2785.60 -29.58 76.02 254.15 85.74 13 2 25 1785.6 -28.34 48.66  
 110.00 13 47 10 2500.24 -34.11 54.64 254.43 88.25 14 28 50 1500.2 -31.26 26.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4074 TRA-1.5288 TC3-1.4592 BAU .7947 SGT 2359.0 SGR 1599.8 SG3 1542.3 ST 33.3 SR 21.8 SS 27.8  
 RDE -.4009 RRA -.2932 RC3-1.3884 FAU .51741 RRT .8275 RRF .9225 RTF .8712 CRT .8018 CRS .4112 CST -.1940  
 FDE 1.5371 FRA-5.9940 FC-15.1787 BSP 4326 SGB 2850.3 R23 .2017 R13 .9205 LSA 38.2 MSA 29.9 SSA 2.7  
 BDE .5715 BRA 1.5567 BC3 2.0142 FSP 2648 SG1 2743.6 SG2 772.4 THA 32.15 EL1 38.2 EL2 11.4 ALF 30.69

LAUNCH DATE SEP 3 1973 FLIGHT TIME 204.00 ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC DISTANCE 444.245 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.850 GAL 6.78 AZL 87.88 HCA 130.18 SMA 195.21 ECC .25445 INC 2.1222 V1 29.527  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.428 GAP 5.11 AZP 91.37 TAL 34.44 TAP 164.62 RCA 145.54 APO 244.88 V2 22.692  
 RC 247.751 GL 12.87 GP -19.12 ZAL 37.51 ZAP 95.12 ETS 183.58 ZAE 127.86 ETE 198.53 ZAC 67.98 ETC 285.00 LVI -2.29

PLANETOCENTRIC CONIC  
 C3 29.412 VHL 5.423 DLA 18.10 RAL 9.47 RAD 6646.8 VEL 12.221 PTH 7.17 VHP 2.450 DPA -8.28 RAP 31.79 ECC 1.4840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 58 56 3593.95 -47.29 136.94 254.00 95.97 8 58 50 2593.9 -39.51 105.18  
 60.00 8 17 26 3544.71 -40.28 133.14 254.63 91.41 9 16 30 2544.7 -35.31 103.21  
 70.00 8 45 12 3462.93 -34.09 126.46 254.57 87.81 9 42 55 2462.9 -31.42 98.05  
 80.00 9 29 57 3322.70 -29.52 115.51 254.25 85.30 10 25 19 2322.7 -28.47 88.13  
 90.00 10 40 35 3094.65 -27.76 98.57 254.07 84.35 11 32 10 2094.6 -27.32 71.57  
 100.00 12 12 48 2797.17 -29.52 76.88 254.25 85.30 12 59 26 1797.2 -28.47 49.50  
 110.00 13 44 39 2509.75 -34.09 55.38 254.57 87.81 14 26 28 1509.7 -31.42 26.97

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4027 TRA-1.5778 TC3-1.5678 BAU .8321 SGT 2479.5 SGR 1630.0 SG3 1550.9 ST 33.9 SR 21.0 SS 28.5  
 RDE -.3838 RRA -.3061 RC3-1.4214 FAU .51921 RRT .8390 RRF .9269 RTF .8794 CRT .8008 CRS .4199 CST -.1860  
 FDE 1.6407 FRA-5.9972 FC-15.2831 BSP 4556 SGB 2967.3 R23 .2013 R13 .9239 LSA 38.4 MSA 30.5 SSA 2.6  
 BDE .5563 BRA 1.6072 BC3 2.1162 FSP 2685 SG1 2866.4 SG2 767.3 THA 31.38 EL1 38.3 EL2 11.2 ALF 29.10

LAUNCH DATE SEP 3 1973 FLIGHT TIME 206.00 ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC DISTANCE 448.045 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.851 GAL 6.75 AZL 87.83 HCA 131.10 SMA 195.23 ECC .25426 INC 2.1707 V1 29.527  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.400 GAP 4.87 AZP 91.43 TAL 34.26 TAP 165.37 RCA 145.59 APO 244.87 V2 22.665  
 RC 250.580 GL 13.19 GP -19.43 ZAL 37.76 ZAP 93.68 ETS 183.10 ZAE 126.21 ETE 197.78 ZAC 67.81 ETC 285.05 LVI -2.09

PLANETOCENTRIC CONIC  
 C3 29.315 VHL 5.414 DLA 18.45 RAL 9.48 RAD 6646.7 VEL 12.217 PTH 7.17 VHP 2.445 DPA -8.78 RAP 31.39 ECC 1.4825  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 57 28 3600.59 -47.34 137.58 254.30 95.48 8 57 29 2600.6 -39.72 105.67  
 60.00 8 15 27 3552.71 -40.29 133.82 254.85 90.95 9 14 40 2552.7 -35.50 103.80  
 70.00 8 42 35 3472.82 -34.06 127.23 254.73 87.36 9 40 28 2472.8 -31.59 98.78  
 80.00 9 26 37 3334.79 -29.45 116.40 254.36 84.84 10 22 12 2334.8 -28.60 89.01  
 90.00 10 36 55 3107.88 -27.66 99.52 254.16 83.88 11 28 43 2107.9 -27.43 72.52  
 100.00 12 9 29 2809.26 -29.45 77.77 254.36 84.84 12 56 19 1809.3 -28.60 50.37  
 110.00 13 42 1 2519.64 -34.06 56.15 254.73 87.36 14 24 1 1519.6 -31.59 27.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3959 TRA-1.6261 TC3-1.6761 BAU .8700 SGT 2600.1 SGR 1662.0 SG3 1559.3 ST 34.4 SR 20.3 SS 29.2  
 RDE -.3871 RRA -.3201 RC3-1.4534 FAU .52089 RRT .8495 RRF .9312 RTF .8569 CRT .8000 CRS .4220 CST -.1849  
 FDE 1.7333 FRA-6.0052 FC-15.3827 BSP 4790 SGB 3085.9 R23 .2004 R13 .9274 LSA 38.5 MSA 31.0 SSA 2.6  
 BDE .5399 BRA 1.6573 BC3 2.2198 FSP 2701 SG1 2990.2 SG2 762.4 THA 30.71 EL1 38.5 EL2 10.9 ALF 27.63

LAUNCH DATE SEP 3 1973 FLIGHT TIME 208.00 ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC DISTANCE 451.844 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.853 GAL 6.71 AZL 87.78 HCA 132.03 SMA 195.27 ECC .25409 INC 2.2204 V1 29.527  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.373 GAP 4.63 AZP 91.49 TAL 34.08 TAP 166.10 RCA 145.65 APO 244.88 V2 22.638  
 RC 253.394 GL 13.52 GP -19.73 ZAL 38.01 ZAP 92.27 ETS 182.61 ZAE 124.57 ETE 197.05 ZAC 67.64 ETC 285.10 LVI -1.89

PLANETOCENTRIC CONIC  
 C3 29.222 VHL 5.406 DLA 18.82 RAL 9.50 RAD 6646.7 VEL 12.213 PTH 7.17 VHP 2.441 DPA -9.27 RAP 31.01 ECC 1.4809  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 55 57 3607.50 -47.38 138.24 254.61 94.97 8 56 5 2607.5 -39.95 106.18  
 60.00 8 13 25 3561.03 -40.30 134.52 255.08 90.47 9 12 46 2561.0 -35.70 104.42  
 70.00 8 39 52 3483.13 -34.03 128.03 254.89 86.88 9 37 55 2483.1 -31.75 99.54  
 80.00 9 23 10 3347.42 -29.37 117.33 254.47 84.35 10 18 57 2347.4 -28.73 89.92  
 90.00 10 33 4 3121.74 -27.56 100.52 254.25 83.39 11 25 6 2121.7 -27.55 73.52  
 100.00 12 6 2 2821.89 -29.37 78.70 254.47 84.35 12 53 3 1821.9 -28.73 51.29  
 110.00 13 39 18 2529.95 -34.03 56.95 254.89 86.88 14 21 28 1530.0 -31.75 28.45

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3880 TRA-1.6746 TC3-1.7853 BAU .9085 SGT 2722.3 SGR 1695.1 SG3 1566.8 ST 35.0 SR 19.6 SS 29.9  
 RDE -.3507 RRA -.3346 RC3-1.4900 FAU .52225 RRT .8591 RRF .9354 RTF .8937 CRT .7999 CRS .4184 CST -.1886  
 FDE 1.8161 FRA-6.0135 FC-15.4721 BSP 5021 SGB 3206.9 R23 .1993 R13 .9307 LSA 38.7 MSA 31.5 SSA 2.6  
 BDE .5230 BRA 1.7077 BC3 2.3253 FSP 2705 SG1 3116.1 SG2 757.8 THA 30.11 EL1 38.6 EL2 10.6 ALF 26.26

LAUNCH DATE SEP 3 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC										DISTANCE 455.643										EARTH TO MARS																																																																																																																																																																									
RL	130.90	LAL	.00	LOL	340.35	VL	32.855	GAL	6.67	AZL	87.73	HCA	132.95	BMA	195.31	ECC	.25393	INC	2.2714	V1	29.527	RP	242.73	LAP	1.66	LOP	113.32	VP	20.347	GAP	4.40	AZP	91.55	TAL	33.88	TAP	166.83	RCA	145.71	APO	244.90	V2	22.612	RC	256.191	GL	13.86	GP	-20.04	ZAL	38.28	ZAP	90.88	ETS	182.12	ZAE	122.94	ETE	196.34	ZAC	67.46	ETC	285.14	LVI	-1.60																																																																																																																												
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																									
C3	29.133	VHL	5.397	DLA	19.20	RAL	9.52	RAD	8646.7	VEL	12.210	PTH	7.16	VHP	2.438	DPA	-9.75	RAP	30.65	ECC	1.4794	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																														
50.00			7	54	24	3614.68	-47.42	139.93	254.94	94.44	8	54	38	2614.7	-40.18	106.71												60.00			8	11	17	3569.69	-40.30	135.26	255.32	89.97	9	10	47	2569.7	-35.90	105.07											70.00			8	37	2	3493.88	-33.99	128.87	255.07	86.39	9	35	16	2493.9	-31.92	100.33											80.00			9	19	32	3360.64	-29.27	118.30	254.59	83.85	10	15	33	2360.6	-28.86	90.88											90.00			10	29	2	3136.28	-27.44	101.57	254.35	82.88	11	21	19	2136.3	-27.66	74.57											100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25										
60.00			8	11	17	3569.69	-40.30	135.26	255.32	89.97	9	10	47	2569.7	-35.90	105.07											70.00			8	37	2	3493.88	-33.99	128.87	255.07	86.39	9	35	16	2493.9	-31.92	100.33											80.00			9	19	32	3360.64	-29.27	118.30	254.59	83.85	10	15	33	2360.6	-28.86	90.88											90.00			10	29	2	3136.28	-27.44	101.57	254.35	82.88	11	21	19	2136.3	-27.66	74.57											100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																						
70.00			8	37	2	3493.88	-33.99	128.87	255.07	86.39	9	35	16	2493.9	-31.92	100.33											80.00			9	19	32	3360.64	-29.27	118.30	254.59	83.85	10	15	33	2360.6	-28.86	90.88											90.00			10	29	2	3136.28	-27.44	101.57	254.35	82.88	11	21	19	2136.3	-27.66	74.57											100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																																																	
80.00			9	19	32	3360.64	-29.27	118.30	254.59	83.85	10	15	33	2360.6	-28.86	90.88											90.00			10	29	2	3136.28	-27.44	101.57	254.35	82.88	11	21	19	2136.3	-27.66	74.57											100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																																																																												
90.00			10	29	2	3136.28	-27.44	101.57	254.35	82.88	11	21	19	2136.3	-27.66	74.57											100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																																																																																																							
100.00			12	2	24	2835.11	-29.27	79.67	254.59	83.85	12	49	39	1835.1	-28.86	52.25											110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																																																																																																																																		
110.00			13	36	28	2540.70	-33.99	57.79	255.07	86.39	14	18	49	1540.7	-31.92	29.25																																																																																																																																																																													

LAUNCH DATE SEP 3 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC										DISTANCE 459.440										EARTH TO MARS																																																																																																																																																																															
RL	130.90	LAL	.00	LOL	340.35	VL	32.857	GAL	6.63	AZL	87.68	HCA	133.87	BMA	195.39	ECC	.25380	INC	2.3240	V1	29.527	RP	242.99	LAP	1.68	LOP	114.24	VP	20.322	GAP	4.16	AZP	91.61	TAL	33.68	TAP	167.53	RCA	145.77	APO	244.93	V2	22.568	RC	256.972	GL	14.22	GP	-20.34	ZAL	38.55	ZAP	89.53	ETS	181.61	ZAE	121.34	ETE	195.65	ZAC	67.28	ETC	285.19	LVI	-1.47																																																																																																																																		
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																															
C3	29.046	VHL	5.389	DLA	19.59	RAL	9.53	RAD	8646.6	VEL	12.206	PTH	7.16	VHP	2.437	DPA	-10.23	RAP	30.31	ECC	1.4780	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																				
50.00			7	52	46	3622.15	-47.46	139.65	255.28	93.89	8	53	8	2622.2	-40.42	107.27												60.00			8	9	5	3578.70	-40.30	136.03	255.57	89.45	9	8	44	2578.7	-36.10	105.74												70.00			8	34	5	3505.10	-33.93	129.74	255.24	85.88	9	32	30	2505.1	-32.08	101.16												80.00			9	15	45	3374.49	-29.17	119.32	254.72	83.33	10	11	59	2374.5	-28.99	91.89												90.00			10	24	48	3151.56	-27.31	102.67	254.45	82.34	11	17	20	2151.6	-27.76	75.67												100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08											
60.00			8	9	5	3578.70	-40.30	136.03	255.57	89.45	9	8	44	2578.7	-36.10	105.74												70.00			8	34	5	3505.10	-33.93	129.74	255.24	85.88	9	32	30	2505.1	-32.08	101.16												80.00			9	15	45	3374.49	-29.17	119.32	254.72	83.33	10	11	59	2374.5	-28.99	91.89												90.00			10	24	48	3151.56	-27.31	102.67	254.45	82.34	11	17	20	2151.6	-27.76	75.67												100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																							
70.00			8	34	5	3505.10	-33.93	129.74	255.24	85.88	9	32	30	2505.1	-32.08	101.16												80.00			9	15	45	3374.49	-29.17	119.32	254.72	83.33	10	11	59	2374.5	-28.99	91.89												90.00			10	24	48	3151.56	-27.31	102.67	254.45	82.34	11	17	20	2151.6	-27.76	75.67												100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																																																			
80.00			9	15	45	3374.49	-29.17	119.32	254.72	83.33	10	11	59	2374.5	-28.99	91.89												90.00			10	24	48	3151.56	-27.31	102.67	254.45	82.34	11	17	20	2151.6	-27.76	75.67												100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																																																																															
90.00			10	24	48	3151.56	-27.31	102.67	254.45	82.34	11	17	20	2151.6	-27.76	75.67												100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																																																																																																											
100.00			11	58	37	2848.96	-29.17	80.68	254.72	83.33	12	46	6	1849.0	-28.99	53.26												110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																																																																																																																																							
110.00			13	33	31	2551.92	-33.93	58.66	255.24	85.88	14	16	3	1551.9	-32.08	30.08																																																																																																																																																																																			

LAUNCH DATE SEP 3 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC										DISTANCE 463.237										EARTH TO MARS																																																																																																																																																																																						
RL	130.90	LAL	.00	LOL	340.35	VL	32.860	GAL	6.59	AZL	87.62	HCA	134.78	BMA	195.40	ECC	.25367	INC	2.3780	V1	29.527	RP	243.24	LAP	1.69	LOP	115.16	VP	20.298	GAP	3.93	AZP	91.68	TAL	33.48	TAP	168.26	RCA	145.84	APO	244.97	V2	22.580	RC	261.736	GL	14.58	GP	-20.65	ZAL	38.84	ZAP	88.19	ETS	181.10	ZAE	119.75	ETE	194.98	ZAC	67.09	ETC	285.23	LVI	-1.24																																																																																																																																									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																																						
C3	28.964	VHL	5.382	DLA	19.99	RAL	9.55	RAD	8646.6	VEL	12.203	PTH	7.16	VHP	2.438	DPA	-10.70	RAP	30.00	ECC	1.4767	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																											
50.00			7	51	5	3629.92	-47.49	140.39	255.84	93.31	8	51	35	2629.9	-40.68	107.86													60.00			8	6	48	3588.08	-40.29	136.82	255.83	88.91	9	6	36	2588.1	-36.31	106.45													70.00			8	31	0	3516.81	-33.87	130.63	255.43	85.34	9	29	37	2516.8	-32.25	102.03													80.00			9	11	46	3389.02	-29.03	120.38	254.84	82.78	10	8	19	2389.0	-29.11	92.95													90.00			10	20	21	3167.83	-27.15	103.82	254.55	81.78	11	13	8	2167.8	-27.86	78.84													100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95												
60.00			8	6	48	3588.08	-40.29	136.82	255.83	88.91	9	6	36	2588.1	-36.31	106.45													70.00			8	31	0	3516.81	-33.87	130.63	255.43	85.34	9	29	37	2516.8	-32.25	102.03													80.00			9	11	46	3389.02	-29.03	120.38	254.84	82.78	10	8	19	2389.0	-29.11	92.95													90.00			10	20	21	3167.83	-27.15	103.82	254.55	81.78	11	13	8	2167.8	-27.86	78.84													100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																									
70.00			8	31	0	3516.81	-33.87	130.63	255.43	85.34	9	29	37	2516.8	-32.25	102.03													80.00			9	11	46	3389.02	-29.03	120.38	254.84	82.78	10	8	19	2389.0	-29.11	92.95													90.00			10	20	21	3167.83	-27.15	103.82	254.55	81.78	11	13	8	2167.8	-27.86	78.84													100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																																																						
80.00			9	11	46	3389.02	-29.03	120.38	254.84	82.78	10	8	19	2389.0	-29.11	92.95													90.00			10	20	21	3167.83	-27.15	103.82	254.55	81.78	11	13	8	2167.8	-27.86	78.84													100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																																																																																			
90.00			10	20	21	3167.83	-27.15	103.82	254.55	81.78	11	13	8	2167.8	-27.86	78.84													100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																																																																																																																
100.00			11	54	38	2863.49	-29.05	81.75	254.84	82.78	12	42	21	1863.5	-29.11	54.32													110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																																																																																																																																													
110.00			13	30	26	2563.62	-33.87	59.57	255.43	85.34	14	13	10	1563.6	-32.25	30.95																																																																																																																																																																																										

LAUNCH DATE SEP 3 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC										DISTANCE 467.033										EARTH TO MARS																																																																																																																																																																																													
RL	130.90	LAL	.00	LOL	340.35	VL	32.863	GAL	6.55	AZL	87.97	HCA	135.70	BMA	195.48	ECC	.25357	INC	2.4338	V1	29.527	RP	243.50	LAP	1.70	LOP	116.08	VP	20.278	GAP	3.70	AZP	91.74	TAL	33.27	TAP	168.97	RCA	145.90	APO	245.02	V2	22.538	RC	264.483	GL	14.95	GP	-20.97	ZAL	39.13	ZAP	86.89	ETS	180.89	ZAE	118.18	ETE	194.33	ZAC	66.89	ETC	285.27	LVI	-1.01																																																																																																																																																
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																																													
C3	28.885	VHL	5.374	DLA	20.41	RAL	9.57	RAD	8646.6	VEL	12.199	PTH	7.16	VHP	2.440	DPA	-11.17	RAP	29.70	ECC	1.4754	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																																																		
50.00			7	49	20	3638.00	-47.52	141.17	256.01	92.71	8	49	58	2638.0	-40.91	108.47														60.00			8	4	25	3597.85	-40.27	137.66	256.11	88.34	9	4	23	2597.8	-38.53	107.19														70.00			8	27	47	3529.04	-33.80	131.60	255.62	84.79	9	26	36	2529.0	-32.42	102.95														80.00			9	7	34	3404.28	-28.91	121.49	254.97	82.21	10	4	19	2404.3	-29.23	94.07														90.00			10	15	38	3184.57	-26.98	105.03	254.65	81.20	11	8	42	2184.6	-27.96	78.07														100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86													
60.00			8	4	25	3597.85	-40.27	137.66	256.11	88.34	9	4	23	2597.8	-38.53	107.19														70.00			8	27	47	3529.04	-33.80	131.60	255.62	84.79	9	26	36	2529.0	-32.42	102.95														80.00			9	7	34	3404.28	-28.91	121.49	254.97	82.21	10	4	19	2404.3	-29.23	94.07														90.00			10	15	38	3184.57	-26.98	105.03	254.65	81.20	11	8	42	2184.6	-27.96	78.07														100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																											
70.00			8	27	47	3529.04	-33.80	131.60	255.62	84.79	9	26	36	2529.0	-32.42	102.95														80.00			9	7	34	3404.28	-28.91	121.49	254.97	82.21	10	4	19	2404.3	-29.23	94.07														90.00			10	15	38	3184.57	-26.98	105.03	254.65	81.20	11	8	42	2184.6	-27.96	78.07														100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																																																									
80.00			9	7	34	3404.28	-28.91	121.49	254.97	82.21	10	4	19	2404.3	-29.23	94.07														90.00			10	15	38	3184.57	-26.98	105.03	254.65	81.20	11	8	42	2184.6	-27.96	78.07														100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																																																																																							
90.00			10	15	38	3184.57	-26.98	105.03	254.65	81.20	11	8	42	2184.6	-27.96	78.07														100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																																																																																																																					
100.00			11	50	26	2878.75	-28.91	82.86	254.97	82.21	12	38	25	1878.7	-29.23	55.44														110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																																																																																																																																																			
110.00			13	27	13	2575.86	-33.80	60.52	255.62	84.79	14	10	9	1575.9	-32.42	31.86																																																																																																																																																																																																	

LAUNCH DATE SEP 3 1973 FLIGHT TIME 210.00 ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC DISTANCE 470.828 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.866 GAL 6.51 AZL 87.51 HCA 136.61 SMA 195.52 ECC .25348 INC 2.4910 V1 29.527  
 RP 243.74 LAP 1.71 LOP 116.99 VP 20.254 GAP 3.47 AZP 91.81 TAL 33.06 TAP 169.67 RCA 149.96 APO 245.08 V2 22.511  
 RC 267.212 GL 15.33 GP -21.28 ZAL 39.44 ZAP 85.62 ETS 180.07 ZAE 116.64 ETE 193.89 ZAC 66.68 ETC 285.31 LVI -.77

PLANETOCENTRIC CONIC  
 C3 26.811 VHL 5.368 DLA 20.84 RAL 9.59 RAD 6646.5 VEL 12.196 PTH 7.15 VHP 2.444 DPA -11.63 RAP 29.43 ECC 1.4742  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 31 3648.41 -47.54 141.99 256.40 92.09 8 48 17 2648.4 -41.17 109.11  
 60.00 8 1 55 3608.03 -40.23 138.52 256.39 87.76 9 2 3 2608.0 -36.74 107.97  
 70.00 8 24 24 3541.03 -33.72 132.59 255.82 84.21 9 23 26 2541.8 -32.59 103.91  
 80.00 9 3 9 3420.33 -28.76 122.66 255.10 81.61 10 0 10 2420.3 -29.35 95.25  
 90.00 10 10 38 3202.47 -26.79 106.31 254.75 80.59 11 4 1 2202.5 -28.05 79.37  
 100.00 11 46 1 2894.80 -28.76 84.03 255.10 81.61 12 34 16 1894.8 -29.35 56.62  
 110.00 13 23 50 2588.65 -33.72 61.51 255.82 84.21 14 6 59 1588.6 -32.59 32.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3306 TRA-1.9219 TC3-2.3434 BAU 1.1043 SGT 3357.3 SGR 1852.0 SG3 1567.6 ST 37.5 SR 15.5 SS 33.8  
 RDE -.2563 RRA -.4012 RC3-1.6519 FAU .51700 RRT .8948 RRF .9520 RTF .9168 CRT .8189 CRS .3638 CST -.2112  
 FDE 2.2779 FRA-5.8832 FC-15.5352 BSP 6227 SGB 3834.2 R23 .2006 R13 .9419 LSA 40.7 MSA 33.6 SSA 2.4  
 BDE .4183 BRA 1.9634 BC3 2.8671 FSP 2700 SG1 3762.6 SG2 737.7 THA 27.41 EL1 39.8 EL2 8.4 ALF 19.64

LAUNCH DATE SEP 3 1973 FLIGHT TIME 220.00 ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC DISTANCE 474.623 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.870 GAL 6.46 AZL 87.45 HCA 137.52 SMA 195.59 ECC .25340 INC 2.5502 V1 29.527  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.233 GAP 3.24 AZP 91.88 TAL 32.84 TAP 170.36 RCA 146.03 APO 245.15 V2 22.487  
 RC 269.924 GL 15.73 GP -21.60 ZAL 39.75 ZAP 84.37 ETS 179.54 ZAE 115.11 ETE 193.07 ZAC 66.46 ETC 285.35 LVI -.52

PLANETOCENTRIC CONIC  
 C3 28.741 VHL 5.361 DLA 21.28 RAL 9.60 RAD 6646.5 VEL 12.194 PTH 7.15 VHP 2.449 DPA -12.09 RAP 29.18 ECC 1.4730  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 45 36 3655.17 -47.56 142.83 256.81 91.44 8 46 32 2655.2 -41.43 109.79  
 60.00 7 59 19 3618.66 -40.22 139.42 256.68 87.15 8 59 38 2618.7 -36.96 108.79  
 70.00 8 20 51 3555.23 -33.62 133.62 256.02 83.60 9 20 6 2555.2 -32.75 104.92  
 80.00 8 58 29 3437.25 -28.59 123.89 255.22 80.99 9 55 46 2437.2 -29.46 96.50  
 90.00 10 5 20 3221.42 -26.57 107.65 254.84 79.95 10 59 1 2221.4 -28.12 80.75  
 100.00 11 41 21 2911.72 -28.59 85.26 255.22 80.99 12 29 52 1911.7 -29.46 57.86  
 110.00 13 20 18 2602.04 -33.62 62.54 256.02 83.60 14 3 40 1602.0 -32.75 33.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3149 TRA-1.9717 TC3-2.4559 BAU 1.1441 SGT 3487.2 SGR 1883.5 SG3 1562.3 ST 38.1 SR 14.7 SS 34.6  
 RDE -.2356 RRA -.4145 RC3-1.6834 FAU .51415 RRT .9002 RRF .9548 RTF .9200 CRT .8287 CRS .3366 CST -.2209  
 FDE 2.3685 FRA-5.8372 FC-15.4871 BSP 6473 SGB 3963.3 R23 .2016 R13 .9436 LSA 41.3 MSA 33.9 SSA 2.3  
 BDE .3933 BRA 2.0148 BC3 2.9774 FSP 2897 SG1 3894.7 SG2 734.3 THA 26.97 EL1 40.1 EL2 7.8 ALF 18.50

LAUNCH DATE SEP 3 1973 FLIGHT TIME 222.00 ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC DISTANCE 478.416 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.874 GAL 6.42 AZL 87.39 HCA 138.43 SMA 195.66 ECC .25334 INC 2.6114 V1 29.527  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.213 GAP 3.01 AZP 91.95 TAL 32.61 TAP 171.04 RCA 146.09 APO 245.23 V2 22.464  
 RC 272.618 GL 16.14 GP -21.93 ZAL 40.08 ZAP 83.16 ETS 179.01 ZAE 113.61 ETE 192.46 ZAC 66.24 ETC 285.40 LVI -.26

PLANETOCENTRIC CONIC  
 C3 28.677 VHL 5.355 DLA 21.73 RAL 9.62 RAD 6646.5 VEL 12.191 PTH 7.15 VHP 2.455 DPA -12.54 RAP 28.98 ECC 1.4719  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 37 3684.30 -47.57 143.72 257.23 90.76 8 44 41 2684.3 -41.70 110.50  
 60.00 7 56 35 3629.75 -40.18 140.36 256.99 86.51 8 57 5 2629.7 -37.18 109.65  
 70.00 8 17 7 3569.27 -33.51 134.70 256.22 82.97 9 16 37 2569.3 -32.92 105.90  
 80.00 8 53 31 3455.12 -28.39 125.18 255.35 80.34 9 51 7 2455.1 -29.56 97.81  
 90.00 9 59 41 3241.54 -26.33 109.07 254.93 79.28 10 53 42 2241.5 -28.19 82.22  
 100.00 11 36 23 2929.59 -28.39 86.55 255.35 80.34 12 25 13 1929.6 -29.56 59.18  
 110.00 13 16 34 2616.08 -33.51 63.62 256.22 82.97 14 0 10 1616.1 -32.92 34.90

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2981 TRA-2.0214 TC3-2.5882 BAU 1.1838 SGT 3617.7 SGR 1915.0 SG3 1555.1 ST 38.6 SR 13.9 SS 33.4  
 RDE -.2145 RRA -.4277 RC3-1.7145 FAU .51070 RRT .9051 RRF .9574 RTF .9228 CRT .8414 CRS .3018 CST -.2322  
 FDE 2.4582 FRA-5.7831 FC-15.4177 BSP 6718 SGB 4093.3 R23 .2028 R13 .9450 LSA 42.1 MSA 34.1 SSA 2.3  
 BDE .3872 BRA 2.0662 BC3 3.0879 FSP 2682 SG1 4027.5 SG2 731.2 THA 26.54 EL1 40.4 EL2 7.2 ALF 17.45

LAUNCH DATE SEP 3 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC DISTANCE 482.209 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.878 GAL 6.38 AZL 87.33 HCA 139.34 SMA 195.74 ECC .25329 INC 2.6747 V1 29.527  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.194 GAP 2.79 AZP 92.03 TAL 32.38 TAP 171.72 RCA 146.16 APO 245.31 V2 22.441  
 RC 275.292 GL 16.56 GP -22.26 ZAL 40.41 ZAP 81.98 ETS 178.46 ZAE 112.14 ETE 191.36 ZAC 66.00 ETC 285.44 LVI .01

PLANETOCENTRIC CONIC  
 C3 28.618 VHL 5.350 DLA 22.20 RAL 9.63 RAD 6646.5 VEL 12.189 PTH 7.15 VHP 2.463 DPA -12.99 RAP 28.78 ECC 1.4710  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 41 32 3673.82 -47.58 144.64 257.67 90.05 8 42 46 2673.8 -41.97 111.25  
 60.00 7 53 43 3641.33 -40.12 141.34 257.30 85.85 8 54 25 2641.3 -37.41 110.55  
 70.00 8 13 11 3584.01 -33.38 135.83 256.43 82.32 9 12 55 2584.0 -33.08 107.10  
 80.00 8 48 15 3474.04 -28.16 126.54 255.46 79.66 9 46 9 2474.0 -29.65 99.21  
 90.00 9 53 37 3262.99 -26.05 110.58 255.01 78.58 10 48 0 2263.0 -28.24 83.78  
 100.00 11 31 7 2948.52 -28.16 87.91 255.46 79.66 12 20 15 1948.5 -29.65 60.58  
 110.00 13 12 38 2630.82 -33.38 64.75 256.43 82.32 13 56 28 1630.8 -33.08 36.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2793 TRA-2.0712 TC3-2.6804 BAU 1.2237 SGT 3748.9 SGR 1946.5 SG3 1546.1 ST 39.2 SR 13.1 SS 36.3  
 RDE -.1923 RRA -.4407 RC3-1.7452 FAU .50670 RRT .9096 RRF .9599 RTF .9253 CRT .8575 CRS .2575 CST -.2446  
 FDE 2.5473 FRA-5.7220 FC-15.3266 BSP 6965 SGB 4224.1 R23 .2043 R13 .9463 LSA 42.9 MSA 34.3 SSA 2.2  
 BDE .3391 BRA 2.1176 BC3 3.1985 FSP 2665 SG1 4160.8 SG2 728.5 THA 26.14 EL1 40.8 EL2 6.5 ALF 16.47



LAUNCH DATE SEP 3 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC										DISTANCE 501.157										EARTH TO MARS																																													
RL	150.90	LAL	.00	LOL	340.35	VL	32.900	GAL	6.15	AZL	86.97	MCA	143.85	SMA	196.17	ECC	.25321	INC	3.0284	V1	29.527	RP	245.53	LAP	1.79	LOP	124.24	VP	20.113	GAP	1.68	AZP	92.45	TAL	31.17	TAP	175.02	RCA	146.50	APO	245.84	V2	22.334	RC	288.361	GL	18.91	GP	-24.06	ZAL	42.27	ZAP	76.56	ETS	175.64	ZAE	105.12	ETE	188.98	ZAC	64.60	ETC	285.66	LVI	1.57
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.424	VHL	5.331	DLA	24.78	RAL	9.64	RAD	6646.4	VEL	12.181	PTH	7.14	VHP	2.520	DPA	-15.22	RAP	26.17	ECC	1.4678	SGT	4406.1	SGR	2109.2	SG3	1477.3	ST	42.4	SR	10.2	SS	40.8	CR1	.9670	CRS	-.167	CST	-.3333	LSA	48.7	MSA	34.5	SSA	1.9																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	.9274	RRF	.9704	RTF	.9342	EL1	43.5	EL2	2.5	ALF	13.20																												
50.00	7	29	20	3728.20	-47.45	149.89	260.09	86.00	8	31	28	2728.2	-43.44	115.65	80.00	8	15	24	3589.68	-26.48	134.72	255.89	75.68	9	15	13	2589.7	-29.85	107.80	100.00	10	58	16	3064.16	-26.48	96.08	255.89	75.68	11	49	20	2064.2	-29.85	69.17																					

LAUNCH DATE SEP 3 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC										DISTANCE 504.943										EARTH TO MARS																																													
RL	150.90	LAL	.00	LOL	340.35	VL	32.906	GAL	6.10	AZL	86.89	HCA	144.75	SMA	196.27	ECC	.25322	INC	3.1079	V1	29.527	RP	245.73	LAP	1.79	LOP	125.14	VP	20.099	GAP	1.47	AZP	92.54	TAL	30.92	TAP	175.66	RCA	146.57	APO	245.97	V2	22.314	RC	290.907	GL	19.44	GP	-24.45	ZAL	42.67	ZAP	75.57	ETS	175.05	ZAE	103.79	ETE	188.42	ZAC	64.27	ETC	285.71	LVI	1.92
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.411	VHL	5.330	DLA	25.36	RAL	9.62	RAD	6646.4	VEL	12.180	PTH	7.14	VHP	2.535	DPA	-15.67	RAP	26.14	ECC	1.4676	SGT	4537.1	SGR	2143.2	SG3	1459.1	ST	43.2	SR	10.1	SS	41.7	CR1	.9797	CRS	-.2919	CST	-.3556	LSA	50.1	MSA	34.5	SSA	1.9																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	.9302	RRF	.9722	RTF	.9354	EL1	44.3	EL2	2.0	ALF	12.92																												
50.00	7	26	28	3740.66	-47.38	151.09	260.62	85.08	8	28	49	2740.7	-43.75	116.69	80.00	8	6	59	3618.66	-25.98	136.72	255.90	74.74	9	7	17	2618.7	-29.80	109.85	100.00	10	49	51	3093.14	-25.98	98.09	255.90	74.74	11	41	24	2093.1	-29.80	71.32																					

LAUNCH DATE SEP 3 1973

FLIGHT TIME 238.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC										DISTANCE 508.729										EARTH TO MARS																																													
RL	150.90	LAL	.00	LOL	340.35	VL	32.911	GAL	6.05	AZL	86.81	HCA	145.64	SMA	196.37	ECC	.25325	INC	3.1909	V1	29.527	RP	245.93	LAP	1.80	LOP	126.04	VP	20.086	GAP	1.25	AZP	92.64	TAL	30.66	TAP	176.30	RCA	146.64	APO	246.24	V2	22.295	RC	293.430	GL	19.99	GP	-24.85	ZAL	43.09	ZAP	74.62	ETS	174.45	ZAE	102.49	ETE	187.87	ZAC	63.92	ETC	285.76	LVI	2.30
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.407	VHL	5.330	DLA	25.95	RAL	9.60	RAD	6646.4	VEL	12.180	PTH	7.14	VHP	2.552	DPA	-16.12	RAP	26.13	ECC	1.4675	SGT	4667.7	SGR	2177.6	SG3	1439.2	ST	44.0	SR	10.1	SS	42.7	CR1	.9818	CRS	-.4196	CST	-.3791	LSA	51.7	MSA	34.4	SSA	1.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	.9328	RRF	.9739	RTF	.9364	EL1	45.1	EL2	1.9	ALF	12.78																												
50.00	7	23	25	3753.74	-47.30	152.34	261.17	84.12	8	25	59	2753.7	-44.08	117.79	80.00	8	5	59	3650.52	-25.39	138.90	255.88	73.75	8	58	29	2650.5	-29.70	112.31	100.00	10	40	31	3124.99	-25.39	100.27	255.88	73.75	11	32	36	2125.0	-29.70	73.68																					

LAUNCH DATE SEP 3 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC										DISTANCE 512.513										EARTH TO MARS																																													
RL	150.90	LAL	.00	LOL	340.35	VL	32.916	GAL	6.00	AZL	86.72	HCA	146.54	SMA	196.47	ECC	.25328	INC	3.2777	V1	29.527	RP	246.12	LAP	1.81	LOP	126.93	VP	20.075	GAP	1.04	AZP	92.74	TAL	30.40	TAP	176.93	RCA	146.71	APO	246.24	V2	22.276	RC	295.928	GL	20.56	GP	-25.28	ZAL	43.53	ZAP	73.71	ETS	173.84	ZAE	101.21	ETE	187.32	ZAC	63.55	ETC	285.82	LVI	2.69
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	28.416	VHL	5.331	DLA	26.56	RAL	9.58	RAD	6646.4	VEL	12.180	PTH	7.14	VHP	2.569	DPA	-16.57	RAP	26.16	ECC	1.4677	SGT	4798.2	SGR	2215.5	SG3	1418.4	ST	44.9	SR	10.5	SS	43.6	CR1	.9722	CRS	-.5388	CST	-.4038	LSA	53.4	MSA	34.4	SSA	1.8																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RR1	.9352	RRF	.9755	RTF	.9373	EL1	46.1	EL2	2.4	ALF	12.79																												
50.00	7	20	11	3767.48	-47.19	153.65	261.72	83.12	8	22	58	2767.5	-44.37	118.96	80.00	8	3	59	3685.99	-24.69	141.31	255.80	72.65	8	48	35	2686.0	-29.54	114.94	100.00	10	30	1	3160.46	-24.69	102.67	255.80	72.65	11	22	41	2160.5	-29.54	76.30																					

LAUNCH DATE SEP 3 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.922 GAL 5.96 AZL 86.63 HCA 147.43 SMA 186.58 ECC .25332 INC 3.3685 V1 29.527
RP 246.30 LAP 1.81 LOP 127.83 VP 20.063 GAP .83 AZP 92.84 TAL 30.13 TAP 177.58 RCA 146.78 APO 246.38 VE 22.258
RC 298.401 GL 21.15 GP -25.72 ZAL 43.98 ZAP 72.83 ETS 173.22 ZAE 99.96 ETE 186.77 ZAC 63.16 ETC 285.88 LVI 3.10

DISTANCE 516.297

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.437 VHL 5.333 DLA 27.20 RAL 9.52 RAD 8646.4 VEL 12.181 PTH 7.14 VHP 2.589 DPA -17.03 RAP 28.21 ECC 1.4680
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 16 43 3781.94 -47.07 155.03 262.29 82.07 8 19 45 2781.9 -44.69 120.21
60.00 7 19 16 3775.16 -38.87 152.49 260.36 78.39 8 22 11 2775.2 -39.42 121.34
70.00 7 23 51 3761.63 -30.97 149.10 258.07 74.83 8 26 32 2761.6 -34.14 120.83
80.00 7 35 8 3726.19 -23.85 143.99 255.64 71.48 8 37 14 2726.2 -29.29 117.90
90.00 8 19 41 3582.20 -20.00 131.96 254.18 69.58 9 19 23 2582.2 -26.65 106.91
100.00 10 18 0 3200.66 -23.85 105.36 255.64 71.48 11 11 20 2200.7 -29.29 79.26
110.00 12 23 17 2808.45 -30.97 78.02 258.07 74.83 13 10 6 1808.5 -34.14 49.75

DIFFERENTIAL CORRECTIONS

TDE -.0307 TRA-2.5131 TC3-3.6407 BAU 1.5810
RDE .0444 RRA -.3668 RC3-2.0097 FAU .44923
FDE 3.2866 FRA-4.9669 FC-13.6764 BSP 9193
BDE .0339 BRA 2.5762 BC3 4.1586 FSP 2385

MID-COURSE EXECUTION ACCURACY

SGT 4928.9 SGR 2250.6 SG3 1396.4
RRR .9375 RRF .9770 RTF .9381
SCB 5418.4 R23 .2250 R13 .9529
SG1 5370.5 SG2 718.8 THA 23.62

ORBIT DETERMINATION ACCURACY

ST 45.9 SR 11.0 SS 44.6
CRT .9529 CR8 -.6441 CST -.4296
LSA 55.2 MSA 34.3 SSA 1.7
EL1 47.1 EL2 3.3 ALF 12.94

LAUNCH DATE SEP 3 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.927 GAL 5.91 AZL 86.54 HCA 148.32 SMA 196.69 ECC .25338 INC 3.4637 V1 29.527
RP 246.48 LAP 1.82 LOP 128.72 VP 20.053 GAP .82 AZP 92.95 TAL 29.86 TAP 178.18 RCA 146.85 APO 246.52 VE 22.241
RC 300.850 GL 21.77 GP -26.17 ZAL 44.44 ZAP 71.99 ETS 172.59 ZAE 98.74 ETE 186.22 ZAC 62.75 ETC 285.94 LVI 3.54

DISTANCE 520.079

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.472 VHL 5.336 DLA 27.86 RAL 9.47 RAD 8646.4 VEL 12.183 PTH 7.14 VHP 2.609 DPA -17.49 RAP 28.30 ECC 1.4686
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 13 1 3797.18 -46.91 158.47 262.87 80.97 8 18 18 2797.2 -45.01 121.54
60.00 7 14 2 3794.47 -38.59 154.05 260.70 77.36 8 17 17 2794.5 -39.62 122.94
70.00 7 15 55 3788.91 -30.47 151.07 258.16 73.76 8 19 4 2788.9 -34.13 122.96
80.00 7 20 58 3773.05 -22.80 147.08 255.37 70.18 8 23 51 2773.1 -28.90 121.32
90.00 7 33 44 3667.08 -17.89 137.30 253.36 67.73 8 34 51 2667.1 -25.52 112.87
100.00 10 3 50 3247.32 -22.80 108.45 255.37 70.18 10 57 57 2247.5 -28.90 82.69
110.00 12 15 21 2835.73 -30.47 79.99 258.16 73.76 13 2 37 1835.7 -34.13 51.88

DIFFERENTIAL CORRECTIONS

TDE .0076 TRA-2.5617 TC3-3.7378 BAU 1.6205
RDE .0761 RRA -.5829 RC3-2.0379 FAU .44082
FDE 3.3595 FRA-4.8675 FC-13.4038 BSP 9440
BDE .0765 BRA 2.6271 BC3 4.2573 FSP 2342

MID-COURSE EXECUTION ACCURACY

SGT 5058.7 SGR 2288.6 SG3 1373.1
RRR .9396 RRF .9785 RTF .9388
SCB 5522.4 R23 .2279 R13 .9533
SG1 5505.5 SG2 719.7 THA 23.45

ORBIT DETERMINATION ACCURACY

ST 47.1 SR 11.0 SS 45.6
CRT .9278 CR8 -.7310 CST -.4863
LSA 57.1 MSA 34.2 SSA 1.6
EL1 48.3 EL2 4.3 ALF 13.25

LAUNCH DATE SEP 3 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.933 GAL 5.88 AZL 86.44 HCA 149.21 SMA 196.80 ECC .25343 INC 3.5636 V1 29.527
RP 246.65 LAP 1.82 LOP 129.61 VP 20.044 GAP .81 AZP 93.06 TAL 29.59 TAP 178.80 RCA 146.92 APO 246.67 VE 22.224
RC 303.274 GL 22.41 GP -26.65 ZAL 44.92 ZAP 71.18 ETS 171.94 ZAE 97.55 ETE 185.67 ZAC 62.31 ETC 286.01 LVI 4.00

DISTANCE 523.861

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.523 VHL 5.341 DLA 28.54 RAL 9.40 RAD 8646.4 VEL 12.185 PTH 7.14 VHP 2.631 DPA -17.97 RAP 28.42 ECC 1.4694
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 9 3 3813.27 -46.73 157.98 263.45 79.81 8 12 37 2813.3 -45.33 122.96
60.00 7 8 24 3815.00 -38.27 155.71 261.03 76.28 8 11 59 2815.0 -39.80 124.66
70.00 7 7 10 3818.64 -29.88 153.19 258.21 72.64 8 10 49 2818.6 -34.12 125.20
80.00 7 3 26 3830.41 -21.43 150.79 254.92 68.69 8 7 16 2830.4 -28.30 125.48
85.97 6 38 30 3916.28 -14.21 153.86 251.68 64.98 7 42 6 2916.3 -23.31 130.48
100.00 9 46 18 3304.88 -21.43 112.15 254.92 68.69 10 41 23 2304.9 -28.30 86.85
110.00 12 6 37 2868.45 -29.88 82.10 260.21 72.64 12 54 22 1868.9 -34.12 94.20

DIFFERENTIAL CORRECTIONS

TDE .0475 TRA-2.6105 TC3-3.8328 BAU 1.6803
RDE .1091 RRA -.5896 RC3-2.0882 FAU .43212
FDE 3.4289 FRA-4.7648 FC-13.1159 BSP 9680
BDE .1180 BRA 2.6788 BC3 4.3341 FSP 2296

MID-COURSE EXECUTION ACCURACY

SGT 3189.0 SGR 2328.2 SG3 1348.7
RRR .9416 RRF .9798 RTF .5394
SCB 5687.3 R23 .2308 R13 .9536
SG1 5641.4 SG2 721.3 THA 23.31

ORBIT DETERMINATION ACCURACY

ST 48.3 SR 12.9 SS 46.8
CRT .9014 CR8 -.7988 CST -.4829
LSA 59.2 MSA 34.1 SSA 1.6
EL1 49.7 EL2 5.4 ALF 13.69

LAUNCH DATE SEP 3 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 32.939 GAL 5.80 AZL 86.33 HCA 150.10 SMA 196.91 ECC .25350 INC 3.6688 V1 29.527
RP 248.82 LAP 1.83 LOP 130.50 VP 20.035 GAP .80 AZP 93.18 TAL 29.32 TAP 179.42 RCA 146.99 APO 246.83 VE 22.207
RC 305.873 GL 23.09 GP -27.15 ZAL 45.42 ZAP 70.41 ETS 171.28 ZAE 96.39 ETE 185.11 ZAC 61.84 ETC 286.08 LVI 4.48

DISTANCE 527.641

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 28.591 VHL 5.347 DLA 29.25 RAL 9.31 RAD 8646.5 VEL 12.188 PTH 7.15 VHP 2.655 DPA -18.45 RAP 28.57 ECC 1.4705
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 4 48 3830.28 -46.52 159.58 264.04 78.61 8 8 38 2830.3 -45.64 124.48
60.00 7 2 19 3836.91 -37.90 157.45 261.33 75.14 8 6 16 2836.9 -39.98 126.50
70.00 6 57 26 3851.31 -29.20 155.48 258.20 71.44 8 1 37 2851.3 -34.03 127.83
80.00 6 39 8 3908.94 -19.40 155.74 254.11 66.85 7 44 17 2908.9 -27.24 131.08
82.18 6 5 45 4016.03 -14.52 161.34 251.80 64.32 7 12 41 3016.0 -23.86 137.99
100.00 9 22 0 3363.41 -19.40 117.11 254.11 66.85 10 18 24 2363.4 -27.24 92.44
110.00 11 56 53 2898.12 -29.20 84.40 258.20 71.44 12 45 11 1898.1 -34.03 58.75

DIFFERENTIAL CORRECTIONS

TDE .0910 TRA-2.6584 TC3-3.9226 BAU 1.6995
RDE .1440 RRA -.6165 RC3-2.0933 FAU .42287
FDE 3.4977 FRA-4.6570 FC-12.8047 BSP 9937
BDE .1704 BRA 2.7289 BC3 4.4483 FSP 2252

MID-COURSE EXECUTION ACCURACY

SGT 5318.7 SGR 2368.2 SG3 1322.4
RRR .9434 RRF .9811 RTF .9309
SCB 5820.3 R23 .2341 R13 .9538
SG1 5775.1 SG2 723.3 THA 23.18

ORBIT DETERMINATION ACCURACY

ST 49.6 SR 14.1 SS 47.5
CRT .8768 CR8 -.8503 CST -.5104
LSA 61.4 MSA 33.9 SSA 1.5
EL1 51.2 EL2 6.6 ALF 14.27

LAUNCH DATE SEP 3 1973

FLIGHT TIME 290.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC

DISTANCE 531.414

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.945 GAL 5.75 AZL 86.22 HCA 190.99 SMA 197.02 ECC .25357 INC 3.7797 V1 29.527
RP 246.98 LAP 1.83 LOP 131.39 VP 20.027 GAP -.01 AZP 93.31 TAL 29.04 TAP 180.03 RCA 147.06 APO 246.98 V2 22.191
RC 308.047 GL 23.80 GP -27.67 ZAL 45.93 ZAP 69.68 ETS 170.61 ZAE 95.25 ETE 184.96 ZAC 61.35 ETC 286.16 LVI 4.99

PLANETOCENTRIC CONIC

C3 28.678 VHL 5.368 DLA 30.00 RAL 9.21 RAD 6646.5 VEL 12.191 PTH 7.15 VHP 2.680 DPA -18.95 RAP 28.78 ECC 1.4720
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 0 13 3848.31 -46.28 161.23 264.63 77.35 8 4 21 2848.3 -45.95 126.10
60.00 6 55 42 3860.35 -37.48 159.30 261.62 73.95 8 0 2 2860.4 -40.10 128.48
70.00 6 46 27 3867.64 -28.38 158.00 258.11 70.15 7 51 15 2867.6 -33.85 130.65
79.56 5 45 3 4081.79 -14.84 166.38 251.92 63.63 6 53 5 3081.8 -24.43 143.06
79.56 5 45 3 4081.79 -14.84 166.38 251.92 63.63 6 53 5 3081.8 -24.43 143.06
79.56 5 45 3 4081.79 -14.84 166.38 251.92 63.63 6 53 5 3081.8 -24.43 143.06
110.00 11 45 54 2934.46 -28.38 86.91 258.11 70.15 12 34 48 1934.5 -33.85 59.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1364 TRA-2.7074 TC3-4.0098 BAU 1.7392 SGT 3445.3 SGR 2411.0 SG3 1295.6 ST 51.1 SR 15.6 SS 48.8
RDE .1801 RRA -.6351 RC3-2.1209 FAU .41347 RRT .9451 RRF .9823 RTF .9403 CRT .8571 CRS -.8879 CST -.5378
FDE 3.5602 FRA-4.5528 FC-12.4817 BSP 10182 SGB 5955.2 R23 .2371 R13 .9540 LSA 63.7 MSA 33.8 SSA 1.4
BDE .2259 BRA 2.7809 BC3 4.5361 FSP 2202 SGI 5910.8 SG2 725.8 THA 23.08 EL1 52.9 EL2 7.6 ALF 14.98

LAUNCH DATE SEP 3 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 535.201

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.951 GAL 5.70 AZL 86.10 HCA 151.87 SMA 197.14 ECC .25366 INC 3.8967 V1 29.527
RP 247.14 LAP 1.84 LOP 132.28 VP 20.020 GAP -.22 AZP 93.44 TAL 28.76 TAP 180.64 RCA 147.13 APO 247.14 V2 22.178
RC 310.395 GL 24.54 GP -28.22 ZAL 46.47 ZAP 68.99 ETS 169.92 ZAE 94.14 ETE 184.00 ZAC 60.83 ETC 286.24 LVI 5.53

PLANETOCENTRIC CONIC

C3 28.789 VHL 5.366 DLA 30.77 RAL 9.09 RAD 6646.5 VEL 12.196 PTH 7.15 VHP 2.707 DPA -19.46 RAP 28.96 ECC 1.4738
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 55 15 3867.42 -45.96 162.97 265.22 76.03 7 59 43 2867.4 -46.25 127.85
60.00 6 48 28 3885.52 -36.99 161.25 261.87 72.71 7 53 14 2885.5 -40.21 130.61
70.00 6 33 52 3928.69 -27.40 160.78 257.92 68.77 7 39 20 2928.7 -33.57 133.82
77.35 5 28 13 4134.68 -15.16 170.50 252.04 62.90 6 37 8 3134.7 -25.01 147.22
77.35 5 28 13 4134.68 -15.16 170.50 252.04 62.90 6 37 8 3134.7 -25.01 147.22
77.35 5 28 13 4134.68 -15.16 170.50 252.04 62.90 6 37 8 3134.7 -25.01 147.22
110.00 11 33 18 2975.51 -27.40 89.70 257.92 68.77 12 22 53 1975.5 -33.57 62.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1757 TRA-2.7840 TC3-4.1031 BAU 1.7852 SGT 5587.8 SGR 2473.9 SG3 1276.9 ST 52.6 SR 17.0 SS 48.7
RDE .2074 RRA -.6652 RC3-2.1630 FAU .40704 RRT .9478 RRF .9838 RTF .9425 CRT .8541 CRS -.9075 CST -.5680
FDE 3.5902 FRA-4.5172 FC-12.2402 BSP 10270 SGB 6110.8 R23 .2353 R13 .9557 LSA 65.9 MSA 33.3 SSA 1.4
BDE .2718 BRA 2.8429 BC3 4.6383 FSP 2074 SGI 6067.4 SG2 726.5 THA 23.12 EL1 54.8 EL2 8.5 ALF 15.76

LAUNCH DATE SEP 3 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

DISTANCE 538.978

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.957 GAL 5.65 AZL 85.90 HCA 152.76 SMA 197.26 ECC .25375 INC 4.0207 V1 29.527
RP 247.29 LAP 1.84 LOP 133.17 VP 20.014 GAP -.42 AZP 93.58 TAL 28.48 TAP 181.24 RCA 147.21 APO 247.31 V2 22.161
RC 312.717 GL 25.31 GP -28.80 ZAL 47.02 ZAP 68.34 ETS 169.21 ZAE 93.07 ETE 183.43 ZAC 60.27 ETC 286.33 LVI 6.10

PLANETOCENTRIC CONIC

C3 28.923 VHL 5.378 DLA 31.57 RAL 8.95 RAD 6646.6 VEL 12.201 PTH 7.16 VHP 2.736 DPA -19.98 RAP 29.22 ECC 1.4760
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 49 53 3887.78 -45.61 164.81 265.79 74.66 7 54 41 2887.8 -46.54 129.73
60.00 6 40 32 3912.74 -36.42 163.34 262.08 71.39 7 45 45 2912.7 -40.28 132.92
70.00 6 19 0 3976.40 -26.19 163.96 257.57 67.25 7 25 16 2976.4 -33.14 137.48
75.35 5 13 31 4180.36 -15.49 174.12 252.17 62.14 6 23 12 3180.4 -25.62 150.89
75.35 5 13 31 4180.36 -15.49 174.12 252.17 62.14 6 23 12 3180.4 -25.62 150.89
75.35 5 13 31 4180.36 -15.49 174.12 252.17 62.14 6 23 12 3180.4 -25.62 150.89
110.00 11 18 26 3023.22 -26.19 92.88 257.57 67.25 12 8 50 2023.2 -33.14 66.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2292 TRA-2.8108 TC3-4.1782 BAU 1.8233 SGT 3710.5 SGR 2814.9 SG3 1244.6 ST 54.5 SR 18.8 SS 49.8
RDE .2502 RRA -.6828 RC3-2.1853 FAU .39591 RRT .9490 RRF .9847 RTF .523 CRT .8398 CRS -.9315 CST -.5858
FDE 3.6268 FRA-4.3872 FC-11.8905 BSP 10560 SGB 8239.8 R23 .2397 R13 .9554 LSA 68.6 MSA 33.2 SSA 1.3
BDE .3393 BRA 2.8926 BC3 4.7152 FSP 2043 SGI 6196.9 SG2 730.5 THA 23.02 EL1 56.9 EL2 9.8 ALF 16.67

LAUNCH DATE SEP 3 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

DISTANCE 542.754

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.963 GAL 5.60 AZL 85.85 HCA 153.84 SMA 197.38 ECC .25384 INC 4.1520 V1 29.527
RP 247.44 LAP 1.84 LOP 134.06 VP 20.008 GAP -.62 AZP 93.72 TAL 28.19 TAP 181.84 RCA 147.28 APO 247.48 V2 22.147
RC 315.013 GL 26.13 GP -29.40 ZAL 47.60 ZAP 67.73 ETS 168.49 ZAE 92.03 ETE 182.87 ZAC 59.68 ETC 286.43 LVI 6.70

PLANETOCENTRIC CONIC

C3 29.085 VHL 5.393 DLA 32.41 RAL 8.78 RAD 6646.6 VEL 12.208 PTH 7.16 VHP 2.767 DPA -20.53 RAP 29.50 ECC 1.4787
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 44 2 3909.50 -45.20 166.75 266.35 73.21 7 49 12 2909.5 -46.81 131.76
60.00 6 31 45 3942.29 -35.75 165.57 262.23 70.01 7 37 27 2942.3 -40.30 135.44
70.00 6 0 41 4034.25 -24.61 167.71 256.97 65.53 7 7 55 3034.3 -32.45 141.85
73.47 5 0 11 4221.34 -15.82 177.42 252.29 61.34 6 10 32 3221.3 -26.23 154.26
73.47 5 0 11 4221.34 -15.82 177.42 252.29 61.34 6 10 32 3221.3 -26.23 154.26
73.47 5 0 11 4221.34 -15.82 177.42 252.29 61.34 6 10 32 3221.3 -26.23 154.26
110.00 11 0 8 3081.07 -24.61 96.63 256.97 65.53 11 51 29 2081.1 -32.45 70.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2844 TRA-2.8590 TC3-4.2492 BAU 1.8620 SGT 5834.5 SGR 2559.4 SG3 1211.7 ST 56.5 SR 20.8 SS 50.9
RDE .2944 RRA -.7024 RC3-2.2079 FAU .38469 RRT .9502 RRF .9857 RTF .9420 CRT .8310 CRS -.9483 CST -.6185
FDE 3.6934 FRA-4.2614 FC-11.4505 BSP 10831 SGB 6371.1 R23 .2438 R13 .9552 LSA 71.5 MSA 33.2 SSA 1.2
BDE .4093 BRA 2.9440 BC3 4.7886 FSP 2003 SGI 6328.6 SG2 735.1 THA 22.96 EL1 59.2 EL2 11.1 ALF 17.67

LAUNCH DATE SEP 3 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

DISTANCE 546.528

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.970 GAL 5.84 AZL 85.71 HCA 154.83 SMA 197.80 ECC .25394 INC 4.2917 V1 29.527
RP 247.58 LAP 1.84 LOP 134.94 VP 20.003 GAP -.83 AZP 93.88 TAL 27.91 TAP 182.43 RCA 147.35 APO 247.66 V2 22.133
RC 317.282 GL 26.99 GP -30.04 ZAL 48.19 ZAP 67.16 ETS 167.75 ZAE 81.01 ETE 182.29 ZAC 59.06 ETC 266.54 LVI 7.34

PLANETOCENTRIC CONIC

C3 29.279 VHL 5.411 DLA 33.28 RAL 8.58 RAD 6646.7 VEL 12.216 PTH 7.17 VHP 2.800 DPA -21.09 RAP 29.83 ECC 1.4819
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 37 39 3932.73 -44.72 168.78 266.88 71.71 7 43 12 2932.7 -47.05 133.95
60.00 6 21 58 3974.62 -34.97 167.95 262.30 68.55 7 28 13 2974.6 -40.25 138.19
70.00 5 35 50 4111.48 -22.34 172.56 255.91 63.47 6 44 21 3111.5 -31.27 147.56
71.67 4 47 50 4258.76 -16.15 180.49 252.43 60.50 5 58 49 3258.8 -26.87 157.39
71.67 4 47 50 4258.76 -16.15 180.49 252.43 60.50 5 58 49 3258.8 -26.87 157.39
71.67 4 47 50 4258.76 -16.15 180.49 252.43 60.50 5 58 49 3258.8 -26.87 157.39
110.00 10 35 16 3158.30 -22.34 101.48 255.91 63.47 11 27 54 2158.3 -31.27 76.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3423 TRA-2.9080 TC3-4.3155 BAU 1.9016 SGT 5959.0 SGR 2607.6 SG3 1178.5 ST 58.6 SR 23.0 SS 51.9
RDE .3404 RRA -.7242 RC3-2.2308 FAU .37341 RRT .9514 RRF .9865 RTF .9419 CRT .6270 CR8 -.9602 CST -.6428
FDE 3.7516 FRA-4.1394 FC-11.0410 B8P 11089 SGB 6504.6 R23 .2477 R13 .9550 LSA 74.5 MSA 33.1 SQA 1.2
BDE .4828 BRA 2.9968 BC3 4.8580 F8P 1956 SG1 6462.3 SG2 740.2 THA 22.92 EL1 61.7 EL2 12.3 ALF 18.73

LAUNCH DATE SEP 3 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

DISTANCE 550.302

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.976 GAL 5.49 AZL 85.56 HCA 155.41 SMA 197.83 ECC .25405 INC 4.4406 V1 29.527
RP 247.71 LAP 1.85 LOP 135.83 VP 19.999 GAP -1.03 AZP 94.04 TAL 27.81 TAP 183.02 RCA 147.42 APO 247.83 V2 22.120
RC 319.322 GL 27.89 GP -30.72 ZAL 48.82 ZAP 68.65 ETS 167.00 ZAE 90.04 ETE 181.70 ZAC 58.39 ETC 286.66 LVI 8.01

PLANETOCENTRIC CONIC

C3 29.509 VHL 5.432 DLA 34.20 RAL 8.35 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 2.635 DPA -21.68 RAP 30.19 ECC 1.4856
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 30 39 3957.68 -44.17 170.92 267.37 70.13 7 36 36 2957.7 -47.26 136.32
60.00 6 10 57 4010.29 -34.05 170.53 262.28 67.00 7 17 47 3010.3 -40.11 141.21
69.92 4 36 11 4293.62 -16.48 183.40 252.56 59.61 5 47 44 3293.6 -27.53 160.38
69.92 4 36 11 4293.62 -16.48 183.40 252.56 59.61 5 47 44 3293.6 -27.53 160.38
69.92 4 36 11 4293.62 -16.48 183.40 252.56 59.61 5 47 44 3293.6 -27.53 160.38
69.92 4 36 11 4293.62 -16.48 183.40 252.56 59.61 5 47 44 3293.6 -27.53 160.38
69.92 4 36 11 4293.62 -16.48 183.40 252.56 59.61 5 47 44 3293.6 -27.53 160.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4031 TRA-2.9587 TC3-4.3742 BAU 1.9411 SGT 6081.2 SGR 2658.3 SG3 1143.8 ST 60.8 SR 25.3 SS 52.8
RDE .3886 RRA -.7473 RC3-2.2528 FAU .36180 RRT .9526 RRF .9873 RTF .9417 CRT .8268 CR8 -.9689 CST -.6682
FDE 3.8008 FRA-4.0154 FC-10.6145 B8P 11361 SGB 6636.9 R23 .2513 R13 .9548 LSA 77.7 MSA 33.0 SQA 1.1
BDE .5599 BRA 3.0497 BC3 4.9202 F8P 1907 SG1 6594.8 SG2 746.1 THA 22.92 EL1 64.5 EL2 13.4 ALF 19.83

LAUNCH DATE SEP 3 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

DISTANCE 554.075

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.38 VL 32.982 GAL 5.44 AZL 85.40 HCA 156.29 SMA 197.78 ECC .25416 INC 4.5996 V1 29.527
RP 247.84 LAP 1.85 LOP 136.71 VP 19.998 GAP -1.23 AZP 94.21 TAL 27.32 TAP 183.61 RCA 147.49 APO 248.01 V2 22.107
RC 321.734 GL 28.85 GP -31.43 ZAL 49.47 ZAP 66.17 ETS 166.22 ZAE 89.09 ETE 181.11 ZAC 57.69 ETC 286.79 LVI 8.73

PLANETOCENTRIC CONIC

C3 29.781 VHL 5.457 DLA 35.15 RAL 8.09 RAD 6646.9 VEL 12.236 PTH 7.19 VHP 2.874 DPA -22.29 RAP 30.60 ECC 1.4901
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 22 55 3984.51 -43.92 173.18 267.81 68.49 7 29 20 2984.5 -47.43 138.90
60.00 5 58 22 4050.14 -32.96 173.34 262.09 65.36 7 5 53 3050.1 -39.86 144.57
66.19 4 25 0 4326.53 -16.82 186.19 252.60 58.66 5 37 7 3326.5 -28.20 163.27
66.19 4 25 0 4326.53 -16.82 186.19 252.60 58.66 5 37 7 3326.5 -28.20 163.27
66.19 4 25 0 4326.53 -16.82 186.19 252.60 58.66 5 37 7 3326.5 -28.20 163.27
66.19 4 25 0 4326.53 -16.82 186.19 252.60 58.66 5 37 7 3326.5 -28.20 163.27
66.19 4 25 0 4326.53 -16.82 186.19 252.60 58.66 5 37 7 3326.5 -28.20 163.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4882 TRA-3.0582 TC3-4.4247 BAU 1.9805 SGT 6202.0 SGR 2711.3 SG3 1107.8 ST 63.3 SR 27.7 SS 53.7
RDE .4404 RRA -.7724 RC3-2.2729 FAU .34975 RRT .9538 RRF .9880 RTF .9414 CRT .8292 CR8 -.9753 CST -.6889
FDE 3.8479 FRA-3.8915 FC-10.1673 B8P 11636 SGB 6768.8 R23 .2583 R13 .9545 LSA 81.1 MSA 32.9 SQA 1.0
BDE .6428 BRA 3.1036 BC3 4.9743 F8P 1855 SG1 6726.9 SG2 752.5 THA 22.93 EL1 67.6 EL2 14.5 ALF 20.98

LAUNCH DATE SEP 3 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC

DISTANCE 557.847

EARTH TO MARS

RL 150.90 LAL .00 LOL 340.35 VL 32.989 GAL 5.38 AZL 85.23 HCA 157.17 SMA 197.88 ECC .25428 INC 4.7689 V1 29.527
RP 247.97 LAP 1.85 LOP 137.59 VP 19.993 GAP -1.43 AZP 94.40 TAL 27.03 TAP 184.20 RCA 147.56 APO 248.19 V2 22.095
RC 323.917 GL 29.86 GP -32.18 ZAL 50.14 ZAP 65.75 ETS 165.43 ZAE 88.18 ETE 180.50 ZAC 56.93 ETC 286.93 LVI 8.49

PLANETOCENTRIC CONIC

C3 30.100 VHL 5.488 DLA 36.15 RAL 7.77 RAD 6647.0 VEL 12.249 PTH 7.20 VHP 2.915 DPA -22.92 RAP 31.04 ECC 1.4954
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 14 22 4013.55 -42.77 175.57 268.17 68.78 7 21 18 3013.6 -47.54 141.70
60.00 5 43 45 4095.47 -31.63 176.45 261.72 63.60 6 52 0 3095.5 -39.44 148.35
66.47 4 14 12 4357.81 -17.15 188.90 252.81 57.87 5 26 80 3357.8 -28.89 168.08
66.47 4 14 12 4357.81 -17.15 188.90 252.81 57.87 5 26 80 3357.8 -28.89 168.08
66.47 4 14 12 4357.81 -17.15 188.90 252.81 57.87 5 26 80 3357.8 -28.89 168.08
66.47 4 14 12 4357.81 -17.15 188.90 252.81 57.87 5 26 80 3357.8 -28.89 168.08
66.47 4 14 12 4357.81 -17.15 188.90 252.81 57.87 5 26 80 3357.8 -28.89 168.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5329 TRA-3.0588 TC3-4.4703 BAU 2.0219 SGT 6328.3 SGR 2770.0 SG3 1071.8 ST 66.0 SR 30.3 SS 54.4
RDE .4934 RRA -.8011 RC3-2.2936 FAU .33771 RRT .9547 RRF .9887 RTF .9412 CRT .8335 CR8 -.9798 CST -.7091
FDE 3.8779 FRA-3.7742 FC3-9.7132 B8P 11873 SGB 6906.2 R23 .2587 R13 .9543 LSA 84.5 MSA 32.9 SQA 1.0
BDE .7282 BRA 3.1620 BC3 5.0244 F8P 1793 SG1 6864.3 SG2 759.3 THA 22.98 EL1 70.9 EL2 15.6 ALF 22.08



LAUNCH DATE SEP 3 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC DISTANCE 961.618 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 32.996 GAL 5.33 AZL 85.05 MCA 186.08 SMA 198.01 ECC .25441 INC 4.9830 V1 29.527  
 RP 248.09 LAP 1.85 LOP 138.48 VP 19.991 GAP -1.63 AZP 94.60 TAL 26.73 TAP 184.78 RCA 147.63 APO 248.38 V2 22.084  
 RC 328.089 GL 30.92 GP -32.88 ZAL 50.85 ZAP 65.38 ETS 164.62 ZAE 87.31 ETE 179.89 ZAC 56.13 ETC 287.09 LVI 10.29

PLANETOCENTRIC CONIC  
 C3 30.474 VHL 5.920 DLA 37.20 RAL 7.41 RAD 6647.2 VEL 12.264 PTH 7.21 VHP 2.960 DPA -23.59 RAP 31.94 ECC 1.5018  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 4 49 4048.12 -41.89 178.09 268.43 84.99 7 12 14 3048.1 -47.58 144.75  
 60.00 5 28 15 4140.44 -29.97 179.96 261.06 61.69 6 35 23 3148.4 -38.78 152.70  
 64.75 4 3 39 4387.82 -17.47 191.54 252.93 56.62 5 16 46 3387.8 -29.60 168.85  
 64.75 4 3 39 4387.82 -17.47 191.54 252.93 56.62 5 16 46 3387.8 -29.60 168.85  
 64.75 4 3 39 4387.82 -17.47 191.54 252.93 56.62 5 16 46 3387.8 -29.60 168.85  
 64.75 4 3 39 4387.82 -17.47 191.54 252.93 56.62 5 16 46 3387.8 -29.60 168.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6025 TRA-3.1109 TC3-4.5045 BAU 2.0627 SGT 6446.5 SGR 2830.6 S63 1033.3 ST 68.8 SR 33.1 S8 55.1  
 RDE .5506 RRA -.8314 RC3-2.3113 FAU .32508 RRT .9558 RRF .9893 RTF .9408 CRT .8392 CR8 -.9833 CST -.7284  
 FDE 3.9037 FRA-3.6519 FC3-9.2353 B8P 12134 SGB 7040.5 R23 .2622 R13 .9541 LSA 88.2 MSA 32.8 S3A .9  
 BDE .8162 BRA 3.2201 BC3 5.0629 F8P 1732 SG1 6998.7 S62 766.8 THA 23.06 EL1 74.5 EL2 16.6 ALF 23.21

LAUNCH DATE SEP 3 1973 FLIGHT TIME 266.00 ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC DISTANCE 565.388 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.002 GAL 5.27 AZL 84.85 MCA 186.92 SMA 198.13 ECC .25454 INC 5.1505 V1 29.527  
 RP 248.20 LAP 1.85 LOP 139.36 VP 19.990 GAP -1.82 AZP 94.61 TAL 26.43 TAP 185.35 RCA 147.70 APO 248.57 V2 22.073  
 RC 328.191 GL 32.05 GP -33.82 ZAL 51.59 ZAP 65.07 ETS 163.79 ZAE 86.48 ETE 179.26 ZAC 55.28 ETC 287.26 LVI 11.15

PLANETOCENTRIC CONIC  
 C3 30.912 VHL 5.560 DLA 38.30 RAL 6.99 RAD 6647.4 VEL 12.282 PTH 7.22 VHP 3.009 DPA -24.29 RAP 32.07 ECC 1.5087  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 54 4 4079.66 -40.86 180.76 268.55 63.13 7 2 4 3079.7 -47.51 148.09  
 60.00 5 4 11 4213.53 -27.79 184.09 259.94 59.56 6 14 25 3213.5 -37.74 157.91  
 63.02 3 53 13 4416.89 -17.79 194.14 253.05 55.50 5 6 50 3416.9 -30.31 171.60  
 63.02 3 53 13 4416.89 -17.79 194.14 253.05 55.50 5 6 50 3416.9 -30.31 171.60  
 63.02 3 53 13 4416.89 -17.79 194.14 253.05 55.50 5 6 50 3416.9 -30.31 171.60  
 63.02 3 53 13 4416.89 -17.79 194.14 253.05 55.50 5 6 50 3416.9 -30.31 171.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6753 TRA-3.1643 TC3-4.5288 BAU 2.1042 SGT 6565.6 SGR 2895.8 S63 993.9 ST 71.8 SR 36.0 S8 55.7  
 RDE .6115 RRA -.8651 RC3-2.3275 FAU .31220 RRT .9568 RRF .9898 RTF .9405 CRT .8459 CR8 -.9859 CST -.7465  
 FDE 3.9200 FRA-3.5304 FC3-8.7435 B8P 12388 SGB 7175.9 R23 .2655 R13 .9538 LSA 92.1 MSA 32.7 S3A .9  
 BDE .9110 BRA 3.2804 BC3 5.0917 F8P 1864 SG1 7133.9 S62 774.9 THA 23.17 EL1 78.4 EL2 17.6 ALF 24.31

LAUNCH DATE SEP 3 1973 FLIGHT TIME 270.00 ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC DISTANCE 569.157 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.009 GAL 5.22 AZL 84.64 MCA 159.80 SMA 198.26 ECC .25468 INC 5.3639 V1 29.527  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.990 GAP -2.02 AZP 95.04 TAL 26.13 TAP 185.93 RCA 147.77 APO 248.76 V2 22.062  
 RC 330.283 GL 33.24 GP -34.72 ZAL 52.37 ZAP 64.81 ETS 162.94 ZAE 85.69 ETE 178.62 ZAC 54.38 ETC 287.46 LVI 12.08

PLANETOCENTRIC CONIC  
 C3 31.428 VHL 5.808 DLA 39.45 RAL 6.51 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 3.062 DPA -25.02 RAP 32.66 ECC 1.5178  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 41 52 4117.73 -39.65 183.61 268.50 61.19 6 50 30 3117.7 -47.32 151.75  
 60.00 4 32 46 4303.81 -24.56 189.94 257.89 56.98 5 44 30 3303.8 -35.88 164.86  
 61.26 3 42 51 4445.22 -18.09 196.72 253.14 54.32 4 56 56 3445.2 -31.04 174.36  
 61.26 3 42 51 4445.22 -18.09 196.72 253.14 54.32 4 56 56 3445.2 -31.04 174.36  
 61.26 3 42 51 4445.22 -18.09 196.72 253.14 54.32 4 56 56 3445.2 -31.04 174.36  
 61.26 3 42 51 4445.22 -18.09 196.72 253.14 54.32 4 56 56 3445.2 -31.04 174.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .7483 TRA-3.2204 TC3-4.5425 BAU 2.1470 SGT 6885.4 SGR 2985.0 S63 952.9 ST 74.9 SR 39.1 S8 56.1  
 RDE .6756 RRA -.9022 RC3-2.3409 FAU .29886 RRT .9578 RRF .9903 RTF .5.00 CRT .8524 CR8 -.9878 CST -.7618  
 FDE 3.9233 FRA-3.4077 FC3-8.2331 B8P 12629 SGB 7313.3 R23 .2690 R13 .9535 LSA 96.0 MSA 32.7 S3A .8  
 BDE 1.0082 BRA 3.3444 BC3 5.1102 F8P 1594 SG1 7271.2 S62 783.7 THA 23.30 EL1 82.4 EL2 18.6 ALF 25.37

LAUNCH DATE SEP 3 1973 FLIGHT TIME 272.00 ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC DISTANCE 572.925 EARTH TO MARS  
 RL 150.90 LAL .00 LOL 340.35 VL 33.016 GAL 5.16 AZL 84.40 MCA 160.68 SMA 198.40 ECC .25482 INC 5.5958 V1 29.527  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.990 GAP -2.21 AZP 95.28 TAL 25.83 TAP 186.50 RCA 147.84 APO 248.95 V2 22.052  
 RC 332.344 GL 34.51 GP -35.67 ZAL 53.19 ZAP 64.62 ETS 162.08 ZAE 84.95 ETE 177.97 ZAC 53.41 ETC 287.67 LVI 13.03

PLANETOCENTRIC CONIC  
 C3 32.028 VHL 5.659 DLA 40.66 RAL 5.94 RAD 6647.8 VEL 12.327 PTH 7.26 VHP 3.120 DPA -25.80 RAP 33.31 ECC 1.5271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 27 51 4160.13 -38.22 186.65 268.20 59.16 6 37 11 3160.1 -46.96 155.78  
 59.47 3 32 26 4473.03 -18.37 199.30 253.22 53.06 4 46 59 3473.0 -31.78 177.14  
 59.47 3 32 26 4473.03 -18.37 199.30 253.22 53.06 4 46 59 3473.0 -31.78 177.14  
 59.47 3 32 26 4473.03 -18.37 199.30 253.22 53.06 4 46 59 3473.0 -31.78 177.14  
 59.47 3 32 26 4473.03 -18.37 199.30 253.22 53.06 4 46 59 3473.0 -31.78 177.14  
 59.47 3 32 26 4473.03 -18.37 199.30 253.22 53.06 4 46 59 3473.0 -31.78 177.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .8237 TRA-3.2783 TC3-4.5439 BAU 2.1907 SGT 6803.7 SGR 3039.0 S63 910.3 ST 78.1 SR 42.3 S8 56.4  
 RDE .7444 RRA -.9432 RC3-2.3514 FAU .28512 RRT .9588 RRF .9906 RTF .9394 CRT .8589 CR8 -.9892 CST -.7756  
 FDE 3.9153 FRA-3.2835 FC3-7.7072 B8P 12874 SGB 7451.6 R23 .2725 R13 .9531 LSA 100.0 MSA 32.7 S3A .8  
 BDE 1.1102 BRA 3.4113 BC3 5.1163 F8P 1522 SG1 7409.3 S62 793.1 THA 23.47 EL1 86.7 EL2 19.5 ALF 26.40

LAUNCH DATE SEP 3 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.022 GAL 5.10 AZL 84.18 HCA 181.55 SMA 198.93 ECC .29497 INC 5.0486 V1 29.527
RP 248.50 LAP 1.85 LOP 141.99 VP 19.991 GAP -2.41 AZP 95.85 TAL 25.22 TAP 187.07 RCA 147.91 APO 249.18 V2 22.043
RC 334.376 GL 39.86 GP -36.60 ZAL 54.05 ZAP 64.49 ETS 181.20 ZAE 84.26 ETE 177.31 ZAC 52.39 ETC 287.81 LVI 14.06

DISTANCE 576.692

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.735 VHL 5.721 DLA 41.93 RAL 5.29 RAD 6648.1 VEL 12.355 PTH 7.28 VHP 3.184 DPA -26.62 RAP 34.01 ECC 1.8387
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 3 11 28 4208.06 -36.49 189.93 267.58 57.05 6 21 36 3208.1 -46.37 160.26
57.65 3 21 54 4500.41 -18.62 201.87 253.27 51.72 4 36 55 3500.4 -32.51 179.96
57.65 3 21 54 4500.41 -18.62 201.87 253.27 51.72 4 36 55 3500.4 -32.51 179.96
57.65 3 21 54 4500.41 -18.62 201.87 253.27 51.72 4 36 55 3500.4 -32.51 179.96
57.65 3 21 54 4500.41 -18.62 201.87 253.27 51.72 4 36 55 3500.4 -32.51 179.96
57.65 3 21 54 4500.41 -18.62 201.87 253.27 51.72 4 36 55 3500.4 -32.51 179.96

DIFFERENTIAL CORRECTIONS

TDE .9007 TRA-3.3377 TC3-4.9301 BAU 2.2380
RDE .8179 RRA -.9684 RC3-2.3580 FAU .27094
FDE 3.8939 FRA-3.1563 FC3-7.1655 BOP 13126
BDE 1.2167 BRA 3.4809 BC3 5.1070 FBP 1445

MID-COURSE EXECUTION ACCURACY

SGT 6918.8 SGR 3117.9 SCS 866.1
RRT .9597 RRF .9909 RTP .9388
SGB 7588.9 R23 .2780 R13 .9327
SGI 7546.3 SGI 803.2 THA 23.67

ORBIT DETERMINATION ACCURACY

BT 81.5 BR 45.7 BS 56.5
CRT .8652 CR8 -.9902 CBT -.7878
LSA 104.2 MSA 32.8 SBA .7
EL1 91.1 EL2 20.5 ALF 27.41

LAUNCH DATE SEP 3 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 6 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.029 GAL 5.05 AZL 83.87 HCA 182.42 SMA 198.86 ECC .29512 INC 6.1254 V1 29.527
RP 248.50 LAP 1.85 LOP 142.87 VP 19.993 GAP -2.60 AZP 95.84 TAL 25.22 TAP 187.84 RCA 147.98 APO 249.34 V2 22.034
RC 336.377 GL 37.30 GP -37.76 ZAL 54.95 ZAP 64.43 ETS 180.31 ZAE 83.82 ETE 176.83 ZAC 51.29 ETC 288.18 LVI 15.18

DISTANCE 580.459

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.888 VHL 5.794 DLA 43.27 RAL 4.83 RAD 6648.4 VEL 12.369 PTH 7.30 VHP 3.286 DPA -27.48 RAP 34.77 ECC 1.8824
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 4 01 50 4263.43 -34.36 193.83 266.49 54.83 6 2 53 3263.4 -49.48 169.29
59.78 3 11 10 4827.84 -18.84 204.46 253.28 50.30 4 26 37 3527.6 -33.24 182.84
59.78 3 11 10 4827.84 -18.84 204.46 253.28 50.30 4 26 37 3527.6 -33.24 182.84
59.78 3 11 10 4827.84 -18.84 204.46 253.28 50.30 4 26 37 3527.6 -33.24 182.84
59.78 3 11 10 4827.84 -18.84 204.46 253.28 50.30 4 26 37 3527.6 -33.24 182.84
59.78 3 11 10 4827.84 -18.84 204.46 253.28 50.30 4 26 37 3527.6 -33.24 182.84

DIFFERENTIAL CORRECTIONS

TDE .9709 TRA-3.4089 TC3-4.8078 BAU 2.2880
RDE .8096 RRA -1.0461 RC3-2.3682 FAU .29738
FDE 3.8339 FRA-3.0614 FC3-6.8371 BOP 13260
BDE 1.3169 BRA 3.8829 BC3 5.0917 FBP 1340

MID-COURSE EXECUTION ACCURACY

SGT 7042.4 SGR 3212.8 SCS 822.8
RRT .9812 RRF .9912 RTP .9390
SGB 7740.7 R23 .2769 R13 .9830
SGI 7698.1 SGI 810.8 THA 23.96

ORBIT DETERMINATION ACCURACY

BT 84.7 BR 49.1 BS 56.2
CRT .8716 CR8 -.9907 CBT -.7978
LSA 108.0 MSA 32.8 SBA .7
EL1 98.6 EL2 21.3 ALF 28.31

LAUNCH DATE SEP 3 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.036 GAL 4.99 AZL 83.87 HCA 183.30 SMA 198.80 ECC .29588 INC 6.4300 V1 29.527
RP 248.67 LAP 1.84 LOP 143.78 VP 19.998 GAP -2.79 AZP 96.18 TAL 24.91 TAP 188.20 RCA 148.08 APO 249.84 V2 22.028
RC 338.347 GL 36.85 GP -38.00 ZAL 55.01 ZAP 64.46 ETS 189.41 ZAE 83.05 ETE 179.88 ZAC 50.18 ETC 288.48 LVI 16.38

DISTANCE 584.228

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.888 VHL 5.878 DLA 44.67 RAL 3.64 RAD 6648.7 VEL 12.428 PTH 7.33 VHP 3.338 DPA -28.38 RAP 35.61 ECC 1.8888
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 4 27 17 4330.02 -31.69 197.61 264.89 52.45 8 39 27 3330.0 -44.08 171.08
53.88 3 0 8 4884.87 -19.02 207.08 253.24 48.79 4 16 0 3884.9 -33.96 188.80
53.88 3 0 8 4884.87 -19.02 207.08 253.24 48.79 4 16 0 3884.9 -33.96 188.80
53.88 3 0 8 4884.87 -19.02 207.08 253.24 48.79 4 16 0 3884.9 -33.96 188.80
53.88 3 0 8 4884.87 -19.02 207.08 253.24 48.79 4 16 0 3884.9 -33.96 188.80
53.88 3 0 8 4884.87 -19.02 207.08 253.24 48.79 4 16 0 3884.9 -33.96 188.80

DIFFERENTIAL CORRECTIONS

TDE 1.0831 TRA-3.4848 TC3-4.4884 BAU 2.3280
RDE .9801 RRA -1.0989 RC3-2.3888 FAU .24094
FDE 3.8019 FRA-3.0944 FC3-6.0389 BOP 13637
BDE 1.4386 BRA 3.8337 BC3 5.0373 FBP 1288

MID-COURSE EXECUTION ACCURACY

SGT 7141.3 SGR 3282.8 SCS 772.0
RRT .9817 RRF .9917 RTP .9370
SGB 7883.6 R23 .2834 R13 .9815
SGI 7880.3 SGI 824.6 THA 24.20

ORBIT DETERMINATION ACCURACY

BT 88.1 BR 53.0 BS 56.8
CRT .8787 CR8 -.9913 CBT -.8088
LSA 112.4 MSA 33.1 SBA .6
EL1 100.4 EL2 22.5 ALF 29.38

LAUNCH DATE SEP 3 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC

RL 150.90 LAL .00 LOL 340.35 VL 33.043 GAL 4.91 AZL 83.83 HCA 184.17 SMA 198.93 ECC .29634 INC 6.7668 V1 29.527
RP 248.78 LAP 1.84 LOP 144.83 VP 19.998 GAP -2.95 AZP 96.81 TAL 24.81 TAP 188.68 RCA 148.14 APO 249.72 V2 22.019
RC 340.287 GL 40.81 GP -40.80 ZAL 57.01 ZAP 64.73 ETS 188.64 ZAE 82.69 ETE 178.39 ZAC 48.77 ETC 288.88 LVI 17.68

DISTANCE 587.821

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.887 VHL 5.971 DLA 46.28 RAL 2.88 RAD 6649.1 VEL 12.478 PTH 7.37 VHP 3.419 DPA -29.38 RAP 36.71 ECC 1.8888
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 3 01 57 4422.27 -27.74 202.88 261.46 49.68 8 8 39 3422.3 -41.60 178.90
51.79 2 48 27 4882.81 -19.19 209.84 253.19 47.11 4 4 49 3882.8 -34.72 188.96
51.79 2 48 27 4882.81 -19.19 209.84 253.19 47.11 4 4 49 3882.8 -34.72 188.96
51.79 2 48 27 4882.81 -19.19 209.84 253.19 47.11 4 4 49 3882.8 -34.72 188.96
51.79 2 48 27 4882.81 -19.19 209.84 253.19 47.11 4 4 49 3882.8 -34.72 188.96
51.79 2 48 27 4882.81 -19.19 209.84 253.19 47.11 4 4 49 3882.8 -34.72 188.96

DIFFERENTIAL CORRECTIONS

TDE 1.0280 TRA-2.7878 TC3-3.8788 BAU 1.8291
RDE 1.8630 RRA -.3023 RC3-1.3820 FAU .10768
FDE 6.0919 FRA -.2100 FC3-2.6139 BOP 27371
BDE 2.6956 BRA 2.8039 BC3 3.8370 FBP 3754

MID-COURSE EXECUTION ACCURACY

SGT 8053.4 SGR 2482.7 SCS 873.1
RRT .7998 RRF .9818 RTP .8288
SGB 8342.7 R23 .7123 R13 .8863
SGI 8388.5 SGI 1412.2 THA 19.13

ORBIT DETERMINATION ACCURACY

BT 109.4 BR 90.6 BS 86.3
CRT .8820 CR8 -.9984 CBT -.8546
LSA 160.8 MSA 42.2 SBA .4
EL1 137.9 EL2 33.9 ALF 38.93

LAUNCH DATE SEP 3 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 12 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 33.080 GAL 4.87 AZL 82.86 HCA 165.04 SMA 199.07 ECC .25561 INC 7.1416 V1 29.527  
 RP 248.82 LAP 1.84 LOP 145.50 VP 20.002 GAP -3.17 AZP 96.90 TAL 24.29 TAP 189.33 RCA 148.18 APO 249.95 V2 22.012  
 RC 342.196 GL 42.22 GP -41.42 ZAL 57.99 ZAP 64.76 ETS 157.82 ZAE 82.09 ETE 174.57 ZAC 47.55 ETC 289.22 LVI 18.90

Planetocentric Conic: C3 37.121 VHL 6.093 DLA 47.68 RAL 1.36 RAD 6649.7 VEL 12.530 PTH 7.41 VHP 3.524 DPA -30.37 RAP 37.51 ECC 1.6109  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03  
 49.87 2 36 29 4610.08 -19.18 212.43 252.91 45.47 3 53 19 3610.1 -35.29 192.03

Differential Corrections: TDE 1.1851 TRA-3.6082 TC3-4.2998 BAU 2.4260 SGT 7354.5 SGR 3491.6 SG3 669.6 ST 94.2 SR 60.7 SS 54.7  
 RDE 1.1659 RRA-1.2311 RC3-2.3259 FAU .20849 RRT .9633 RRF .9905 RTF .9335 CRT .8802 CRS -.9913 CST -.8105  
 FDE 3.6369 FRA-2.6078 FC3-4.8624 BSP 14152 SGB 8141.3 R23 .2943 R13 .9489 LSA 120.0 MSA 34.0 SSA .5  
 BDE 1.6625 BRA 3.8124 BC3 4.8885 FSP 1113 SGI 8096.6 SG2 851.4 THA 24.87 EL1 109.3 EL2 24.8 ALF 31.37

LAUNCH DATE SEP 3 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 14 1974

Heliocentric Conic: RL 150.90 LAL .00 LOL 340.35 VL 33.058 GAL 4.82 AZL 82.44 HCA 165.91 SMA 199.20 ECC .25578 INC 7.5614 V1 29.527  
 RP 248.88 LAP 1.84 LOP 146.38 VP 20.006 GAP -3.36 AZP 97.34 TAL 23.98 TAP 189.88 RCA 148.25 APO 250.15 V2 22.006  
 RC 344.074 GL 44.09 GP -42.80 ZAL 59.12 ZAP 65.05 ETS 156.74 ZAE 81.72 ETE 173.89 ZAC 46.13 ETC 289.66 LVI 20.31

Planetocentric Conic: C3 38.803 VHL 6.229 DLA 49.29 RAL 359.91 RAD 6650.2 VEL 12.597 PTH 7.46 VHP 3.638 DPA -31.44 RAP 38.59 ECC 1.6386  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33  
 47.79 2 23 40 4638.42 -19.13 215.18 252.56 43.66 3 40 59 3638.4 -35.86 195.33

Differential Corrections: TDE 1.2388 TRA-3.6815 TC3-4.1838 BAU 2.4747 SGT 7444.2 SGR 3594.8 SG3 614.0 ST 96.8 SR 64.8 SS 53.6  
 RDE 1.2712 RRA-1.3079 RC3-2.2921 FAU .19072 RRT .9637 RRF .9898 RTF .9302 CRT .8795 CRS -.9909 CST -.8077  
 FDE 3.5282 FRA-2.4421 FC3-4.2552 BSP 14520 SGB 8266.8 R23 .3029 R13 .9465 LSA 123.4 MSA 34.8 SSA .5  
 BDE 1.7750 BRA 3.9069 BC3 4.7703 FSP 1038 SGI 8221.0 SG2 868.5 THA 25.26 EL1 113.5 EL2 26.3 ALF 32.45

LAUNCH DATE SEP 4 1973

FLIGHT TIME 110.00

ARRIVAL DATE DEC 31 1973

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.029 GAL 7.85 AZL 89.38 HCA 87.45 SMA 211.17 ECC .31414 INC .6158 V1 29.534  
 RP 227.15 LAP .62 LOP 68.77 VP 23.239 GAP 17.80 AZP 89.97 TAL 33.81 TAP 121.06 RCA 144.83 APO 277.51 V2 24.214  
 RC 124.878 GL 3.26 GP -7.21 ZAL 37.12 ZAP 156.58 ET8 198.05 ZAE 163.27 ETE 330.35 ZAC 75.51 ETC 282.44 LVI -8.85

Planetocentric Conic: C3 39.611 VHL 6.294 DLA 10.20 RAL 15.84 RAD 6650.5 VEL 12.629 PTH 7.48 VHP 5.281 DPA 9.81 RAP 46.32 ECC 1.6519  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 51 10 3507.33 -46.36 128.79 259.57 102.18 9 49 37 2507.3 -36.46 99.13  
 60.00 9 19 39 3431.55 -39.86 123.58 261.18 97.86 10 16 50 2431.5 -32.27 95.16  
 70.00 9 59 23 3314.59 -33.88 114.90 261.97 94.64 10 54 38 2314.6 -28.47 87.52  
 80.00 10 56 10 3136.75 -29.76 101.71 262.28 92.53 11 48 27 2136.7 -25.70 75.03  
 90.00 12 12 31 2890.31 -28.23 83.67 262.34 91.78 13 0 42 1890.3 -24.65 57.22  
 100.00 13 39 2 2611.22 -29.76 63.08 262.28 92.53 14 22 33 1611.2 -25.70 36.39  
 110.00 14 58 50 2361.41 -33.87 43.82 261.97 94.64 15 38 11 1361.4 -28.47 16.44

Differential Corrections: TDE -.3115 TRA -.6414 TC3 .5021 BAU .2865 SGT 912.0 SGR 712.4 SG3 316.9 ST 16.8 SR 31.9 SS 7.4  
 RDE -.6969 RRA .2180 RC3 -.2015 FAU .12803 RRT -.1559 RRF .2982 RTF -.4819 CRT .7907 CR8 .0188 C8T -.5392  
 FDE -.0240 FRA -1.1071 FC3 -2.7982 BSP 1120 SGB 1157.3 R23 -.0923 R13 .5121 LSA 34.8 MSA 11.7 S8A 2.5  
 BDE .7634 BRA .6774 BC3 .5410 FSP 453 SG1 927.4 SG2 692.2 THA 164.17 EL1 34.8 EL2 9.4 ALF 65.50

LAUNCH DATE SEP 4 1973

FLIGHT TIME 120.00

ARRIVAL DATE JAN 2 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.970 GAL 7.85 AZL 89.35 HCA 88.50 SMA 209.85 ECC .31012 INC .6472 V1 29.534  
 RP 227.54 LAP .65 LOP 69.82 VP 23.111 GAP 17.43 AZP 89.98 TAL 33.96 TAP 122.46 RCA 144.77 APO 274.93 V2 24.172  
 RC 127.544 GL 3.45 GP -7.40 ZAL 36.76 ZAP 155.44 ET8 198.37 ZAE 163.84 ETE 328.22 ZAC 75.34 ETC 282.47 LVI -8.70

Planetocentric Conic: C3 39.091 VHL 6.252 DLA 10.22 RAL 15.22 RAD 6650.3 VEL 12.608 PTH 7.47 VHP 5.129 DPA 9.61 RAP 46.28 ECC 1.6433  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 49 23 3504.51 -46.32 128.53 258.85 102.38 9 47 47 2504.5 -36.36 98.94  
 60.00 9 17 50 3428.81 -39.63 123.36 260.49 98.01 10 14 59 2428.8 -32.19 94.97  
 70.00 9 57 33 3311.95 -33.86 114.69 261.30 94.76 10 52 45 2312.0 -28.41 87.34  
 80.00 10 54 17 3134.21 -29.75 101.52 261.61 92.83 11 46 31 2134.2 -25.65 74.85  
 90.00 12 10 38 2887.82 -28.22 83.48 261.68 91.87 12 58 48 1887.8 -24.61 57.05  
 100.00 13 37 9 2608.68 -29.75 62.89 261.61 92.63 14 20 38 1608.7 -25.65 36.22  
 110.00 14 56 59 2358.77 -33.86 43.61 261.30 94.76 15 36 18 1358.8 -28.41 16.25

Differential Corrections: TDE -.3133 TRA -.6379 TC3 .5089 BAU .2887 SGT 916.7 SGR 719.2 SG3 336.6 ST 16.9 SR 32.0 SS 7.8  
 RDE -.6952 RRA .2127 RC3 -.2148 FAU .13481 RRT -.1603 RRF .2845 RTF -.4783 CRT .7949 CR8 .0171 C8T -.5371  
 FDE -.0258 FRA -1.1940 FC3 -2.9856 BSP 1130 SGB 1165.2 R23 -.1017 R13 .5126 LSA 35.0 MSA 11.9 S8A 2.6  
 BDE .7626 BRA .6725 BC3 .5524 FSP 486 SG1 933.7 SG2 697.0 THA 163.40 EL1 35.0 EL2 9.4 ALF 65.29

LAUNCH DATE SEP 4 1973

FLIGHT TIME 122.00

ARRIVAL DATE JAN 4 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.915 GAL 7.84 AZL 89.32 HCA 89.54 SMA 208.63 ECC .30636 INC .6785 V1 29.534  
 RP 227.93 LAP .68 LOP 70.86 VP 22.987 GAP 17.06 AZP 89.99 TAL 34.29 TAP 123.83 RCA 144.71 APO 272.55 V2 24.131  
 RC 130.237 GL 3.83 GP -7.59 ZAL 36.43 ZAP 154.29 ET8 197.92 ZAE 164.42 ETE 325.82 ZAC 75.18 ETC 282.49 LVI -8.59

Planetocentric Conic: C3 38.608 VHL 6.214 DLA 10.26 RAL 14.81 RAD 6650.2 VEL 12.589 PTH 7.45 VHP 4.983 DPA 9.39 RAP 46.24 ECC 1.6354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 47 39 3502.04 -46.28 128.30 258.17 102.95 9 46 1 2502.0 -36.27 98.78  
 60.00 9 16 3 3426.44 -39.61 123.16 259.84 98.15 10 13 10 2426.4 -32.12 94.81  
 70.00 9 55 44 3309.71 -33.83 114.52 260.66 94.86 10 50 53 2309.7 -28.38 87.18  
 80.00 10 52 26 3132.10 -29.75 101.37 260.98 92.72 11 44 38 2132.1 -25.61 74.71  
 90.00 12 8 45 2885.77 -28.22 83.33 261.05 91.95 12 56 51 1885.8 -24.58 56.91  
 100.00 13 35 17 2606.57 -29.75 62.74 260.98 92.72 14 18 44 1606.6 -25.61 36.07  
 110.00 14 55 10 2356.53 -33.85 43.44 260.66 94.86 15 34 28 1356.5 -28.38 16.10

Differential Corrections: TDE -.3193 TRA -.6333 TC3 .5143 BAU .2905 SGT 920.5 SGR 726.2 SG3 357.2 ST 17.1 SR 32.1 SS 8.2  
 RDE -.6935 RRA .2078 RC3 -.2266 FAU .14190 RRT -.1683 RRF .3015 RTF -.4738 CRT .7990 CR8 .0165 C8T -.5339  
 FDE -.0272 FRA -1.2870 FC3 -3.1819 BSP 1140 SGB 1172.5 R23 -.1120 R13 .5125 LSA 35.2 MSA 12.2 S8A 2.6  
 BDE .7618 BRA .6682 BC3 .5628 FSP 520 SG1 939.2 SG2 701.8 THA 162.60 EL1 35.1 EL2 9.4 ALF 65.08

LAUNCH DATE SEP 4 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 6 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.464 GAL 7.84 AZL 89.28 HCA 90.58 SMA 207.80 ECC .30283 INC .7097 V1 29.534  
 RP 228.32 LAP .71 LOP 71.81 VP 22.868 GAP 16.69 AZP 90.01 TAL 34.61 TAP 125.19 RCA 144.66 APO 270.34 V2 24.090  
 RC 132.934 GL 3.81 GP -7.78 ZAL 36.11 ZAP 153.11 ET8 197.50 ZAE 165.01 ETE 323.11 ZAC 75.01 ETC 282.52 LVI -8.41

Planetocentric Conic: C3 38.159 VHL 6.177 DLA 10.30 RAL 14.43 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 4.842 DPA 9.18 RAP 46.17 ECC 1.6280  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 45 57 3499.90 -46.25 128.10 257.55 102.70 9 44 17 2499.9 -36.19 98.64  
 60.00 9 14 19 3424.42 -39.59 122.99 259.23 98.26 10 11 24 2424.4 -32.06 94.67  
 70.00 9 53 58 3307.86 -33.84 114.38 260.06 94.95 10 49 4 2307.9 -28.32 87.06  
 80.00 10 50 35 3130.40 -29.74 101.24 260.38 92.78 11 42 45 2130.4 -25.58 74.59  
 90.00 12 6 53 2884.15 -28.21 83.22 260.46 92.00 12 54 57 1884.2 -24.55 56.80  
 100.00 13 33 27 2604.87 -29.74 62.61 260.38 92.78 14 16 52 1604.9 -25.58 35.98  
 110.00 14 53 23 2354.68 -33.84 43.29 260.06 94.95 15 32 37 1354.7 -28.32 15.97

Differential Corrections: TDE -.3172 TRA -.6333 TC3 .5178 BAU .2918 SGT 923.1 SGR 733.5 SG3 378.8 ST 17.3 SR 32.2 SS 8.6  
 RDE -.6918 RRA .2012 RC3 -.2431 FAU .14933 RRT -.1722 RRF .3193 RTF -.4671 CRT .8028 CR8 .0151 C8T -.5316  
 FDE -.0288 FRA -1.3841 FC3 -3.3879 BSP 1145 SGB 1179.0 R23 -.1232 R13 .5117 LSA 35.3 MSA 12.4 S8A 2.7  
 BDE .7611 BRA .6645 BC3 .5720 FSP 558 SG1 943.8 SG2 706.7 THA 161.71 EL1 35.3 EL2 9.4 ALF 64.84

LAUNCH DATE SEP 4 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 8 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.415 GAL 7.84 AZL 89.26 HCA 91.82 SMA 206.45 ECC .29956 INC .7408 V1 29.834  
 RP 228.70 LAP .74 LOP 72.94 VP 22.754 GAP 16.33 AZP 90.02 TAL 34.81 TAP 126.53 RCA 144.81 APO 268.30 V2 24.049  
 RC 135.894 GL 4.00 GP -7.99 ZAL 35.81 ZAP 151.91 ETS 197.11 ZAE 165.59 ETE 320.07 ZAC 74.84 ETC 282.55 LVI -8.26

Planetary Conic: C3 37.741 VHL 6.143 DLA 10.35 RAL 14.06 RAD 6649.9 VEL 12.555 PTH 7.43 VHP 4.707 DPA 6.92 RAP 46.08 ECC 1.6211  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 44 19 3498.08 -46.22 127.94 256.96 102.82 9 42 37 2498.1 -36.12 98.52  
 60.00 9 12 37 3422.75 -39.57 122.85 258.65 98.35 10 9 40 2422.0 -32.01 94.56  
 70.00 9 52 10 3306.38 -33.83 114.26 259.49 95.01 10 47 17 2306.4 -28.28 86.95  
 80.00 10 48 46 3129.11 -29.74 101.15 259.82 92.83 11 40 55 2129.1 -25.56 74.50  
 90.00 12 5 2 2882.95 -28.21 83.13 259.90 92.05 12 53 5 1882.9 -24.53 56.72  
 100.00 13 31 37 2603.58 -29.74 62.51 259.82 92.83 14 15 1 1603.6 -25.56 35.87  
 110.00 14 51 37 2353.19 -33.83 43.18 259.49 95.01 15 30 50 1353.2 -28.28 15.87

Differential Corrections: TDE -.3195 TRA -.6324 TC3 .5196 BAU .2928  
 RDE -.6900 RRA .1949 RC3 -.2583 FAU .15708  
 FDE -.0290 FRA -1.4855 FC3 -3.6033 BSP 1149  
 BDE .7604 BRA .6617 BC3 .5802 FSP 595

Mid-Course Execution Accuracy: SGT 925.1 SGR 740.9 SG3 401.4  
 RRT -.1775 RRF .3376 RTF -.4593  
 SGB 1185.2 R23 -.1355 R13 .5102  
 SGI 947.7 SG2 711.8 THA 160.79

Orbit Determination Accuracy: ST 17.4 SR 32.3 SS 9.0  
 CRT .8065 CRS .0167 CST -.5289  
 LSA 35.5 MSA 12.7 SSA 2.7  
 EL1 35.5 EL2 9.4 ALF 64.58

LAUNCH DATE SEP 4 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 10 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.370 GAL 7.83 AZL 89.23 HCA 92.65 SMA 205.48 ECC .29649 INC .7718 V1 29.534  
 RP 229.09 LAP .77 LOP 73.98 VP 22.644 GAP 15.97 AZP 90.04 TAL 35.19 TAP 127.84 RCA 144.56 APO 266.41 V2 24.008  
 RC 138.457 GL 4.18 GP -8.20 ZAL 35.54 ZAP 150.70 ETS 196.73 ZAE 166.16 ETE 316.63 ZAC 74.67 ETC 282.58 LVI -8.12

Planetary Conic: C3 37.350 VHL 6.111 DLA 10.40 RAL 13.71 RAD 6649.7 VEL 12.539 PTH 7.42 VHP 4.577 DPA 8.67 RAP 45.97 ECC 1.6147  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 43 3496.57 -46.20 127.80 256.41 102.93 9 40 59 2496.6 -36.06 98.42  
 60.00 9 10 57 3421.41 -39.56 122.74 258.12 98.43 10 7 59 2421.4 -31.97 94.47  
 70.00 9 50 26 3305.25 -33.82 114.17 258.97 95.07 10 45 31 2305.3 -28.26 86.88  
 80.00 10 46 57 3128.20 -29.73 101.08 259.30 92.87 11 39 5 2128.2 -25.54 74.44  
 90.00 12 3 12 2882.14 -28.21 83.07 259.37 92.08 12 51 14 1882.1 -24.51 56.66  
 100.00 13 29 49 2602.68 -29.73 62.45 259.30 92.87 14 13 12 1602.7 -25.54 35.81  
 110.00 14 49 52 2352.07 -33.82 43.09 258.97 95.07 15 29 4 1352.1 -28.26 15.79

Differential Corrections: TDE -.3219 TRA -.6321 TC3 .5192 BAU .2932  
 RDE -.6881 RRA .1882 RC3 -.2742 FAU .16519  
 FDE -.0291 FRA -1.5921 FC3 -3.8289 BSP 1150  
 BDE .7597 BRA .6595 BC3 .5872 FSP 635

Mid-Course Execution Accuracy: SGT 925.7 SGR 748.8 SG3 425.1  
 RRT -.1819 RRF .3366 RTF -.4496  
 SGB 1190.6 R23 -.1490 R13 .5080  
 SGI 950.4 SG2 717.1 THA 159.80

Orbit Determination Accuracy: ST 17.6 SR 32.4 SS 9.4  
 CRT .8101 CRS .0177 CST -.5225  
 LSA 35.7 MSA 13.0 SSA 2.7  
 EL1 35.6 EL2 9.4 ALF 64.30

LAUNCH DATE SEP 4 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 12 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.327 GAL 7.83 AZL 89.20 HCA 93.69 SMA 204.58 ECC .29362 INC .8028 V1 29.534  
 RP 229.48 LAP .80 LOP 75.01 VP 22.538 GAP 15.62 AZP 90.05 TAL 35.46 TAP 129.14 RCA 144.51 APO 264.65 V2 23.967  
 RC 141.241 GL 4.36 GP -8.41 ZAL 35.29 ZAP 149.46 ETS 196.38 ZAE 166.70 ETE 312.77 ZAC 74.49 ETC 282.62 LVI -7.98

Planetary Conic: C3 36.985 VHL 6.081 DLA 10.46 RAL 13.38 RAD 6649.8 VEL 12.525 PTH 7.40 VHP 4.453 DPA 8.40 RAP 45.84 ECC 1.6087  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 9 3495.35 -46.18 127.69 255.91 103.01 9 39 25 2495.4 -36.02 98.34  
 60.00 9 9 19 3420.39 -39.55 122.65 257.62 98.48 10 6 20 2420.4 -31.94 94.40  
 70.00 9 48 43 3304.47 -33.82 114.11 258.47 95.10 10 43 48 2304.5 -28.24 86.82  
 80.00 10 45 9 3127.68 -29.73 101.04 258.81 92.89 11 37 17 2127.7 -25.53 74.40  
 90.00 12 1 22 2881.73 -28.21 83.04 258.88 92.09 12 49 24 1881.7 -24.51 56.64  
 100.00 13 28 1 2602.15 -29.73 62.41 258.81 92.89 14 11 23 1602.1 -25.53 35.77  
 110.00 14 48 10 2351.29 -33.82 43.03 258.47 95.10 15 27 21 1351.3 -28.24 15.74

Differential Corrections: TDE -.3248 TRA -.6330 TC3 .5189 BAU .2932  
 RDE -.6881 RRA .1811 RC3 -.2908 FAU .17361  
 FDE -.0279 FRA -1.7032 FC3 -4.0640 BSP 1151  
 BDE .7591 BRA .6584 BC3 .5930 FSP 678

Mid-Course Execution Accuracy: SGT 925.5 SGR 757.0 SG3 449.7  
 RRT -.1853 RRF .3761 RTF -.4479  
 SGB 1195.7 R23 -.1639 R13 .5050  
 SGI 952.4 SG2 722.9 THA 158.76

Orbit Determination Accuracy: ST 17.8 SR 32.4 SS 9.9  
 CRT .8135 CRS .0208 CST -.5167  
 LSA 35.8 MSA 13.3 SSA 2.8  
 EL1 35.8 EL2 9.4 ALF 63.99

LAUNCH DATE SEP 4 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 14 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.287 GAL 7.82 AZL 89.17 HCA 94.71 SMA 203.75 ECC .29093 INC .8337 V1 29.534  
 RP 229.86 LAP .83 LOP 76.04 VP 22.438 GAP 15.27 AZP 90.07 TAL 35.71 TAP 130.42 RCA 144.47 APO 263.03 V2 23.927  
 RC 144.048 GL 4.55 GP -8.83 ZAL 33.05 ZAP 148.20 ETS 196.03 ZAE 167.20 ETE 308.43 ZAC 74.32 ETC 282.66 LVI -7.83

Planetary Conic: C3 36.642 VHL 6.053 DLA 10.53 RAL 13.07 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 4.334 DPA 8.12 RAP 45.70 ECC 1.6030  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 38 3494.42 -46.17 127.60 255.44 103.08 9 37 53 2494.4 -35.98 98.27  
 60.00 9 7 43 3419.67 -39.54 122.59 257.16 98.52 10 4 43 2419.7 -31.92 94.35  
 70.00 9 47 2 3304.03 -33.81 114.08 258.01 95.12 10 42 6 2304.0 -28.23 86.79  
 80.00 10 43 23 3127.51 -29.73 101.03 258.35 92.89 11 35 30 2127.5 -25.53 74.39  
 90.00 11 59 33 2881.69 -28.21 83.04 258.42 92.09 12 47 34 1881.7 -24.51 56.63  
 100.00 13 26 14 2601.98 -29.73 62.40 258.35 92.89 14 9 36 1602.0 -25.53 35.76  
 110.00 14 46 28 2350.85 -33.81 43.00 258.01 95.12 15 25 39 1350.8 -28.23 15.71

Differential Corrections: TDE -.3274 TRA -.6348 TC3 .5124 BAU .2929  
 RDE -.6841 RRA .1735 RC3 -.3081 FAU .18240  
 FDE -.0263 FRA -1.8194 FC3 -4.3095 BSP 1148  
 BDE .7584 BRA .6581 BC3 .5979 FSP 722

Mid-Course Execution Accuracy: SGT 924.3 SGR 765.7 SG3 475.5  
 RRT -.1877 RRF .3962 RTF -.4243  
 SGB 1200.3 R23 -.1801 R13 .5015  
 SGI 953.5 SG2 729.1 THA 157.63

Orbit Determination Accuracy: ST 18.0 SR 32.5 SS 10.3  
 CRT .8167 CRS .0237 CST -.5112  
 LSA 35.9 MSA 13.6 SSA 2.8  
 EL1 35.9 EL2 9.4 ALF 63.67

LAUNCH DATE SEP 4 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 18 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.250 GAL 7.81 AZL 89.14 HCA 95.74 SMA 202.08 ECC .28841 INC .8647 V1 29.534  
 RP 230.25 LAP .86 LOP 77.06 VP 22.338 GAP 14.92 AZP 90.09 TAL 35.94 TAP 131.67 RCA 144.44 APO 261.32 V2 23.887  
 RC 146.870 GL 4.73 GP -8.85 ZAL 34.84 ZAP 146.92 ETS 195.71 ZAE 167.64 ETE 303.60 ZAC 74.15 ETC 282.70 LVI -7.89

Distance 310.862 Earth to Mars

Planetocentric Conic: C3 36.320 VHL 6.027 DLA 10.61 RAL 12.77 RAD 6649.4 VEL 12.498 PTH 7.39 VHP 4.219 DPA 7.83 RAP 45.93 ECC 1.5977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 38 10 3493.75 -46.16 127.54 255.00 103.12 9 36 23 2493.8 -35.96 98.23  
 60.00 9 6 9 3419.24 -39.54 122.56 256.73 98.55 10 3 9 2419.2 -31.90 94.32  
 70.00 9 45 21 3303.91 -33.81 114.07 257.58 95.13 10 40 25 2303.9 -26.23 86.78  
 80.00 10 41 36 3127.70 -29.73 101.04 257.92 92.89 11 33 44 2127.7 -25.53 74.41  
 90.00 11 57 44 2882.02 -28.21 83.06 257.99 92.08 12 45 46 1882.0 -24.51 56.66  
 100.00 13 24 28 2602.17 -29.73 62.41 257.92 92.89 14 7 50 1602.2 -25.53 35.77  
 110.00 14 44 48 2350.73 -33.81 42.99 257.58 95.13 15 23 58 1350.7 -26.23 15.70

Differential Corrections: TDE -.3303 TRA -.6378 TC3 .5058 BAW .2922 RDE -.6818 RRA .1655 RC3 -.3262 FAU .19151 FDE -.0236 FRA -1.9404 FC3 -4.5648 B8P 1142 BDE .7578 BRA .8587 BC3 .6019 F8P 788

Mid-Course Execution Accuracy: SGT 922.3 SGR 774.9 SCS 502.3 RRT -.1887 RRF .4168 RTF -.4084 SGB 1204.6 R23 -.1974 R13 .4975 SGI 953.6 SGT 755.9 THA 156.42

Orbit Determination Accuracy: ST 18.2 SR 32.5 SS 10.7 CRT .8196 CR8 .0276 CST -.5030 L8A 36.1 M8A 13.9 S8A 2.8 EL1 36.1 EL2 9.4 ALF 63.33

LAUNCH DATE SEP 4 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 18 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.215 GAL 7.81 AZL 89.10 HCA 96.76 SMA 202.26 ECC .28806 INC .8956 V1 29.534  
 RP 230.63 LAP .89 LOP 78.08 VP 22.243 GAP 14.58 AZP 90.11 TAL 36.15 TAP 132.91 RCA 144.40 APO 260.12 V2 23.847  
 RC 149.713 GL 4.92 GP -9.09 ZAL 34.64 ZAP 145.62 ETS 195.39 ZAE 168.00 ETE 298.26 ZAC 73.97 ETC 282.75 LVI -7.59

Distance 314.570 Earth to Mars

Planetocentric Conic: C3 36.017 VHL 6.001 DLA 10.70 RAL 12.49 RAD 6649.3 VEL 12.486 PTH 7.38 VHP 4.109 DPA 7.53 RAP 45.34 ECC 1.5927  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 36 43 3493.35 -46.15 127.50 254.60 103.15 9 34 56 2493.3 -35.94 98.20  
 60.00 9 4 37 3419.10 -39.53 122.55 256.33 98.55 10 1 36 2419.1 -31.90 94.31  
 70.00 9 43 42 3304.10 -33.81 114.08 257.18 95.12 10 38 46 2304.1 -26.23 86.80  
 80.00 10 39 51 3128.23 -29.73 101.08 257.92 92.87 11 31 59 2128.2 -25.54 74.44  
 90.00 11 55 55 2882.71 -28.21 83.11 257.59 92.08 12 43 58 1882.7 -24.52 56.70  
 100.00 13 22 42 2602.70 -29.73 62.45 257.92 92.87 14 6 5 1602.7 -25.54 35.81  
 110.00 14 43 8 2350.92 -33.81 43.00 257.18 95.12 15 22 19 1350.9 -26.23 15.72

Differential Corrections: TDE -.3337 TRA -.8418 TC3 .4968 BAW .2912 RDE -.6795 RRA .1571 RC3 -.3451 FAU .20095 FDE -.0195 FRA -2.0656 FC3 -4.8303 B8P 1137 BDE .7570 BRA .8607 BC3 .6047 F8P 817

Mid-Course Execution Accuracy: SGT 919.5 SGR 784.6 SCS 530.1 RRT -.1877 RRF .4377 RTF -.3896 SGB 1208.6 R23 -.2168 R13 .4926 SGI 953.0 SGT 743.6 THA 155.16

Orbit Determination Accuracy: ST 18.5 SR 32.5 SS 11.1 CRT .8225 CR8 .0328 CST -.4879 L8A 36.2 M8A 14.3 S8A 2.8 EL1 36.2 EL2 9.5 ALF 62.94

LAUNCH DATE SEP 4 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 20 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.183 GAL 7.80 AZL 89.07 HCA 97.77 SMA 201.80 ECC .28385 INC .9266 V1 29.534  
 RP 231.01 LAP .92 LOP 79.10 VP 22.151 GAP 14.25 AZP 90.13 TAL 36.38 TAP 134.13 RCA 144.37 APO 258.82 V2 23.807  
 RC 152.572 GL 5.10 GP -9.32 ZAL 34.46 ZAP 144.30 ETS 195.08 ZAE 168.26 ETE 292.43 ZAC 73.79 ETC 282.80 LVI -7.41

Distance 318.289 Earth to Mars

Planetocentric Conic: C3 35.732 VHL 5.978 DLA 10.79 RAL 12.23 RAD 6649.2 VEL 12.475 PTH 7.37 VHP 4.004 DPA 7.21 RAP 45.13 ECC 1.5881  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 35 18 3493.18 -46.15 127.49 254.23 103.16 9 33 32 2493.2 -35.94 98.19  
 60.00 9 3 6 3419.22 -39.54 122.56 255.96 98.55 10 0 5 2419.2 -31.90 94.32  
 70.00 9 42 4 3304.58 -33.82 114.12 256.81 95.10 10 37 8 2304.6 -26.24 86.83  
 80.00 10 38 5 3129.07 -29.74 101.14 257.14 92.83 11 30 14 2129.1 -25.56 74.50  
 90.00 11 54 6 2883.75 -28.21 83.16 257.22 92.02 12 42 10 1883.7 -24.54 56.77  
 100.00 13 20 37 2603.54 -29.74 62.51 257.14 92.83 14 4 21 1603.5 -25.56 35.87  
 110.00 14 41 30 2351.39 -33.82 43.04 256.81 95.10 15 20 41 1351.4 -26.24 15.78

Differential Corrections: TDE -.3272 TRA -.8374 TC3 .4958 BAW .2942 RDE -.6776 RRA .1477 RC3 -.3654 FAU .21119 FDE -.0283 FRA -2.2056 FC3 -5.1170 B8P 1027 BDE .7524 BRA .8543 BC3 .6159 F8P 857

Mid-Course Execution Accuracy: SGT 914.6 SGR 795.9 SCS 560.3 RRT -.1890 RRF .4808 RTF -.3544 SGB 1212.4 R23 -.2183 R13 .5039 SGI 954.9 SGT 747.0 THA 152.52

Orbit Determination Accuracy: ST 18.3 SR 32.6 SS 11.6 CRT .8215 CR8 .0223 CST -.5086 L8A 36.1 M8A 14.6 S8A 2.8 EL1 36.1 EL2 9.4 ALF 63.30

LAUNCH DATE SEP 4 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 22 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 33.152 GAL 7.79 AZL 89.04 HCA 98.79 SMA 200.98 ECC .28179 INC .9576 V1 29.534  
 RP 231.39 LAP .95 LOP 80.11 VP 22.063 GAP 13.92 AZP 90.15 TAL 36.54 TAP 135.33 RCA 144.35 APO 257.62 V2 23.787  
 RC 155.447 GL 5.29 GP -9.57 ZAL 34.30 ZAP 142.95 ETS 194.77 ZAE 168.41 ETE 286.22 ZAC 73.61 ETC 282.88 LVI -7.28

Distance 322.018 Earth to Mars

Planetocentric Conic: C3 35.461 VHL 5.958 DLA 10.89 RAL 11.98 RAD 6649.1 VEL 12.464 PTH 7.36 VHP 3.904 DPA 6.87 RAP 44.90 ECC 1.5836  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 58 3493.27 -46.15 127.50 253.90 103.18 9 32 10 2493.3 -35.94 98.20  
 60.00 9 1 37 3419.61 -39.54 122.59 255.62 98.53 9 58 36 2419.6 -31.91 94.35  
 70.00 9 40 27 3305.37 -33.82 114.16 256.47 95.06 10 35 32 2305.4 -26.26 86.88  
 80.00 10 36 20 3130.26 -29.74 101.23 256.80 92.79 11 28 31 2130.3 -25.56 74.58  
 90.00 11 52 18 2885.10 -28.22 83.28 256.87 91.97 12 40 23 1885.1 -24.56 56.87  
 100.00 13 19 12 2604.73 -29.74 62.60 256.80 92.79 14 2 37 1604.7 -25.56 35.95  
 110.00 14 39 53 2352.18 -33.82 43.10 256.47 95.06 15 19 5 1352.2 -26.26 15.80

Differential Corrections: TDE -.3348 TRA -.8477 TC3 .4775 BAW .2910 RDE -.6747 RRA .1385 RC3 -.3857 FAU .22114 FDE -.0158 FRA -2.3369 FC3 -5.3988 B8P 1059 BDE .7531 BRA .8623 BC3 .6138 F8P 913

Mid-Course Execution Accuracy: SGT 910.9 SGR 806.8 SCS 589.7 RRT -.1883 RRF .4818 RTF -.3536 SGB 1216.8 R23 -.2470 R13 .4927 SGI 951.3 SGT 758.7 THA 151.44

Orbit Determination Accuracy: ST 18.7 SR 32.5 SS 12.0 CRT .8252 CR8 .0333 CST -.4954 L8A 36.3 M8A 15.0 S8A 2.9 EL1 36.3 EL2 9.5 ALF 62.58

LAUNCH DATE SEP 4 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC

DISTANCE 329.751

EARTH TO MARS

RL 130.86 LAL .00 LOL 341.32 VL 33.124 GAL 7.76 AZL 89.01 HCA 99.80 SMA 200.41 ECC .27986 INC .9887 V1 29.534
RP 231.77 LAP .97 LOP 81.12 VP 21.978 GAP 13.59 AZP 90.17 TAL 36.70 TAP 136.50 RCA 144.32 APO 256.30 V2 23.720
RC 158.336 GL 5.48 GP -9.82 ZAL 34.18 ZAP 141.59 ETS 194.47 ZAE 168.42 ETE 279.72 ZAC 73.44 ETC 282.91 LVI -7.14

PLANETOCENTRIC CONIC

C3 35.204 VHL 5.933 DLA 10.99 RAL 11.75 RAD 6649.0 VEL 12.454 PTH 7.35 VHP 3.807 DPA 6.53 RAP 44.65 ECC 1.8794
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 38 3493.59 -46.15 127.52 253.59 103.13 9 30 50 2493.6 -35.95 98.22
60.00 9 0 9 3420.26 -39.55 122.64 255.31 98.49 9 57 9 2420.3 -31.93 94.39
70.00 9 38 50 3306.44 -33.63 114.27 256.15 95.01 10 33 57 2306.4 -26.29 86.96
80.00 10 34 38 3131.78 -29.74 101.34 256.48 92.73 11 26 47 2131.8 -25.61 74.68
90.00 11 50 30 2886.81 -28.22 83.41 256.55 91.91 12 38 36 1886.8 -24.59 56.98
100.00 13 17 27 2806.23 -29.74 62.71 256.48 92.73 14 0 54 1606.2 -25.61 36.05
110.00 14 38 18 2353.26 -33.63 43.18 256.15 95.01 15 17 30 1353.3 -26.29 15.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

YDE -.3409 TRA -.6581 TC3 .4578 BAW .2883 SGT 906.9 SGR 818.9 SG3 620.2 ST 19.1 SR 32.5 SS 12.8
RDE -.6716 RRA .1289 RC3 -.4069 FAW .23144 RRT -.1763 RRF .5031 RTF -.3214 CRT .8282 CRS .0438 CST -.4834
FDE -.0052 FRA -2.4729 FC3 -5.6915 BSP 1075 SGB 1221.7 R23 -.2747 R13 .4833 LSA 36.5 MSA 15.4 SSA 2.9
BDE .7532 BRA .6706 BC3 .6125 FSP 970 SG1 947.5 SG2 771.2 THA 150.12 EL1 36.5 EL2 9.6 ALF 61.92

LAUNCH DATE SEP 4 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC

DISTANCE 329.495

EARTH TO MARS

RL 130.86 LAL .00 LOL 341.32 VL 33.097 GAL 7.77 AZL 88.98 HCA 100.81 SMA 199.88 ECC .27805 INC 1.0199 V1 29.534
RP 232.14 LAP 1.00 LOP 82.13 VP 21.896 GAP 13.26 AZP 90.19 TAL 36.85 TAP 137.68 RCA 144.31 APO 255.46 V2 23.689
RC 161.238 GL 5.67 GP -10.07 ZAL 34.04 ZAP 140.21 ETS 194.18 ZAE 168.29 ETE 273.10 ZAC 73.26 ETC 282.97 LVI -7.00

PLANETOCENTRIC CONIC

C3 34.960 VHL 5.913 DLA 11.11 RAL 11.53 RAD 6648.9 VEL 12.444 PTH 7.35 VHP 3.715 DPA 6.17 RAP 44.38 ECC 1.5753
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 31 17 3494.13 -46.16 127.57 253.31 103.10 9 29 31 2494.1 -35.97 98.26
60.00 8 58 43 3421.16 -39.56 122.72 255.03 98.44 9 55 44 2421.2 -31.96 94.45
70.00 9 37 14 3307.78 -33.64 114.37 255.86 94.95 10 32 22 2307.8 -28.32 87.05
80.00 10 32 51 3133.97 -29.75 101.48 256.18 92.66 11 25 5 2133.6 -25.64 74.81
90.00 11 48 41 2888.83 -28.23 83.56 256.25 91.83 12 38 50 1888.8 -24.63 57.12
100.00 13 15 43 2808.04 -29.75 62.84 256.18 92.66 13 59 11 1608.0 -25.64 36.18
110.00 14 36 41 2354.60 -33.64 43.29 255.86 94.95 15 15 55 1354.6 -28.32 15.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

YDE -.3465 TRA -.8690 TC3 .4364 BAW .2860 SGT 903.0 SGR 831.1 SG3 631.7 ST 19.5 SR 32.4 SS 12.9
RDE -.6684 RRA .1188 RC3 -.4290 FAW .24203 RRT -.1623 RRF .5247 RTF -.2870 CRT .8305 CRS .0537 CST -.4727
FDE .0063 FRA -2.8132 FC3 -5.9936 BSP 1083 SGB 1227.3 R23 -.3017 R13 .4755 LSA 36.6 MSA 15.8 SSA 2.9
BDE .7529 BRA .6794 BC3 .6120 FSP 1029 SG1 943.4 SG2 785.0 THA 148.57 EL1 36.6 EL2 9.6 ALF 61.29

LAUNCH DATE SEP 4 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC

DISTANCE 333.245

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.073 GAL 7.76 AZL 88.95 HCA 101.81 SMA 199.40 ECC .27636 INC 1.0511 V1 29.534
RP 232.51 LAP 1.03 LOP 83.14 VP 21.817 GAP 12.94 AZP 90.22 TAL 36.99 TAP 138.80 RCA 144.29 APO 254.50 V2 23.650
RC 164.150 GL 5.86 GP -10.33 ZAL 33.93 ZAP 138.80 ETS 193.89 ZAE 167.99 ETE 266.53 ZAC 73.08 ETC 283.03 LVI -6.87

PLANETOCENTRIC CONIC

C3 34.727 VHL 5.893 DLA 11.23 RAL 11.32 RAD 6648.8 VEL 12.435 PTH 7.34 VHP 3.627 DPA 5.80 RAP 44.09 ECC 1.5719
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 30 0 3494.88 -46.17 127.64 253.07 103.04 9 28 15 2494.9 -36.00 98.31
60.00 8 57 17 3422.29 -39.57 122.81 254.77 98.38 9 54 19 2422.3 -31.99 94.53
70.00 9 35 39 3309.40 -33.65 114.49 255.60 94.88 10 30 48 2309.4 -28.35 87.16
80.00 10 31 6 3135.68 -29.76 101.63 255.91 92.58 11 23 22 2135.7 -25.68 74.93
90.00 11 46 52 2891.17 -28.23 83.73 255.98 91.75 12 35 3 1891.2 -24.67 57.28
100.00 13 13 58 2810.19 -29.76 63.00 255.91 92.58 13 57 28 1610.1 -25.68 36.32
110.00 14 35 5 2356.22 -33.65 43.41 255.60 94.88 15 14 22 1356.2 -28.35 16.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

YDE -.3519 TRA -.8803 TC3 .4130 BAW .2843 SGT 899.2 SGR 844.7 SG3 684.3 ST 19.9 SR 32.4 SS 13.3
RDE -.6651 RRA .1081 RC3 -.4520 FAW .25299 RRT -.1456 RRF .5464 RTF -.2.99 CRT .8324 CRS .0824 CST -.4635
FDE .0164 FRA -2.7593 FC3 -6.3068 BSP 1082 SGB 1233.7 R23 -.3271 R13 .4703 LSA 36.7 MSA 16.2 SSA 2.9
BDE .7522 BRA .6889 BC3 .6123 FSP 1087 SG1 938.8 SG2 800.4 THA 146.63 EL1 36.7 EL2 9.7 ALF 60.70

LAUNCH DATE SEP 4 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC

DISTANCE 337.002

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.050 GAL 7.74 AZL 88.92 HCA 102.81 SMA 198.95 ECC .27478 INC 1.0825 V1 29.534
RP 232.89 LAP 1.06 LOP 84.14 VP 21.741 GAP 12.63 AZP 90.24 TAL 37.11 TAP 139.92 RCA 144.28 APO 253.61 V2 23.612
RC 167.073 GL 6.05 GP -10.59 ZAL 33.84 ZAP 137.38 ETS 193.60 ZAE 167.55 ETE 260.17 ZAC 72.90 ETC 283.09 LVI -6.73

PLANETOCENTRIC CONIC

C3 34.506 VHL 5.874 DLA 11.36 RAL 11.13 RAD 6648.7 VEL 12.426 PTH 7.33 VHP 3.543 DPA 5.41 RAP 43.78 ECC 1.5679
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 28 45 3495.85 -46.19 127.73 252.84 102.98 9 27 1 2495.8 -36.04 98.37
60.00 8 55 53 3423.65 -39.58 122.93 254.54 98.30 9 52 56 2423.7 -32.03 94.82
70.00 9 34 4 3311.27 -33.66 114.64 255.36 94.79 10 29 16 2311.3 -28.40 87.29
80.00 10 29 22 3138.07 -29.76 101.81 255.68 92.48 11 21 40 2138.1 -25.72 75.12
90.00 11 45 3 2893.81 -28.24 83.92 255.73 91.65 12 33 16 1893.8 -24.71 57.46
100.00 13 12 13 2612.55 -29.76 63.18 255.66 92.48 13 55 46 1612.5 -25.72 36.48
110.00 14 33 31 2358.09 -33.66 43.56 255.36 94.79 15 12 49 1358.1 -28.40 16.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

YDE -.3564 TRA -.6933 TC3 .3867 BAW .2828 SGT 896.1 SGR 859.1 SG3 717.6 ST 20.2 SR 32.3 SS 13.8
RDE -.6615 RRA .0971 RC3 -.4758 FAW .26414 RRT -.1251 RRF .5660 RTF -.2087 CRT .8338 CRS .0715 CST -.4545
FDE .0323 FRA -2.9070 FC3 -6.6273 BSP 1083 SGB 1241.4 R23 -.3510 R13 .4675 LSA 36.9 MSA 16.6 SSA 2.9
BDE .7514 BRA .7000 BC3 .6131 FSP 1149 SG1 933.9 SG2 817.9 THA 144.30 EL1 36.8 EL2 9.8 ALF 60.09

LAUNCH DATE SEP 4 1973

FLIGHT TIME 190.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC											DISTANCE 340.784											EARTH TO MARS																																																																																		
RL	190.86	LAL	.00	LOL	341.32	VL	33.029	GAL	7.73	AZL	88.89	HCA	103.81	SMA	198.93	ECC	.27329	INC	1.1140	V1	29.534	RP	233.25	LAP	1.08	LOP	85.13	VP	21.667	GAP	12.31	AZP	90.27	TAL	37.21	TAP	141.02	RCA	144.27	APO	252.79	V2	23.573	RC	170.003	GL	6.24	GP	-10.86	ZAL	33.76	ZAP	135.93	ETS	193.30	ZAE	166.95	ETE	254.16	ZAC	72.72	ETC	283.16	LVI	-6.60																																							
PLANETOCENTRIC CONIC											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
C3	34.293	VHL	5.856	DLA	11.49	RAL	10.95	RAD	6648.6	VEL	12.418	PTH	7.33	VHP	3.463	DPA	5.02	RAP	43.45	ECC	1.5644	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	27	31	3497.02	-46.21	127.84	252.65	102.90	9	25	48	2497.0	-36.08	98.45	60.00	8	54	29	3425.24	-39.60	123.06	254.33	98.21	9	51	35	2425.2	-32.08	94.73	70.00	9	32	30	3313.41	-33.87	114.81	255.14	94.69	10	27	43	2313.4	-28.45	87.44	80.00	10	27	36	3140.76	-29.77	102.01	255.43	92.38	11	19	57	2140.8	-25.77	75.30	90.00	11	43	13	2896.75	-28.24	84.14	255.49	91.54	12	31	29	1896.8	-24.76	57.66	100.00	13	10	28	2615.23	-29.77	63.38	255.43	92.38	13	54	4	1615.2	-25.77	36.67	110.00	14	31	56	2360.22	-33.87	43.72	255.14	94.69	15	11	16	1360.2	-28.45	16.35
TDE	-.3611	TRA	-.7072	TC3	.3580	BAU	.2822	SGT	894.0	SGR	874.7	SG3	751.9	ST	20.6	SR	32.2	88	14.2	RDE	-.6577	RRA	.0855	RC3	-.5006	FAU	.27560	RRT	-.1007	RRF	.5894	RTF	-.1641	CRT	.8350	CR8	.0808	C8T	-.4457	FDE	.0480	FRA	-3.0598	FC3	-6.9575	BSP	1086	SG8	1250.7	R23	-3.692	R13	.4714	LSA	37.0	MSA	17.0	88A	2.9	BDE	.7503	BRA	.7123	BC3	.6154	F8P	1210	SG1	928.8	SG2	837.6	THA	141.11	EL1	36.9	EL2	9.9	ALF	59.47																									

LAUNCH DATE SEP 4 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC											DISTANCE 344.532											EARTH TO MARS																																																																																		
RL	190.86	LAL	.00	LOL	341.32	VL	33.009	GAL	7.71	AZL	88.85	HCA	104.80	SMA	198.14	ECC	.27191	INC	1.1458	V1	29.534	RP	233.62	LAP	1.11	LOP	86.13	VP	21.595	GAP	12.00	AZP	90.29	TAL	37.30	TAP	142.10	RCA	144.27	APO	252.02	V2	23.536	RC	172.941	GL	6.43	GP	-11.14	ZAL	33.70	ZAP	134.47	ETS	193.01	ZAE	166.20	ETE	248.59	ZAC	72.55	ETC	283.23	LVI	-6.47																																							
PLANETOCENTRIC CONIC											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
C3	34.090	VHL	5.839	DLA	11.63	RAL	10.79	RAD	6648.6	VEL	12.410	PTH	7.32	VHP	3.387	DPA	4.61	RAP	43.10	ECC	1.5610	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	26	19	3498.38	-46.23	127.96	252.48	102.80	9	24	37	2498.4	-36.13	98.54	60.00	8	53	7	3427.05	-39.61	123.21	254.14	98.11	9	50	14	2427.1	-32.14	94.85	70.00	9	30	56	3315.79	-33.88	114.99	254.94	94.59	10	26	11	2315.8	-28.50	87.60	80.00	10	25	51	3143.73	-29.78	102.23	255.23	92.26	11	18	15	2143.7	-25.83	75.50	90.00	11	41	22	2899.99	-28.25	84.37	255.28	91.43	12	29	42	1900.0	-24.81	57.89	100.00	13	8	43	2618.20	-29.78	63.60	255.23	92.26	13	52	21	1618.2	-25.83	36.87	110.00	14	30	22	2362.61	-33.88	43.91	254.94	94.59	15	9	45	1362.6	-28.50	16.52
TDE	-.3658	TRA	-.7226	TC3	.3264	BAU	.2822	SGT	893.4	SGR	891.2	SG3	786.8	ST	21.0	SR	32.1	88	14.7	RDE	-.6536	RRA	.0733	RC3	-.5262	FAU	.28724	RRT	-.0719	RRF	.6105	RTF	-.1153	CRT	.8358	CR8	.0899	C8T	-.4375	FDE	.0694	FRA	-3.2144	FC3	-7.2946	BSP	1086	SG8	1262.0	R23	-3.720	R13	.4894	LSA	37.0	MSA	17.5	88A	2.9	BDE	.7480	BRA	.7263	BC3	.6192	F8P	1274	SG1	923.9	SG2	859.6	THA	135.99	EL1	37.0	EL2	10.0	ALF	58.83																									

LAUNCH DATE SEP 4 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC											DISTANCE 348.304											EARTH TO MARS																																																																																		
RL	190.86	LAL	.00	LOL	341.32	VL	32.991	GAL	7.70	AZL	88.82	HCA	105.79	SMA	197.79	ECC	.27060	INC	1.1777	V1	29.534	RP	233.99	LAP	1.13	LOP	87.12	VP	21.527	GAP	11.70	AZP	90.32	TAL	37.37	TAP	143.17	RCA	144.27	APO	251.31	V2	23.498	RC	175.886	GL	6.63	GP	-11.41	ZAL	33.66	ZAP	132.99	ETS	192.72	ZAE	165.33	ETE	243.51	ZAC	72.37	ETC	283.30	LVI	-6.34																																							
PLANETOCENTRIC CONIC											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
C3	33.894	VHL	5.822	DLA	11.78	RAL	10.63	RAD	6648.5	VEL	12.402	PTH	7.31	VHP	3.315	DPA	4.19	RAP	42.74	ECC	1.5578	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	25	8	3499.94	-46.25	128.11	252.33	102.70	9	23	28	2499.9	-36.19	98.64	60.00	8	51	45	3429.08	-39.63	123.30	253.98	98.00	9	48	54	2429.1	-32.20	94.99	70.00	9	29	22	3318.41	-33.90	115.19	254.76	94.47	10	24	40	2318.4	-28.56	87.78	80.00	10	24	5	3146.97	-29.79	102.47	255.04	92.14	11	16	32	2147.0	-25.89	75.73	90.00	11	39	31	2903.53	-28.25	84.63	255.09	91.30	12	27	54	1903.5	-24.87	58.13	100.00	13	6	57	2621.44	-29.79	63.84	255.04	92.14	13	50	38	1621.4	-25.89	37.10	110.00	14	28	48	2365.23	-33.90	44.11	254.76	94.47	15	8	13	1365.2	-28.56	16.70
TDE	-.3708	TRA	-.7394	TC3	.2917	BAU	.2931	SGT	895.0	SGR	908.8	SG3	822.4	ST	21.4	SR	32.0	88	15.1	RDE	-.6492	RRA	.0611	RC3	-.5526	FAU	.29905	RRT	-.0383	RRF	.6312	RTF	-.1524	CRT	.8364	CR8	.1003	C8T	-.4284	FDE	.0860	FRA	-3.3713	FC3	-7.6385	BSP	1096	SG8	1275.5	R23	-3.115	R13	.5503	LSA	37.1	MSA	17.9	88A	2.9	BDE	.7475	BRA	.7420	BC3	.6248	F8P	1339	SG1	920.3	SG2	883.1	THA	124.07	EL1	37.1	EL2	10.1	ALF	58.18																									

LAUNCH DATE SEP 4 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC											DISTANCE 352.081											EARTH TO MARS																																																																																		
RL	190.86	LAL	.00	LOL	341.32	VL	32.974	GAL	7.68	AZL	88.79	HCA	106.78	SMA	197.46	ECC	.26939	INC	1.2099	V1	29.534	RP	234.35	LAP	1.16	LOP	88.11	VP	21.460	GAP	11.40	AZP	90.35	TAL	37.43	TAP	144.22	RCA	144.27	APO	250.68	V2	23.481	RC	178.836	GL	6.83	GP	-11.69	ZAL	33.63	ZAP	131.49	ETS	192.42	ZAE	164.34	ETE	238.92	ZAC	72.19	ETC	283.37	LVI	-6.21																																							
PLANETOCENTRIC CONIC											MID-COURSE EXECUTION ACCURACY											ORBIT DETERMINATION ACCURACY																																																																																		
C3	33.708	VHL	5.806	DLA	11.94	RAL	10.49	RAD	6648.4	VEL	12.394	PTH	7.31	VHP	3.246	DPA	3.76	RAP	42.35	ECC	1.5547	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																									
50.00	8	23	57	3501.68	-46.28	126.27	252.20	102.57	9	22	19	2501.7	-36.25	98.76	60.00	8	50	24	3431.31	-39.65	123.56	253.83	97.87	9	47	35	2431.3	-32.26	95.14	70.00	9	27	47	3321.28	-33.91	115.42	254.60	94.34	10	23	9	2321.3	-28.63	87.98	80.00	10	22	18	3150.49	-29.80	102.73	254.87	92.00	11	14	49	2130.5	-25.95	75.97	90.00	11	37	38	2907.35	-28.26	84.91	254.92	91.16	12	26	6	1907.4	-24.93	58.39	100.00	13	5	10	2624.96	-29.80	64.10	254.87	92.00	13	48	55	1625.0	-25.95	37.34	110.00	14	27	14	2368.10	-33.91	44.33	254.60	94.34	15	6	42	1368.1	-28.63	16.80
TDE	-.3754	TRA	-.7581	TC3	.2534	BAU	.2851	SGT	899.2	SGR	927.5	SG3	858.3	ST	21.8	SR	31.8	88	15.8	RDE	-.6446	RRA	.0484	RC3	-.5798	FAU	.31086	RRT	.0003	RRF	.6514	RTF	-.0092	CRT	.8367	CR8	.1103	C8T	-.4201	FDE	.1081	FRA	-3.5288	FC3	-7.9870	BSP	1113	SG8	1291.8	R23	.0087	R13	.6513	LSA	37.2	MSA	18.3	88A	2.9	BDE	.7459	BRA	.7596	BC3	.6327	F8P	1404	SG1	927.5	SG2	899.2	THA	89.71	EL1	37.2	EL2	10.2	ALF	57.44																									



LAUNCH DATE SEP 4 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 9 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.959 GAL 7.66 AZL 88.76 MCA 107.77 SMA 197.17 ECC .26825 INC 1.2422 V1 29.534  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.396 GAP 11.10 AZP 90.38 TAL 37.48 TAP 145.25 RCA 144.28 APO 250.05 V2 23.424  
 RC 181.791 GL 7.03 GP -11.98 ZAL 33.61 ZAP 129.97 ETS 192.12 ZAE 163.25 ETE 234.79 ZAC 72.02 ETC 283.44 LVI -6.07

Distance 355.661 EARTH TO MARS

Planetary Conic: CS 33.524 VHL 5.790 DLA 12.10 RAL 10.36 RAD 6648.3 VEL 12.387 PTH 7.30 VHP 3.180 DPA 3.31 RAP 41.99 ECC 1.5517  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 48 3503.61 -46.30 128.44 252.10 102.44 9 21 12 2503.6 -36.33 98.88  
 60.00 8 49 3 3433.75 -39.68 123.77 253.71 97.74 9 46 17 2433.8 -32.33 95.31  
 70.00 9 26 13 3324.39 -33.93 115.66 254.46 94.19 10 21 37 2324.4 -28.70 88.19  
 80.00 10 20 31 3154.28 -29.81 103.01 254.72 91.85 11 13 5 2154.3 -26.02 76.23  
 90.00 11 35 45 2911.47 -28.26 85.21 254.76 91.01 12 24 16 1911.5 -25.00 58.67  
 100.00 13 3 23 2628.75 -29.81 64.38 254.72 91.85 13 47 12 1628.8 -26.02 37.60  
 110.00 14 25 39 2371.21 -33.93 44.58 254.46 94.19 15 5 11 1371.2 -28.70 17.11

Differential Corrections: TDE -.3806 TRA -.7784 TC3 .2120 BAU .2885 SGT 907.0 SGR 947.2 SG3 894.7 ST 22.2 SR 31.7 SS 16.0  
 RDE -.6395 RRA .0352 RC3 -.6078 FAU .32298 RRT .0436 RRF .6709 RTF .0552 CRT .8368 CRS .1215 CST -.4108  
 FDE .1337 FRA-3.6878 FC3-8.3408 BSP 1140 SGB 1311.4 R23 .2201 R13 .6343 LSA 37.3 MSA 18.8 SSA 2.9  
 BDE .7442 BRA .7792 BC3 .6437 FSP 1471 SGI 955.3 SG2 898.4 THA 67.42 EL1 37.3 EL2 10.3 ALF 56.67

LAUNCH DATE SEP 4 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 11 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.945 GAL 7.65 AZL 88.73 MCA 108.75 SMA 196.89 ECC .26718 INC 1.2749 V1 29.534  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.334 GAP 10.80 AZP 90.41 TAL 37.51 TAP 146.26 RCA 144.29 APO 249.50 V2 23.387  
 RC 184.750 GL 7.23 GP -12.27 ZAL 33.61 ZAP 128.44 ETS 191.81 ZAE 162.06 ETE 231.11 ZAC 71.84 ETC 283.52 LVI -5.94

Distance 359.645 EARTH TO MARS

Planetary Conic: CS 33.348 VHL 5.775 DLA 12.27 RAL 10.24 RAD 6648.3 VEL 12.380 PTH 7.30 VHP 3.118 DPA 2.86 RAP 41.54 ECC 1.5488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 40 3505.71 -46.33 128.64 252.02 102.29 9 20 6 2505.7 -36.40 99.02  
 60.00 8 47 43 3436.40 -39.70 123.99 253.61 97.59 9 44 59 2436.4 -32.41 95.49  
 70.00 9 24 38 3327.73 -33.94 115.92 254.34 94.04 10 20 6 2327.7 -28.77 88.42  
 80.00 10 18 43 3158.34 -29.81 103.31 254.58 91.69 11 11 21 2158.3 -26.09 76.51  
 90.00 11 33 50 2915.87 -28.27 85.53 254.62 90.85 12 22 26 1915.9 -25.07 58.98  
 100.00 13 1 34 2632.81 -29.81 64.68 254.58 91.69 13 45 27 1632.8 -26.09 37.88  
 110.00 14 24 5 2374.55 -33.94 44.83 254.34 94.04 15 3 39 1374.5 -28.77 17.34

Differential Corrections: TDE -.3857 TRA -.8002 TC3 .1673 BAU .2934 SGT 918.6 SGR 967.9 SG3 931.4 ST 22.7 SR 31.5 SS 16.4  
 RDE -.6342 RRA .0218 RC3 -.6365 FAU .33506 RRT .0908 RRF .6898 RTF .1182 CRT .8367 CRS .1337 CST -.4010  
 FDE .1628 FRA-3.8468 FC3-8.6983 BSP 1177 SGB 1334.4 R23 .2690 R13 .6377 LSA 37.4 MSA 19.3 SSA 2.9  
 BDE .7422 BRA .8005 BC3 .6582 FSP 1539 SGI 991.7 SG2 892.9 THA 59.97 EL1 37.4 EL2 10.5 ALF 55.87

LAUNCH DATE SEP 4 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 13 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.932 GAL 7.63 AZL 88.69 MCA 109.73 SMA 196.64 ECC .26618 INC 1.3077 V1 29.534  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.274 GAP 10.51 AZP 90.44 TAL 37.53 TAP 147.26 RCA 144.30 APO 248.98 V2 23.351  
 RC 187.714 GL 7.43 GP -12.56 ZAL 33.62 ZAP 126.90 ETS 191.50 ZAE 160.80 ETE 227.80 ZAC 71.67 ETC 283.59 LVI -5.81

Distance 363.432 EARTH TO MARS

Planetary Conic: CS 33.178 VHL 5.760 DLA 12.44 RAL 10.13 RAD 6648.2 VEL 12.373 PTH 7.29 VHP 3.060 DPA 2.39 RAP 41.11 ECC 1.5460  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 33 3508.00 -46.37 128.85 251.95 102.13 9 19 1 2508.0 -36.49 99.18  
 60.00 8 46 23 3439.24 -39.73 124.23 253.32 97.43 9 43 42 2439.2 -32.49 95.69  
 70.00 9 23 3 3331.30 -33.96 116.19 254.23 93.88 10 18 35 2331.3 -28.85 88.67  
 80.00 10 16 53 3162.66 -29.82 103.64 254.46 91.53 11 9 36 2162.7 -26.17 76.81  
 90.00 11 31 54 2920.54 -28.27 85.87 254.30 90.67 12 20 35 1920.5 -25.14 59.30  
 100.00 12 59 45 2637.13 -29.82 65.00 254.46 91.53 13 43 42 1637.1 -26.17 38.18  
 110.00 14 22 30 2378.12 -33.96 45.11 254.23 93.88 15 2 8 1378.1 -28.85 17.59

Differential Corrections: TDE -.3868 TRA -.8200 TC3 .1239 BAU .3009 SGT 930.6 SGR 991.0 SG3 969.8 ST 23.0 SR 31.3 SS 16.9  
 RDE -.6293 RRA .0072 RC3 -.6669 FAU .34767 RRT .1356 RRF .7089 RTF .1777 CRT .8351 CRS .1353 CST -.4030  
 FDE .1815 FRA-4.0175 FC3-9.0719 BSP 1216 SGB 1359.5 R23 .2891 R13 .6610 LSA 37.4 MSA 19.7 SSA 2.9  
 BDE .7386 BRA .8200 BC3 .6783 FSP 1594 SGI 1030.5 SG2 886.7 THA 57.45 EL1 37.4 EL2 10.6 ALF 55.35

LAUNCH DATE SEP 4 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 15 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.920 GAL 7.61 AZL 88.66 MCA 110.71 SMA 196.41 ECC .26525 INC 1.3410 V1 29.534  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.216 GAP 10.22 AZP 90.47 TAL 37.54 TAP 148.24 RCA 144.32 APO 248.51 V2 23.315  
 RC 190.600 GL 7.64 GP -12.85 ZAL 33.64 ZAP 125.34 ETS 191.18 ZAE 159.46 ETE 224.85 ZAC 71.50 ETC 283.67 LVI -5.68

Distance 367.221 EARTH TO MARS

Planetary Conic: CS 33.012 VHL 5.746 DLA 12.63 RAL 10.03 RAD 6648.2 VEL 12.366 PTH 7.29 VHP 3.004 DPA 1.92 RAP 40.66 ECC 1.5433  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 26 3510.46 -46.40 129.08 251.91 101.96 9 17 56 2510.5 -36.58 99.34  
 60.00 8 45 3 3442.29 -39.75 124.48 253.45 97.26 9 42 25 2442.3 -32.58 95.90  
 70.00 9 21 28 3335.11 -33.98 116.49 254.15 93.70 10 17 3 2335.1 -28.94 88.93  
 80.00 10 15 2 3167.26 -29.83 103.98 254.36 91.35 11 7 50 2167.3 -26.25 77.13  
 90.00 11 29 56 2925.52 -28.28 86.24 254.39 90.49 12 18 42 1925.5 -25.22 59.84  
 100.00 12 57 54 2641.73 -29.83 65.34 254.36 91.35 13 41 58 1641.7 -26.25 38.49  
 110.00 14 20 54 2381.93 -33.98 45.41 254.15 93.70 15 0 36 1381.9 -28.94 17.85

Differential Corrections: TDE -.3949 TRA -.8481 TC3 .0689 BAU .3089 SGT 955.3 SGR 1013.0 SG3 1005.5 ST 23.6 SR 31.1 SS 17.4  
 RDE -.6226 RRA -.0065 RC3 -.6965 FAU .35932 RRT .1931 RRF .7257 RTF .2470 CRT .8354 CRS .1590 CST -.3854  
 FDE .2247 FRA-4.1674 FC3-9.4231 BSP 1286 SGB 1392.4 R23 .2821 R13 .6774 LSA 37.5 MSA 20.2 SSA 2.9  
 BDE .7373 BRA .8482 BC3 .6999 FSP 1672 SGI 1079.2 SG2 879.8 THA 53.45 EL1 37.5 EL2 10.7 ALF 54.22

LAUNCH DATE SEP 4 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.809 GAL 7.58 AZL 88.63 HCA 111.68 SMA 196.21 ECC .28437 INC 1.3745 V1 29.934
RP 236.12 LAP 1.28 LOP 93.01 VP 21.160 GAP 9.93 AZP 90.51 TAL 37.53 TAP 149.21 RCA 144.33 APO 248.08 V2 23.279
RC 193.849 GL 7.85 GP -13.15 ZAL 33.68 ZAP 123.77 ETS 190.85 ZAE 158.07 ETE 222.20 ZAC 71.34 ETC 263.75 LVI -5.55

DISTANCE 371.013

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.851 VHL 5.732 DLA 12.82 RAL 9.94 RAD 6648.1 VEL 12.360 PTH 7.28 VHP 2.952 DPA 1.44 RAP 40.21 ECC 1.9406
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 18 20 3513.09 -46.44 129.32 251.89 101.78 9 16 53 2513.1 -36.68 99.52
60.00 8 43 43 3445.53 -39.78 124.75 253.40 97.08 9 41 8 2445.5 -32.68 96.12
70.00 9 19 52 3339.15 -33.99 116.80 254.07 93.52 10 15 31 2339.1 -29.03 89.21
80.00 10 13 10 3172.12 -29.84 104.34 254.27 91.16 11 6 2 2172.1 -26.33 77.46
90.00 11 27 57 2930.77 -28.28 86.62 254.30 90.30 12 16 48 1930.8 -25.30 60.01
100.00 12 56 2 2646.59 -29.84 65.71 254.27 91.16 13 40 9 1646.6 -26.33 38.83
110.00 14 19 18 2385.97 -33.99 45.72 254.07 93.52 14 59 4 1386.0 -29.03 18.13

DIFFERENTIAL CORRECTIONS

TDE -.4005 TRA -.0757 TC3 .0133 BAU .3194
RDE -.6161 RRA -.0207 RC3 -.7272 FAU .37115
FDE .2642 FRA-4.3207 FC3-9.7811 B3P 1362
BDE .7348 BRA -6.759 BC3 .7273 F3P 1742

MID-COURSE EXECUTION ACCURACY

SGT 983.1 SGR 1036.6 S63 1041.8
RRT .2482 RRF .7422 RTF .3122
SGB 1428.7 R23 .2810 R13 .6995
S61 1131.0 S62 872.9 THA 51.03

ORBIT DETERMINATION ACCURACY

ST 24.1 SR 30.8 S3 17.8
CRT .8347 CR3 .1694 CST -.3741
LSA 37.6 MSA 20.7 S3A 2.9
EL1 37.6 EL2 10.9 ALF 53.25

LAUNCH DATE SEP 4 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.899 GAL 7.56 AZL 88.59 HCA 112.65 SMA 196.02 ECC .26356 INC 1.4064 V1 29.534
RP 236.46 LAP 1.30 LOP 93.98 VP 21.106 GAP 9.65 AZP 90.54 TAL 37.51 TAP 150.16 RCA 144.36 APO 247.68 V2 23.244
RC 196.819 GL 8.06 GP -13.45 ZAL 33.73 ZAP 122.19 ETS 190.52 ZAE 156.62 ETE 219.81 ZAC 71.17 ETC 283.82 LVI -5.42

DISTANCE 374.807

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.694 VHL 5.718 DLA 13.01 RAL 9.86 RAD 6648.0 VEL 12.354 PTH 7.28 VHP 2.903 DPA .95 RAP 39.74 ECC 1.5381
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 17 14 3515.88 -46.48 129.58 251.89 101.58 9 15 50 2515.9 -36.78 99.71
60.00 8 42 22 3448.97 -39.81 125.04 253.37 96.88 9 39 51 2448.0 -32.77 96.36
70.00 9 18 14 3343.41 -34.01 117.14 254.02 93.32 10 13 58 2343.4 -29.12 89.51
80.00 10 11 17 3177.25 -29.84 104.72 254.20 90.96 11 4 14 2177.2 -26.42 77.82
90.00 11 25 56 2936.31 -28.28 87.03 254.22 90.10 12 14 52 1936.3 -25.39 60.39
100.00 12 54 8 2651.72 -29.84 66.09 254.20 90.96 13 38 20 1651.7 -26.42 39.19
110.00 14 17 41 2390.23 -34.01 46.05 254.02 93.32 14 57 31 1390.2 -29.12 18.43

DIFFERENTIAL CORRECTIONS

TDE -.4037 TRA -.9025 TC3 -.0428 BAU .3324
RDE -.6097 RRA -.0358 RC3 -.7592 FAU .38327
FDE .2974 FRA-4.4809 FC-10.1489 B3P 1448
BDE .7312 BRA .9032 BC3 .7604 F3P 1803

MID-COURSE EXECUTION ACCURACY

SGT 1013.7 SGR 1062.2 S63 1079.2
RRT .3007 RRF .7565 RTF .3732
SGB 1468.3 R23 .2733 R13 .7237
S61 1185.6 S62 866.2 THA 49.42

ORBIT DETERMINATION ACCURACY

ST 24.6 SR 30.6 S3 18.3
CRT .8332 CR3 .1771 CST -.3704
LSA 37.6 MSA 21.1 S3A 2.9
EL1 37.6 EL2 11.0 ALF 52.44

LAUNCH DATE SEP 4 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.890 GAL 7.54 AZL 88.56 HCA 113.62 SMA 195.86 ECC .26279 INC 1.4427 V1 29.534
RP 236.81 LAP 1.32 LOP 94.95 VP 21.053 GAP 9.37 AZP 90.58 TAL 37.48 TAP 151.10 RCA 144.38 APO 247.32 V2 23.209
RC 199.589 GL 8.27 GP -13.75 ZAL 33.79 ZAP 120.80 ETS 190.18 ZAE 155.12 ETE 217.85 ZAC 71.01 ETC 283.90 LVI -5.29

DISTANCE 378.603

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.541 VHL 5.704 DLA 13.22 RAL 9.79 RAD 6648.0 VEL 12.347 PTH 7.27 VHP 2.857 DPA .46 RAP 39.26 ECC 1.5355
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 16 8 3518.86 -46.52 129.85 251.90 101.37 9 14 47 2518.9 -36.89 99.91
60.00 8 41 2 3452.60 -39.84 125.34 253.35 96.68 9 38 34 2452.6 -32.88 96.61
70.00 9 16 36 3347.91 -34.03 117.49 253.98 93.12 10 12 24 2347.9 -29.22 89.83
80.00 10 9 21 3182.65 -29.85 105.12 254.14 90.74 11 2 24 2182.7 -26.51 78.19
90.00 11 23 52 2942.14 -28.28 87.45 254.15 89.88 12 12 54 1942.1 -25.48 60.79
100.00 12 52 13 2657.12 -29.85 66.49 254.14 90.74 13 36 30 1657.1 -26.51 39.56
110.00 14 16 3 2394.73 -34.03 46.40 253.98 93.12 14 55 57 1394.7 -29.22 18.74

DIFFERENTIAL CORRECTIONS

TDE -.4101 TRA -.9345 TC3 -.1063 BAU .3471
RDE -.6021 RRA -.0503 RC3 -.7908 FAU .39467
FDE .3476 FRA-4.6253 FC-10.4999 B3P 1548
BDE .7285 BRA .9358 BC3 .7980 F3P 1875

MID-COURSE EXECUTION ACCURACY

SGT 1055.4 SGR 1087.4 S63 1114.9
RRT .3560 RRF .7731 RTF .4441
SGB 1515.4 R23 .2899 R13 .7442
S61 1248.3 S62 859.2 THA 47.40

ORBIT DETERMINATION ACCURACY

ST 25.2 SR 30.3 S3 18.7
CRT .8324 CR3 .1950 CST -.3557
LSA 37.8 MSA 21.6 S3A 2.9
EL1 37.7 EL2 11.2 ALF 51.30

LAUNCH DATE SEP 4 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.882 GAL 7.51 AZL 88.52 HCA 114.98 SMA 195.70 ECC .26208 INC 1.4774 V1 29.534
RP 237.14 LAP 1.34 LOP 95.91 VP 21.003 GAP 9.09 AZP 90.61 TAL 37.44 TAP 152.03 RCA 144.41 APO 246.98 V2 23.174
RC 202.557 GL 8.49 GP -14.03 ZAL 33.86 ZAP 119.01 ETS 189.83 ZAE 153.99 ETE 215.88 ZAC 70.85 ETC 283.98 LVI -5.16

DISTANCE 382.401

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.392 VHL 5.691 DLA 13.43 RAL 9.72 RAD 6647.8 VEL 12.341 PTH 7.27 VHP 2.814 DPA -.04 RAP 38.77 ECC 1.5331
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 15 3 3521.99 -46.56 130.14 251.93 101.15 9 13 45 2522.0 -37.00 100.12
60.00 8 39 41 3456.43 -39.87 125.67 253.35 96.46 9 37 17 2456.4 -32.99 96.88
70.00 9 14 57 3352.84 -34.05 117.85 253.95 92.90 10 10 50 2352.6 -29.32 90.16
80.00 10 7 24 3188.32 -29.85 105.54 254.10 90.52 11 0 32 2188.3 -26.60 78.59
90.00 11 21 46 2948.26 -28.28 87.90 254.10 89.66 12 10 55 1948.3 -25.57 61.22
100.00 12 50 16 2662.79 -29.85 66.91 254.10 90.52 13 34 38 1662.8 -26.60 39.96
110.00 14 14 23 2399.46 -34.05 46.77 253.95 92.90 14 54 23 1399.5 -29.32 19.07

DIFFERENTIAL CORRECTIONS

TDE -.4135 TRA -.9651 TC3 -.1699 BAU .3642
RDE -.5948 RRA -.0657 RC3 -.8237 FAU .40622
FDE .3890 FRA-4.7770 FC-10.8572 B3P 1361
BDE .7244 BRA .9673 BC3 .8410 F3P 1936

MID-COURSE EXECUTION ACCURACY

SGT 1099.3 SGR 1114.5 S63 1150.5
RRT .4069 RRF .7875 RTF .4895
SGB 1565.5 R23 .2819 R13 .7654
S61 1313.1 S62 852.4 THA 45.97

ORBIT DETERMINATION ACCURACY

ST 25.6 SR 30.0 S3 19.2
CRT .8308 CR3 .2048 CST -.3503
LSA 37.8 MSA 22.1 S3A 2.9
EL1 37.8 EL2 11.3 ALF 50.35

LAUNCH DATE SEP 4 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC DISTANCE 386.200 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.878 GAL 7.49 AZL 88.49 HCA 115.54 SMA 195.56 ECC .26141 INC 1.5125 V1 29.534  
 RP 237.48 LAP 1.36 LOP 96.88 VP 20.994 GAP 8.81 AZP 90.65 TAL 37.39 TAP 152.94 RCA 144.44 APO 246.68 V2 23.140  
 RC 205.523 GL 8.71 GP -14.35 ZAL 33.95 ZAP 117.40 ETS 169.48 ZAE 152.01 ETE 213.88 ZAC 70.69 ETC 284.05 LVI -5.02

PLANETOCENTRIC CONIC  
 C3 32.246 VHL 5.679 DLA 13.84 RAL 9.67 RAD 6647.8 VEL 12.336 PTH 7.26 VHP 2.773 DPA -.55 RAP 38.28 ECC 1.5307  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 58 3525.30 -46.60 130.45 251.98 100.92 9 12 43 2525.3 -37.12 100.34  
 60.00 8 38 20 3460.45 -39.90 126.00 253.37 96.23 9 38 0 2460.4 -33.10 97.16  
 70.00 9 13 17 3357.59 -34.06 118.24 253.94 92.67 10 9 14 2357.6 -29.43 90.50  
 80.00 10 5 24 3194.25 -29.86 105.98 254.06 90.29 10 58 39 2194.3 -26.70 79.00  
 90.00 11 19 38 2954.67 -28.27 88.37 254.06 89.42 12 8 53 1954.7 -25.66 61.66  
 100.00 12 48 16 2668.73 -29.86 67.35 254.06 90.29 13 32 45 1668.7 -26.70 40.37  
 110.00 14 12 43 2404.41 -34.06 47.16 253.94 92.67 14 52 47 1404.4 -29.43 19.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4136 TRA -.9940 TC3 -.2323 BAU .3834 SGT 1144.1 SGR 1144.7 S63 1188.6 ST 26.0 SR 29.7 S8 19.7  
 RDE -.5882 RRA -.0824 RC3 -.8585 FAU .41839 RRT .4530 RRF .8019 RTF .5392 CRT .8277 CRS .2037 CST -.3568  
 FDE .4166 FRA -4.9419 FC-11.2328 BSP 1794 SGB 1618.4 R23 .2508 R13 .7869 LSA 37.8 MSA 22.6 S8A 2.9  
 BDE .7190 BRA .9974 BC3 .8894 FSP 1975 S61 1379.4 S62 846.4 THA 45.03 EL1 37.8 EL2 11.5 ALF 49.63

LAUNCH DATE SEP 4 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC DISTANCE 389.999 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.869 GAL 7.46 AZL 88.45 HCA 116.50 SMA 195.44 ECC .26079 INC 1.5481 V1 29.534  
 RP 237.81 LAP 1.39 LOP 97.84 VP 20.907 GAP 8.54 AZP 90.69 TAL 37.33 TAP 153.83 RCA 144.47 APO 246.41 V2 23.106  
 RC 208.485 GL 8.94 GP -14.65 ZAL 34.05 ZAP 115.81 ETS 169.11 ZAE 150.41 ETE 212.24 ZAC 70.53 ETC 284.13 LVI -4.89

PLANETOCENTRIC CONIC  
 C3 32.102 VHL 5.666 DLA 13.87 RAL 9.62 RAD 6647.8 VEL 12.330 PTH 7.26 VHP 2.736 DPA -1.06 RAP 37.78 ECC 1.5283  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 53 3528.78 -46.65 130.78 252.05 100.67 9 11 41 2528.8 -37.25 100.58  
 60.00 8 36 58 3464.67 -39.93 126.36 253.40 96.00 9 34 42 2464.7 -33.22 97.45  
 70.00 9 11 35 3362.80 -34.08 118.65 253.94 92.43 10 7 37 2362.8 -29.54 90.87  
 80.00 10 3 23 3200.49 -29.86 106.45 254.05 90.05 10 56 43 2200.5 -26.80 79.44  
 90.00 11 17 27 2961.40 -28.27 88.86 254.03 89.18 12 6 49 1961.4 -25.76 62.13  
 100.00 12 46 15 2674.96 -29.86 67.81 254.05 90.05 13 30 49 1675.0 -26.80 40.81  
 110.00 14 11 1 2409.62 -34.06 47.56 253.94 92.43 14 51 11 1409.6 -29.54 19.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4233 TRA -1.0347 TC3 -.3110 BAU .4044 SGT 1212.0 SGR 1169.4 S63 1216.3 ST 26.8 SR 29.3 S8 20.1  
 RDE -.5778 RRA -.0958 RC3 -.8896 FAU .42781 RRT .5030 RRF .8132 RTF .5886 CRT .8275 CRS .2363 CST -.3266  
 FDE .4990 FRA -5.0493 FC-11.5372 BSP 1920 SGB 1684.2 R23 .2500 R13 .8012 LSA 38.0 MSA 23.1 S8A 2.9  
 BDE .7163 BRA 1.0391 BC3 .9424 FSP 2071 S61 1460.5 S62 838.7 THA 42.96 EL1 38.0 EL2 11.6 ALF 48.03

LAUNCH DATE SEP 4 1973

FLIGHT TIME 178.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC DISTANCE 393.800 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.863 GAL 7.43 AZL 88.42 HCA 117.46 SMA 195.34 ECC .26021 INC 1.5842 V1 29.534  
 RP 238.14 LAP 1.41 LOP 98.79 VP 20.861 GAP 8.27 AZP 90.73 TAL 37.25 TAP 154.71 RCA 144.51 APO 246.17 V2 23.073  
 RC 211.443 GL 9.17 GP -14.95 ZAL 34.15 ZAP 114.20 ETS 188.74 ZAE 148.79 ETE 210.72 ZAC 70.38 ETC 284.20 LVI -4.75

PLANETOCENTRIC CONIC  
 C3 31.982 VHL 5.653 DLA 14.10 RAL 9.58 RAD 6647.8 VEL 12.324 PTH 7.25 VHP 2.701 DPA -1.37 RAP 37.28 ECC 1.5260  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 47 3532.42 -46.69 131.12 252.13 100.41 9 10 40 2532.4 -37.38 100.83  
 60.00 8 35 35 3469.09 -39.98 126.73 253.44 95.74 9 33 24 2469.1 -33.34 97.76  
 70.00 9 9 51 3368.23 -34.09 119.07 253.95 92.18 10 5 59 2368.2 -29.65 91.25  
 80.00 10 1 18 3207.00 -29.86 106.93 254.04 89.79 10 54 45 2207.0 -26.91 79.89  
 90.00 11 15 13 2968.43 -28.26 89.38 254.02 88.92 12 4 42 1968.4 -25.86 62.62  
 100.00 12 44 10 2681.47 -29.86 68.30 254.04 89.79 13 28 52 1681.5 -26.91 41.26  
 110.00 14 9 17 2415.05 -34.09 47.99 253.95 92.18 14 49 32 1415.1 -29.65 20.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4271 TRA -1.0711 TC3 -.3896 BAU .4275 SGT 1278.8 SGR 1198.0 S63 1251.0 ST 27.4 SR 28.9 S8 20.6  
 RDE -.5687 RRA -.1112 RC3 -.9231 FAU .43810 RRT .5456 RRF .8249 RTF .6099 CRT .8255 CRS .2507 CST -.3168  
 FDE .5586 FRA -5.1792 FC-11.8688 BSP 2086 SGB 1750.8 R23 .2436 R13 .8171 LSA 38.1 MSA 23.5 S8A 2.8  
 BDE .7112 BRA 1.0788 BC3 1.0004 FSP 2133 S61 1540.4 S62 832.1 THA 41.67 EL1 38.1 EL2 11.7 ALF 46.87

LAUNCH DATE SEP 4 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC DISTANCE 397.602 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.858 GAL 7.41 AZL 88.38 HCA 118.42 SMA 195.25 ECC .25967 INC 1.6207 V1 29.534  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.817 GAP 8.00 AZP 90.77 TAL 37.17 TAP 155.59 RCA 144.55 APO 245.94 V2 23.040  
 RC 214.394 GL 9.40 GP -15.25 ZAL 34.27 ZAP 112.60 ETS 188.36 ZAE 147.14 ETE 209.32 ZAC 70.22 ETC 284.27 LVI -4.61

PLANETOCENTRIC CONIC  
 C3 31.824 VHL 5.641 DLA 14.34 RAL 9.54 RAD 6647.7 VEL 12.319 PTH 7.25 VHP 2.689 DPA -2.09 RAP 36.78 ECC 1.5237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 41 3536.24 -46.74 131.47 252.23 100.14 9 9 38 2536.2 -37.52 101.09  
 60.00 8 34 11 3473.71 -39.99 127.12 253.50 95.48 9 32 5 2473.7 -33.47 98.09  
 70.00 9 8 6 3373.91 -34.11 119.51 253.98 91.92 10 4 19 2373.9 -29.77 91.65  
 80.00 9 59 12 3213.80 -29.85 107.43 254.04 89.53 10 52 45 2213.8 -27.01 80.37  
 90.00 11 12 56 2975.77 -28.25 89.91 254.01 88.65 12 2 32 1975.8 -25.96 63.14  
 100.00 12 42 3 2688.27 -29.85 68.80 254.04 89.53 13 26 52 1688.3 -27.01 41.74  
 110.00 14 7 32 2420.73 -34.11 48.43 253.98 91.92 14 47 53 1420.7 -29.77 20.57

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4307 TRA -1.1090 TC3 -.4632 BAU .4524 SGT 1347.6 SGR 1227.4 S63 1282.7 ST 28.0 SR 28.5 S8 21.1  
 RDE -.5594 RRA -.1266 RC3 -.9571 FAU .44805 RRT .5847 RRF .8360 RTF .6686 CRT .8235 CRS .2640 CST -.3077  
 FDE .6134 FRA -5.3033 FC-12.1887 BSP 2220 SGB 1822.8 R23 .2375 R13 .8316 LSA 38.2 MSA 24.0 S8A 2.8  
 BDE .7060 BRA 1.1162 BC3 1.0633 FSP 2190 S61 1625.0 S62 825.7 THA 40.45 EL1 38.2 EL2 11.9 ALF 45.67

LAUNCH DATE SEP 4 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 8 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.894 GAL 7.38 AZL 88.34 HCA 119.37 SMA 195.17 ECC .25917 INC 1.6580 V1 29.534  
 RP 236.79 LAP 1.44 LOP 100.70 VP 20.774 GAP 7.74 AZP 90.81 TAL 37.08 TAP 156.44 RCA 144.59 APO 245.75 V2 23.008  
 RC 217.340 GL 9.64 GP -15.55 ZAL 34.40 ZAP 111.00 ETS 187.97 ZAE 145.47 ETE 208.81 ZAC 70.07 ETC 284.34 LVI -4.48

Distance 401.404

Planetocentric Conic: C3 31.689 VHL 5.629 DLA 14.59 RAL 9.51 RAD 6647.7 VEL 12.313 PTH 7.28 VHP 2.639 DPA -2.61 RAP 36.27 ECC 1.8215  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 35 3540.23 -46.79 131.88 252.34 89.86 9 8 35 2540.2 -37.66 101.37  
 60.00 8 32 46 3478.53 -40.02 127.53 253.57 95.21 9 30 44 2478.5 -33.60 98.45  
 70.00 9 6 18 3379.83 -34.12 119.97 254.02 91.65 10 2 38 2379.8 -29.89 92.07  
 80.00 9 57 2 3220.89 -29.85 107.96 254.05 89.25 10 50 43 2220.9 -27.12 80.87  
 90.00 11 10 36 2983.43 -28.24 90.47 254.02 88.37 12 0 19 1983.4 -26.06 63.67  
 100.00 12 39 53 2695.36 -29.85 69.33 254.05 89.25 13 24 49 1695.4 -27.12 42.24  
 110.00 14 5 44 2426.65 -34.12 48.89 254.02 91.65 14 46 11 1426.6 -29.89 20.99

Differential Corrections: TDE -.4336 TRA -1.1481 TC3 -.5438 BAU .4789 SGT 1423.9 SGR 1257.0 SG3 1312.8 ST 28.6 SR 28.1 SS 21.6  
 RDE -.5495 RRA -.1420 RC3 -.9910 FAU .45739 RRT .6203 RRF .8462 RTF .7021 CRT .8212 CRS .2777 CST -.2985  
 FDE .6779 FRA -5.4189 FC-12.4958 BSP 2386 SGB 1899.4 R23 .2318 R13 .8446 LSA 38.2 MSA 24.5 S5A 2.8  
 BDE .7000 BRA 1.1568 BC3 1.1304 F8P 2248 SG1 1715.6 SG2 819.3 THA 39.30 EL1 38.2 EL2 12.0 ALF 44.43

LAUNCH DATE SEP 4 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 7 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.851 GAL 7.35 AZL 88.30 HCA 120.32 SMA 195.10 ECC .25870 INC 1.6958 V1 29.534  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.733 GAP 7.47 AZP 90.86 TAL 36.97 TAP 157.29 RCA 144.63 APO 245.57 V2 22.975  
 RC 220.278 GL 9.88 GP -15.84 ZAL 34.54 ZAP 109.41 ETS 187.58 ZAE 143.79 ETE 208.79 ZAC 69.93 ETC 284.41 LVI -4.33

Distance 405.207

Planetocentric Conic: C3 31.556 VHL 5.618 DLA 14.84 RAL 9.49 RAD 6647.6 VEL 12.308 PTH 7.24 VHP 2.612 DPA -3.13 RAP 35.77 ECC 1.9193  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 28 3544.40 -46.83 132.24 252.47 99.56 9 7 33 2544.4 -37.81 101.66  
 60.00 8 31 20 3483.56 -40.05 127.95 253.66 94.92 9 29 28 2483.6 -33.74 98.78  
 70.00 9 4 29 3386.00 -34.13 120.46 254.06 91.36 10 0 55 2386.0 -30.01 92.31  
 80.00 9 54 49 3228.29 -29.84 108.51 254.08 88.96 10 48 37 2228.3 -27.23 81.39  
 90.00 11 8 12 2991.42 -28.22 91.98 254.03 88.08 11 58 3 1991.4 -26.17 64.24  
 100.00 12 37 40 2702.78 -29.84 69.88 254.08 88.96 13 22 43 1702.8 -27.23 42.76  
 110.00 14 3 55 2432.82 -34.13 49.37 254.06 91.36 14 44 28 1432.8 -37.01 21.42

Differential Corrections: TDE -.4360 TRA -1.1884 TC3 -.6269 BAU .5070 SGT 1505.4 SGR 1287.3 SG3 1341.9 ST 29.1 SR 27.7 SS 22.1  
 RDE -.5392 RRA -.1574 RC3 -1.0254 FAU .46637 RRT .6524 RRF .8559 RTF .7315 CRT .8188 CRS .2908 CST -.2903  
 FDE .7423 FRA -5.5284 FC-12.7945 BSP 2580 SGB 1980.8 R23 .2264 R13 .8564 LSA 38.3 MSA 25.0 S5A 2.8  
 BDE .6934 BRA 1.1988 BC3 1.2019 F8P 2300 SG1 1806.2 SG2 813.2 THA 38.23 EL1 38.3 EL2 12.1 ALF 43.18

LAUNCH DATE SEP 4 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 9 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.848 GAL 7.32 AZL 88.27 HCA 121.28 SMA 195.05 ECC .25826 INC 1.7342 V1 29.534  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.694 GAP 7.21 AZP 90.90 TAL 36.86 TAP 158.12 RCA 144.67 APO 245.42 V2 22.944  
 RC 223.209 GL 10.13 GP -16.14 ZAL 34.69 ZAP 107.82 ETS 187.17 ZAE 142.11 ETE 208.65 ZAC 69.78 ETC 284.48 LVI -4.19

Distance 409.010

Planetocentric Conic: C3 31.426 VHL 5.608 DLA 15.11 RAL 9.47 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 2.887 DPA -3.64 RAP 35.27 ECC 1.5172  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 21 3548.74 -46.88 132.65 252.62 99.25 9 6 30 2548.7 -37.96 101.96  
 60.00 8 29 52 3488.80 -40.08 128.39 253.78 94.62 9 28 1 2488.8 -33.88 99.16  
 70.00 9 2 37 3392.43 -34.14 120.96 254.13 91.07 9 59 9 2392.4 -30.14 92.96  
 80.00 9 52 32 3235.99 -29.83 109.08 254.11 88.66 10 48 28 2236.0 -27.35 81.93  
 90.00 11 5 43 2999.78 -28.20 91.67 254.06 87.78 11 55 43 1999.9 -26.28 64.82  
 100.00 12 35 24 2710.46 -29.83 70.45 254.11 88.66 13 20 34 1710.5 -27.35 43.30  
 110.00 14 2 3 2439.25 -34.14 49.88 254.13 91.07 14 42 42 1439.2 -30.14 21.88

Differential Corrections: TDE -.4376 TRA -1.2293 TC3 -.7124 BAU .5386 SGT 1991.3 SGR 1318.5 SG3 1370.0 ST 29.7 SR 27.2 SS 22.8  
 RDE -.5288 RRA -.1732 RC3 -1.0601 FAU .47493 RRT .6814 RRF .8650 RTF .7575 CRT .8162 CRS .3008 CST -.2847  
 FDE .8048 FRA -5.6343 FC-13.0834 BSP 2742 SGB 2066.5 R23 .2211 R13 .8672 LSA 38.4 MSA 25.5 S5A 2.8  
 BDE .6884 BRA 1.2416 BC3 1.2773 F8P 2343 SG1 1902.4 SG2 807.2 THA 37.24 EL1 38.4 EL2 12.2 ALF 41.94

LAUNCH DATE SEP 4 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 11 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.845 GAL 7.29 AZL 88.23 HCA 122.21 SMA 195.00 ECC .25786 INC 1.7733 V1 29.534  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.655 GAP 6.85 AZP 90.95 TAL 36.74 TAP 158.85 RCA 144.72 APO 245.29 V2 22.912  
 RC 228.132 GL 10.38 GP -16.44 ZAL 34.85 ZAP 106.24 ETS 186.76 ZAE 140.41 ETE 204.87 ZAC 69.63 ETC 284.84 LVI -4.03

Distance 412.813

Planetocentric Conic: C3 31.299 VHL 5.595 DLA 15.38 RAL 9.46 RAD 6647.5 VEL 12.297 PTH 7.23 VHP 2.964 DPA -4.16 RAP 34.77 ECC 1.5181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 13 3553.27 -46.93 133.07 252.78 98.92 9 5 26 2553.3 -38.12 102.27  
 60.00 8 28 23 3494.25 -40.11 128.85 253.87 94.31 9 26 37 2494.3 -34.03 99.54  
 70.00 9 0 42 3399.12 -34.15 121.48 254.20 90.76 9 57 21 2399.1 -30.27 93.44  
 80.00 9 50 12 3244.02 -29.82 109.68 254.16 88.35 10 44 16 2244.0 -27.46 82.50  
 90.00 11 3 11 3008.44 -28.18 92.30 254.09 87.46 11 53 19 2008.4 -26.39 65.43  
 100.00 12 33 4 2718.49 -29.82 71.05 254.16 88.35 13 18 22 1718.5 -27.46 43.87  
 110.00 14 0 8 2445.94 -34.15 50.40 254.20 90.76 14 40 54 1445.9 -30.27 22.36

Differential Corrections: TDE -.4379 TRA -1.2711 TC3 -.7998 BAU .5675 SGT 1880.5 SGR 1350.8 SG3 1397.4 ST 30.2 SR 26.8 SS 23.0  
 RDE -.5184 RRA -.1893 RC3 -1.0954 FAU .48322 RRT .7075 RRF .8737 RTF .7804 CRT .8134 CRS .3070 CST -.2836  
 FDE .8623 FRA -5.7392 FC-13.3660 BSP 2934 SGB 2156.1 R23 .2157 R13 .8772 LSA 38.5 MSA 25.9 S5A 2.8  
 BDE .6786 BRA 1.2851 BC3 1.3562 F8P 2378 SG1 2001.6 SG2 801.5 THA 36.36 EL1 38.5 EL2 12.2 ALF 40.74

LAUNCH DATE SEP 4 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC DISTANCE 416.617 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.844 GAL 7.25 AZL 88.19 HCA 123.18 SMA 194.97 ECC .25749 INC 1.8131 V1 29.534  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.818 GAP 6.70 AZP 90.99 TAL 36.61 TAP 159.76 RCA 144.77 APO 245.17 V2 22.682  
 RC 229.048 GL 10.64 GP -16.73 ZAL 35.02 ZAP 104.67 ETS 186.34 ZAE 136.71 ETE 203.55 ZAC 69.49 ETC 284.61 LVI -3.90

PLANETOCENTRIC CONIC  
 C3 31.174 VHL 5.583 DLA 15.85 RAL 9.45 RAD 6647.5 VEL 12.292 PTH 7.23 VHP 2.944 DPA -4.67 RAP 34.27 ECC 1.5130  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 3 3557.97 -46.98 133.52 252.95 98.58 9 4 21 2558.0 -38.29 102.61  
 60.00 8 26 52 3499.92 -40.14 129.33 253.99 93.99 9 25 12 2499.9 -34.18 99.95  
 70.00 8 58 45 3406.07 -34.15 122.02 254.28 90.44 9 55 31 2406.1 -30.41 93.94  
 80.00 9 47 48 3252.37 -29.80 110.30 254.21 88.02 10 42 0 2252.4 -27.58 83.09  
 90.00 11 0 34 3017.48 -28.15 92.96 254.13 87.13 11 50 51 2017.5 -26.50 66.07  
 100.00 12 30 39 2726.84 -29.80 71.67 254.21 88.02 13 16 6 1726.8 -27.58 44.46  
 110.00 13 58 11 2452.89 -34.15 50.94 254.28 90.44 14 39 4 1452.9 -30.41 22.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4356 TRA-1.3116 TC3 -.8884 BAU .5995 SGT 1770.1 SGR 1386.2 SG3 1426.2 ST 30.7 SR 26.4 SS 23.5  
 RDE -.5091 RRA -.2069 RC3-1.1327 FAU .49187 RRT .7311 RRF .8822 RTF .8011 CRT .8099 CRS .3034 CST -.2933  
 FDE .9022 FRA-5.8557 FC-13.6596 BSP 3138 SGB 2248.3 R23 .2093 R13 .8871 LSA 38.6 MSA 26.3 SSA 2.8  
 BDE .6700 BRA 1.3278 BC3 1.4383 FSP 2384 SG1 2102.6 SG2 796.3 THA 35.67 EL1 38.6 EL2 12.3 ALF 39.72

LAUNCH DATE SEP 4 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC DISTANCE 420.419 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.843 GAL 7.22 AZL 88.15 HCA 124.09 SMA 194.95 ECC .25714 INC 1.8537 V1 29.534  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.583 GAP 6.45 AZP 91.04 TAL 36.47 TAP 160.56 RCA 144.82 APO 245.08 V2 22.851  
 RC 231.999 GL 10.90 GP -17.02 ZAL 35.20 ZAP 103.12 ETS 185.91 ZAE 137.01 ETE 202.59 ZAC 69.34 ETC 284.67 LVI -3.74

PLANETOCENTRIC CONIC  
 C3 31.049 VHL 5.572 DLA 15.94 RAL 9.45 RAD 6647.4 VEL 12.287 PTH 7.23 VHP 2.526 DPA -5.18 RAP 33.79 ECC 1.5110  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 53 3562.88 -47.03 133.98 253.14 98.23 9 3 16 2562.9 -38.46 102.95  
 60.00 8 25 19 3505.83 -40.16 129.83 254.13 93.65 9 23 45 2505.8 -34.33 100.37  
 70.00 8 56 44 3413.33 -34.15 122.59 254.37 90.10 9 53 38 2413.3 -30.54 94.46  
 80.00 9 45 19 3261.10 -29.78 110.95 254.27 87.68 10 39 40 2261.1 -27.70 83.71  
 90.00 10 57 52 3026.94 -28.11 93.65 254.18 86.79 11 48 19 2026.9 -26.61 66.74  
 100.00 12 28 11 2735.57 -29.78 72.31 254.27 87.68 13 13 47 1735.6 -27.70 45.08  
 110.00 13 56 11 2460.15 -34.15 51.51 254.37 90.10 14 37 11 1460.2 -30.54 23.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4415 TRA-1.3625 TC3 -.9879 BAU .6330 SGT 1881.8 SGR 1409.6 SG3 1440.2 ST 31.6 SR 25.6 SS 24.1  
 RDE -.4926 RRA -.2179 RC3-1.1617 FAU .49574 RRT .7521 RRF .8881 RTF .8170 CRT .8090 CRS .3429 CST -.2550  
 FDE 1.0343 FRA-5.8729 FC-13.8225 BSP 3324 SGB 2351.2 R23 .2100 R13 .8921 LSA 38.8 MSA 26.9 SSA 2.7  
 BDE .6615 BRA 1.3798 BC3 1.5250 FSP 2485 SG1 2214.7 SG2 789.4 THA 34.36 EL1 38.8 EL2 12.3 ALF 37.76

LAUNCH DATE SEP 4 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC DISTANCE 424.222 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.842 GAL 7.18 AZL 88.10 HCA 125.02 SMA 194.94 ECC .25682 INC 1.8950 V1 29.534  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.548 GAP 6.19 AZP 91.09 TAL 36.33 TAP 161.35 RCA 144.87 APO 245.00 V2 22.821  
 RC 234.892 GL 11.17 GP -17.32 ZAL 35.39 ZAP 101.58 ETS 185.48 ZAE 135.31 ETE 201.67 ZAC 69.20 ETC 284.72 LVI -3.59

PLANETOCENTRIC CONIC  
 C3 30.928 VHL 5.581 DLA 16.24 RAL 9.48 RAD 6647.4 VEL 12.282 PTH 7.22 VHP 2.510 DPA -5.69 RAP 33.32 ECC 1.5080  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 2 41 3567.97 -47.08 134.47 253.34 97.86 9 2 9 2568.0 -38.63 103.31  
 60.00 8 23 44 3511.96 -40.19 130.35 254.27 93.30 9 22 18 2512.0 -34.49 100.82  
 70.00 8 54 40 3420.87 -34.15 123.18 254.48 89.75 9 51 41 2420.9 -30.68 95.00  
 80.00 9 42 46 3270.17 -29.75 111.62 254.34 87.33 10 37 16 2270.2 -27.83 84.36  
 90.00 10 55 4 3036.78 -28.07 94.37 254.24 86.43 11 45 41 2036.8 -26.73 67.44  
 100.00 12 25 37 2744.64 -29.75 72.99 254.34 87.33 13 11 22 1744.6 -27.83 45.73  
 110.00 13 54 7 2467.69 -34.15 52.10 254.48 89.75 14 35 14 1467.7 -30.68 23.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4410 TRA-1.4084 TC3-1.0838 BAU .6672 SGT 1985.8 SGR 1440.3 SG3 1460.2 ST 32.1 SR 25.1 SS 24.7  
 RDE -.4787 RRA -.2328 RC3-1.1954 FAU .50144 RRT .7709 RRF .8948 RTF .8221 CRT .8064 CRS .3548 CST -.2472  
 FDE 1.1140 FRA-5.9368 FC-14.0381 BSP 3531 SGB 2453.1 R23 .2089 R13 .8988 LSA 38.9 MSA 27.4 SSA 2.7  
 BDE .6518 BRA 1.4275 BC3 1.6136 FSP 2522 SG1 2324.6 SG2 783.8 THA 33.52 EL1 38.9 EL2 12.3 ALF 36.35

LAUNCH DATE SEP 4 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC DISTANCE 428.025 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.842 GAL 7.15 AZL 88.06 HCA 125.96 SMA 194.93 ECC .25652 INC 1.9373 V1 29.534  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.518 GAP 5.94 AZP 91.14 TAL 36.18 TAP 162.13 RCA 144.93 APO 244.94 V2 22.792  
 RC 237.739 GL 11.45 GP -17.81 ZAL 35.59 ZAP 100.05 ETS 185.04 ZAE 133.62 ETE 200.79 ZAC 69.08 ETC 284.78 LVI -3.43

PLANETOCENTRIC CONIC  
 C3 30.810 VHL 5.551 DLA 16.34 RAL 9.48 RAD 6647.3 VEL 12.278 PTH 7.22 VHP 2.495 DPA -6.20 RAP 32.86 ECC 1.5070  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 28 3573.27 -47.13 134.97 253.56 97.48 9 1 1 2573.3 -38.81 103.69  
 60.00 8 22 6 3518.33 -40.21 130.89 254.43 92.93 9 20 44 2518.3 -34.65 101.28  
 70.00 8 52 33 3428.70 -34.15 123.79 254.59 89.39 9 49 42 2428.7 -30.83 95.56  
 80.00 9 40 7 3279.62 -29.72 112.32 254.42 86.96 10 34 47 2279.6 -27.95 85.04  
 90.00 10 52 11 3047.03 -28.03 95.11 254.30 86.06 11 42 58 2047.0 -26.84 68.17  
 100.00 12 22 59 2754.09 -29.72 73.69 254.42 86.96 13 8 53 1754.1 -27.95 46.40  
 110.00 13 51 59 2475.92 -34.15 52.71 254.59 89.39 14 33 15 1475.5 -30.83 24.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4398 TRA-1.4550 TC3-1.1818 BAU .7023 SGT 2093.3 SGR 1471.0 SG3 1478.2 ST 32.7 SR 24.5 SS 25.2  
 RDE -.4664 RRA -.2473 RC3-1.2289 FAU .50648 RRT .7877 RRF .9011 RTF .8452 CRT .8039 CRS .3655 CST -.2403  
 FDE 1.1938 FRA-5.9890 FC-14.2314 BSP 3743 SGB 2558.5 R23 .2043 R13 .9047 LSA 39.0 MSA 27.9 SSA 2.7  
 BDE .6411 BRA 1.4759 BC3 1.7050 FSP 2555 SG1 2437.2 SG2 778.3 THA 32.71 EL1 39.0 EL2 12.2 ALF 34.94

LAUNCH DATE SEP 4 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.842 GAL 7.11 AZL 88.02 HCA 128.89 SMA 194.93 ECC .25625 INC 1.9804 V1 29.534  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.483 GAP 5.70 AZP 91.19 TAL 36.02 TAP 182.91 RCA 144.98 APO 244.89 V2 22.763  
 RC 240.615 GL 11.73 GP -17.90 ZAL 35.80 ZAP 98.54 ETS 184.59 ZAE 131.93 ETE 199.95 ZAC 68.91 ETC 284.83 LVI -3.28

Distance 431.827 Earth to Mars

Planetary Conic: C3 30.693 VHL 5.540 DLA 16.85 RAL 9.47 RAD 6647.3 VEL 12.273 PTH 7.21 VHP 2.483 DPA -6.69 RAP 32.40 ECC 1.5051  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 13 3578.77 -47.17 135.49 253.80 97.08 8 59 52 2578.8 -39.00 104.08  
 60.00 8 20 26 3524.95 -40.23 131.46 254.60 92.55 9 19 11 2525.0 -34.82 101.76  
 70.00 8 50 22 3436.84 -34.14 124.43 254.71 89.02 9 47 39 2436.8 -30.97 96.15  
 80.00 9 37 24 3289.46 -29.68 113.05 254.51 86.58 10 32 13 2289.5 -28.08 85.74  
 90.00 10 49 11 3057.73 -27.97 95.89 254.37 85.67 11 40 9 2057.7 -26.95 68.93  
 100.00 12 20 15 2763.93 -29.68 74.42 254.51 86.58 13 6 19 1763.9 -28.08 47.11  
 110.00 13 49 48 2463.66 -34.14 53.34 254.71 89.02 14 31 12 1483.7 -30.97 25.07

Differential Corrections: TDE -.4378 TRA-1.5023 TC3-1.2817 BAU .7392 SGT 2204.1 SGR 1501.8 SG3 1494.3 ST 33.3 SR 23.9 SS 25.8  
 RDE -.4525 RRA -.2619 RC3-1.2623 FAU .51082 RRT .8029 RRF .9070 RTF .8568 CRT .8015 CRS .3749 CST -.2345  
 FDE 1.2751 FRA-6.0346 FC-14.4082 BSP 3960 SGB 2667.1 R23 .2020 R13 .9101 LSA 39.2 MSA 28.4 SBA 2.7  
 BDE .6297 BRA 1.5252 BC3 1.7989 F8P 2584 SG1 2552.6 SG2 773.0 THA 31.98 EL1 39.1 EL2 12.2 ALF 33.52

LAUNCH DATE SEP 4 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.842 GAL 7.08 AZL 87.98 HCA 127.82 SMA 194.95 ECC .25601 INC 2.0245 V1 29.534  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.453 GAP 5.45 AZP 91.24 TAL 35.85 TAP 163.67 RCA 145.04 APO 244.85 V2 22.734  
 RC 243.479 GL 12.02 GP -18.18 ZAL 36.01 ZAP 97.06 ETS 184.13 ZAE 130.25 ETE 199.15 ZAC 68.76 ETC 284.88 LVI -3.10

Distance 435.629 Earth to Mars

Planetary Conic: C3 30.579 VHL 5.530 DLA 17.17 RAL 9.49 RAD 6647.2 VEL 12.268 PTH 7.21 VHP 2.473 DPA -7.19 RAP 31.97 ECC 1.5033  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 58 56 3584.48 -47.22 136.04 254.04 96.66 8 58 41 2584.5 -39.19 104.50  
 60.00 8 18 43 3531.83 -40.25 132.04 254.79 92.15 9 17 35 2531.8 -34.99 102.26  
 70.00 8 48 6 3445.31 -34.13 125.09 254.84 88.63 9 45 32 2445.3 -31.12 96.77  
 80.00 9 34 34 3299.71 -29.64 113.81 254.60 86.18 10 29 34 2299.7 -28.20 86.48  
 90.00 10 48 4 3068.88 -27.91 96.70 254.45 85.27 11 37 13 2068.9 -27.07 69.72  
 100.00 12 17 26 2774.18 -29.64 75.18 254.60 86.18 13 3 40 1774.2 -28.20 47.84  
 110.00 13 47 33 2492.13 -34.13 54.00 254.84 88.63 14 29 5 1492.1 -31.12 25.68

Differential Corrections: TDE -.4348 TRA-1.5504 TC3-1.3831 BAU .7748 SGT 2317.3 SGR 1532.9 SG3 1508.9 ST 33.9 SR 23.3 SS 26.4  
 RDE -.4384 RRA -.2765 RC3-1.2957 FAU .51484 RRT .8186 RRF .9125 RTF .8670 CRT .7993 CRS .3622 CST -.2305  
 FDE 1.3550 FRA-6.0730 FC-14.5700 BSP 4179 SGB 2778.4 R23 .1999 R13 .9150 LSA 39.3 MSA 28.8 SBA 2.7  
 BDE .6175 BRA 1.5749 BC3 1.8952 F8P 2604 SG1 2670.2 SG2 767.8 THA 31.25 EL1 39.3 EL2 12.1 ALF 32.12

LAUNCH DATE SEP 4 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 25 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.843 GAL 7.04 AZL 87.93 HCA 128.75 SMA 194.97 ECC .25578 INC 2.0897 V1 29.534  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.423 GAP 5.21 AZP 91.30 TAL 35.87 TAP 184.42 RCA 145.10 APO 244.83 V2 22.706  
 RC 246.330 GL 12.31 GP -18.47 ZAL 36.24 ZAP 95.59 ETS 183.67 ZAE 128.58 ETE 198.37 ZAC 68.61 ETC 284.93 LVI -2.92

Distance 439.431 Earth to Mars

Planetary Conic: C3 30.488 VHL 5.520 DLA 17.50 RAL 9.50 RAD 6647.2 VEL 12.264 PTH 7.21 VHP 2.464 DPA -7.68 RAP 31.54 ECC 1.5014  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 57 37 3590.42 -47.26 136.60 254.31 96.22 8 57 28 2590.4 -39.39 104.93  
 60.00 8 16 57 3538.97 -40.27 132.65 254.98 91.74 9 15 56 2539.0 -35.17 102.70  
 70.00 8 45 46 3454.12 -34.11 125.77 254.98 88.22 9 43 20 2454.1 -31.28 97.41  
 80.00 9 31 38 3310.39 -29.58 114.60 254.70 85.77 10 28 48 2310.4 -28.33 87.24  
 90.00 10 42 50 3080.52 -27.85 97.54 254.54 84.83 11 34 11 2080.5 -27.18 70.56  
 100.00 12 14 30 2784.86 -29.58 75.97 254.70 85.77 13 0 54 1784.9 -28.33 48.61  
 110.00 13 45 13 2500.93 -34.11 54.69 254.98 88.22 14 28 53 1500.9 -31.28 26.33

Differential Corrections: TDE -.4302 TRA-1.5981 TC3-1.4847 BAU .8119 SGT 2431.3 SGR 1565.6 SG3 1523.1 ST 34.4 SR 22.7 SS 26.9  
 RDE -.4250 RRA -.2818 RC3-1.3300 FAU .61827 RRT .8291 RRF .9178 RTF .8644 CRT .7971 CRS .3622 CST -.2333  
 FDE 1.4222 FRA-6.1143 FC-14.7284 BSP 4404 SGB 2891.8 R23 .1975 R13 .9198 LSA 39.5 MSA 29.3 SBA 2.6  
 BDE .6047 BRA 1.6245 BC3 1.9933 F8P 2807 SG1 2789.3 SG2 763.0 THA 30.63 EL1 39.5 EL2 11.9 ALF 30.83

LAUNCH DATE SEP 4 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 27 1974

Heliocentric Conic: RL 150.86 LAL .00 LOL 341.32 VL 32.845 GAL 7.00 AZL 87.88 HCA 129.87 SMA 194.99 ECC .25557 INC 2.1159 V1 28.534  
 RP 242.08 LAP 1.63 LOP 111.02 VP 20.395 GAP 4.97 AZP 91.38 TAL 35.49 TAP 185.17 RCA 145.16 APO 244.83 V2 22.679  
 RC 249.167 GL 12.62 GP -18.76 ZAL 36.48 ZAP 94.15 ETS 183.20 ZAE 126.92 ETE 197.82 ZAC 68.46 ETC 284.98 LVI -2.74

Distance 443.232 Earth to Mars

Planetary Conic: C3 30.359 VHL 5.510 DLA 17.84 RAL 9.52 RAD 6647.1 VEL 12.259 PTH 7.20 VHP 2.458 DPA -8.16 RAP 31.14 ECC 1.4996  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 56 16 3596.58 -47.31 137.19 254.58 95.77 8 56 13 2596.6 -39.59 103.38  
 60.00 8 15 7 3546.39 -40.28 133.28 255.19 91.31 9 14 14 2546.4 -35.35 103.33  
 70.00 8 43 21 3463.29 -34.09 126.49 255.13 87.80 9 41 4 2463.3 -31.43 98.08  
 80.00 9 28 35 3321.54 -29.53 115.42 254.80 85.34 10 23 56 2321.5 -28.46 88.05  
 90.00 10 39 28 3092.70 -27.77 98.43 254.62 84.42 11 31 1 2092.7 -27.30 71.43  
 100.00 12 11 27 2796.01 -29.53 76.79 254.80 85.34 12 58 3 1796.0 -28.46 49.42  
 110.00 13 42 48 2510.10 -34.09 55.41 255.13 87.80 14 24 38 1510.1 -31.43 27.00

Differential Corrections: TDE -.4267 TRA-1.6485 TC3-1.5911 BAU .8496 SGT 2552.3 SGR 1592.6 SG3 1529.8 ST 35.1 SR 21.9 SS 27.6  
 RDE -.4078 RRA -.3039 RC3-1.3601 FAU .51947 RRT .8389 RRF .9222 RTF .8836 CRT .7958 CRS .3977 CST -.2197  
 FDE 1.5303 FRA-6.1065 FC-14.8136 BSP 4633 SGB 3008.4 R23 .1976 R13 .9229 LSA 39.7 MSA 29.8 SBA 2.6  
 BDE .5902 BRA 1.6763 BC3 2.0932 F8P 2649 SG1 2911.4 SG2 757.8 THA 29.89 EL1 39.6 EL2 11.7 ALF 29.24

LAUNCH DATE SEP 4 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 29 1974

MELIOCENTRIC CONIC DISTANCE 447.032 EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.847 GAL 6.98 AZL 87.84 HCA 130.60 SMA 195.03 ECC .29538 INC 2.1632 V1 29.534  
 RP 242.33 LAP 1.84 LOP 111.94 VP 20.387 GAP 4.73 AZP 91.41 TAL 35.31 TAP 165.90 RCA 145.22 APO 244.83 V2 22.652  
 RC 251.989 GL 12.93 GP -19.05 ZAL 36.73 ZAP 92.73 ETS 182.73 ZAE 125.28 ETE 196.90 ZAC 68.30 ETC 285.02 LVI -2.56

PLANETOCENTRIC CONIC

C3 30.253 VHL 5.500 DLA 18.19 RAL 9.54 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 2.453 DPA -8.64 RAP 30.75 ECC 1.4979

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 54 53	3802.99	-47.35	137.80	254.87	95.30	8 54 56	2603.0	-39.80	105.85
60.00	8 13 14	3554.11	-40.29	133.93	255.40	90.87	9 12 28	2554.1	-35.54	103.90
70.00	8 40 51	3472.82	-34.06	127.23	255.28	87.36	9 38 44	2472.8	-31.59	98.78
80.00	9 25 24	3333.17	-29.46	116.28	254.91	84.90	10 20 57	2333.2	-28.58	88.69
90.00	10 35 58	3105.41	-27.68	99.35	254.72	83.97	11 27 43	2105.4	-27.41	72.34
100.00	12 8 16	2807.64	-29.46	77.65	254.91	84.90	12 55 4	1807.6	-28.58	50.26
110.00	13 40 17	2519.64	-34.06	56.15	255.28	87.36	14 22 17	1519.6	-31.59	27.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4208 TRA-1.6980 TC3-1.6968 BAU .8877 SGT 2672.6 SGR 1622.6 SG3 1537.6 ST 35.6 SR 21.2 SS 28.3  
 RDE -.3918 RRA -.3176 RC3-1.3921 FAU .52097 RRT .8499 RRF .9267 RTF .8904 CRT .7946 CRS .4023 CST -.2167  
 FDE 1.6176 FRA-6.1123 FC-14.9086 BSP 4865 SGB 3126.6 R23 .1968 R13 .9264 LSA 39.9 MSA 30.3 SSA 2.6  
 BDE .5750 BRA 1.7275 BC3 2.1947 FSP 2662 SG1 3034.6 SG2 753.0 THA 29.27 EL1 39.8 EL2 11.5 ALF 27.83

LAUNCH DATE SEP 4 1973

FLIGHT TIME 208.00

ARRIVAL DATE MAR 31 1974

MELIOCENTRIC CONIC DISTANCE 450.832 EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.849 GAL 6.92 AZL 87.79 HCA 131.52 SMA 195.07 ECC .25522 INC 2.2118 V1 29.534  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.341 GAP 4.49 AZP 91.47 TAL 35.11 TAP 166.63 RCA 145.28 APO 244.85 V2 22.625  
 RC 254.795 GL 13.25 GP -19.34 ZAL 36.98 ZAP 91.33 ETS 182.25 ZAE 123.65 ETE 196.20 ZAC 68.14 ETC 285.07 LVI -2.37

PLANETOCENTRIC CONIC

C3 30.150 VHL 5.491 DLA 18.55 RAL 9.56 RAD 6647.1 VEL 12.251 PTH 7.20 VHP 2.449 DPA -9.11 RAP 30.38 ECC 1.4962

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 53 27	3609.63	-47.39	138.44	255.18	94.81	8 53 36	2609.6	-40.02	106.34
60.00	8 11 17	3562.12	-40.30	134.62	255.63	90.41	9 10 40	2562.1	-35.72	104.50
70.00	8 38 15	3482.75	-34.03	128.00	255.44	86.90	9 36 18	2482.7	-31.74	99.51
80.00	9 22 6	3345.31	-29.38	117.17	255.03	84.43	10 17 51	2345.3	-28.71	89.77
90.00	10 32 17	3118.72	-27.58	100.31	254.81	83.49	11 24 16	2118.7	-27.52	73.30
100.00	12 4 58	2819.78	-29.38	78.54	255.03	84.43	12 51 57	1819.8	-28.71	51.14
110.00	13 37 41	2529.56	-34.03	56.92	255.44	86.90	14 19 51	1529.6	-31.74	28.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4137 TRA-1.7476 TC3-1.8029 BAU .9263 SGT 2794.0 SGR 1654.6 SG3 1545.4 ST 36.2 SR 20.5 SS 28.9  
 RDE -.3765 RRA -.3323 RC3-1.4252 FAU .52243 RRT .8592 RRF .9311 RTF .8968 CRT .7939 CRS .4001 CST -.2201  
 FDE 1.6911 FRA-6.1230 FC-15.0014 BSP 5092 SGB 3247.1 R23 .1956 R13 .9298 LSA 40.2 MSA 30.7 SSA 2.5  
 BDE .5594 BRA 1.7789 BC3 2.2982 FSP 2656 SG1 3159.7 SG2 748.6 THA 28.73 EL1 40.0 EL2 11.3 ALF 26.54

LAUNCH DATE SEP 4 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 2 1974

MELIOCENTRIC CONIC DISTANCE 454.631 EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.851 GAL 6.88 AZL 87.74 HCA 132.44 SMA 195.11 ECC .25506 INC 2.2617 V1 29.534  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.316 GAP 4.25 AZP 91.53 TAL 34.91 TAP 167.35 RCA 145.35 APO 244.88 V2 22.599  
 RC 257.584 GL 13.58 GP -19.63 ZAL 37.25 ZAP 89.96 ETS 181.77 ZAE 122.04 ETE 195.52 ZAC 67.97 ETC 285.11 LVI -2.17

PLANETOCENTRIC CONIC

C3 30.050 VHL 5.482 DLA 18.92 RAL 9.59 RAD 6647.0 VEL 12.247 PTH 7.19 VHP 2.447 DPA -9.57 RAP 30.03 ECC 1.4945

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 51 58	3616.54	-47.43	139.11	255.50	94.30	8 52 14	2616.5	-40.24	106.85
60.00	8 9 16	3570.45	-40.30	135.32	255.86	89.93	9 8 47	2570.5	-35.92	105.12
70.00	8 35 33	3493.09	-33.99	128.81	255.61	86.43	9 33 46	2493.1	-31.90	100.27
80.00	9 18 38	3358.01	-29.29	118.11	255.15	83.95	10 14 36	2358.0	-28.84	90.69
90.00	10 28 27	3132.66	-27.47	101.31	254.91	83.00	11 20 39	2132.7	-27.63	74.31
100.00	12 1 30	2832.48	-29.29	79.47	255.15	83.95	12 48 43	1832.5	-28.84	52.06
110.00	13 34 59	2539.91	-33.99	57.73	255.61	86.43	14 17 19	1539.9	-31.90	29.19

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4060 TRA-1.7980 TC3-1.9111 BAU .9650 SGT 2918.3 SGR 1682.7 SG3 1547.8 ST 36.7 SR 19.7 SS 29.8  
 RDE -.3588 RRA -.3447 RC3-1.4554 FAU .52213 RRT .8673 RRF .9349 RTF .8519 CRT .7940 CRS .4041 CST -.2152  
 FDE 1.7899 FRA-6.1002 FC-15.0427 BSP 5335 SGB 3368.7 R23 .1960 R13 .9322 LSA 40.4 MSA 31.2 SSA 2.5  
 BDE .5417 BRA 1.8307 BC3 2.4022 FSP 2675 SG1 3285.5 SG2 744.1 THA 28.14 EL1 40.2 EL2 11.0 ALF 25.10

LAUNCH DATE SEP 4 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 4 1974

MELIOCENTRIC CONIC DISTANCE 458.429 EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.854 GAL 6.84 AZL 87.69 HCA 133.36 SMA 195.16 ECC .25493 INC 2.3129 V1 29.534  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.292 GAP 4.02 AZP 91.59 TAL 34.71 TAP 168.08 RCA 145.41 APO 244.92 V2 22.573  
 RC 260.356 GL 13.92 GP -19.92 ZAL 37.52 ZAP 88.62 ETS 181.27 ZAE 120.44 ETE 194.85 ZAC 67.80 ETC 285.15 LVI -1.97

PLANETOCENTRIC CONIC

C3 29.953 VHL 5.473 DLA 19.30 RAL 9.61 RAD 6647.0 VEL 12.243 PTH 7.19 VHP 2.447 DPA -10.03 RAP 29.70 ECC 1.4929

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 50 25	3623.72	-47.48	139.80	255.84	93.77	8 50 49	2623.7	-40.47	107.39
60.00	8 7 10	3579.12	-40.30	136.08	256.11	89.43	9 6 49	2579.1	-36.11	105.77
70.00	8 32 44	3503.87	-33.94	129.65	255.79	85.93	9 31 7	2503.9	-32.06	101.07
80.00	9 15 1	3371.29	-29.19	119.08	255.27	83.45	10 11 13	2371.3	-28.96	91.66
90.00	10 24 25	3147.29	-27.34	102.36	255.01	82.49	11 16 52	2147.3	-27.73	75.36
100.00	11 57 53	2845.76	-29.19	80.45	255.27	83.45	12 45 19	1845.8	-28.96	53.03
110.00	13 32 10	2550.69	-33.94	58.57	255.79	85.93	14 14 41	1550.7	-32.06	29.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3972 TRA-1.8485 TC3-2.0198 BAU 1.0041 SGT 3043.9 SGR 1712.0 SG3 1549.3 ST 37.3 SR 19.0 SS 30.3  
 RDE -.3409 RRA -.3578 RC3-1.4861 FAU .52153 RRT .8748 RRF .9385 RTF .9066 CRT .7951 CRS .4023 CST -.2149  
 FDE 1.8791 FRA-6.0778 FC-15.0740 BSP 5569 SGB 3492.3 R23 .1963 R13 .9346 LSA 40.8 MSA 31.6 SSA 2.5  
 BDE .5235 BRA 1.8828 BC3 2.5076 FSP 2677 SG1 3413.0 SG2 739.8 THA 27.60 EL1 40.5 EL2 10.6 ALF 23.76

LAUNCH DATE SEP 4 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

RL 180.86 LAL .00 LOL 341.32 VL 32.857 GAL 6.80 AZL 87.63 HCA 134.27 SMA 195.22 ECC .25491 INC 2.3655 V1 29.534
RP 243.37 LAP 1.69 LOP 115.82 VP 20.269 GAP 3.79 AZP 91.65 TAL 34.50 TAP 188.77 RCA 145.48 APO 244.96 V2 22.548
RC 263.112 GL 14.27 GP -20.21 ZAL 37.81 ZAP 87.30 ETS 180.78 ZAE 118.87 ETE 194.21 ZAC 87.82 ETC 285.19 LVI -1.76

DISTANCE 462.226

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.860 VHL 5.464 DLA 19.69 RAL 9.64 RAD 8647.0 VEL 12.239 PTH 7.19 VHP 2.448 DPA -10.48 RAP 29.39 ECC 1.4914
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 49 3631.19 -47.49 140.52 256.19 93.22 8 49 21 2631.2 -40.70 107.95
60.00 8 4 59 3588.13 -40.29 138.83 256.37 88.90 9 4 48 2588.1 -36.31 106.46
70.00 8 29 47 3515.11 -33.88 130.52 255.97 85.42 9 28 22 2515.1 -32.23 101.91
80.00 9 11 14 3385.20 -29.08 120.10 255.40 82.92 10 7 39 2385.2 -29.08 92.68
90.00 10 20 10 3162.65 -27.20 103.48 255.12 81.96 11 12 53 2162.6 -27.83 76.48
100.00 11 34 6 2859.88 -29.08 81.47 255.40 82.92 12 41 45 1859.7 -29.08 54.04
110.00 13 29 14 2561.93 -33.88 59.44 255.97 85.42 14 11 58 1561.9 -32.23 30.82

DIFFERENTIAL CORRECTIONS

TDE -.3889 TRA-1.8993 TC3-2.1287 BAU 1.0434
RDE -.3228 RRA -.3710 RC3-1.5163 FAU .52031
FDE 1.9679 FRA-6.0508 FC-15.0857 B8P 5806
BDE .5039 BRA 1.9352 BC3 2.6137 F8P 2674

MID-COURSE EXECUTION ACCURACY

SGT 3170.3 SGR 1741.2 SG3 1549.1
RRY .8816 RRF .9420 RTF .9108
SG8 3617.0 R23 .1968 R13 .9368
SG1 3541.4 SG2 735.7 THA 27.10

ORBIT DETERMINATION ACCURACY

8T 37.8 SR 18.2 88 31.0
CRT .7973 CR8 .3969 C8T -.2167
LSA 41.1 M8A 32.0 88A 2.4
EL1 40.7 EL2 10.2 ALF 22.47

LAUNCH DATE SEP 4 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.860 GAL 6.78 AZL 87.58 HCA 135.19 SMA 195.28 ECC .25470 INC 2.4198 V1 29.534
RP 243.62 LAP 1.71 LOP 116.53 VP 20.247 GAP 3.55 AZP 91.72 TAL 34.20 TAP 189.47 RCA 145.54 APO 245.02 V2 22.523
RC 265.850 GL 14.63 GP -20.51 ZAL 38.10 ZAP 86.01 ETS 180.28 ZAE 117.32 ETE 193.58 ZAC 67.43 ETC 285.23 LVI -1.54

DISTANCE 466.023

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.770 VHL 5.456 DLA 20.10 RAL 9.66 RAD 8648.9 VEL 12.235 PTH 7.18 VHP 2.450 DPA -10.93 RAP 29.11 ECC 1.4899
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 10 3638.95 -47.52 141.27 256.55 92.64 8 47 49 2638.9 -40.94 108.54
60.00 8 2 43 3597.52 -40.27 137.63 256.64 88.36 9 2 41 2597.5 -36.52 107.17
70.00 8 26 43 3526.85 -33.81 131.43 256.16 84.89 9 25 30 2526.9 -32.39 102.70
80.00 9 7 15 3399.80 -28.96 121.17 255.53 82.38 10 3 54 2399.8 -29.20 93.74
90.00 10 15 42 3178.82 -27.04 104.62 255.22 81.40 11 8 41 2178.8 -27.93 77.65
100.00 11 50 6 2874.27 -28.96 82.53 255.53 82.38 12 38 1 1874.3 -29.20 55.11
110.00 13 26 9 2573.67 -33.81 60.35 256.16 84.89 14 9 3 1573.7 -32.39 31.70

DIFFERENTIAL CORRECTIONS

TDE -.3753 TRA-1.9498 TC3-2.2381 BAU 1.0828
RDE -.3041 RRA -.3838 RC3-1.5468 FAU .51880
FDE 2.0367 FRA-6.0134 FC-15.0811 B8P 6049
BDE .4830 BRA 1.9872 BC3 2.7208 F8P 2670

MID-COURSE EXECUTION ACCURACY

SGT 3297.5 SGR 1770.7 SG3 1547.3
RRY .8879 RRF .9453 RTF .9145
SG8 3742.9 R23 .1974 R13 .9388
SG1 3670.6 SG2 731.9 THA 26.63

ORBIT DETERMINATION ACCURACY

8T 38.4 SR 17.4 88 31.7
CRT .8008 CR8 .3883 C8T -.2194
LSA 41.5 M8A 32.4 88A 2.4
EL1 41.0 EL2 9.8 ALF 21.82

LAUNCH DATE SEP 4 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.864 GAL 6.72 AZL 87.52 HCA 136.10 SMA 195.38 ECC .25461 INC 2.4757 V1 29.534
RP 243.86 LAP 1.72 LOP 117.45 VP 20.226 GAP 3.32 AZP 91.78 TAL 34.06 TAP 170.16 RCA 145.61 APO 245.09 V2 22.499
RC 268.570 GL 15.00 GP -20.81 ZAL 38.40 ZAP 84.78 ETS 179.77 ZAE 115.79 ETE 192.98 ZAC 87.24 ETC 285.27 LVI -1.31

DISTANCE 469.818

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.685 VHL 5.448 DLA 20.51 RAL 9.69 RAD 8648.9 VEL 12.232 PTH 7.18 VHP 2.454 DPA -11.37 RAP 28.84 ECC 1.4885
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 45 26 3647.03 -47.54 142.05 256.93 92.04 8 46 13 2647.0 -41.19 109.18
60.00 8 0 21 3607.30 -40.25 138.46 256.92 87.80 9 0 28 2607.3 -36.73 107.92
70.00 8 23 30 3539.12 -33.74 132.38 256.36 84.33 9 22 29 2539.1 -32.55 103.70
80.00 9 3 3 3415.13 -28.81 122.28 255.88 81.81 9 59 58 2415.1 -29.31 94.87
90.00 10 10 58 3195.88 -26.88 105.84 255.32 80.82 11 4 14 2195.9 -28.02 78.89
100.00 11 45 55 2889.60 -28.81 83.65 255.66 81.81 12 34 4 1889.6 -29.31 56.24
110.00 13 22 56 2585.94 -33.74 61.30 256.36 84.33 14 8 2 1585.9 -32.55 32.82

DIFFERENTIAL CORRECTIONS

TDE -.3683 TRA-2.0004 TC3-2.3477 BAU 1.1222
RDE -.2846 RRA -.3884 RC3-1.5783 FAU .91809
FDE 2.1489 FRA-5.9666 FC-15.0515 B8P 6293
BDE .4807 BRA 2.0393 BC3 2.8278 F8P 2685

MID-COURSE EXECUTION ACCURACY

SGT 3425.5 SGR 1799.5 SG3 1543.1
RRY .8935 RRF .9483 RTF .9177
SG8 3869.4 R23 .1985 R13 .9405
SG1 3800.3 SG2 728.3 THA 26.18

ORBIT DETERMINATION ACCURACY

8T 38.9 SR 16.8 88 32.8
CRT .8059 CR8 .3760 C8T -.2232
LSA 42.0 M8A 32.8 88A 2.4
EL1 41.3 EL2 9.3 ALF 20.02

LAUNCH DATE SEP 4 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

RL 150.86 LAL .00 LOL 341.32 VL 32.868 GAL 6.87 AZL 87.47 HCA 137.01 SMA 195.42 ECC .25454 INC 2.5334 V1 29.534
RP 244.10 LAP 1.73 LOP 118.38 VP 20.205 GAP 3.10 AZP 91.85 TAL 33.83 TAP 170.84 RCA 145.68 APO 245.16 V2 22.478
RC 271.273 GL 15.38 GP -21.11 ZAL 38.72 ZAP 83.53 ETS 179.28 ZAE 114.28 ETE 192.36 ZAC 87.03 ETC 285.30 LVI -1.07

DISTANCE 473.613

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 29.604 VHL 5.441 DLA 20.94 RAL 9.71 RAD 8648.9 VEL 12.229 PTH 7.18 VHP 2.459 DPA -11.81 RAP 28.80 ECC 1.4872
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 43 38 3655.43 -47.58 142.86 257.32 91.42 8 44 33 2655.4 -41.44 109.81
60.00 7 57 52 3617.49 -40.22 139.32 257.20 87.21 8 58 10 2617.5 -36.94 108.70
70.00 8 20 8 3551.94 -33.65 133.37 256.55 83.75 9 19 20 2551.9 -32.71 104.67
80.00 8 58 37 3431.27 -28.85 123.45 255.78 81.21 9 55 48 2431.3 -29.42 96.08
90.00 10 5 57 3213.87 -26.88 107.11 255.42 80.21 10 59 31 2213.9 -28.09 80.20
100.00 11 41 29 2905.74 -28.85 84.82 255.78 81.21 12 29 55 1905.7 -29.42 57.42
110.00 13 19 34 2598.76 -33.65 62.29 256.55 83.75 14 2 53 1598.8 -32.71 33.59

DIFFERENTIAL CORRECTIONS

TDE -.3482 TRA-2.0512 TC3-2.4575 BAU 1.1819
RDE -.2648 RRA -.4094 RC3-1.6061 FAU .91322
FDE 2.2332 FRA-5.9185 FC-15.0087 B8P 6535
BDE .4375 BRA 2.0918 BC3 2.9358 F8P 2653

MID-COURSE EXECUTION ACCURACY

SGT 3554.6 SGR 1829.1 SG3 1537.8
RRY .8988 RRF .9513 RTF .9207
SG8 3997.8 R23 .1997 R13 .9421
SG1 3931.3 SG2 724.9 THA 25.76

ORBIT DETERMINATION ACCURACY

8T 39.4 SR 15.8 88 33.2
CRT .8131 CR8 .3575 C8T -.2295
LSA 42.5 M8A 33.1 88A 2.3
EL1 41.6 EL2 8.7 ALF 18.89



LAUNCH DATE SEP 4 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

DISTANCE 477.406

EARTH TO MARS

RL 130.86 LAL .00 LOL 341.32 VL 32.876 GAL 8.63 AZL 87.41 HCA 137.92 SMA 195.50 ECC .25447 INC 2.5929 V1 29.534
RP 244.34 LAP 1.74 LOP 119.27 VP 20.188 GAP 2.87 AZP 91.93 TAL 33.60 TAP 171.52 RCA 145.75 APO 245.25 V2 22.452
RC 273.957 GL 15.77 GP -21.43 ZAL 39.04 ZAP 82.33 ETS 178.73 ZAE 112.79 ETE 191.77 ZAC 66.82 ETC 285.34 LVI -.82

PLANETOCENTRIC CONIC

C3 29.528 VHL 5.434 DLA 21.38 RAL 9.74 RAD 6646.8 VEL 12.226 PTH 7.18 VHP 2.466 DPA -12.24 RAP 28.39 ECC 1.4860
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 44 3664.19 -47.57 143.70 257.74 90.76 8 42 49 2664.2 -41.69 110.49
60.00 7 55 17 3628.13 -40.18 140.23 257.50 86.60 8 55 48 2628.1 -37.15 109.52
70.00 8 16 35 3565.38 -33.54 134.40 256.76 83.15 9 16 0 2565.4 -32.87 105.68
80.00 8 53 56 3448.28 -28.47 124.68 255.91 80.59 9 51 24 2448.3 -29.52 97.31
90.00 10 0 37 3232.96 -26.43 108.46 255.51 79.57 10 54 30 2233.0 -28.16 81.59
100.00 11 36 48 2922.75 -28.47 86.05 255.91 80.59 12 25 30 1922.7 -29.52 58.68
110.00 13 16 1 2612.20 -33.54 63.32 256.76 83.15 13 59 34 1612.2 -32.87 34.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3323 TRA-2.1015 TC3-2.5669 BAU 1.2014 SGT 3683.5 SGR 1857.9 SG3 1530.2 ST 40.0 SR 15.0 SS 34.0
RDE -.2441 RRA -.4218 RC3-1.6350 FAU .50960 RRT .9036 RRF .9540 RTF .9232 CRT .8227 CR8 .3340 CST -.2362
FDE 2.3230 FRA-5.8583 FC-14.9410 BSP 6779 SGB 4125.5 R23 .2012 R13 .9434 LSA 43.1 MSA 33.5 SSA 2.3
BDE .4123 BRA 2.1434 BC3 3.0434 FSP 2640 SG1 4061.9 SG2 721.7 THA 25.36 EL1 41.9 EL2 8.1 ALF 17.81

LAUNCH DATE SEP 4 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

DISTANCE 481.199

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.876 GAL 8.58 AZL 87.35 HCA 138.82 SMA 195.58 ECC .25442 INC 2.6544 V1 29.534
RP 244.56 LAP 1.75 LOP 120.18 VP 20.188 GAP 2.85 AZP 92.00 TAL 33.37 TAP 172.19 RCA 145.82 APO 245.34 V2 22.430
RC 276.623 GL 16.18 GP -21.74 ZAL 39.37 ZAP 81.17 ETS 178.20 ZAE 111.33 ETE 191.19 ZAC 66.59 ETC 285.38 LVI -.56

PLANETOCENTRIC CONIC

C3 29.457 VHL 5.427 DLA 21.84 RAL 9.76 RAD 6646.8 VEL 12.223 PTH 7.17 VHP 2.473 DPA -12.67 RAP 28.20 ECC 1.4848
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 39 46 3673.31 -47.58 144.59 258.16 90.08 8 40 59 2673.3 -41.96 111.21
60.00 7 52 34 3639.23 -40.13 141.17 257.80 85.97 8 53 13 2639.2 -37.37 110.39
70.00 8 12 51 3579.46 -33.42 135.49 256.96 82.52 9 12 30 2579.5 -33.03 108.75
80.00 8 48 57 3466.25 -28.26 125.98 256.03 79.94 9 46 43 2466.3 -29.61 98.64
90.00 9 54 56 3253.23 -26.18 109.89 255.60 78.90 10 49 9 2253.2 -28.22 83.07
100.00 11 31 49 2940.72 -28.26 87.35 256.03 79.94 12 20 50 1940.7 -29.61 60.01
110.00 13 12 17 2626.28 -33.42 64.40 256.96 82.52 13 56 4 1626.3 -33.03 35.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3155 TRA-2.1522 TC3-2.6768 BAU 1.2413 SGT 3813.7 SGR 1887.9 SG3 1521.7 ST 40.6 SR 14.2 SS 34.8
RDE -.2232 RRA -.4348 RC3-1.6644 FAU .50569 RRT .9081 RRF .9566 RTF .9235 CRT .8352 CR8 .3020 CST -.2456
FDE 2.4064 FRA-5.7976 FC-14.8622 BSP 7019 SGB 4255.4 R23 .2028 R13 .9447 LSA 43.7 MSA 33.7 SSA 2.2
BDE .3865 BRA 2.1957 BC3 3.1520 FSP 2620 SG1 4194.3 SG2 718.8 THA 24.99 EL1 42.3 EL2 7.5 ALF 16.83

LAUNCH DATE SEP 4 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

DISTANCE 484.991

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 32.880 GAL 6.54 AZL 87.28 HCA 139.73 SMA 195.66 ECC .25438 INC 2.7181 V1 29.534
RP 244.79 LAP 1.76 LOP 121.08 VP 20.151 GAP 2.42 AZP 92.07 TAL 33.13 TAP 172.86 RCA 145.89 APO 245.44 V2 22.407
RC 279.268 GL 16.60 GP -22.07 ZAL 39.72 ZAP 80.03 ETS 177.67 ZAE 109.69 ETE 190.62 ZAC 66.35 ETC 285.42 LVI -.29

PLANETOCENTRIC CONIC

C3 29.392 VHL 5.421 DLA 22.31 RAL 9.78 RAD 6646.8 VEL 12.220 PTH 7.17 VHP 2.482 DPA -13.09 RAP 28.04 ECC 1.4837
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 37 41 3682.83 -47.57 145.51 258.60 89.38 8 39 4 2682.8 -42.23 111.96
60.00 7 49 42 3650.83 -40.07 142.15 258.12 85.30 8 50 33 2650.8 -37.58 111.29
70.00 8 8 55 3594.25 -33.29 136.62 257.17 81.86 9 8 49 2594.2 -33.19 107.88
80.00 8 43 39 3485.29 -28.02 127.35 256.15 79.25 9 41 44 2485.3 -29.70 100.05
90.00 9 48 50 3274.86 -25.88 111.41 255.67 78.19 10 43 25 2274.9 -28.26 84.63
100.00 11 26 31 2959.77 -28.02 88.71 256.15 79.25 12 15 51 1959.8 -29.70 61.41
110.00 13 8 21 2641.07 -33.29 65.54 257.17 81.86 13 52 22 1641.1 -33.19 36.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2966 TRA-2.2027 TC3-2.7855 BAU 1.2808 SGT 3943.5 SGR 1917.3 SG3 1511.1 ST 41.1 SR 13.4 SS 35.8
RDE -.2011 RRA -.4476 RC3-1.6930 FAU .50108 RRT .9122 RRF .9591 RTF .9276 CRT .8508 CR8 .2617 CST -.2559
FDE 2.4947 FRA-5.7287 FC-14.7593 BSP 7267 SGB 4384.9 R23 .2047 R13 .9458 LSA 44.5 MSA 34.0 SSA 2.2
BDE .3583 BRA 2.2477 BC3 3.2596 FSP 2602 SG1 4326.1 SG2 716.2 THA 24.64 EL1 42.7 EL2 6.8 ALF 15.90

LAUNCH DATE SEP 4 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 488.782

EARTH TO MARS

RL 130.86 LAL .00 LOL 341.32 VL 32.888 GAL 8.49 AZL 87.22 HCA 140.63 SMA 195.78 ECC .25435 INC 2.7841 V1 29.534
RP 245.01 LAP 1.77 LOP 121.99 VP 20.134 GAP 2.20 AZP 92.15 TAL 32.88 TAP 173.51 RCA 145.96 APO 245.54 V2 22.386
RC 281.893 GL 17.04 GP -22.40 ZAL 40.07 ZAP 78.93 ETS 177.13 ZAE 108.48 ETE 190.06 ZAC 66.10 ETC 285.46 LVI -.00

PLANETOCENTRIC CONIC

C3 29.333 VHL 5.416 DLA 22.79 RAL 9.79 RAD 6646.7 VEL 12.218 PTH 7.17 VHP 2.492 DPA -13.52 RAP 27.90 ECC 1.4827
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 35 31 3692.78 -47.56 146.47 259.06 88.64 8 37 3 2692.8 -42.50 112.78
60.00 7 46 42 3662.96 -40.00 143.17 258.44 84.61 8 47 45 2663.0 -37.80 112.25
70.00 8 4 45 3609.80 -33.13 137.80 257.37 81.18 9 4 54 2609.8 -33.34 109.06
80.00 8 37 59 3505.53 -27.76 128.79 256.26 78.54 9 36 25 2505.5 -29.76 101.55
90.00 9 42 15 3298.02 -25.55 113.02 255.73 77.45 10 37 13 2298.0 -28.28 86.34
100.00 11 20 51 2980.00 -27.76 90.16 256.26 78.54 12 10 31 1980.0 -29.76 62.91
110.00 13 4 11 2656.62 -33.13 66.72 257.37 81.18 13 48 28 1656.6 -33.34 37.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2760 TRA-2.2526 TC3-2.8935 BAU 1.3203 SGT 4073.1 SGR 1947.0 SG3 1498.9 ST 41.7 SR 12.6 SS 36.5
RDE -.1784 RRA -.4602 RC3-1.7213 FAU .49600 RRT .9160 RRF .9614 RTF .9293 CRT .8696 CR8 .2107 CST -.2679
FDE 2.5811 FRA-5.6526 FC-14.6390 BSP 7511 SGB 4514.6 R23 .2069 R13 .9467 LSA 45.3 MSA 34.2 SSA 2.1
BDE .3286 BRA 2.2991 BC3 3.3668 FSP 2578 SG1 4457.8 SG2 713.9 THA 24.31 EL1 43.1 EL2 6.0 ALF 15.06

LAUNCH DATE SEP 4 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.890 GAL 6.45 AZL 87.15 HCA 141.93 SMA 195.84 ECC .25433 INC 2.8926 V1 29.934  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.119 GAP 1.98 AZP 92.23 TAL 32.64 TAP 174.17 RCA 146.03 APO 245.65 V2 22.365  
 RC 284.497 GL 17.49 GP -22.74 ZAL 40.44 ZAP 77.86 ETS 176.58 ZAE 107.09 ETE 189.50 ZAC 65.83 ETC 285.50 LVI .29

DISTANCE 492.572 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.280 VHL 5.411 DLA 23.29 RAL 9.81 RAD 8646.7 VEL 12.216 PTH 7.17 VHP 2.504 DPA -13.94 RAP 27.79 ECC 1.4819  
 LNCH AZMTH LNCH TIME LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 13 3703.14 -47.54 147.47 259.93 87.86 8 34 56 2703.1 -42.79 113.59  
 60.00 7 43 32 3675.67 -39.91 144.24 258.77 83.89 8 44 47 2675.7 -38.03 113.26  
 70.00 8 0 19 3626.18 -32.95 139.05 257.58 80.46 9 0 46 2626.2 -33.49 110.32  
 80.00 8 31 55 3527.10 -27.46 130.32 256.36 77.79 9 30 42 2527.1 -29.62 103.15  
 90.00 9 35 8 3322.95 -25.17 114.75 255.78 76.66 10 30 31 2325.0 -28.27 86.17  
 100.00 11 14 47 3001.57 -27.46 91.69 256.36 77.79 12 4 48 2001.6 -29.82 64.52  
 110.00 12 59 46 2673.00 -32.95 67.97 257.58 80.46 13 44 19 1673.0 -33.49 39.24

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2942 TRA-2.3030 TC3-3.0012 BAU 1.3599 SGT 4203.7 SGR 1977.5 SG3 1485.5 ST 42.3 SR 11.9 SS 37.3  
 RDE -.1552 RRA -.4734 RC3-1.7497 FAU .49052 RRT .9195 RRF .9637 RTF .9310 CRT .8913 CRS .1469 CST -.2819  
 FDE 2.6631 FRA-5.5758 FC-14.5032 BSP 7755 SGB 4645.6 R23 .2081 R13 .9476 LSA 46.3 MSA 34.4 SSA 2.1  
 BDE .2979 BRA 2.3511 BC3 3.4740 FSP 2533 SG1 4590.7 SG2 711.8 THA 24.00 EL1 43.7 EL2 5.2 ALF 14.33

LAUNCH DATE SEP 4 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.895 GAL 6.40 AZL 87.08 HCA 142.43 SMA 195.94 ECC .25432 INC 2.9237 V1 29.934  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.104 GAP 1.76 AZP 92.32 TAL 32.38 TAP 174.82 RCA 146.11 APO 245.77 V2 22.344  
 RC 287.079 GL 17.96 GP -23.09 ZAL 40.82 ZAP 76.82 ETS 176.02 ZAE 105.72 ETE 188.95 ZAC 65.55 ETC 285.54 LVI .80

DISTANCE 496.361 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.235 VHL 5.407 DLA 23.81 RAL 9.81 RAD 8646.7 VEL 12.214 PTH 7.17 VHP 2.516 DPA -14.36 RAP 27.71 ECC 1.4811  
 LNCH AZMTH LNCH TIME LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 48 3713.98 -47.51 148.52 260.01 87.06 8 32 42 2714.0 -43.07 114.48  
 60.00 7 40 11 3688.99 -39.81 145.36 259.10 83.14 8 41 40 2689.0 -38.25 114.32  
 70.00 7 55 38 3643.47 -32.75 140.36 257.78 79.71 8 56 21 2643.5 -33.62 111.65  
 80.00 8 25 22 3550.19 -27.11 131.95 256.44 77.00 9 24 32 2550.2 -29.85 104.86  
 90.00 9 27 22 3349.97 -24.73 116.61 255.80 75.83 10 23 12 2350.0 -28.24 90.14  
 100.00 11 8 14 3024.67 -27.11 93.32 256.44 77.00 11 58 38 2024.7 -29.85 66.23  
 110.00 12 55 4 2690.29 -32.75 69.27 257.78 79.71 13 39 54 1690.3 -33.62 40.57

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2301 TRA-2.3526 TC3-3.1075 BAU 1.3993 SGT 4333.3 SGR 2008.5 SG3 1470.9 ST 43.0 SR 11.3 SS 38.2  
 RDE -.1310 RRA -.4887 RC3-1.7781 FAU .48486 RRT .9228 RRF .9658 RTF .9324 CRT .9193 CRS .0684 CST -.2977  
 FDE 2.7461 FRA-5.4940 FC-14.3521 BSP 8001 SGB 4776.2 R23 .2118 R13 .9484 LSA 47.3 MSA 34.5 SSA 2.0  
 BDE .2648 BRA 2.4024 BC3 3.5803 FSP 2523 SG1 4723.1 SG2 710.1 THA 23.73 EL1 44.2 EL2 4.4 ALF 13.70

LAUNCH DATE SEP 4 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.900 GAL 6.35 AZL 87.00 HCA 143.33 SMA 196.04 ECC .25433 INC 2.9976 V1 29.934  
 RP 245.83 LAP 1.79 LOP 124.89 VP 20.090 GAP 1.55 AZP 92.41 TAL 32.13 TAP 175.48 RCA 146.18 APO 245.89 V2 22.324  
 RC 289.637 GL 18.45 GP -23.45 ZAL 41.21 ZAP 75.81 ETS 175.48 ZAE 104.38 ETE 188.41 ZAC 65.25 ETC 285.58 LVI .93

DISTANCE 500.148 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.199 VHL 5.404 DLA 24.35 RAL 9.81 RAD 8646.7 VEL 12.212 PTH 7.17 VHP 2.530 DPA -14.78 RAP 27.66 ECC 1.4805  
 LNCH AZMTH LNCH TIME LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 15 3725.33 -47.46 149.61 260.51 86.22 8 30 20 2729.3 -43.36 115.41  
 60.00 7 36 38 3702.98 -39.69 146.53 259.44 82.35 8 38 21 2703.0 -38.47 115.44  
 70.00 7 50 37 3661.77 -32.52 141.73 257.98 78.93 8 51 39 2661.8 -33.73 113.06  
 80.00 8 18 15 3575.05 -26.72 133.70 256.51 76.16 9 17 51 2575.0 -29.86 106.71  
 90.00 9 18 49 3379.47 -24.23 118.62 255.80 74.95 10 15 9 2379.5 -28.16 92.30  
 100.00 11 1 7 3049.52 -26.72 95.06 256.51 76.16 11 51 57 2049.3 -29.86 68.08  
 110.00 12 50 3 2708.59 -32.52 70.65 257.98 78.93 13 35 12 1708.6 -33.75 41.98

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2048 TRA-2.4023 TC3-3.2139 BAU 1.4390 SGT 4483.8 SGR 2040.2 SG3 1454.9 ST 43.6 SR 10.8 SS 39.0  
 RDE -.1062 RRA -.5000 RC3-1.8064 FAU .47839 RRT .9258 RRF .9678 RTF .9336 CRT .9396 CRS -.0247 CST -.3145  
 FDE 2.8262 FRA-5.4061 FC-14.1842 BSP 8244 SGB 4907.9 R23 .2141 R13 .9491 LSA 48.4 MSA 34.8 SSA 2.0  
 BDE .2307 BRA 2.4530 BC3 3.6864 FSP 2493 SG1 4856.4 SG2 708.8 THA 23.48 EL1 44.8 EL2 3.6 ALF 13.17

LAUNCH DATE SEP 4 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.905 GAL 6.30 AZL 86.93 HCA 144.23 SMA 196.14 ECC .25434 INC 3.0746 V1 29.934  
 RP 245.83 LAP 1.80 LOP 125.99 VP 20.077 GAP 1.33 AZP 92.50 TAL 31.87 TAP 176.10 RCA 146.25 APO 246.02 V2 22.305  
 RC 292.172 GL 18.95 GP -23.83 ZAL 41.61 ZAP 74.84 ETS 174.89 ZAE 103.07 ETE 187.87 ZAC 64.93 ETC 285.63 LVI 1.27

DISTANCE 503.935 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.171 VHL 5.401 DLA 24.90 RAL 9.81 RAD 8646.7 VEL 12.211 PTH 7.17 VHP 2.548 DPA -15.21 RAP 27.63 ECC 1.4801  
 LNCH AZMTH LNCH TIME LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 32 3737.23 -47.40 150.76 261.03 85.34 8 27 49 2737.2 -43.68 116.40  
 60.00 7 32 52 3717.68 -39.55 147.75 259.79 81.53 8 34 50 2717.7 -38.69 116.63  
 70.00 7 45 15 3681.18 -32.25 143.19 258.17 78.11 8 46 36 2681.2 -33.87 114.57  
 80.00 8 10 30 3601.95 -26.27 135.57 256.55 75.27 9 10 32 2601.9 -29.83 108.71  
 90.00 9 9 19 3412.03 -23.63 120.82 255.75 74.00 10 6 11 2412.0 -28.04 94.67  
 100.00 10 53 22 3076.42 -26.27 96.93 256.55 75.27 11 44 39 2076.4 -29.83 70.08  
 110.00 12 44 42 2728.00 -32.25 72.10 258.17 78.11 13 30 10 1728.0 -33.87 43.49

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1773 TRA-2.4521 TC3-3.3176 BAU 1.4784 SGT 4593.8 SGR 2072.3 SG3 1437.5 ST 44.4 SR 10.4 SS 39.9  
 RDE -.0802 RRA -.5139 RC3-1.8343 FAU .47165 RRT .9286 RRF .9697 RTF .9347 CRT .9617 CRS -.1336 CST -.3332  
 FDE 2.9067 FRA-5.3173 FC-13.9977 BSP 8486 SGB 5039.6 R23 .2169 R13 .9497 LSA 49.7 MSA 34.7 SSA 1.9  
 BDE .1946 BRA 2.5054 BC3 3.7909 FSP 2459 SG1 4989.6 SG2 707.8 THA 23.22 EL1 45.5 EL2 2.8 ALF 12.76

LAUNCH DATE SEP 4 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.911 GAL 6.25 AZL 86.85 HCA 149.12 SMA 196.24 ECC .25436 INC 3.1549 V1 29.934  
 RP 246.02 LAP 1.80 LOP 126.46 VP 20.065 GAP 1.11 AZP 92.59 TAL 31.81 TAP 176.73 RCA 146.33 APO 246.18 V2 22.286  
 RC 294.882 GL 19.48 GP -24.22 ZAL 42.03 ZAP 73.90 ETS 174.30 ZAE 101.78 ETE 187.33 ZAC 64.60 ETC 285.68 LVI 1.63

DISTANCE 507.721  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.152 VHL 5.399 DLA 25.47 RAL 9.80 RAD 8646.7 VEL 12.210 PTH 7.16 VHP 2.561 DPA -15.64 RAP 27.63 FCC 1.4798  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 22 40 3749.70 -47.33 151.95 261.56 84.42 8 25 10 2749.7 -43.96 117.45  
 60.00 7 28 52 3733.16 -39.39 149.04 260.13 80.67 8 31 5 2733.2 -38.91 117.89  
 70.00 7 39 30 3701.83 -31.95 144.72 258.55 77.25 8 41 12 2701.8 -33.97 116.17  
 80.00 8 1 58 3631.29 -25.75 137.59 256.55 74.33 9 2 30 2631.3 -29.77 110.69  
 90.00 8 58 34 3448.50 -22.93 123.26 255.65 72.98 9 56 3 2448.5 -27.84 97.32  
 100.00 10 44 50 3105.76 -25.75 98.96 256.55 74.33 11 36 36 2105.8 -29.77 72.26  
 110.00 12 38 56 2748.65 -31.95 73.64 258.35 77.25 13 24 45 1748.6 -33.97 45.09

DIFFERENTIAL CORRECTIONS  
 TDE -.1473 TRA-2.5007 TC3-3.4193 BAV 1.5174 SGT 4722.1 SGR 2104.6 SG3 1418.4 ST 45.1 SR 10.2 SS 40.9  
 RDE -.0531 RRA -.5275 RC3-1.8617 FAU .46441 RRT .9312 RRF .9715 RTF .9356 CRT .9776 CRS -.2540 CST -.3532  
 FDE 2.9875 FRA-5.2201 FC-13.7917 BSP 8739 SGB 5169.9 R23 .2199 R13 .9501 LSA 51.0 MSA 34.7 SSA 1.8  
 BDE .1566 BRA 2.5558 BC3 3.6933 FSP 2427 SG1 5121.3 SG2 707.3 THA 23.00 EL1 46.2 EL2 2.1 ALF 12.46

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 4 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.916 GAL 6.20 AZL 86.76 HCA 146.02 SMA 196.35 ECC .25439 INC 3.2387 V1 29.934  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.034 GAP .90 AZP 92.69 TAL 31.34 TAP 177.35 RCA 146.40 APO 246.30 V2 22.267  
 RC 297.167 GL 20.03 GP -24.82 ZAL 42.46 ZAP 73.00 ETS 173.71 ZAE 100.52 ETE 186.79 ZAC 64.24 ETC 285.73 LVI 2.01

DISTANCE 511.506  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.145 VHL 5.399 DLA 26.07 RAL 9.78 RAD 8646.7 VEL 12.210 PTH 7.16 VHP 2.578 DPA -16.07 RAP 27.66 ECC 1.4796  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 19 37 3762.80 -47.23 153.20 262.10 83.46 8 22 19 2762.8 -44.27 118.56  
 60.00 7 24 36 3749.50 -39.20 150.39 260.48 79.78 8 27 6 2749.5 -39.12 119.22  
 70.00 7 33 18 3725.87 -31.61 146.35 258.51 76.34 8 35 21 2723.9 -34.06 117.89  
 80.00 7 52 29 3663.61 -25.13 139.79 256.52 73.33 8 53 33 2663.6 -29.65 113.28  
 90.00 8 46 10 3490.21 -22.07 126.01 255.47 71.85 9 44 20 2490.2 -27.55 100.33  
 100.00 10 35 21 3138.09 -25.13 101.16 256.52 73.33 11 27 39 2138.1 -29.65 74.65  
 110.00 12 32 44 2770.69 -31.61 75.27 258.51 76.34 13 18 55 1770.7 -34.06 46.80

DIFFERENTIAL CORRECTIONS  
 TDE -.1161 TRA-2.5303 TC3-3.5207 BAV 1.5589 SGT 4852.3 SGR 2138.8 SG3 1398.8 ST 46.0 SR 10.2 SS 41.8  
 RDE -.0254 RRA -.5422 RC3-1.8898 FAU .45703 RRT .9337 RRF .9733 RTF .9365 CRT .9836 CRS -.3782 CST -.3749  
 FDE 3.0622 FRA-5.1261 FC-13.5759 BSP 8979 SGB 5302.7 R23 .2228 R13 .9506 LSA 52.5 MSA 34.7 SSA 1.8  
 BDE .1188 BRA 2.6073 BC3 3.9958 FSP 2389 SG1 5255.4 SG2 707.1 THA 22.81 EL1 47.0 EL2 1.8 ALF 12.30

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 4 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.922 GAL 6.15 AZL 86.67 HCA 146.91 SMA 196.46 ECC .25443 INC 3.3264 V1 29.934  
 RP 246.39 LAP 1.82 LOP 128.27 VP 20.043 GAP .69 AZP 92.79 TAL 31.07 TAP 177.98 RCA 146.47 APO 246.44 V2 22.249  
 RC 299.828 GL 20.60 GP -25.04 ZAL 42.90 ZAP 72.13 ETS 173.10 ZAE 99.28 ETE 186.26 ZAC 63.87 ETC 285.78 LVI 2.41

DISTANCE 515.289  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.149 VHL 5.399 DLA 26.68 RAL 9.75 RAD 8646.7 VEL 12.210 PTH 7.16 VHP 2.597 DPA -16.50 RAP 27.73 ECC 1.4797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 22 3776.37 -47.12 154.52 262.65 82.46 8 19 18 2776.6 -44.58 119.74  
 60.00 7 20 2 3766.78 -38.98 151.80 260.82 78.84 8 22 49 2766.8 -39.32 120.64  
 70.00 7 26 34 3747.50 -31.22 148.08 258.65 75.39 8 29 2 2747.5 -34.12 119.73  
 80.00 7 41 47 3699.71 -24.41 142.23 256.42 72.25 8 43 27 2699.7 -29.46 115.95  
 90.00 8 31 21 3539.57 -20.99 129.23 255.17 70.60 9 30 21 2539.6 -27.11 103.88  
 100.00 10 24 39 3174.18 -24.41 103.60 256.42 72.25 11 17 33 2174.2 -29.46 77.32  
 110.00 12 26 1 2794.32 -31.22 76.99 258.65 75.39 13 12 35 1794.3 -34.12 48.65

DIFFERENTIAL CORRECTIONS  
 TDE -.0827 TRA-2.5995 TC3-3.6194 BAV 1.5982 SGT 4981.4 SGR 2173.7 SG3 1377.7 ST 46.9 SR 10.4 SS 42.7  
 RDE .0035 RRA -.5572 RC3-1.9175 FAU .44922 RRT .9360 RRF .9749 RTF .9372 CRT .9782 CRS -.4989 CST -.3975  
 FDE 3.1361 FRA-5.0274 FC-13.3419 BSP 9220 SGB 5435.0 R23 .2259 R13 .9510 LSA 54.0 MSA 34.7 SSA 1.7  
 BDE .0827 BRA 2.6585 BC3 4.0960 FSP 2349 SG1 5388.8 SG2 707.4 THA 22.63 EL1 48.0 EL2 2.1 ALF 12.27

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 4 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.928 GAL 6.10 AZL 86.58 HCA 147.80 SMA 196.57 ECC .25447 INC 3.4182 V1 29.934  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.034 GAP .48 AZP 92.89 TAL 30.80 TAP 178.60 RCA 146.55 APO 246.59 V2 22.232  
 RC 302.085 GL 21.19 GP -25.48 ZAL 43.36 ZAP 71.29 ETS 172.49 ZAE 98.08 ETE 185.73 ZAC 63.47 ETC 285.84 LVI 2.83

DISTANCE 519.072  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 29.166 VHL 5.401 DLA 27.32 RAL 9.71 RAD 8646.7 VEL 12.211 PTH 7.17 VHP 2.617 DPA -16.94 RAP 27.82 ECC 1.4800  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 53 3791.07 -46.98 155.89 263.22 81.41 8 18 4 2791.1 -44.89 121.00  
 60.00 7 15 9 3785.04 -38.73 153.29 261.16 77.86 8 18 14 2785.0 -39.52 122.16  
 70.00 7 19 15 3772.95 -30.77 149.92 258.77 74.38 8 22 8 2772.9 -34.15 121.71  
 80.00 7 29 29 3740.81 -23.53 144.96 256.24 71.06 8 31 50 2740.8 -29.18 118.97  
 90.00 8 12 28 3601.88 -19.53 133.21 254.68 69.13 9 12 29 2601.9 -26.41 108.30  
 100.00 10 12 21 3215.28 -23.53 106.33 256.24 71.06 11 5 56 2215.3 -29.18 80.34  
 110.00 12 18 41 2819.76 -30.77 78.84 258.77 74.38 13 5 41 1819.8 -34.15 50.63

DIFFERENTIAL CORRECTIONS  
 TDE -.0463 TRA-2.6478 TC3-3.7152 BAV 1.6351 SGT 5109.1 SGR 2209.3 SG3 1355.3 ST 47.9 SR 10.9 SS 43.6  
 RDE .0340 RRA -.5724 RC3-1.9448 FAU .44096 RRT .9381 RRF .9765 RTF .9378 CRT .9619 CRS -.6089 CST -.4214  
 FDE 3.2106 FRA-4.9241 FC-13.0888 BSP 9471 SGB 5566.3 R23 .2291 R13 .9513 LSA 55.7 MSA 34.7 SSA 1.7  
 BDE .0574 BRA 2.7090 BC3 4.1934 FSP 2310 SG1 5521.1 SG2 708.1 THA 22.47 EL1 49.0 EL2 2.9 ALF 12.37

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 4 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC  
 RL 180.86 LAL .00 LOL 341.32 VL 32.934 GAL 6.05 AZL 86.49 HCA 148.69 SMA 196.68 ECC .25453 INC 3.5146 V1 29.534  
 RP 246.74 LAP 1.83 LOP 130.06 VP 20.025 GAP .27 AZP 93.00 TAL 30.52 TAP 179.21 RCA 146.62 APO 246.75 V2 22.219  
 RC 304.476 GL 21.81 GP -25.94 ZAL 43.63 ZAP 70.49 ETS 171.66 ZAE 96.90 ETE 185.19 ZAC 63.04 ETC 285.90 LVI 3.27

PLANETOCENTRIC CONIC  
 C3 29.199 VHL 5.404 DLA 27.98 RAL 9.86 RAD 6646.7 VEL 12.212 PTH 7.17 VHP 2.638 DPA -17.39 RAP 27.94 ECC 1.4805  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 10 3806.36 -46.81 157.33 263.79 80.31 8 12 37 2806.4 -45.19 122.34  
 60.00 7 9 53 3804.44 -38.44 154.86 261.49 76.83 8 13 18 2804.4 -39.71 123.78  
 70.00 7 11 13 3800.51 -30.25 151.90 258.85 73.52 8 14 34 2800.5 -34.15 123.97  
 80.00 7 14 52 3789.05 -22.42 148.12 255.94 69.75 8 18 1 2789.1 -28.75 122.49  
 90.00 7 43 35 3696.17 -17.13 139.09 253.72 67.15 8 45 11 2696.2 -25.08 114.88  
 100.00 9 57 44 3263.52 -22.42 109.49 255.94 69.75 10 52 7 2263.5 -28.75 83.86  
 110.00 12 10 40 2647.33 -30.25 80.82 258.85 73.52 12 58 7 1847.3 -34.15 52.78

DIFFERENTIAL CORRECTIONS  
 TDE -.0079 TRA-2.6964 TC3-3.8003 BAU 1.6741 SGT 5236.6 SGR 2246.3 8G3 1331.7 ST 49.0 SR 11.6 SB 44.6  
 RDE .0655 RRA -.5685 RC3-1.9720 FAU .43240 RRT .9401 RRF .9779 RTF .9383 CRT .9384 CR8 -.7012 CBT -.4463  
 FDE 3.2811 FRA-4.8206 FC-12.8206 BSP 9716 SGB 5698.0 R23 .2324 R13 .9515 LSA 57.6 MSA 34.6 S8A 1.6  
 BDE .0660 BRA 2.7599 BC3 4.2066 FSP 2267 SGI 5653.7 SGI 709.2 THA 22.33 EL1 50.2 EL2 3.9 ALF 12.62

LAUNCH DATE SEP 4 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.940 GAL 6.00 AZL 86.38 HCA 149.58 SMA 196.80 ECC .25459 INC 3.6158 V1 29.534  
 RP 246.90 LAP 1.83 LOP 130.95 VP 20.017 GAP .06 AZP 93.12 TAL 30.24 TAP 179.82 RCA 146.70 APO 246.90 V2 22.199  
 RC 306.863 GL 22.46 GP -26.41 ZAL 44.32 ZAP 69.73 ETS 171.21 ZAE 95.74 ETE 184.65 ZAC 62.60 ETC 285.97 LVI 3.73

PLANETOCENTRIC CONIC  
 C3 29.247 VHL 5.408 DLA 28.67 RAL 9.59 RAD 6646.7 VEL 12.214 PTH 7.17 VHP 2.680 DPA -17.85 RAP 28.09 ECC 1.4813  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 5 11 3822.51 -46.62 158.84 264.37 79.16 8 8 54 2822.5 -45.50 123.78  
 60.00 7 4 13 3825.10 -38.11 156.51 261.81 75.75 8 7 58 2825.1 -39.88 125.51  
 70.00 7 2 21 3830.59 -29.64 154.03 258.88 72.19 8 6 12 2830.6 -34.09 126.21  
 80.00 6 56 32 3848.90 -20.96 151.97 255.44 68.24 8 0 41 2848.9 -28.07 126.81  
 85.07 6 26 14 3946.57 -14.08 158.02 252.30 64.77 7 32 1 2946.6 -23.28 132.68  
 100.00 9 39 24 3323.37 -20.96 113.33 255.44 68.24 10 34 47 2323.4 -28.07 88.17  
 110.00 12 1 48 2877.41 -29.64 82.95 258.88 72.19 12 49 48 1877.4 -34.09 55.13

DIFFERENTIAL CORRECTIONS  
 TDE .0327 TRA-2.7453 TC3-3.8997 BAU 1.7136 SGT 5364.6 SGR 2285.4 8G3 1307.5 ST 50.2 SR 12.6 SB 45.5  
 RDE .0984 RRA -.8053 RC3-1.9997 FAU .42368 RRT .9420 RRF .9793 RTF .9387 CRT .9119 CR8 -.7747 CBT -.4717  
 FDE 3.3488 FRA-4.7156 FC-12.8412 BSP 9961 SGB 5831.3 R23 .2357 R13 .9518 LSA 59.6 MSA 34.6 S8A 1.6  
 BDE .1036 BRA 2.8112 BC3 4.3825 FSP 2223 SGI 5787.8 SGI 711.1 THA 22.22 EL1 51.8 EL2 5.0 ALF 13.00

LAUNCH DATE SEP 4 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.946 GAL 5.95 AZL 86.28 HCA 150.46 SMA 196.92 ECC .25466 INC 3.7224 V1 29.534  
 RP 247.06 LAP 1.83 LOP 131.84 VP 20.010 GAP -.14 AZP 93.24 TAL 29.96 TAP 180.42 RCA 146.77 APO 247.07 V2 22.183  
 RC 309.224 GL 23.14 GP -26.91 ZAL 44.82 ZAP 69.01 ETS 170.56 ZAE 94.82 ETE 184.11 ZAC 62.12 ETC 286.04 LVI 4.22

PLANETOCENTRIC CONIC  
 C3 29.313 VHL 5.414 DLA 29.39 RAL 9.51 RAD 6646.7 VEL 12.217 PTH 7.17 VHP 2.688 DPA -18.32 RAP 28.27 ECC 1.4824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 0 54 3839.89 -46.39 160.43 264.95 77.96 8 4 54 2839.6 -45.81 125.31  
 60.00 6 58 4 3847.16 -37.72 158.28 262.11 74.62 8 2 11 2847.2 -40.03 127.36  
 70.00 6 52 27 3863.72 -28.93 156.35 258.85 70.99 7 58 51 2863.7 -33.97 128.79  
 80.00 6 30 7 3934.11 -18.72 167.30 254.50 66.31 7 35 41 2934.1 -26.85 132.84  
 81.66 5 58 28 4035.52 -14.39 162.72 252.42 64.10 7 5 44 3035.5 -23.83 139.42  
 100.00 9 12 59 3408.58 -18.72 118.67 254.50 66.31 10 9 47 2408.6 -26.85 94.21  
 110.00 11 51 53 2910.54 -28.93 85.26 258.85 70.99 12 40 24 1910.5 -33.97 57.71

DIFFERENTIAL CORRECTIONS  
 TDE .0759 TRA-2.7941 TC3-3.9886 BAU 1.7528 SGT 5491.8 SGR 2325.5 8G3 1281.8 ST 51.5 SR 13.7 SB 46.4  
 RDE .1328 RRA -.8231 RC3-2.0266 FAU .41447 RRT .9438 RRF .9808 RTF .9391 CRT .8865 CR8 -.8311 CBT -.4879  
 FDE 3.4137 FRA-4.6104 FC-12.8410 BSP 10203 SGB 5983.7 R23 .2390 R13 .9519 LSA 61.7 MSA 34.5 S8A 1.6  
 BDE .1529 BRA 2.8628 BC3 4.4721 FSP 2175 SGI 5920.9 SGI 713.2 THA 22.12 EL1 52.9 EL2 6.2 ALF 13.51

LAUNCH DATE SEP 4 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.988 GAL 5.90 AZL 86.17 HCA 151.39 SMA 197.04 ECC .25473 INC 3.8348 V1 29.534  
 RP 247.22 LAP 1.84 LOP 132.73 VP 20.003 GAP -.35 AZP 93.37 TAL 29.68 TAP 181.03 RCA 146.85 APO 247.23 V2 22.168  
 RC 311.559 GL 23.85 GP -27.44 ZAL 45.34 ZAP 68.32 ETS 169.88 ZAE 93.52 ETE 183.57 ZAC 61.62 ETC 286.12 LVI 4.74

PLANETOCENTRIC CONIC  
 C3 29.401 VHL 5.422 DLA 30.13 RAL 9.41 RAD 6646.8 VEL 12.220 PTH 7.17 VHP 2.711 DPA -18.81 RAP 28.49 ECC 1.4839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 17 3857.69 -46.12 162.09 265.53 76.70 8 0 34 2857.7 -46.10 126.96  
 60.00 6 51 23 3870.77 -37.28 160.11 262.38 73.43 7 55 53 2870.8 -40.15 129.36  
 70.00 6 41 16 3900.63 -28.08 158.88 258.74 69.71 7 46 16 2900.6 -33.77 131.66  
 79.15 5 38 46 4097.98 -14.71 167.52 252.53 63.40 6 47 4 3098.0 -24.40 144.26  
 79.15 5 38 46 4097.98 -14.71 167.52 252.53 63.40 6 47 4 3098.0 -24.40 144.26  
 79.15 5 38 46 4097.98 -14.71 167.52 252.53 63.40 6 47 4 3098.0 -24.40 144.26  
 110.00 11 40 42 2947.45 -28.08 87.80 258.74 69.71 12 29 50 1947.4 -33.77 60.57

DIFFERENTIAL CORRECTIONS  
 TDE .1131 TRA-2.8502 TC3-4.0805 BAU 1.7980 SGT 5632.2 SGR 2385.0 8G3 1264.2 ST 53.0 SR 15.0 SB 46.7  
 RDE .1590 RRA -.8514 RC3-2.0673 FAU .40826 RRT .9464 RRF .9922 RTF .9411 CRT .8769 CR8 -.8624 CBT -.5275  
 FDE 3.4094 FRA-4.5691 FC-12.0212 BSP 10301 SGB 6116.4 R23 .2380 R13 .9536 LSA 63.7 MSA 34.0 S8A 1.4  
 BDE .1951 BRA 2.9237 BC3 4.5743 FSP 2055 SGI 6074.5 SGI 714.3 THA 22.16 EL1 54.6 EL2 7.0 ALF 14.16

LAUNCH DATE SEP 4 1973

FLIGHT TIME 294.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC DISTANCE 537.972 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.959 GAL 5.84 AZL 86.05 HCA 152.25 SMA 197.18 ECC .29482 INC 3.9536 V1 29.534  
 RP 247.37 LAP 1.84 LOP 133.61 VP 19.997 GAP -.56 AZP 93.50 TAL 29.39 TAP 181.62 RCA 146.92 APO 247.40 V2 22.154  
 RC 313.869 GL 24.59 GP -27.99 ZAL 45.89 ZAP 67.67 ETS 169.20 ZAE 92.45 ETE 183.02 ZAC 61.08 ETC 286.20 LVI 5.29

PLANETOCENTRIC CONIC  
 C3 29.511 VHL 5.432 DLA 30.91 RAL 9.29 RAD 6646.8 VEL 12.225 PTH 7.18 VHP 2.738 DPA -19.31 RAP 28.74 ECC 1.4857  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 16 3876.94 -45.80 163.84 266.11 75.39 7 55 53 2876.9 -46.39 120.73  
 60.00 6 44 3 3896.20 -36.77 162.08 262.62 72.19 7 49 0 2896.2 -40.25 131.52  
 70.00 6 28 21 3942.61 -27.06 161.72 258.51 68.32 7 34 4 2942.6 -33.46 134.69  
 76.98 5 22 25 4149.24 -15.03 171.52 252.66 62.67 6 31 34 3149.2 -24.99 148.31  
 76.98 5 22 25 4149.24 -15.03 171.52 252.66 62.67 6 31 34 3149.2 -24.99 148.31  
 76.98 5 22 25 4149.24 -15.03 171.52 252.66 62.67 6 31 34 3149.2 -24.99 148.31  
 110.00 11 27 47 2989.43 -27.06 90.64 258.51 68.32 12 17 37 1989.4 -33.46 63.61

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1632 TRA-2.8976 TC3-4.1576 BAU 1.8360 SGT 5755.1 SGR 2424.6 SG3 1233.8 ST 54.5 SR 16.5 SS 47.8  
 RDE .1991 RRA -.6687 RC3-2.0906 FAU .39761 RRT .9477 RRF .9833 RTF .9409 CRT .8555 CR8 -.8982 CST -.5521  
 FDE 3.4854 FRA-4.4412 FC-11.6644 BSP 10575 SGB 6245.0 R23 .2426 R13 .9533 LSA 66.2 MSA 34.0 S8A 1.4  
 BDE .2575 BRA 2.9738 BC3 4.6536 FSP 2024 SGI 6203.6 SG2 718.0 THA 22.08 EL1 56.4 EL2 8.3 ALF 14.88

LAUNCH DATE SEP 4 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC DISTANCE 541.748 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.965 GAL 5.79 AZL 85.92 HCA 153.12 SMA 197.29 ECC .25490 INC 4.0795 V1 29.534  
 RP 247.51 LAP 1.84 LOP 134.50 VP 19.992 GAP -.76 AZP 93.64 TAL 29.10 TAP 182.22 RCA 147.00 APO 247.57 V2 22.140  
 RC 316.151 GL 23.37 GP -28.57 ZAL 46.45 ZAP 67.06 ETS 168.49 ZAE 91.41 ETE 182.46 ZAC 60.51 ETC 286.29 LVI 5.87

PLANETOCENTRIC CONIC  
 C3 29.646 VHL 5.445 DLA 31.71 RAL 9.14 RAD 6646.9 VEL 12.230 PTH 7.18 VHP 2.768 DPA -19.82 RAP 29.03 ECC 1.4879  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 45 51 3897.44 -45.43 165.68 266.67 74.01 7 50 48 2897.4 -46.67 130.63  
 60.00 6 36 0 3923.70 -36.17 164.17 262.81 70.87 7 41 24 2923.7 -40.30 133.86  
 70.00 6 13 2 3991.64 -25.78 164.96 258.12 66.78 7 19 34 2991.6 -32.97 136.63  
 75.01 5 8 2 4193.84 -15.35 175.07 252.78 61.90 6 17 56 3193.8 -25.59 151.91  
 75.01 5 8 2 4193.84 -15.35 175.07 252.78 61.90 6 17 56 3193.8 -25.59 151.91  
 75.01 5 8 2 4193.84 -15.35 175.07 252.78 61.90 6 17 56 3193.8 -25.59 151.91  
 110.00 11 12 28 3038.45 -25.78 93.88 258.12 66.78 12 3 7 2038.5 -32.97 67.55

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2182 TRA-2.9450 TC3-4.2298 BAU 1.8741 SGT 5877.0 SGR 2466.5 SG3 1202.5 ST 56.2 SR 18.3 SS 48.9  
 RDE .2411 RRA -.6872 RC3-2.1134 FAU .38671 RRT .9489 RRF .9842 RTF .9406 CRT .8397 CR8 -.9240 CST -.5769  
 FDE 3.5555 FRA-4.3138 FC-11.2928 BSP 10849 SGB 6373.6 R23 .2470 R13 .9530 LSA 68.8 MSA 34.0 S8A 1.3  
 BDE .3238 BRA 3.0241 BC3 4.7284 FSP 1987 SGI 6332.6 SG2 722.3 THA 22.02 EL1 58.4 EL2 9.6 ALF 15.73

LAUNCH DATE SEP 4 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC DISTANCE 545.524 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.972 GAL 5.73 AZL 85.79 HCA 154.00 SMA 197.41 ECC .25500 INC 4.2131 V1 29.534  
 RP 247.65 LAP 1.85 LOP 135.38 VP 19.988 GAP -.98 AZP 93.79 TAL 28.81 TAP 182.81 RCA 147.07 APO 247.75 V2 22.126  
 RC 318.408 GL 26.20 GP -29.19 ZAL 47.04 ZAP 66.50 ETS 167.77 ZAE 90.41 ETE 181.90 ZAC 59.91 ETC 286.39 LVI 6.48

PLANETOCENTRIC CONIC  
 C3 29.810 VHL 5.460 DLA 32.56 RAL 8.97 RAD 6646.9 VEL 12.237 PTH 7.19 VHP 2.799 DPA -20.38 RAP 29.35 ECC 1.4906  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 56 3919.33 -45.00 167.61 267.21 72.57 7 45 15 2919.3 -46.92 132.68  
 60.00 6 27 5 3953.61 -35.48 166.41 262.93 69.49 7 32 59 2953.6 -40.29 136.40  
 70.00 5 53 56 4051.78 -24.11 168.83 257.45 65.04 7 1 28 3051.8 -32.21 143.16  
 73.15 4 54 57 4233.91 -15.68 178.31 252.91 61.10 6 5 31 3233.9 -26.21 155.21  
 73.15 4 54 57 4233.91 -15.68 178.31 252.91 61.10 6 5 31 3233.9 -26.21 155.21  
 73.15 4 54 57 4233.91 -15.68 178.31 252.91 61.10 6 5 31 3233.9 -26.21 155.21  
 110.00 10 53 22 3098.59 -24.11 97.75 257.45 65.04 11 45 1 2098.6 -32.21 78.07

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2723 TRA-2.9926 TC3-4.2984 BAU 1.9122 SGT 5997.9 SGR 2511.2 SG3 1170.4 ST 58.1 SR 20.3 SS 49.9  
 RDE .2850 RRA -.7073 RC3-2.1382 FAU .37582 RRT .9501 RRF .9882 RTF .9403 CRT .8295 CR8 -.9424 CST -.6019  
 FDE 3.6191 FRA-4.1884 FC-10.9087 BSP 11126 SGB 6502.4 R23 .2513 R13 .9527 LSA 71.6 MSA 33.9 S8A 1.2  
 BDE .3941 BRA 3.0750 BC3 4.7982 FSP 1947 SGI 6461.6 SG2 727.1 THA 21.98 EL1 60.6 EL2 10.9 ALF 16.88

LAUNCH DATE SEP 4 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC DISTANCE 549.288 EARTH TO MARS  
 RL 150.86 LAL .00 LOL 341.32 VL 32.978 GAL 5.68 AZL 85.64 HCA 154.88 SMA 197.54 ECC .25510 INC 4.3552 V1 29.534  
 RP 247.78 LAP 1.85 LOP 136.27 VP 19.985 GAP -1.18 AZP 93.94 TAL 28.51 TAP 183.39 RCA 147.15 APO 247.93 V2 22.113  
 RC 320.632 GL 27.06 GP -29.83 ZAL 47.65 ZAP 65.97 ETS 167.03 ZAE 89.43 ETE 181.32 ZAC 59.27 ETC 286.50 LVI 7.13

PLANETOCENTRIC CONIC  
 C3 30.008 VHL 5.478 DLA 33.44 RAL 8.77 RAD 6647.0 VEL 12.245 PTH 7.19 VHP 2.833 DPA -20.92 RAP 29.71 ECC 1.4939  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 33 27 3942.77 -44.31 169.85 267.72 71.07 7 39 10 2942.8 -47.15 134.90  
 60.00 6 17 8 3986.38 -34.68 168.81 262.98 68.03 7 23 34 2986.4 -40.22 139.18  
 70.00 5 27 12 4134.55 -21.64 173.98 256.25 62.91 6 36 7 3134.6 -30.87 149.24  
 71.37 4 42 45 4270.81 -16.01 181.34 253.03 60.24 5 53 56 3270.8 -26.85 158.31  
 71.37 4 42 45 4270.81 -16.01 181.34 253.03 60.24 5 53 56 3270.8 -26.85 158.31  
 71.37 4 42 45 4270.81 -16.01 181.34 253.03 60.24 5 53 56 3270.8 -26.85 158.31  
 110.00 10 26 38 3181.37 -21.64 102.90 256.25 62.90 11 19 40 2181.4 -30.87 78.15

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3284 TRA-3.0423 TC3-4.3602 BAU 1.9521 SGT 6122.0 SGR 2560.9 SG3 1138.4 ST 60.2 SR 22.3 SS 50.8  
 RDE .3302 RRA -.7302 RC3-2.1602 FAU .36464 RRT .9513 RRF .9861 RTF .9401 CRT .8243 CR8 -.9553 CST -.6257  
 FDE 3.6710 FRA-4.0695 FC-10.5200 BSP 11373 SGB 6636.0 R23 .2552 R13 .9525 LSA 74.5 MSA 33.9 S8A 1.2  
 BDE .4664 BRA 3.1287 BC3 4.8660 FSP 1896 SGI 6595.5 SG2 732.6 THA 21.99 EL1 63.0 EL2 12.1 ALF 17.69

LAUNCH DATE SEP 4 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.985 GAL 5.83 AZL 85.49 HCA 155.76 SMA 197.67 ECC .25921 INC 4.9089 V1 29.534  
 RP 247.91 LAP 1.85 LOP 137.15 VP 19.982 GAP -1.36 AZP 94.11 TAL 28.21 TAP 183.98 RCA 147.22 APO 248.11 V2 22.101  
 RC 322.829 GL 27.97 GP -30.52 ZAL 48.28 ZAP 65.50 ETS 166.27 ZAE 86.49 ETE 180.74 ZAC 58.58 ETC 286.62 LVI 7.82

PLANETOCENTRIC CONIC  
 C3 30.243 VHL 5.499 DLA 34.36 RAL 8.54 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 2.869 DPA -21.50 RAP 30.10 ECC 1.4977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 26 21 3967.95 -43.93 171.79 268.19 69.50 7 32 29 2967.9 -47.34 137.31  
 60.00 6 5 53 4022.64 -33.72 171.41 262.91 66.48 7 12 55 3022.6 -40.05 142.25  
 69.62 4 31 12 4305.22 -16.34 184.22 253.16 59.35 5 42 57 3305.2 -27.50 161.27  
 69.62 4 31 12 4305.22 -16.34 184.22 253.16 59.35 5 42 57 3305.2 -27.50 161.27  
 69.62 4 31 12 4305.22 -16.34 184.22 253.16 59.35 5 42 57 3305.2 -27.50 161.27  
 69.62 4 31 12 4305.22 -16.34 184.22 253.16 59.35 5 42 57 3305.2 -27.50 161.27  
 69.62 4 31 12 4305.22 -16.34 184.22 253.16 59.35 5 42 57 3305.2 -27.50 161.27

DIFFERENTIAL CORRECTIONS  
 TDE .3906 TRA-3.0916 TC3-4.4150 BAU 1.9912 SGT 8242.6 SGR 2611.9 SG3 1104.5 ST 62.4 SR 24.6 SS 51.6  
 RDE .3783 RRA -.7544 RC3-2.1821 FAU .35309 RRT .9524 RRF .9869 RTF .9398 CRT .8220 CR8 -.9849 C8T -.6492  
 FDE 3.7193 FRA-3.9477 FC-10.1078 B8P 11636 SGB 8767.0 R23 .2592 R13 .9522 LSA 77.6 MSA 33.8 S8A 1.1  
 BDE .5438 BRA 3.1823 BC3 4.9248 F8P 1846 SGI 8726.6 SG2 738.6 THA 22.01 EL1 65.7 EL2 13.3 ALF 18.77

LAUNCH DATE SEP 4 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.991 GAL 5.57 AZL 85.33 HCA 156.84 SMA 197.79 ECC .25532 INC 4.6690 V1 29.534  
 RP 248.03 LAP 1.85 LOP 138.03 VP 19.980 GAP -1.56 AZP 94.29 TAL 27.91 TAP 184.56 RCA 147.29 APO 248.30 V2 22.089  
 RC 324.997 GL 28.93 GP -31.24 ZAL 48.94 ZAP 65.07 ETS 165.50 ZAE 87.59 ETE 180.15 ZAC 57.86 ETC 286.75 LVI 8.55

PLANETOCENTRIC CONIC  
 C3 30.522 VHL 5.525 DLA 35.32 RAL 8.27 RAD 6647.2 VEL 12.266 PTH 7.21 VHP 2.908 DPA -22.10 RAP 30.54 ECC 1.5023  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 18 30 3995.10 -43.25 174.06 268.60 67.86 7 25 5 2995.1 -47.48 139.92  
 60.00 5 53 0 4063.27 -32.58 174.25 262.69 64.84 7 0 43 3063.3 -39.75 145.67  
 67.89 4 20 6 4337.77 -16.67 186.99 253.29 58.40 5 32 24 3337.8 -28.17 164.14  
 67.89 4 20 6 4337.77 -16.67 186.99 253.29 58.40 5 32 24 3337.8 -28.17 164.14  
 67.89 4 20 6 4337.77 -16.67 186.99 253.29 58.40 5 32 24 3337.8 -28.17 164.14  
 67.89 4 20 6 4337.77 -16.67 186.99 253.29 58.40 5 32 24 3337.8 -28.17 164.14  
 67.89 4 20 6 4337.77 -16.67 186.99 253.29 58.40 5 32 24 3337.8 -28.17 164.14

DIFFERENTIAL CORRECTIONS  
 TDE .4540 TRA-3.1422 TC3-4.4638 BAU 2.0314 SGT 8364.0 SGR 2687.0 SG3 1069.9 ST 64.8 SR 27.0 SS 52.5  
 RDE .4289 RRA -.7809 RC3-2.2039 FAU .34140 RRT .9535 RRF .9876 RTF .9395 CRT .8242 CR8 -.9719 C8T -.6713  
 FDE 3.7589 FRA-3.8273 FC3-9.6836 B8P 11887 SGB 8900.3 R23 .2831 R13 .9520 LSA 80.9 MSA 33.7 S8A 1.0  
 BDE .6246 BRA 3.2378 BC3 4.9782 F8P 1790 SGI 8859.9 SG2 745.3 THA 22.06 EL1 68.7 EL2 14.4 ALF 19.88

LAUNCH DATE SEP 4 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 32.998 GAL 5.51 AZL 85.16 HCA 157.52 SMA 197.93 ECC .25544 INC 4.8430 V1 29.534  
 RP 248.14 LAP 1.85 LOP 138.92 VP 19.979 GAP -1.76 AZP 94.48 TAL 27.61 TAP 185.13 RCA 147.37 APO 248.48 V2 22.078  
 RC 327.134 GL 29.95 GP -32.00 ZAL 49.64 ZAP 64.69 ETS 164.70 ZAE 86.72 ETE 179.54 ZAC 57.09 ETC 286.90 LVI 9.32

PLANETOCENTRIC CONIC  
 C3 30.851 VHL 5.554 DLA 36.33 RAL 7.95 RAD 6647.3 VEL 12.279 PTH 7.22 VHP 2.950 DPA -22.74 RAP 31.02 ECC 1.5077  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 47 4024.51 -42.47 176.45 268.93 66.15 7 16 51 3024.5 -47.56 142.78  
 60.00 5 37 57 4109.69 -31.19 177.40 262.26 63.07 6 46 27 3109.7 -39.28 149.53  
 68.18 4 9 22 4368.71 -17.00 189.67 253.41 57.39 5 22 11 3368.7 -28.86 166.94  
 68.18 4 9 22 4368.71 -17.00 189.67 253.41 57.39 5 22 11 3368.7 -28.86 166.94  
 68.18 4 9 22 4368.71 -17.00 189.67 253.41 57.39 5 22 11 3368.7 -28.86 166.94  
 68.18 4 9 22 4368.71 -17.00 189.67 253.41 57.39 5 22 11 3368.7 -28.86 166.94  
 68.18 4 9 22 4368.71 -17.00 189.67 253.41 57.39 5 22 11 3368.7 -28.86 166.94

DIFFERENTIAL CORRECTIONS  
 TDE .9201 TRA-3.1937 TC3-4.5040 BAU 2.0718 SGT 8484.3 SGR 2725.5 SG3 1034.0 ST 67.4 SR 29.8 SS 53.2  
 RDE .4884 RRA -.8099 RC3-2.2243 FAU .32938 RRT .9548 RRF .9883 RTF .9391 CRT .8278 CR8 -.9770 C8T -.6921  
 FDE 3.7900 FRA-3.7073 FC3-9.2424 B8P 12140 SGB 7033.8 R23 .2868 R13 .9517 LSA 84.3 MSA 33.6 S8A 1.0  
 BDE .7094 BRA 3.2948 BC3 5.0233 F8P 1730 SGI 8993.4 SG2 752.6 THA 22.13 EL1 71.9 EL2 15.5 ALF 21.00

LAUNCH DATE SEP 4 1973

FLIGHT TIME 268.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC  
 RL 150.86 LAL .00 LOL 341.32 VL 33.005 GAL 5.46 AZL 84.97 HCA 188.40 SMA 188.06 ECC .25556 INC 5.0302 V1 29.534  
 RP 248.25 LAP 1.85 LOP 139.80 VP 19.978 GAP -1.95 AZP 94.88 TAL 27.31 TAP 185.71 RCA 147.44 APO 248.67 V2 22.087  
 RC 329.241 GL 31.03 GP -32.82 ZAL 50.36 ZAP 64.36 ETS 183.89 ZAE 85.89 ETE 178.93 ZAC 56.27 ETC 287.06 LVI 10.18

PLANETOCENTRIC CONIC  
 C3 31.238 VHL 5.589 DLA 37.39 RAL 7.58 RAD 6647.5 VEL 12.295 PTH 7.23 VHP 2.998 DPA -23.41 RAP 31.55 ECC 1.5141  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 0 2 4096.54 -41.88 178.98 269.15 64.36 7 7 38 3056.5 -47.57 145.85  
 60.00 5 19 48 4184.55 -29.45 180.98 261.52 61.14 6 29 12 3164.3 -38.55 153.99  
 64.45 3 58 49 4398.58 -17.31 192.31 253.52 56.33 5 12 8 3398.6 -29.57 169.71  
 64.45 3 58 49 4398.58 -17.31 192.31 253.52 56.33 5 12 8 3398.6 -29.57 169.71  
 64.45 3 58 49 4398.58 -17.31 192.31 253.52 56.33 5 12 8 3398.6 -29.57 169.71  
 64.45 3 58 49 4398.58 -17.31 192.31 253.52 56.33 5 12 8 3398.6 -29.57 169.71  
 64.45 3 58 49 4398.58 -17.31 192.31 253.52 56.33 5 12 8 3398.6 -29.57 169.71

DIFFERENTIAL CORRECTIONS  
 TDE .5904 TRA-3.2452 TC3-4.5337 BAU 2.1122 SGT 8601.7 SGR 2786.0 SG3 996.2 ST 70.1 SR 32.3 SS 53.9  
 RDE .5402 RRA -.8405 RC3-2.2417 FAU .31672 RRT .9556 RRF .9889 RTF .9388 CRT .8327 CR8 -.9810 C8T -.7117  
 FDE 3.8175 FRA-3.5812 FC3-8.7778 B8P 12409 SGB 7165.4 R23 .2709 R13 .9513 LSA 88.0 MSA 33.6 S8A .9  
 BDE .8002 BRA 3.3323 BC3 5.0577 F8P 1673 SGI 7124.9 SG2 760.8 THA 22.23 EL1 75.4 EL2 16.6 ALF 22.14

LAUNCH DATE SEP 4 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

DISTANCE 568.156

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.012 GAL 5.40 AZL 84.77 HCA 159.27 SMA 198.19 ECC .25569 INC 5.2322 V1 29.534
RP 248.35 LAP 1.85 LOP 140.68 VP 19.978 GAP -2.15 AZP 94.90 TAL 27.00 TAP 186.28 RCA 147.51 APO 248.87 V2 22.057
RC 331.317 GL 32.17 GP -33.68 ZAL 51.12 ZAP 64.09 ETS 163.05 ZAE 85.10 ETE 176.30 ZAC 55.39 ETC 287.24 LVI 11.02

PLANETOCENTRIC CONIC

C3 31.892 VHL 5.630 DLA 38.50 RAL 7.15 RAD 6647.7 VEL 12.313 PTH 7.25 VHP 3.046 DPA -24.11 RAP 32.12 ECC 1.5216
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 49 2 4091.64 -40.49 181.67 269.23 62.50 6 57 14 3091.6 -47.47 149.24
60.00 4 56 36 4232.45 -27.14 185.26 260.27 58.98 6 7 8 3232.4 -37.39 159.40
62.71 3 48 23 4427.53 -17.62 194.90 253.62 55.20 5 2 11 3427.5 -30.28 172.46
62.71 3 48 23 4427.53 -17.62 194.90 253.62 55.20 5 2 11 3427.5 -30.28 172.46
62.71 3 48 23 4427.53 -17.62 194.90 253.62 55.20 5 2 11 3427.5 -30.28 172.46
62.71 3 48 23 4427.53 -17.62 194.90 253.62 55.20 5 2 11 3427.5 -30.28 172.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6607 TRA-3.3005 TC3-4.5559 BAU 2.1346 SGT 6722.1 SGR 2833.6 SG3 956.1 ST 73.0 SR 35.2 SB 54.4
RDE .6001 RRA -.8761 RC3-2.2595 FAU .30413 RRT .9566 RRF .9894 RTF .9382 CRT .8387 CRS -.9838 CST -.7292
FDE 3.8282 FRA-3.4631 FC3-8.3079 BSP 12636 SGB 7302.7 R23 .2743 R13 .9510 LSA 91.7 MSA 33.5 SSA .8
BDE .8925 BRA 3.4148 BC3 5.0854 FSP 1603 SG1 7262.1 SG2 769.5 THA 22.37 EL1 79.1 EL2 17.7 ALF 23.24

LAUNCH DATE SEP 4 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

DISTANCE 571.925

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.019 GAL 5.34 AZL 84.55 HCA 160.15 SMA 198.32 ECC .25583 INC 5.4511 V1 29.534
RP 248.45 LAP 1.85 LOP 141.56 VP 19.979 GAP -2.34 AZP 95.13 TAL 26.70 TAP 186.85 RCA 147.59 APO 249.06 V2 22.048
RC 333.364 GL 33.38 GP -34.59 ZAL 51.91 ZAP 63.88 ETS 162.20 ZAE 84.35 ETE 177.66 ZAC 54.46 ETC 287.43 LVI 11.95

PLANETOCENTRIC CONIC

C3 32.226 VHL 5.677 DLA 39.66 RAL 6.65 RAD 6647.9 VEL 12.335 PTH 7.26 VHP 3.100 DPA -24.85 RAP 32.74 ECC 1.5304
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 36 32 4130.43 -39.23 184.53 269.12 60.57 6 45 22 3130.4 -47.23 152.96
60.00 4 22 2 4331.26 -23.53 191.14 257.89 56.29 5 34 13 3331.3 -35.23 166.90
60.94 3 38 0 4455.71 -17.92 197.48 253.71 54.00 4 52 16 3455.7 -31.01 175.22
60.94 3 38 0 4455.71 -17.92 197.48 253.71 54.00 4 52 16 3455.7 -31.01 175.22
60.94 3 38 0 4455.71 -17.92 197.48 253.71 54.00 4 52 16 3455.7 -31.01 175.22
60.94 3 38 0 4455.71 -17.92 197.48 253.71 54.00 4 52 16 3455.7 -31.01 175.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7344 TRA-3.3557 TC3-4.5644 BAU 2.1969 SGT 6838.3 SGR 2924.1 SG3 917.9 ST 76.1 SR 38.2 SB 54.8
RDE .6644 RRA -.9143 RC3-2.2736 FAU .29092 RRT .9576 RRF .9898 RTF .9376 CRT .8452 CRS -.9859 CST -.7453
FDE 3.8303 FRA-3.3401 FC3-7.8155 BSP 12887 SGB 7437.2 R23 .2779 R13 .9507 LSA 95.6 MSA 33.5 SSA .8
BDE .9904 BRA 3.4780 BC3 5.0993 FSP 1534 SG1 7396.3 SG2 778.6 THA 22.53 EL1 83.1 EL2 18.7 ALF 24.33

LAUNCH DATE SEP 4 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC

DISTANCE 575.692

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.025 GAL 5.29 AZL 84.31 HCA 161.02 SMA 198.46 ECC .25597 INC 5.6891 V1 29.534
RP 248.54 LAP 1.85 LOP 142.43 VP 19.980 GAP -2.53 AZP 95.38 TAL 26.39 TAP 187.41 RCA 147.66 APO 249.26 V2 22.039
RC 335.380 GL 34.66 GP -35.56 ZAL 52.75 ZAP 63.73 ETS 161.33 ZAE 83.65 ETE 177.00 ZAC 53.47 ETC 287.65 LVI 12.94

PLANETOCENTRIC CONIC

C3 32.853 VHL 5.732 DLA 40.89 RAL 6.07 RAD 6648.1 VEL 12.360 PTH 7.28 VHP 3.160 DPA -25.63 RAP 33.42 ECC 1.5407
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 22 6 4173.78 -37.74 187.60 268.75 58.54 6 31 39 3173.8 -46.81 157.07
59.15 3 27 33 4483.42 -18.19 200.05 253.78 52.73 4 42 17 3483.4 -31.74 178.01
59.15 3 27 33 4483.42 -18.19 200.05 253.78 52.73 4 42 17 3483.4 -31.74 178.01
59.15 3 27 33 4483.42 -18.19 200.05 253.78 52.73 4 42 17 3483.4 -31.74 178.01
59.15 3 27 33 4483.42 -18.19 200.05 253.78 52.73 4 42 17 3483.4 -31.74 178.01
59.15 3 27 33 4483.42 -18.19 200.05 253.78 52.73 4 42 17 3483.4 -31.74 178.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8083 TRA-3.4143 TC3-4.5617 BAU 2.2410 SGT 6955.5 SGR 3000.1 SG3 876.3 ST 79.2 SR 41.4 SB 55.1
RDE .7329 RRA -.9569 RC3-2.2853 FAU .27736 RRT .9586 RRF .9901 RTF .9370 CRT .8514 CRS -.9875 CST -.7590
FDE 3.8197 FRA-3.2161 FC3-7.3087 BSP 13121 SGB 7574.9 R23 .2816 R13 .9502 LSA 99.5 MSA 33.6 SSA .7
BDE 1.0911 BRA 3.5458 BC3 5.1021 FSP 1460 SG1 7533.8 SG2 788.7 THA 22.73 EL1 87.2 EL2 19.8 ALF 25.40

LAUNCH DATE SEP 4 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC

DISTANCE 579.460

EARTH TO MARS

RL 150.86 LAL .00 LOL 341.32 VL 33.032 GAL 5.23 AZL 84.05 HCA 161.90 SMA 198.60 ECC .25611 INC 5.9491 V1 29.534
RP 248.63 LAP 1.85 LOP 143.31 VP 19.983 GAP -2.73 AZP 95.66 TAL 26.08 TAP 187.98 RCA 147.73 APO 249.46 V2 22.030
RC 337.366 GL 36.03 GP -36.60 ZAL 53.63 ZAP 63.65 ETS 160.44 ZAE 83.00 ETE 176.33 ZAC 52.42 ETC 287.90 LVI 14.00

PLANETOCENTRIC CONIC

C3 33.593 VHL 5.796 DLA 42.17 RAL 5.39 RAD 6648.4 VEL 12.390 PTH 7.30 VHP 3.226 DPA -26.46 RAP 34.15 ECC 1.5529
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 5 9 4222.96 -35.94 190.92 268.03 56.43 6 15 32 3130.0 -46.15 161.63
57.31 3 16 57 4510.82 -18.43 202.62 253.81 51.37 4 32 8 3510.8 -32.47 180.84
57.31 3 16 57 4510.82 -18.43 202.62 253.81 51.37 4 32 8 3510.8 -32.47 180.84
57.31 3 16 57 4510.82 -18.43 202.62 253.81 51.37 4 32 8 3510.8 -32.47 180.84
57.31 3 16 57 4510.82 -18.43 202.62 253.81 51.37 4 32 8 3510.8 -32.47 180.84
57.31 3 16 57 4510.82 -18.43 202.62 253.81 51.37 4 32 8 3510.8 -32.47 180.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8783 TRA-3.4797 TC3-4.5496 BAU 2.2696 SGT 7078.7 SGR 3090.9 SG3 835.6 ST 82.4 SR 44.6 SB 54.9
RDE .8003 RRA -1.0106 RC3-2.3004 FAU .26438 RRT .9601 RRF .9905 RTF .9372 CRT .8586 CRS -.9884 CST -.7715
FDE 3.7741 FRA-3.1136 FC3-6.8133 BSP 13276 SGB 7724.1 R23 .2826 R13 .9506 LSA 103.3 MSA 33.5 SSA .7
BDE 1.1882 BRA 3.6235 BC3 5.0981 FSP 1360 SG1 7682.9 SG2 796.5 THA 23.01 EL1 91.4 EL2 20.6 ALF 26.36

LAUNCH DATE SEP 4 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC  
 RL 190.86 LAL .00 LOL 341.32 VL 33.039 GAL 5.17 AZL 83.77 HCA 162.77 SMA 198.73 ECC .25626 INC 6.2343 V1 29.534  
 RP 248.71 LAP 1.84 LOP 144.19 VP 19.985 GAP -2.92 AZP 95.96 TAL 25.77 TAP 188.54 RCA 147.80 APO 249.66 V2 22.023  
 RC 339.321 GL 37.49 GP -37.70 ZAL 54.56 ZAP 63.65 ETS 159.55 ZAE 82.41 ETE 179.65 ZAC 51.29 ETC 288.17 LVI 15.13

PLANETOCENTRIC CONIC  
 C3 34.466 VHL 5.871 DLA 43.52 RAL 4.60 RAD 8648.7 VEL 12.425 PTH 7.33 VHP 3.299 DPA -27.33 RAP 34.96 ECC 1.5672  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 44 40 4280.22 -33.72 194.59 266.80 54.20 5 56 1 3280.2 -45.13 166.77  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74  
 55.43 3 6 5 4538.12 -18.64 205.22 253.80 49.93 4 21 43 3538.1 -33.19 163.74

DIFFERENTIAL CORRECTIONS  
 TDE .9588 TRA-3.5374 TC3-4.5088 BAU 2.3310 SGT 7181.0 SGR 3166.8 SG3 787.4 ST 85.7 SR 48.4 SS 55.1  
 RDE .8894 RRA-1.0567 RC3-2.2947 FAU .24854 RRT .9605 RRF .9904 RTF .9351 CRT .8627 CR8 -.9894 CST -.7807  
 FDE 3.7594 FRA-2.8587 FC3-6.2429 BSP 13620 SGB 7848.3 R23 .2895 R13 .9480 LSA 107.6 MSA 33.8 S8A .6  
 BDE 1.3051 BRA 3.8918 BC3 5.0589 FSP 1307 SG1 7806.3 SG2 810.6 THA 23.22 EL1 96.0 EL2 21.8 ALF 27.49

LAUNCH DATE SEP 4 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC  
 RL 190.86 LAL .00 LOL 341.32 VL 33.046 GAL 5.11 AZL 83.45 HCA 163.64 SMA 198.87 ECC .25642 INC 6.5487 V1 29.534  
 RP 248.78 LAP 1.84 LOP 145.07 VP 19.989 GAP -3.11 AZP 96.29 TAL 25.45 TAP 189.10 RCA 147.80 APO 249.86 V2 22.015  
 RC 341.246 GL 39.05 GP -38.87 ZAL 55.54 ZAP 63.72 ETS 158.65 ZAE 81.88 ETE 174.96 ZAC 50.09 ETC 288.48 LVI 16.33

PLANETOCENTRIC CONIC  
 C3 35.501 VHL 5.958 DLA 44.94 RAL 3.67 RAD 8649.1 VEL 12.466 PTH 7.36 VHP 3.381 DPA -28.25 RAP 35.83 ECC 1.5843  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 18 46 4349.89 -30.86 198.78 264.79 51.80 5 31 16 3349.9 -43.57 172.75  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73  
 53.49 2 54 53 4565.43 -18.80 207.85 253.74 48.40 4 10 59 3565.4 -33.90 166.73

DIFFERENTIAL CORRECTIONS  
 TDE 1.0364 TRA-3.5977 TC3-4.4501 BAU 2.3740 SGT 7280.4 SGR 3248.9 SG3 737.6 ST 89.0 SR 52.2 SS 55.0  
 RDE .9759 RRA-1.1086 RC3-2.2838 FAU .23230 RRT .9609 RRF .9902 RTF .9327 CRT .8662 CR8 -.9900 CST -.7873  
 FDE 3.7237 FRA-2.8013 FC3-5.6850 BSP 13973 SGB 7872.4 R23 .2898 R13 .9471 LSA 111.8 MSA 34.2 S8A .6  
 BDE 1.4235 BRA 3.7647 BC3 5.0019 FSP 1248 SG1 7929.5 SG2 826.0 THA 23.48 EL1 100.6 EL2 23.1 ALF 28.58

LAUNCH DATE SEP 4 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC  
 RL 190.86 LAL .00 LOL 341.32 VL 33.053 GAL 5.08 AZL 83.10 HCA 164.51 SMA 199.01 ECC .25658 INC 6.8972 V1 29.534  
 RP 248.85 LAP 1.84 LOP 145.94 VP 19.993 GAP -3.30 AZP 98.85 TAL 25.14 TAP 189.65 RCA 147.95 APO 250.07 V2 22.009  
 RC 343.139 GL 40.72 GP -40.12 ZAL 56.58 ZAP 63.88 ETS 157.74 ZAE 81.42 ETE 174.28 ZAC 48.80 ETC 288.84 LVI 17.61

PLANETOCENTRIC CONIC  
 C3 36.738 VHL 6.061 DLA 46.43 RAL 2.59 RAD 8649.5 VEL 12.515 PTH 7.40 VHP 3.473 DPA -29.23 RAP 36.78 ECC 1.6046  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 8 4444.42 -26.76 204.04 261.27 49.07 4 56 12 3444.4 -40.94 180.29  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81  
 51.50 2 43 13 4592.93 -18.90 210.51 253.59 46.76 3 59 46 3592.9 -34.58 189.81

DIFFERENTIAL CORRECTIONS  
 TDE 1.0981 TRA-3.6737 TC3-4.3848 BAU 2.4274 SGT 7398.9 SGR 3337.8 SG3 690.5 ST 92.0 SR 55.8 SS 54.2  
 RDE 1.0599 RRA-1.1813 RC3-2.2810 FAU .21740 RRT .9622 RRF .9901 RTF .9320 CRT .8695 CR8 -.9898 CST -.7811  
 FDE 3.6311 FRA-2.8007 FC3-5.1233 BSP 14124 SGB 8123.3 R23 .2898 R13 .9467 LSA 115.4 MSA 34.6 S8A .5  
 BDE 1.5247 BRA 3.8590 BC3 4.9428 FSP 1145 SG1 8080.1 SG2 836.8 THA 23.87 EL1 104.8 EL2 24.2 ALF 29.58

LAUNCH DATE SEP 4 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 15 1974

HELIOCENTRIC CONIC  
 RL 190.86 LAL .00 LOL 341.32 VL 33.080 GAL 5.00 AZL 82.71 HCA 165.38 SMA 199.18 ECC .25674 INC 7.2860 V1 29.534  
 RP 248.92 LAP 1.83 LOP 146.82 VP 19.998 GAP -3.48 AZP 97.05 TAL 24.82 TAP 190.21 RCA 148.02 APO 250.28 V2 22.003  
 RC 345.001 GL 42.51 GP -41.46 ZAL 57.68 ZAP 64.13 ETS 156.85 ZAE 81.03 ETE 173.56 ZAC 47.43 ETC 289.24 LVI 18.98

PLANETOCENTRIC CONIC  
 C3 38.217 VHL 6.182 DLA 47.99 RAL 1.31 RAD 8650.0 VEL 12.574 PTH 7.44 VHP 3.577 DPA -30.27 RAP 37.81 ECC 1.6289  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01  
 49.46 2 30 55 4620.90 -18.93 213.22 253.33 45.03 3 47 56 3620.9 -35.20 193.01

DIFFERENTIAL CORRECTIONS  
 TDE 1.1592 TRA-3.7410 TC3-4.2838 BAU 2.4736 SGT 7486.6 SGR 3454.4 SG3 637.1 ST 94.8 SR 59.8 SS 53.4  
 RDE 1.1615 RRA-1.2496 RC3-2.2558 FAU .20011 RRT .9626 RRF .9894 RTF .9287 CRT .8702 CR8 -.9898 CST -.7913  
 FDE 3.5497 FRA-2.5153 FC3-4.5332 BSP 14503 SGB 8245.1 R23 .3085 R13 .9442 LSA 119.1 MSA 35.2 S8A .5  
 BDE 1.6410 BRA 3.9442 BC3 4.8414 FSP 1077 SG1 8200.8 SG2 854.2 THA 24.23 EL1 109.2 EL2 25.6 ALF 30.88



LAUNCH DATE SEP 5 1973

FLIGHT TIME 122.00

ARRIVAL DATE JAN 5 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 33.481 GAL 8.14 AZL 89.31 HCA 89.09 SMA 207.73 ECC .30591 INC .6942 V1 29.842  
 RP 226.12 LAP .69 LOP 71.39 VP 22.905 GAP 16.93 AZP 89.99 TAL 35.71 TAP 124.81 RCA 144.18 APO 271.20 V2 24.110  
 RC 131.592 GL 3.65 GP -7.59 ZAL 35.03 ZAP 153.52 ETS 197.37 ZAE 164.94 ETE 324.29 ZAC 75.23 ETC 282.52 LVI -8.64

Distance 287.723 Earth to Mars

Planetocentric Conic: C3 39.881 VHL 6.318 DLA 10.10 RAL 14.40 RAD 6650.6 VEL 12.639 PTH 7.49 VHP 4.935 DPA 9.31 RAP 45.97 ECC 1.6583  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 42 38 3507.17 -46.36 128.77 258.40 102.19 9 41 5 2507.2 -36.46 99.12  
 60.00 9 11 13 3431.10 -39.63 123.58 260.02 97.89 10 8 24 2431.1 -32.26 95.13  
 70.00 9 51 5 3313.79 -33.87 114.83 260.81 94.68 10 46 19 2313.6 -26.46 87.46  
 80.00 10 47 59 3135.97 -29.76 101.62 261.12 92.58 11 40 15 2135.6 -25.68 74.94  
 90.00 12 4 24 2886.97 -28.23 83.57 261.19 91.83 12 52 33 1889.0 -24.63 57.13  
 100.00 13 30 51 2610.04 -29.76 62.99 261.12 92.58 14 14 21 1610.0 -25.68 36.31  
 110.00 14 50 32 2360.60 -33.87 43.75 260.81 94.68 15 29 52 1360.6 -26.46 16.38

Differential Corrections: TDE -.3186 TRA -.8422 TC3 .4923 BAU .2886 SGT 905.8 SGR 728.2 SG3 361.5 ST 17.0 SR 32.2 SS 8.6  
 RDE -.7079 RRA .2083 RC3 -.2252 FAU .14538 RRT -.1589 RRF .3021 RTF -.4520 CRT .8000 CRS -.0373 CST -.5796  
 FDE -.0525 FRA -1.3787 FC3 -3.1559 BSP 1096 SGB 1162.2 R23 -.1183 R13 .4946 LSA 35.3 MSA 12.6 SSA 2.6  
 BDE .7763 BRA .6751 BC3 .5414 FSP 527 SG1 924.3 SG2 704.5 THA 162.08 EL1 35.2 EL2 9.3 ALF 65.30

LAUNCH DATE SEP 5 1973

FLIGHT TIME 124.00

ARRIVAL DATE JAN 7 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 33.430 GAL 8.13 AZL 89.27 HCA 90.13 SMA 206.64 ECC .30251 INC .7251 V1 29.542  
 RP 226.51 LAP .73 LOP 72.42 VP 22.788 GAP 16.56 AZP 90.00 TAL 36.02 TAP 126.15 RCA 144.13 APO 269.15 V2 24.089  
 RC 134.321 GL 3.82 GP -7.78 ZAL 34.73 ZAP 152.33 ETS 196.97 ZAE 165.54 ETE 321.36 ZAC 75.06 ETC 282.55 LVI -8.50

Distance 291.356 Earth to Mars

Planetocentric Conic: C3 39.431 VHL 6.279 DLA 10.15 RAL 14.03 RAD 6650.5 VEL 12.622 PTH 7.47 VHP 4.796 DPA 9.08 RAP 45.88 ECC 1.6489  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 41 1 3505.16 -46.33 128.59 257.80 102.33 9 39 26 2505.2 -36.38 98.99  
 60.00 9 9 33 3429.22 -39.63 123.39 259.44 97.99 10 6 42 2429.2 -32.20 95.00  
 70.00 9 49 22 3312.07 -33.86 114.70 260.24 94.76 10 44 34 2312.1 -28.42 87.34  
 80.00 10 46 12 3134.02 -29.75 101.51 260.55 92.64 11 38 26 2134.0 -25.65 74.84  
 90.00 12 2 35 2887.50 -28.22 83.46 260.62 91.88 12 50 43 1887.5 -24.60 57.03  
 100.00 13 29 4 2608.50 -29.75 62.88 260.55 92.64 14 12 32 1608.5 -25.65 36.21  
 110.00 14 48 48 2358.89 -33.86 43.62 260.24 94.76 15 28 7 1358.9 -26.42 16.26

Differential Corrections: TDE -.3209 TRA -.6413 TC3 .4945 BAU .2896 SGT 908.1 SGR 735.5 SG3 383.3 ST 17.2 SR 32.4 SS 9.0  
 RDE -.7064 RRA .2022 RC3 -.2393 FAU .15299 RRT -.1637 RRF .3196 RTF -.4443 CRT .8036 CRS -.0355 CST -.5749  
 FDE -.0543 FRA -1.4797 FC3 -3.3589 BSP 1100 SGB 1168.8 R23 -.1303 R13 .4930 LSA 35.4 MSA 12.6 SSA 2.6  
 BDE .7759 BRA .6724 BC3 .5493 FSP 584 SG1 928.4 SG2 709.7 THA 181.20 EL1 35.4 EL2 9.3 ALF 65.05

LAUNCH DATE SEP 5 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 9 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 33.383 GAL 8.13 AZL 89.24 HCA 91.17 SMA 205.63 ECC .29933 INC .7559 V1 29.842  
 RP 228.90 LAP .78 LOP 73.46 VP 22.678 GAP 16.19 AZP 90.02 TAL 36.31 TAP 127.48 RCA 144.08 APO 267.18 V2 24.028  
 RC 137.073 GL 4.00 GP -7.98 ZAL 34.45 ZAP 151.11 ETS 196.59 ZAE 166.12 ETE 318.03 ZAC 74.90 ETC 282.55 LVI -8.36

Distance 295.006 Earth to Mars

Planetocentric Conic: C3 39.011 VHL 6.246 DLA 10.20 RAL 13.68 RAD 6650.3 VEL 12.605 PTH 7.48 VHP 4.863 DPA 8.83 RAP 45.78 ECC 1.6420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 39 26 3503.46 -46.30 128.43 257.24 102.45 9 37 49 2503.5 -36.32 98.87  
 60.00 9 7 55 3427.67 -39.62 123.26 258.89 98.08 10 5 2 2427.7 -32.15 94.89  
 70.00 9 47 40 3310.72 -33.85 114.60 259.70 94.82 10 42 30 2310.7 -28.39 87.25  
 80.00 10 44 28 3132.87 -29.75 101.42 260.02 92.69 11 36 39 2132.9 -25.63 74.76  
 90.00 12 0 48 2886.43 -28.22 83.38 260.09 91.92 12 48 54 1886.4 -24.59 56.96  
 100.00 13 27 18 2607.34 -29.75 62.79 260.02 92.69 14 10 45 1607.3 -25.63 36.13  
 110.00 14 47 6 2357.54 -33.85 43.51 259.70 94.82 15 26 23 1357.5 -28.39 16.17

Differential Corrections: TDE -.3234 TRA -.6412 TC3 .4948 BAU .2901 SGT 909.4 SGR 743.0 SG3 406.1 ST 17.4 SR 32.4 SS 9.4  
 RDE -.7049 RRA .1957 RC3 -.2541 FAU .16093 RRT -.1678 RRF .3379 RTF -.4448 CRT .8071 CRS -.0350 CST -.5712  
 FDE -.0566 FRA -1.5858 FC3 -3.5713 BSP 1102 SGB 1174.4 R23 -.1435 R13 .4906 LSA 35.6 MSA 12.9 SSA 2.7  
 BDE .7755 BRA .6704 BC3 .5562 FSP 603 SG1 931.6 SG2 715.1 THA 180.25 EL1 35.6 EL2 9.3 ALF 64.79

LAUNCH DATE SEP 5 1973

FLIGHT TIME 128.00

ARRIVAL DATE JAN 11 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 33.339 GAL 8.12 AZL 89.21 HCA 92.20 SMA 204.69 ECC .29636 INC .7866 V1 29.542  
 RP 229.28 LAP .79 LOP 74.49 VP 22.567 GAP 15.84 AZP 90.03 TAL 36.59 TAP 128.79 RCA 144.03 APO 265.36 V2 23.988  
 RC 139.847 GL 4.18 GP -8.19 ZAL 34.20 ZAP 149.88 ETS 196.23 ZAE 166.68 ETE 314.32 ZAC 74.74 ETC 282.62 LVI -8.23

Distance 298.672 Earth to Mars

Planetocentric Conic: C3 38.619 VHL 6.214 DLA 10.25 RAL 13.35 RAD 6650.2 VEL 12.590 PTH 7.45 VHP 4.535 DPA 8.57 RAP 45.65 ECC 1.6356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 37 54 3502.05 -46.28 128.30 256.72 102.55 9 36 16 2502.1 -36.27 98.78  
 60.00 9 6 18 3426.44 -39.61 123.16 258.38 98.15 10 3 25 2426.4 -32.12 94.81  
 70.00 9 45 59 3309.71 -33.85 114.52 259.20 94.86 10 41 9 2309.7 -28.36 87.18  
 80.00 10 42 41 3132.08 -29.75 101.37 259.52 92.72 11 34 53 2132.1 -25.61 74.71  
 90.00 11 59 1 2885.75 -28.22 83.33 259.59 91.95 12 47 6 1885.8 -24.58 56.91  
 100.00 13 25 33 2606.56 -29.75 62.73 259.52 92.72 14 9 0 1606.6 -25.61 36.07  
 110.00 14 45 25 2356.53 -33.85 43.44 259.20 94.86 15 24 42 1356.5 -28.36 16.10

Differential Corrections: TDE -.3259 TRA -.6421 TC3 .4931 BAU .2901 SGT 909.9 SGR 750.9 SG3 429.9 ST 17.6 SR 32.5 SS 9.8  
 RDE -.7032 RRA .1888 RC3 -.2695 FAU .16919 RRT -.1711 RRF .3566 RTF -.4234 CRT .8104 CRS -.0323 CST -.5662  
 FDE -.0575 FRA -1.6966 FC3 -3.7929 BSP 1101 SGB 1179.7 R23 -.1579 R13 .4874 LSA 35.8 MSA 13.2 SSA 2.7  
 BDE .7750 BRA .6693 BC3 .5620 FSP 644 SG1 933.9 SG2 720.8 THA 159.23 EL1 35.8 EL2 9.4 ALF 64.52

LAUNCH DATE SEP 5 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 13 1974

HELIOCENTRIC CONIC

DISTANCE 302.352

EARTH TO MARS

RL 130.83 LAL .00 LOL 342.29 VL 33.298 GAL 8.11 AZL 89.18 HCA 93.23 SMA 203.83 ECC .29358 INC .8174 V1 29.542
RP 229.67 LAP .82 LOP 75.32 VP 22.463 GAP 15.48 AZP 90.05 TAL 36.85 TAP 130.08 RCA 143.99 APO 263.67 V2 23.947
RC 142.641 GL 4.36 GP -8.40 ZAL 33.96 ZAP 146.63 ETS 195.88 ZAE 167.20 ETE 310.12 ZAC 74.57 ETC 282.66 LVI -8.09

PLANETOCENTRIC CONIC

C3 36.250 VHL 6.185 DLA 10.32 RAL 13.04 RAD 6650.1 VEL 12.575 PTH 7.44 VHP 4.412 DPA 8.30 RAP 45.50 ECC 1.6295
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 36 24 3500.93 -46.26 128.20 256.23 102.63 9 34 45 2500.9 -36.23 98.71
60.00 9 4 44 3425.52 -39.60 123.08 257.91 98.20 10 1 50 2425.5 -32.09 94.75
70.00 9 44 20 3309.04 -33.84 114.47 258.73 94.89 10 39 29 2309.0 -28.35 87.14
80.00 10 40 57 3131.66 -29.74 101.33 259.05 92.73 11 33 9 2131.7 -25.60 74.68
90.00 11 57 14 2885.45 -28.22 83.31 259.12 91.96 12 45 20 1805.5 -24.57 58.89
100.00 13 23 49 2606.14 -29.74 62.70 259.05 92.73 14 7 15 1606.1 -25.60 36.05
110.00 14 43 46 2355.86 -33.84 43.38 258.73 94.89 15 23 2 1355.9 -28.35 16.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3288 TRA -.6440 TC3 .4894 BAU .2898 SGT 909.4 8GR 759.2 8G3 454.7 ST 17.8 SR 32.6 88 10.2
RDE -.7014 RRA .1815 RC3 -.2857 FAU .17780 RRT -.1732 RRF .3760 RTF -.4100 CRT .8135 CRS -.0292 CBT -.5608
PDE -.0579 FRA-1.8125 FC3-4.0243 B8P 1097 SGB 1184.6 R23 -.1738 R13 .4835 LSA 36.0 MSA 13.5 88A 2.7
BDE .7747 BRA .6691 BC3 .5667 F8P 686 SGT 935.4 8G2 726.9 THA 158.17 EL1 35.9 EL2 9.4 ALF 64.21

LAUNCH DATE SEP 5 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 15 1974

HELIOCENTRIC CONIC

DISTANCE 306.045

EARTH TO MARS

RL 130.83 LAL .00 LOL 342.29 VL 33.259 GAL 8.11 AZL 89.15 HCA 94.26 SMA 203.03 ECC .29098 INC .8479 V1 29.542
RP 230.05 LAP .85 LOP 76.55 VP 22.363 GAP 15.13 AZP 90.06 TAL 37.09 TAP 131.34 RCA 143.95 APO 262.10 V2 23.907
RC 145.456 GL 4.34 GP -8.62 ZAL 33.74 ZAP 147.35 ETS 195.55 ZAE 167.67 ETE 305.41 ZAC 74.40 ETC 282.70 LVI -7.98

PLANETOCENTRIC CONIC

C3 37.904 VHL 6.157 DLA 10.39 RAL 12.74 RAD 6649.9 VEL 12.561 PTH 7.43 VHP 4.295 DPA 8.02 RAP 45.34 ECC 1.6238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 34 57 3500.08 -46.25 128.12 255.79 102.69 9 33 17 2500.1 -36.19 98.65
60.00 9 3 12 3424.89 -39.59 123.03 257.47 98.23 10 0 17 2424.9 -32.07 94.70
70.00 9 42 42 3308.69 -33.84 114.44 258.29 94.91 10 37 50 2308.7 -28.34 87.11
80.00 10 39 14 3131.60 -29.74 101.33 258.61 92.73 11 31 25 2131.6 -25.60 74.67
90.00 11 55 29 2885.51 -28.22 83.31 258.69 91.95 12 43 34 1885.5 -24.57 56.90
100.00 13 22 5 2606.07 -29.74 62.70 258.61 92.73 14 5 31 1606.1 -25.60 36.04
110.00 14 42 8 2355.50 -33.84 43.36 258.29 94.91 15 21 24 1355.5 -28.34 16.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3318 TRA -.6470 TC3 .4837 BAU .2891 SGT 908.2 8GR 767.9 8G3 480.6 ST 18.0 SR 32.7 88 10.6
RDE -.8996 RRA .1737 RC3 -.3025 FAU .18676 RRT -.1741 RRF .3960 RTF -.3943 CRT .8165 CRS -.0266 CBT -.5559
PDE -.0582 FRA-1.9332 FC3-4.2657 B8P 1093 SGB 1189.3 R23 -.1912 R13 .4790 LSA 36.1 MSA 13.8 88A 2.7
BDE .7743 BRA .6699 BC3 .5703 F8P 731 SGT 936.1 8G2 733.6 THA 157.04 EL1 36.1 EL2 9.4 ALF 63.88

LAUNCH DATE SEP 5 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 17 1974

HELIOCENTRIC CONIC

DISTANCE 309.749

EARTH TO MARS

RL 130.83 LAL .00 LOL 342.29 VL 33.223 GAL 8.10 AZL 89.12 HCA 95.28 SMA 202.28 ECC .28854 INC .8786 V1 29.542
RP 230.44 LAP .87 LOP 77.57 VP 22.266 GAP 14.79 AZP 90.08 TAL 37.31 TAP 132.99 RCA 143.91 APO 260.65 V2 23.867
RC 146.289 GL 4.72 GP -8.84 ZAL 33.54 ZAP 148.05 ETS 195.23 ZAE 168.06 ETE 300.10 ZAC 74.23 ETC 282.75 LVI -7.82

PLANETOCENTRIC CONIC

C3 37.578 VHL 6.130 DLA 10.47 RAL 12.48 RAD 6649.8 VEL 12.548 PTH 7.42 VHP 4.182 DPA 7.72 RAP 45.15 ECC 1.6184
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 33 32 3499.49 -46.24 128.07 255.38 102.73 9 31 51 2499.5 -36.17 98.61
60.00 9 1 42 3424.54 -39.59 123.00 257.06 98.25 9 58 46 2424.5 -32.06 94.68
70.00 9 41 5 3308.65 -33.84 114.44 257.88 94.91 10 36 14 2308.6 -28.34 87.11
80.00 10 37 31 3131.87 -29.74 101.35 258.21 92.72 11 29 43 2131.9 -25.61 74.69
90.00 11 53 43 2885.93 -28.22 83.35 258.28 91.94 12 41 49 1885.9 -24.58 58.82
100.00 13 20 83 2606.34 -29.74 62.72 258.21 92.72 14 3 49 1606.3 -25.61 36.08
110.00 14 40 31 2355.48 -33.84 43.35 257.88 94.91 15 19 47 1355.5 -28.34 16.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3351 TRA -.6512 TC3 .4759 BAU .2880 SGT 906.1 8GR 777.1 8G3 507.4 ST 18.2 SR 32.7 88 11.1
RDE -.6976 RRA .1658 RC3 -.3201 FAU .18604 RRT -.1732 RRF .4163 RTF -.3600 CRT .8192 CRS -.0218 CBT -.6493
PDE -.0564 FRA-2.0580 FC3-4.5184 B8P 1087 SGB 1193.7 R23 -.2101 R13 .4756 LSA 36.3 MSA 14.2 88A 2.8
BDE .7739 BRA .6718 BC3 .5732 F8P 778 SGT 935.8 8G2 741.1 THA 158.84 EL1 36.2 EL2 9.4 ALF 63.51

LAUNCH DATE SEP 5 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 19 1974

HELIOCENTRIC CONIC

DISTANCE 313.465

EARTH TO MARS

RL 130.83 LAL .00 LOL 342.29 VL 33.189 GAL 8.09 AZL 89.09 HCA 96.30 SMA 201.88 ECC .28627 INC .9092 V1 29.542
RP 230.82 LAP .90 LOP 78.59 VP 22.172 GAP 14.45 AZP 90.10 TAL 37.52 TAP 133.81 RCA 143.88 APO 259.30 V2 23.827
RC 151.140 GL 4.90 GP -9.07 ZAL 33.38 ZAP 144.74 ETS 194.91 ZAE 168.37 ETE 294.45 ZAC 74.06 ETC 282.80 LVI -7.89

PLANETOCENTRIC CONIC

C3 37.271 VHL 6.105 DLA 10.58 RAL 12.20 RAD 6649.7 VEL 12.538 PTH 7.41 VHP 4.074 DPA 7.41 RAP 44.94 ECC 1.6134
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 32 9 3499.15 -46.24 128.03 255.00 102.75 9 30 28 2499.1 -36.18 98.59
60.00 9 0 13 3424.46 -39.59 122.99 256.68 98.26 9 57 17 2424.5 -32.06 94.68
70.00 9 39 29 3308.91 -33.84 114.46 257.51 94.90 10 34 38 2308.9 -28.34 87.13
80.00 10 35 49 3132.47 -29.75 101.39 257.83 92.70 11 28 1 2132.5 -25.62 74.73
90.00 11 51 58 2886.69 -28.22 83.40 257.90 91.91 12 40 5 1886.7 -24.59 58.98
100.00 13 18 41 2606.94 -29.75 62.76 257.83 92.70 14 2 7 1606.9 -25.62 36.10
110.00 14 38 56 2355.72 -33.84 43.37 257.51 94.90 15 18 11 1355.7 -28.34 16.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3386 TRA -.6567 TC3 .4680 BAU .2866 SGT 903.5 8GR 786.9 8G3 535.3 ST 18.5 SR 32.7 88 11.5
RDE -.6954 RRA .1569 RC3 -.3201 FAU .20566 RRT -.1704 RRF .4370 RTF -.3540 CRT .8217 CRS -.0168 CBT -.5431
PDE -.0542 FRA-2.1881 FC3-4.7772 B8P 1078 SGB 1198.1 R23 -.2308 R13 .4676 LSA 36.4 MSA 14.5 88A 2.8
BDE .7735 BRA .6751 BC3 .5751 F8P 826 SGT 934.9 8G2 749.4 THA 154.58 EL1 36.4 EL2 9.5 ALF 63.12

LAUNCH DATE SEP 5 1973

FLIGHT TIME 138.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

DISTANCE 317.190

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.137 GAL 8.08 AZL 89.06 HCA 97.31 SMA 200.95 ECC .28414 INC .9398 V1 29.542  
 RP 231.20 LAP .93 LOP 79.61 VP 22.082 GAP 14.11 AZP 90.12 TAL 37.71 TAP 135.02 RCA 143.86 APO 250.05 V2 23.787  
 RC 154.008 GL 5.08 GP -9.30 ZAL 33.20 ZAP 143.40 ETS 194.61 ZAE 168.57 ETE 288.26 ZAC 73.89 ETC 282.85 LVI -7.56

PLANETOCENTRIC CONIC

C3 36.981 VHL 6.081 DLA 10.65 RAL 11.95 RAD 6649.6 VEL 12.525 PTH 7.40 VHP 3.971 DPA 7.09 RAP 44.71 ECC 1.6086  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 48 3499.04 -46.24 128.02 254.65 102.76 9 29 7 2499.0 -36.16 98.58  
 60.00 8 58 46 3424.64 -39.59 123.01 256.33 98.25 9 55 50 2424.6 -32.06 94.69  
 70.00 9 37 55 3309.45 -33.85 114.50 257.15 94.88 10 33 4 2309.4 -28.36 87.16  
 80.00 10 54 7 3133.38 -29.75 101.46 257.47 92.67 11 26 20 2133.4 -25.64 74.79  
 90.00 11 50 13 2887.77 -28.22 83.48 257.54 91.87 12 38 21 1887.8 -24.61 57.05  
 100.00 13 16 59 2607.85 -29.75 62.83 257.47 92.67 14 0 27 1607.8 -25.64 36.16  
 110.00 14 37 21 2356.26 -33.85 43.42 257.15 94.88 15 16 37 1356.3 -28.36 16.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3341 TRA -.6350 TC3 .4611 BAU .2886 SGT 898.8 SGR 797.9 SG3 565.4 ST 18.4 SR 32.7 SS 12.0  
 RDE -.6936 RRA .1473 RC3 -.3581 FAU .2160D RRT -.1773 RRF .4595 RTF -.3447 CRT .8211 CRS -.0233 CST -.5498  
 FDE -.0595 FRA -2.3316 FC3 -5.0566 BSP 983 SGB 1201.9 R23 -.2361 R13 .4763 LSA 36.4 MSA 14.9 SSA 2.8  
 BDE .7699 BRA .6714 BC3 .5838 FSP 867 SG1 935.7 SG2 754.3 THA 151.98 EL1 36.3 EL2 9.4 ALF 63.33

LAUNCH DATE SEP 5 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

DISTANCE 320.923

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.128 GAL 8.06 AZL 89.03 HCA 98.33 SMA 200.36 ECC .28214 INC .9705 V1 29.542  
 RP 231.58 LAP .96 LOP 80.62 VP 21.996 GAP 13.78 AZP 90.14 TAL 37.88 TAP 136.21 RCA 143.83 APO 256.89 V2 23.748  
 RC 156.890 GL 5.26 GP -9.54 ZAL 33.05 ZAP 142.04 ETS 194.31 ZAE 168.63 ETE 281.74 ZAC 73.72 ETC 282.90 LVI -7.43

PLANETOCENTRIC CONIC

C3 36.705 VHL 6.059 DLA 10.75 RAL 11.72 RAD 6649.5 VEL 12.514 PTH 7.40 VHP 3.872 DPA 6.75 RAP 44.47 ECC 1.6041  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 29 30 3499.17 -46.24 128.04 254.33 102.75 9 27 49 2499.2 -36.16 98.59  
 60.00 8 57 20 3425.08 -39.59 123.04 256.01 98.22 9 54 25 2425.1 -32.08 94.72  
 70.00 9 36 21 3310.28 -33.85 114.56 256.83 94.84 10 31 31 2310.3 -28.38 87.22  
 80.00 10 32 25 3134.62 -29.75 101.55 257.15 92.62 11 24 40 2134.6 -25.66 74.88  
 90.00 11 48 28 2889.20 -28.23 83.58 257.21 91.82 12 36 37 1889.2 -24.63 57.15  
 100.00 13 15 17 2609.09 -29.75 62.92 257.15 92.62 13 58 46 1609.1 -25.66 36.25  
 110.00 14 35 47 2357.10 -33.85 43.48 256.83 94.84 15 15 4 1357.1 -28.38 16.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3414 TRA -.6664 TC3 .4419 BAU .2853 SGT 895.8 SGR 808.8 SG3 594.8 ST 18.8 SR 32.7 SS 12.4  
 RDE -.6909 RRA .1380 RC3 -.3777 FAU .22610 RRT -.1647 RRF .4803 RTF -.3115 CRT .8244 CRS -.0128 CST -.5380  
 FDE -.0516 FRA -2.4669 FC3 -5.3328 BSP 1010 SGB 1206.9 R23 -.2661 R13 .4641 LSA 36.6 MSA 15.3 SSA 2.8  
 BDE .7706 BRA .6806 BC3 .5814 FSP 923 SG1 932.1 SG2 766.8 THA 150.94 EL1 36.5 EL2 9.5 ALF 62.63

LAUNCH DATE SEP 5 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

DISTANCE 324.665

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.101 GAL 8.05 AZL 89.00 HCA 99.33 SMA 199.82 ECC .28028 INC 1.0012 V1 29.542  
 RP 231.95 LAP .99 LOP 81.63 VP 21.912 GAP 13.45 AZP 90.16 TAL 38.04 TAP 137.37 RCA 143.81 APO 255.82 V2 23.708  
 RC 159.785 GL 5.44 GP -9.79 ZAL 32.93 ZAP 140.66 ETS 194.02 ZAE 168.55 ETE 275.04 ZAC 73.55 ETC 282.96 LVI -7.30

PLANETOCENTRIC CONIC

C3 36.443 VHL 6.037 DLA 10.85 RAL 11.50 RAD 6649.4 VEL 12.503 PTH 7.39 VHP 3.777 DPA 6.41 RAP 44.20 ECC 1.5998  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 13 3499.52 -46.24 128.07 254.05 102.72 9 26 32 2499.5 -36.17 98.61  
 60.00 8 55 56 3425.77 -39.60 123.10 255.72 98.18 9 53 1 2425.8 -32.10 94.76  
 70.00 9 34 48 3311.39 -33.86 114.65 256.53 94.79 10 29 59 2311.4 -28.40 87.30  
 80.00 10 30 44 3136.16 -29.76 101.67 256.84 92.56 11 23 0 2136.2 -25.69 74.98  
 90.00 11 46 43 2890.94 -28.23 83.71 256.91 91.76 12 34 54 1890.9 -24.66 57.27  
 100.00 13 13 36 2610.63 -29.76 63.04 256.84 92.56 13 57 7 1610.6 -25.69 36.33  
 110.00 14 34 14 2358.21 -33.86 43.57 256.53 94.79 15 13 33 1358.2 -28.40 16.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3477 TRA -.6780 TC3 .4218 BAU .2828 SGT 892.9 SGR 820.4 SG3 625.3 ST 19.2 SR 32.7 SS 12.8  
 RDE -.6881 RRA .1281 RC3 -.3983 FAU .23654 RRT -.1507 RRF .5014 RTF -.268 CRT .8289 CRS -.0033 CST -.5278  
 FDE -.0433 FRA -2.6074 FC3 -5.6191 BSP 1022 SGB 1212.5 R23 -.2952 R13 .4536 LSA 36.7 MSA 15.7 SSA 2.8  
 BDE .7709 BRA .6900 BC3 .5799 FSP 980 SG1 929.3 SG2 780.1 THA 149.67 EL1 36.7 EL2 9.6 ALF 61.99

LAUNCH DATE SEP 5 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

DISTANCE 328.414

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.075 GAL 8.04 AZL 88.97 HCA 100.34 SMA 199.31 ECC .27853 INC 1.0321 V1 29.542  
 RP 232.33 LAP 1.02 LOP 82.63 VP 21.832 GAP 13.12 AZP 90.19 TAL 38.18 TAP 138.52 RCA 143.80 APO 254.83 V2 23.670  
 RC 162.693 GL 5.63 GP -10.04 ZAL 32.82 ZAP 139.26 ETS 193.73 ZAE 168.31 ETE 268.32 ZAC 73.38 ETC 283.02 LVI -7.17

PLANETOCENTRIC CONIC

C3 36.194 VHL 6.016 DLA 10.97 RAL 11.30 RAD 6649.3 VEL 12.493 PTH 7.38 VHP 3.687 DPA 6.05 RAP 43.91 ECC 1.5957  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 26 58 3500.09 -46.25 128.12 253.79 102.68 9 25 18 2500.1 -36.20 98.65  
 60.00 8 54 33 3426.69 -39.61 123.18 255.45 98.13 9 51 39 2426.7 -32.12 94.83  
 70.00 9 33 16 3312.76 -33.86 114.76 256.26 94.72 10 28 28 2312.8 -28.43 87.39  
 80.00 10 29 3 3137.99 -29.76 101.80 256.56 92.49 11 21 21 2138.0 -25.72 75.11  
 90.00 11 44 58 2892.98 -28.23 83.86 256.63 91.68 12 33 11 1893.0 -24.70 57.41  
 100.00 13 11 55 2612.46 -29.76 63.17 256.56 92.49 13 55 27 1612.5 -25.72 36.48  
 110.00 14 32 42 2359.58 -33.86 43.67 256.26 94.72 15 12 2 1359.6 -28.43 16.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3532 TRA -.6900 TC3 .3993 BAU .2803 SGT 890.0 SGR 832.9 SG3 656.8 ST 19.6 SR 32.7 SS 13.2  
 RDE -.6851 RRA .1178 RC3 -.4196 FAU .24729 RRT -.1343 RRF .5227 RTF -.2396 CRT .8289 CRS .0054 CST -.5188  
 FDE -.0342 FRA -2.7524 FC3 -5.9152 BSP 1027 SGB 1219.0 R23 -.3236 R13 .4447 LSA 36.9 MSA 16.1 SSA 2.8  
 BDE .7708 BRA .7000 BC3 .5793 FSP 1039 SG1 924.1 SG2 794.9 THA 148.14 EL1 36.8 EL2 9.7 ALF 61.36

LAUNCH DATE SEP 5 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.052 GAL 8.03 AZL 88.94 HCA 101.34 SMA 198.84 ECC .27689 INC 1.0630 V1 29.542  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.754 GAP 12.80 AZP 90.21 TAL 38.30 TAP 139.64 RCA 143.79 APO 253.90 V2 23.631  
 RC 165.610 GL 5.81 GP -10.29 ZAL 32.72 ZAP 137.84 ETS 193.44 ZAE 167.91 ETE 261.77 ZAC 73.21 ETC 283.08 LVI -7.05

PLANETOCENTRIC CONIC  
 C3 35.956 VHL 5.996 DLA 11.09 RAL 11.11 RAD 6649.2 VEL 12.484 PTH 7.37 VHP 3.601 DPA 5.67 RAP 43.60 ECC 1.5917  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 44 3500.86 -46.26 128.19 253.56 102.63 9 24 5 2500.9 -36.22 98.70  
 60.00 8 53 11 3427.83 -39.62 123.27 255.21 98.07 9 30 19 2427.8 -32.16 94.91  
 70.00 9 31 44 3314.39 -33.87 114.88 256.01 94.65 10 26 58 2314.4 -26.47 87.50  
 80.00 10 27 22 3140.11 -29.77 101.96 256.31 92.40 11 19 42 2140.1 -25.76 75.26  
 90.00 11 43 13 2895.33 -28.24 84.03 256.37 91.60 12 31 28 1895.3 -24.74 57.57  
 100.00 13 10 14 2614.58 -29.77 63.33 256.31 92.40 13 53 49 1614.6 -25.76 36.62  
 110.00 14 31 10 2361.21 -33.87 43.80 256.01 94.65 15 10 32 1361.2 -28.47 16.42

DIFFERENTIAL CORRECTIONS  
 TDE -.3586 TRA -.7032 TC3 .3748 BAW .2785 SGT 887.8 SGR 846.3 SG3 689.2 ST 20.0 SR 32.6 SS 13.6  
 RDE -.6819 RRA .1070 RC3 -.4418 FAU .25833 RRT -.1147 RRF .5441 RTF -.1992 CRT .8305 CRS .0144 CST -.5101  
 FDE -.0236 FRA -2.9016 FC3 -6.2200 BSP 1028 SGB 1226.5 R23 -.3514 R13 .4376 LSA 37.0 MSA 16.5 S8A 2.8  
 BDE .7705 BRA .7113 BC3 .5794 FSP 1097 SG1 919.6 SG2 811.7 THA 146.34 EL1 37.0 EL2 9.8 ALF 60.77

LAUNCH DATE SEP 5 1973

FLIGHT TIME 148.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.030 GAL 8.01 AZL 88.91 HCA 102.34 SMA 198.41 ECC .27536 INC 1.0940 V1 29.542  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.679 GAP 12.49 AZP 90.23 TAL 38.41 TAP 140.75 RCA 143.78 APO 253.05 V2 23.593  
 RC 168.537 GL 6.00 GP -10.55 ZAL 32.64 ZAP 136.40 ETS 193.15 ZAE 167.35 ETE 255.56 ZAC 73.04 ETC 283.14 LVI -6.92

PLANETOCENTRIC CONIC  
 C3 35.728 VHL 5.977 DLA 11.22 RAL 10.93 RAD 6649.2 VEL 12.475 PTH 7.37 VHP 3.518 DPA 5.29 RAP 43.27 ECC 1.5880  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 24 33 3501.84 -46.28 128.28 253.35 102.56 9 22 54 2501.8 -36.26 98.77  
 60.00 8 51 50 3429.21 -39.63 123.39 254.99 97.99 9 48 59 2429.2 -32.20 95.00  
 70.00 9 30 13 3316.27 -33.88 115.03 255.78 94.56 10 25 29 2316.3 -28.51 87.63  
 80.00 10 25 41 3142.51 -29.78 102.14 256.07 92.31 11 18 3 2142.5 -25.80 75.42  
 90.00 11 41 27 2897.97 -28.24 84.23 256.13 91.50 12 29 45 1898.0 -24.78 57.75  
 100.00 13 8 33 2618.98 -29.78 63.51 256.07 92.31 13 52 10 1617.0 -25.80 36.79  
 110.00 14 29 39 2363.09 -33.88 43.95 255.78 94.56 15 9 2 1363.1 -28.51 16.55

DIFFERENTIAL CORRECTIONS  
 TDE -.3638 TRA -.7175 TC3 .3477 BAW .2773 SGT 886.8 SGR 860.5 SG3 722.4 ST 20.4 SR 32.6 SS 14.1  
 RDE -.6785 RRA .0958 RC3 -.4468 FAU .26961 RRT -.0915 RRF .5653 RTF -.1552 CRT .8318 CRS .0243 CST -.5010  
 FDE -.0105 FRA -3.0536 FC3 -6.5330 BSP 1028 SGB 1235.5 R23 -.3768 R13 .4341 LSA 37.1 MSA 16.9 S8A 2.8  
 BDE .7698 BRA .7239 BC3 .5805 FSP 1158 SG1 914.7 SG2 830.8 THA 144.04 EL1 37.1 EL2 9.9 ALF 60.15

LAUNCH DATE SEP 5 1973

FLIGHT TIME 150.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.009 GAL 7.99 AZL 88.87 HCA 103.34 SMA 198.08 ECC .27393 INC 1.1252 V1 29.542  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.606 GAP 12.17 AZP 90.26 TAL 38.51 TAP 141.84 RCA 143.77 APO 252.26 V2 23.554  
 RC 171.472 GL 6.18 GP -10.81 ZAL 32.58 ZAP 134.94 ETS 192.86 ZAE 166.85 ETE 249.77 ZAC 72.88 ETC 283.21 LVI -6.80

PLANETOCENTRIC CONIC  
 C3 35.909 VHL 5.959 DLA 11.35 RAL 10.76 RAD 6649.1 VEL 12.466 PTH 7.36 VHP 3.440 DPA 4.89 RAP 42.93 ECC 1.5844  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 23 22 3903.00 -46.30 129.39 253.17 102.48 9 21 45 2503.0 -36.30 98.84  
 60.00 8 50 30 3430.79 -39.65 123.52 254.80 97.90 9 47 41 2430.8 -32.25 95.11  
 70.00 9 28 42 3318.40 -33.90 115.19 255.58 94.47 10 24 0 2318.4 -28.56 87.78  
 80.00 10 23 59 3145.18 -29.78 102.34 255.86 92.21 11 18 25 2145.2 -25.85 75.80  
 90.00 11 39 41 2900.91 -29.25 84.44 255.91 91.39 12 28 2 1900.9 -24.83 57.98  
 100.00 13 6 31 2619.65 -29.78 63.71 255.86 92.21 13 50 31 1619.7 -25.85 36.97  
 110.00 14 28 8 2365.22 -33.90 44.11 255.58 94.47 15 7 33 1365.2 -28.56 16.70

DIFFERENTIAL CORRECTIONS  
 TDE -.3688 TRA -.7331 TC3 .3180 BAW .2767 SGT 886.7 SGR 875.7 SG3 756.3 ST 20.8 SR 32.5 SS 14.8  
 RDE -.6748 RRA .0841 RC3 -.4488 FAU .28111 RRT -.0642 RRF .5864 RTF -.1174 CRT .8326 CRS .0328 CST -.4936  
 FDE .0028 FRA -3.2089 FC3 -6.8536 BSP 1031 SGB 1246.3 R23 -.3938 R13 .4400 LSA 37.3 MSA 17.3 S8A 2.8  
 BDE .7681 BRA .7379 BC3 .5830 FSP 1219 SG1 909.6 SG2 851.9 THA 140.48 EL1 37.2 EL2 10.0 ALF 60.53

LAUNCH DATE SEP 5 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 32.991 GAL 7.98 AZL 88.84 HCA 104.33 SMA 197.85 ECC .27258 INC 1.1565 V1 29.542  
 RP 233.80 LAP 1.12 LOP 86.63 VP 21.538 GAP 11.86 AZP 90.29 TAL 38.58 TAP 142.91 RCA 143.77 APO 251.53 V2 23.517  
 RC 174.413 GL 6.37 GP -11.08 ZAL 32.53 ZAP 133.46 ETS 192.56 ZAE 165.82 ETE 244.46 ZAC 72.71 ETC 283.26 LVI -6.88

PLANETOCENTRIC CONIC  
 C3 35.299 VHL 5.941 DLA 11.49 RAL 10.61 RAD 6649.0 VEL 12.458 PTH 7.36 VHP 3.368 DPA 4.48 RAP 42.56 ECC 1.5809  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 13 3904.36 -46.32 128.51 253.01 102.39 9 20 37 2504.4 -36.35 98.93  
 60.00 8 49 11 3432.59 -39.67 123.67 254.63 97.80 9 46 23 2432.6 -32.30 95.23  
 70.00 9 27 11 3320.77 -33.91 115.38 255.39 94.36 10 22 32 2320.8 -28.62 87.94  
 80.00 10 22 18 3148.13 -29.79 102.56 255.66 92.09 11 14 46 2148.1 -25.91 75.81  
 90.00 11 37 54 2904.13 -28.25 84.67 255.72 91.27 12 26 18 1904.1 -24.88 58.17  
 100.00 13 5 9 2622.60 -29.79 63.92 255.66 92.09 13 48 52 1622.6 -25.91 37.17  
 110.00 14 26 37 2367.58 -33.91 44.29 255.39 94.36 15 6 5 1367.6 -28.62 16.86

DIFFERENTIAL CORRECTIONS  
 TDE -.3740 TRA -.7503 TC3 .2853 BAW .2771 SGT 889.0 SGR 891.9 SG3 790.9 ST 21.2 SR 32.4 SS 14.9  
 RDE -.6709 RRA .0720 RC3 -.5132 FAU .29281 RRT -.0324 RRF .6072 RTF -.0557 CRT .8333 CRS .0426 CST -.4853  
 FDE .0191 FRA -3.3684 FC3 -7.1815 BSP 1040 SGB 1259.3 R23 -.3723 R13 .4810 LSA 37.4 MSA 17.7 S8A 2.8  
 BDE .7681 BRA .7538 BC3 .5872 FSP 1283 SG1 904.8 SG2 875.8 THA 132.07 EL1 37.3 EL2 10.2 ALF 60.86

LAUNCH DATE SEP 8 1973

FLIGHT TIME 184.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

DISTANCE 347.246

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.973 GAL 7.96 AZL 88.81 HCA 105.32 SMA 197.31 ECC .27133 INC 1.1800 V1 29.542  
 RP 234.17 LAP 1.15 LOP 87.62 VP 21.468 GAP 11.56 AZP 90.31 TAL 38.63 TAP 143.97 RCA 143.78 APO 250.85 V2 23.479  
 RC 177.360 GL 6.56 GP -11.35 ZAL 32.50 ZAP 131.97 ETS 192.27 ZAE 164.86 ETE 239.70 ZAC 72.94 ETC 283.35 LVI -6.85

PLANETOCENTRIC CONIC

C3 35.096 VHL 5.924 DLA 11.64 RAL 10.47 RAD 6648.9 VEL 12.450 PTH 7.35 VHP 3.294 DPA 4.06 RAP 42.18 ECC 1.8776  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 5 3509.90 -48.34 128.66 252.87 102.28 9 19 31 2505.9 -36.41 99.04  
 60.00 8 47 52 3434.60 -39.68 123.84 254.47 97.69 9 45 7 2434.6 -32.36 95.37  
 70.00 9 25 40 3323.37 -33.92 115.58 255.23 94.24 10 21 4 2323.4 -28.67 88.12  
 80.00 10 20 35 3151.34 -29.80 102.79 255.49 91.97 11 13 6 2151.3 -25.96 76.03  
 90.00 11 36 6 2907.63 -28.26 84.93 255.54 91.15 12 24 34 1907.6 -24.94 58.41  
 100.00 13 3 27 2625.81 -29.80 64.16 255.49 91.97 13 47 13 1625.8 -25.96 37.40  
 110.00 14 25 7 2370.19 -33.92 44.50 255.23 94.24 15 4 37 1370.2 -28.67 17.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3793 TRA -.7690 TC3 .2497 BAU .2786 SGT 893.7 SGR 909.2 SG3 826.1 ST 21.6 SR 32.3 SS 15.4  
 RDE -.6667 RRA .0594 RC3 -.5386 FAU .30469 RRT .0038 RRF .6276 RTF -.0004 CRT .8336 CR8 .0521 CST -.4776  
 FDE .0369 FRA -3.5265 FC3 -7.5159 BSP 1054 SGB 1274.8 R23 .0707 R13 .6236 LSA 37.5 MSA 18.2 SSA 2.8  
 BDE .7670 BRA .7713 BC3 .5937 FSP 1346 SG1 909.3 SG2 893.5 THA 83.68 EL1 37.4 EL2 10.3 ALF 58.17

LAUNCH DATE SEP 5 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 6 1974

HELIOCENTRIC CONIC

DISTANCE 351.026

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.957 GAL 7.94 AZL 88.78 HCA 106.31 SMA 197.00 ECC .27015 INC 1.2197 V1 29.542  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.403 GAP 11.25 AZP 90.34 TAL 38.70 TAP 145.01 RCA 143.78 APO 250.22 V2 23.442  
 RC 180.313 GL 6.75 GP -11.63 ZAL 32.48 ZAP 130.46 ETS 191.97 ZAE 163.79 ETE 235.41 ZAC 72.38 ETC 283.42 LVI -6.43

PLANETOCENTRIC CONIC

C3 34.901 VHL 5.908 DLA 11.79 RAL 10.34 RAD 6648.9 VEL 12.442 PTH 7.34 VHP 3.227 DPA 3.63 RAP 41.78 ECC 1.5744  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 58 3507.62 -46.36 128.81 252.76 102.16 9 18 26 2507.6 -36.48 99.15  
 60.00 8 46 35 3438.80 -39.70 124.02 254.34 97.57 9 43 31 2436.8 -32.42 95.52  
 70.00 9 24 10 3326.20 -33.94 115.80 255.08 94.11 10 19 36 2326.2 -28.74 88.32  
 80.00 10 18 52 3154.82 -29.81 103.05 255.33 91.83 11 11 27 2154.8 -26.03 76.27  
 90.00 11 34 17 2911.40 -28.26 85.21 255.37 91.01 12 22 49 1911.4 -25.00 58.67  
 100.00 13 1 44 2629.29 -29.81 64.42 255.33 91.83 13 45 33 1629.3 -26.03 37.64  
 110.00 14 23 36 2373.02 -33.94 44.72 255.08 94.11 15 3 9 1373.0 -28.74 17.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3847 TRA -.7895 TC3 .2107 BAU .2812 SGT 901.6 SGR 927.2 SG3 861.6 ST 22.0 SR 32.1 SS 15.8  
 RDE -.6622 RRA .0466 RC3 -.5647 FAU .31660 RRT .0447 RRF .6474 RTF .0584 CRT .8338 CR8 .0635 CST -.4685  
 FDE .0587 FRA -3.6859 FC3 -7.8535 BSP 1079 SGB 1293.3 R23 .2750 R13 .5868 LSA 37.6 MSA 18.6 SSA 2.8  
 BDE .7658 BRA .7908 BC3 .6027 FSP 1412 SG1 938.3 SG2 890.1 THA 61.02 EL1 37.5 EL2 10.4 ALF 57.42

LAUNCH DATE SEP 5 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 10 1974

HELIOCENTRIC CONIC

DISTANCE 354.809

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.942 GAL 7.92 AZL 88.73 HCA 107.29 SMA 196.72 ECC .26905 INC 1.2516 V1 29.542  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.340 GAP 10.95 AZP 90.37 TAL 38.73 TAP 146.03 RCA 143.79 APO 249.65 V2 23.405  
 RC 183.270 GL 6.95 GP -11.90 ZAL 32.47 ZAP 128.93 ETS 191.67 ZAE 162.63 ETE 231.58 ZAC 72.21 ETC 283.49 LVI -6.31

PLANETOCENTRIC CONIC

C3 34.712 VHL 5.892 DLA 11.96 RAL 10.22 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 3.183 DPA 3.19 RAP 41.37 ECC 1.5713  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 52 3509.51 -46.39 128.99 252.67 102.03 9 17 22 2509.5 -36.55 99.28  
 60.00 8 45 17 3439.21 -39.73 124.22 254.23 97.43 9 42 36 2439.2 -32.49 95.69  
 70.00 9 22 39 3329.26 -33.95 116.04 254.95 93.97 10 18 8 2329.3 -28.81 88.53  
 80.00 10 17 8 3158.55 -29.81 103.33 255.19 91.69 11 9 47 2158.6 -26.09 76.52  
 90.00 11 32 28 2915.46 -28.27 85.50 255.23 90.86 12 21 3 1915.5 -25.06 58.95  
 100.00 13 0 0 2633.02 -29.81 64.70 255.19 91.69 13 43 53 1633.0 -26.09 37.89  
 110.00 14 22 5 2376.08 -33.95 44.95 254.95 93.97 15 1 41 1376.1 -28.81 17.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3901 TRA -.8115 TC3 .1888 BAU .2855 SGT 913.3 SGR 946.4 SG3 897.6 ST 22.5 SR 32.0 SS 16.2  
 RDE -.6574 RRA .0334 RC3 -.5916 FAU .32886 RRT .0892 RRF .6688 RTF .1.95 CRT .8336 CR8 .0739 CST -.4606  
 FDE .0816 FRA -3.8478 FC3 -8.1971 BSP 1113 SGB 1315.3 R23 .2980 R13 .5993 LSA 37.7 MSA 19.0 SSA 2.8  
 BDE .7644 BRA .8122 BC3 .6152 FSP 1477 SG1 973.6 SG2 884.3 THA 58.89 EL1 37.7 EL2 10.6 ALF 56.65

LAUNCH DATE SEP 5 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 12 1974

HELIOCENTRIC CONIC

DISTANCE 358.597

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.929 GAL 7.90 AZL 88.72 HCA 108.27 SMA 196.46 ECC .26801 INC 1.2838 V1 29.542  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.279 GAP 10.66 AZP 90.40 TAL 38.76 TAP 147.03 RCA 143.81 APO 249.11 V2 23.369  
 RC 186.232 GL 7.14 GP -12.10 ZAL 32.48 ZAP 127.38 ETS 191.36 ZAE 161.38 ETE 228.15 ZAC 72.05 ETC 283.57 LVI -6.19

PLANETOCENTRIC CONIC

C3 34.530 VHL 5.876 DLA 12.12 RAL 10.11 RAD 6648.7 VEL 12.427 PTH 7.33 VHP 3.103 DPA 2.73 RAP 40.93 ECC 1.5683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 47 3511.57 -46.42 129.18 252.59 101.88 9 16 19 2511.6 -36.62 99.42  
 60.00 8 44 0 3441.80 -39.75 124.44 254.13 97.29 9 41 22 2441.8 -32.57 95.86  
 70.00 9 21 8 3332.54 -33.97 116.29 254.84 93.82 10 16 40 2332.5 -28.88 88.78  
 80.00 10 15 24 3162.53 -29.82 103.63 255.06 91.53 11 8 6 2162.5 -26.18 76.80  
 90.00 11 30 37 2919.77 -28.27 85.82 255.10 90.70 12 19 17 1919.8 -25.13 59.25  
 100.00 12 58 16 2637.00 -29.82 64.99 255.06 91.53 13 42 13 1637.0 -26.16 38.17  
 110.00 14 20 34 2379.35 -33.97 45.21 254.84 93.82 15 0 14 1379.4 -28.88 17.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3867 TRA -.8263 TC3 .1338 BAU .2932 SGT 919.8 SGR 969.2 SG3 937.4 ST 22.5 SR 31.9 SS 16.7  
 RDE -.6539 RRA .0181 RC3 -.6210 FAU .34193 RRT .1242 RRF .6875 RTF .1707 CRT .8307 CR8 .0631 CST -.4754  
 FDE .0809 FRA -4.0361 FC3 -8.5729 BSP 1137 SGB 1336.2 R23 .2703 R13 .6380 LSA 37.6 MSA 19.5 SSA 2.8  
 BDE .7596 BRA .8265 BC3 .6352 FSP 1514 SG1 1006.4 SG2 878.9 THA 56.44 EL1 37.6 EL2 10.7 ALF 56.54

LAUNCH DATE SEP 5 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 14 1974

HELIOCENTRIC CONIC

DISTANCE 362.388

EARTH TO MARS

RL 130.83 LAL .00 LOL 342.29 VL 32.917 GAL 7.88 AZL 88.68 HCA 109.25 SMA 196.22 ECC .26705 INC 1.3162 V1 29.542
RP 235.99 LAP 1.24 LOP 91.55 VP 21.220 GAP 10.36 AZP 90.43 TAL 38.77 TAP 148.02 RCA 143.82 APO 248.63 V2 23.332
RC 189.197 GL 7.34 GP -12.47 ZAL 32.50 ZAP 125.83 ETS 191.05 ZAE 160.07 ETE 225.10 ZAC 71.89 ETC 283.64 LVI -6.07

PLANETOCENTRIC CONIC

C3 34.350 VHL 5.861 DLA 12.30 RAL 10.02 RAD 6648.7 VEL 12.420 PTH 7.33 VHP 3.045 DPA 2.27 RAP 40.49 ECC 1.5653
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 18 43 3513.81 -46.45 129.39 252.54 101.73 9 15 17 2513.8 -36.70 99.57
60.00 8 42 43 3444.59 -39.77 124.67 254.06 97.13 9 40 8 2444.6 -32.65 96.06
70.00 9 19 36 3336.05 -33.98 116.56 254.74 93.66 10 15 13 2336.1 -28.96 89.00
80.00 10 13 38 3166.79 -29.83 103.94 254.96 91.36 11 6 25 2166.8 -26.24 77.09
90.00 11 28 45 2924.38 -28.28 86.16 254.99 90.53 12 17 29 1924.4 -25.21 59.56
100.00 12 56 30 2641.27 -29.83 65.31 254.96 91.36 13 40 31 1641.3 -26.24 38.46
110.00 14 19 3 2382.87 -33.98 45.48 254.74 93.66 14 58 46 1382.9 -28.96 17.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3986 TRA -.8582 TC3 .0779 BAU .2997 SGT 947.3 SGR 988.5 SG3 970.9 ST 23.4 SR 31.7 S8 17.1
RDE -.6472 RRA .0054 RC3 -.6479 FAU .35309 RRT .1842 RRF .7039 RTF .2429 CRT .8320 CRS .0908 CST -.4502
FDE .1288 FRA -4.1765 FC3 -8.8989 BSP 1212 SGB 1369.1 R23 .2902 R13 .6516 LSA 37.9 MSA 19.9 S8A 2.8
BDE .7601 BRA .8582 BC3 .6526 FSP 1601 SGI 1055.6 SG2 871.9 THA 51.50 EL1 37.8 EL2 10.8 ALF 55.18

LAUNCH DATE SEP 5 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 16 1974

HELIOCENTRIC CONIC

DISTANCE 366.178

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.905 GAL 7.86 AZL 88.65 HCA 110.22 SMA 196.01 ECC .26614 INC 1.3490 V1 29.542
RP 235.94 LAP 1.27 LP 92.52 VP 21.163 GAP 10.07 AZP 90.47 TAL 38.76 TAP 148.99 RCA 143.84 APO 248.10 V2 23.297
RC 192.165 GL 7.54 GP -12.75 ZAL 32.53 ZAP 124.27 ETS 190.73 ZAE 158.69 ETE 222.36 ZAC 71.73 ETC 283.72 LVI -5.99

PLANETOCENTRIC CONIC

C3 34.177 VHL 5.846 DLA 12.48 RAL 9.93 RAD 6648.6 VEL 12.413 PTH 7.32 VHP 2.992 DPA 1.81 RAP 40.04 ECC 1.5625
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 15 39 3516.22 -46.48 129.61 252.51 101.56 9 14 16 2516.2 -36.79 99.73
60.00 8 41 27 3447.58 -39.80 124.92 254.00 96.96 9 38 54 2447.6 -32.73 96.26
70.00 9 18 4 3359.79 -34.00 116.85 254.66 93.49 10 13 44 2339.8 -29.04 89.26
80.00 10 11 51 3171.30 -29.84 104.28 254.87 91.19 11 4 42 2171.3 -26.32 77.41
90.00 11 26 51 2929.26 -28.28 86.51 254.89 90.35 12 15 40 1929.3 -25.28 59.90
100.00 12 54 43 2643.78 -29.84 65.65 254.87 91.19 13 38 49 1643.8 -26.32 38.78
110.00 14 17 31 2386.61 -34.00 45.77 254.66 93.49 14 57 17 1386.6 -29.04 18.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4063 TRA -.8674 TC3 .0237 BAU .3092 SGT 976.1 SGR 1009.8 SG3 1006.1 ST 24.0 SR 31.4 S8 17.5
RDE -.6408 RRA -.0083 RC3 -.6763 FAU .36473 RRT .2390 RRF .7206 RTF .3083 CRT .8319 CRS .1094 CST -.4347
FDE .1690 FRA -4.3279 FC3 -9.2390 BSP 1287 SGB 1404.4 R23 .2886 R13 .6750 LSA 38.0 MSA 20.4 S8A 2.8
BDE .7588 BRA .8674 BC3 .6767 FSP 1676 SGI 1106.4 SG2 865.0 THA 49.04 EL1 38.0 EL2 11.0 ALF 54.11

LAUNCH DATE SEP 5 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 18 1974

HELIOCENTRIC CONIC

DISTANCE 369.972

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.895 GAL 7.83 AZL 88.62 HCA 111.20 SMA 195.82 ECC .26530 INC 1.3820 V1 29.542
RP 236.29 LAP 1.29 LOP 93.49 VP 21.108 GAP 9.79 AZP 90.50 TAL 38.75 TAP 149.94 RCA 143.87 APO 247.76 V2 23.261
RC 195.134 GL 7.25 GP -13.04 ZAL 32.58 ZAP 122.69 ETS 190.40 ZAE 157.25 ETE 219.90 ZAC 71.58 ETC 283.79 LVI -5.82

PLANETOCENTRIC CONIC

C3 34.008 VHL 5.832 DLA 12.67 RAL 9.85 RAD 6648.5 VEL 12.406 PTH 7.32 VHP 2.941 DPA 1.33 RAP 39.57 ECC 1.5597
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 14 36 3518.78 -46.32 129.85 252.49 101.38 9 13 15 2518.8 -36.89 99.90
60.00 8 40 10 3450.75 -39.82 125.19 253.96 96.78 9 37 41 2450.7 -32.83 96.48
70.00 9 16 32 3343.74 -34.01 117.16 254.60 93.31 10 12 16 2343.7 -29.13 89.53
80.00 10 10 3 3176.07 -29.84 104.63 254.79 91.00 11 2 59 2176.1 -26.40 77.74
90.00 11 24 55 2934.41 -28.28 86.89 254.80 90.17 12 13 50 1934.4 -25.36 60.26
100.00 12 52 55 2650.54 -29.84 66.00 254.79 91.00 13 37 5 1650.5 -26.40 39.11
110.00 14 15 38 2390.56 -34.01 46.08 254.60 93.31 14 55 49 1390.6 -29.13 18.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4120 TRA -.9165 TC3 -.0317 BAU .3211 SGT 1008.5 SGR 1032.7 SG3 1041.9 ST 24.5 SR 31.2 S8 17.9
RDE -.6345 RRA -.0226 RC3 -.7056 FAU .37653 RRT .2918 RRF .7370 RTF .3.00 CRT .8310 CRS .1225 CST -.4253
FDE .2045 FRA -4.4837 FC3 -9.5853 BSP 1371 SGB 1443.5 R23 .2915 R13 .7002 LSA 38.1 MSA 20.9 S8A 2.8
BDE .7586 BRA .9168 BC3 .7063 FSP 1743 SGI 1160.5 SG2 858.4 THA 47.32 EL1 38.1 EL2 11.2 ALF 53.15

LAUNCH DATE SEP 5 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 20 1974

HELIOCENTRIC CONIC

DISTANCE 373.769

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.888 GAL 7.81 AZL 88.58 HCA 112.16 SMA 195.84 ECC .26451 INC 1.4154 V1 29.542
RP 236.83 LAP 1.31 LOP 94.46 VP 21.055 GAP 9.50 AZP 90.53 TAL 38.72 TAP 150.88 RCA 143.89 APO 247.39 V2 23.226
RC 198.104 GL 7.95 GP -13.32 ZAL 32.64 ZAP 121.10 ETS 190.07 ZAE 155.77 ETE 217.60 ZAC 71.43 ETC 283.87 LVI -5.70

PLANETOCENTRIC CONIC

C3 33.843 VHL 5.817 DLA 12.86 RAL 9.78 RAD 6648.5 VEL 12.400 PTH 7.31 VHP 2.893 DPA .85 RAP 39.09 ECC 1.5570
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 13 34 3521.51 -46.55 130.10 252.50 101.19 9 12 15 2521.5 -36.99 100.09
60.00 8 38 53 3454.11 -39.85 125.47 253.94 96.59 9 36 27 2454.1 -32.92 96.72
70.00 9 14 58 3347.91 -34.03 117.49 254.55 93.12 10 10 46 2347.9 -29.22 89.83
80.00 10 8 13 3181.09 -29.85 105.00 254.72 90.81 11 1 14 2181.1 -26.48 78.09
90.00 11 22 58 2939.83 -28.28 87.29 254.73 89.97 12 11 58 1939.8 -25.44 60.63
100.00 12 51 5 2655.56 -29.85 66.37 254.72 90.81 13 35 21 1655.6 -26.48 39.45
110.00 14 14 25 2394.73 -34.03 46.40 254.55 93.12 14 54 19 1394.7 -29.22 18.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4178 TRA -.9471 TC3 -.0902 BAU .3353 SGT 1046.7 SGR 1056.5 SG3 1077.3 ST 25.1 SR 31.0 S8 18.3
RDE -.6279 RRA -.0373 RC3 -.7355 FAU .38817 RRT .3438 RRF .7527 RTF .4288 CRT .8299 CRS .1353 CST -.4163
FDE .2424 FRA -4.6371 FC3 -9.9299 BSP 1467 SGB 1487.2 R23 .2735 R13 .7242 LSA 38.2 MSA 21.3 S8A 2.8
BDE .7541 BRA .9478 BC3 .7410 FSP 1809 SGI 1219.1 SG2 851.8 THA 45.78 EL1 38.2 EL2 11.3 ALF 52.17

LAUNCH DATE SEP 5 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC

DISTANCE 377.507

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.870 GAL 7.78 AZL 88.55 HCA 113.12 SMA 189.48 ECC .26377 INC 1.4401 V1 29.542
RP 238.98 LAP 1.33 LOP 93.43 VP 21.004 GAP 9.22 AZP 90.57 TAP 30.68 RCA 143.92 APO 247.04 V2 23.191
RC 201.073 GL 8.18 GP -13.61 ZAL 32.71 ZAP 119.51 ETS 189.75 ZAE 134.24 ETE 215.87 ZAC 71.27 ETC 283.94 LVI -5.80

PLANETOCENTRIC CONIC

C3 33.681 VHL 5.804 DLA 13.06 RAL 9.72 RAD 6648.4 VEL 12.393 PTH 7.31 VHP 2.848 DPA .36 RAP 39.60 ECC 1.5543
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 12 31 3524.40 -46.99 130.37 252.52 100.98 9 11 16 2524.4 -37.09 100.28
60.00 8 37 36 3457.65 -39.88 125.77 253.93 96.39 9 35 14 2457.6 -33.02 96.96
70.00 9 13 24 3392.31 -34.04 117.83 254.52 92.92 10 9 16 2352.3 -29.31 90.13
80.00 10 6 22 3186.36 -29.83 105.40 254.67 90.60 10 59 28 2186.4 -26.57 78.45
90.00 11 20 59 2945.53 -28.28 87.70 254.68 89.78 12 10 5 1945.5 -25.53 61.03
100.00 12 49 14 2660.84 -29.89 66.76 254.67 90.60 13 33 35 1660.8 -26.57 39.82
110.00 14 12 50 2399.13 -34.04 46.75 254.52 92.92 14 52 49 1399.1 -29.31 19.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4227 TRA -.9791 TC3 -.1514 BAU .3518 SGT 1090.7 SGR 1081.3 SG3 1112.6 ST 25.6 SR 30.7 SS 18.8
RDE -.6209 RRA -.0521 RC3 -.7660 FAU .39969 RRT .3938 RRF .7678 RTF .4837 CRT .8284 CRS .1484 CST -.4074
FDE .2833 FRA -4.7875 FC -10.2735 BSP 1578 SGB 1535.8 R23 .2654 R13 .7468 LSA 38.3 MSA 21.6 SSA 2.8
BDE .7512 BRA .9805 BC3 .7809 FSP 1873 SG1 1282.2 SG2 845.5 THA 44.37 EL1 38.3 EL2 11.5 ALF 51.17

LAUNCH DATE SEP 5 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC

DISTANCE 381.366

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.870 GAL 7.76 AZL 88.52 HCA 114.09 SMA 195.34 ECC .26307 INC 1.4833 V1 29.542
RP 237.31 LAP 1.35 LOP 96.39 VP 20.954 GAP 8.94 AZP 90.61 TAP 38.63 RCA 143.95 APO 246.73 V2 23.157
RC 204.040 GL 8.37 GP -13.90 ZAL 32.79 ZAP 117.91 ETS 189.38 ZAE 132.68 ETE 213.84 ZAC 71.13 ETC 284.02 LVI -5.46

PLANETOCENTRIC CONIC

C3 33.524 VHL 5.790 DLA 13.27 RAL 9.66 RAD 6648.3 VEL 12.387 PTH 7.30 VHP 2.807 DPA -.14 RAP 38.11 ECC 1.8517
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 11 29 3527.46 -46.63 130.65 252.56 100.77 9 10 17 2527.5 -37.20 100.49
60.00 8 36 19 3461.38 -39.90 126.08 253.93 96.18 9 34 0 2461.4 -33.13 97.22
70.00 9 11 48 3356.92 -34.06 118.19 254.50 92.70 10 7 45 2356.9 -29.41 90.45
80.00 10 4 29 3191.90 -29.86 105.81 254.63 90.38 10 57 41 2191.9 -26.66 78.84
90.00 11 18 58 2951.51 -28.28 88.14 254.63 89.54 12 8 9 1951.5 -25.62 61.44
100.00 12 47 21 2666.37 -29.86 67.18 254.63 90.38 13 31 47 1666.4 -26.66 40.21
110.00 14 11 15 2403.74 -34.06 47.11 254.50 92.70 14 51 19 1403.7 -29.41 19.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4262 TRA -1.0111 TC3 -.2141 BAU .3701 SGT 1138.5 SGR 1107.5 SG3 1148.1 ST 26.1 SR 30.4 SS 19.2
RDE -.6139 RRA -.0676 RC3 -.7975 FAU .41123 RRT .4408 RRF .7820 RTF .5340 CRT .8265 CRS .1574 CST -.4030
FDE .3211 FRA -4.9410 FC -10.6199 BSP 1700 SGB 1588.3 R23 .2582 R13 .7684 LSA 38.4 MSA 22.2 SSA 2.8
BDE .7474 BRA 1.0134 BC3 .8257 FSP 1929 SG1 1348.4 SG2 839.4 THA 43.21 EL1 38.4 EL2 11.7 ALF 50.24

LAUNCH DATE SEP 5 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC

DISTANCE 385.168

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.864 GAL 7.73 AZL 88.48 HCA 115.06 SMA 195.22 ECC .26243 INC 1.5179 V1 29.542
RP 237.65 LAP 1.38 LOP 97.36 VP 20.907 GAP 8.67 AZP 90.64 TAP 38.57 TAP 153.62 RCA 143.99 APO 246.45 V2 23.123
RC 207.005 GL 8.59 GP -14.19 ZAL 32.88 ZAP 116.31 ETS 189.03 ZAE 131.08 ETE 212.16 ZAC 70.98 ETC 284.02 LVI -5.34

PLANETOCENTRIC CONIC

C3 33.370 VHL 5.777 DLA 13.48 RAL 9.61 RAD 6648.3 VEL 12.381 PTH 7.30 VHP 2.767 DPA -.64 RAP 37.61 ECC 1.5492
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 10 27 3530.66 -46.87 130.95 252.61 100.54 9 9 18 2530.7 -37.32 100.71
60.00 8 35 1 3465.29 -39.93 126.41 253.95 95.96 9 32 48 2465.3 -33.24 97.50
70.00 9 10 12 3361.74 -34.07 118.56 254.49 92.48 10 6 14 2361.7 -29.51 90.79
80.00 10 2 34 3197.68 -29.86 106.24 254.61 90.16 10 55 51 2197.7 -26.76 79.24
90.00 11 16 54 2957.75 -28.27 88.60 254.60 89.31 12 8 12 1957.8 -25.71 61.88
100.00 12 45 25 2672.16 -29.86 67.61 254.61 90.16 13 29 58 1672.2 -26.76 40.61
110.00 14 9 38 2408.56 -34.07 47.48 254.49 92.48 14 49 47 1408.6 -29.51 19.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4256 TRA -1.0407 TC3 -.2749 BAU .3903 SGT 1185.7 SGR 1137.2 SG3 1186.1 ST 26.4 SR 30.2 SS 19.7
RDE -.6082 RRA -.0847 RC3 -.8311 FAU .42354 RRT .4830 RRF .7967 RTF .5.91 CRT .8232 CRS .1506 CST -.4152
FDE .3362 FRA -5.1122 FC -10.9880 BSP 1847 SGB 1842.9 R23 .2440 R13 .7902 LSA 38.4 MSA 22.7 SSA 2.8
BDE .7423 BRA 1.0441 BC3 .8754 FSP 1937 SG1 1415.3 SG2 834.2 THA 42.53 EL1 38.4 EL2 11.8 ALF 49.62

LAUNCH DATE SEP 5 1973

FLIGHT TIME 176.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC

DISTANCE 388.968

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.858 GAL 7.70 AZL 88.45 HCA 116.01 SMA 195.11 ECC .26183 INC 1.5529 V1 29.542
RP 237.98 LAP 1.40 LOP 98.31 VP 20.860 GAP 8.39 AZP 90.68 TAP 38.49 TAP 154.51 RCA 144.02 APO 246.19 V2 23.090
RC 209.965 GL 8.81 GP -14.48 ZAL 32.98 ZAP 114.71 ETS 188.67 ZAE 149.47 ETE 210.62 ZAC 70.84 ETC 284.16 LVI -5.21

PLANETOCENTRIC CONIC

C3 33.217 VHL 5.763 DLA 13.71 RAL 9.57 RAD 6648.2 VEL 12.375 PTH 7.29 VHP 2.731 DPA -1.14 RAP 37.10 ECC 1.5467
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 9 25 3534.05 -46.71 131.27 252.68 100.30 9 8 19 2534.0 -37.44 100.94
60.00 8 33 42 3469.40 -39.96 126.76 253.99 95.73 9 31 32 2469.4 -33.35 97.78
70.00 9 8 34 3366.82 -34.09 118.96 254.50 92.25 10 4 41 2366.8 -29.62 91.15
80.00 10 0 36 3203.77 -29.86 106.69 254.59 89.92 10 54 0 2203.8 -26.85 79.67
90.00 11 14 47 2964.32 -28.27 89.08 254.58 89.07 12 4 12 1964.3 -25.80 62.34
100.00 12 43 28 2678.24 -29.86 68.06 254.59 89.92 13 28 6 1678.2 -26.85 41.04
110.00 14 8 0 2413.64 -34.09 47.88 254.50 92.25 14 48 14 1413.6 -29.62 20.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4378 TRA -1.0852 TC3 -.3551 BAU .4130 SGT 1261.0 SGR 1159.2 SG3 1213.0 ST 27.4 SR 29.8 SS 20.0
RDE -.5971 RRA -.0971 RC3 -.8595 FAU .43214 RRT .5297 RRF .8073 RTF .6237 CRT .8235 CRS .1923 CST -.3769
FDE .4297 FRA -5.2043 FC -11.2630 BSP 1969 SGB 1712.8 R23 .2435 R13 .8037 LSA 38.7 MSA 23.1 SSA 2.8
BDE .7404 BRA 1.0895 BC3 .9299 FSP 2063 SG1 1500.3 SG2 826.4 THA 40.48 EL1 38.6 EL2 12.0 ALF 47.85

LAUNCH DATE SEP 5 1973

FLIGHT TIME 176.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 OL 342.29 VL 32.853 GAL 7.67 AZL 88.41 HCA 116.97 SMA 195.01 ECC .26126 INC 1.5883 V1 29.542
RP 238.30 LAP 1.42 LOP 99.27 VP 20.816 GAP 8.12 AZP 90.72 TAL 38.41 TAP 155.38 RCA 144.06 APO 245.96 V2 23.056
RC 212.919 GL 9.03 GP -14.76 ZAL 33.10 ZAP 113.11 ETS 188.30 ZAE 147.63 ETE 209.19 ZAC 70.70 ETC 284.23 LVI -9.09

DISTANCE 392.770

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.068 VHL 5.750 DLA 13.94 RAL 9.54 RAD 6648.2 VEL 12.389 PTH 7.29 VHP 2.698 DPA -1.64 RAP 36.60 ECC 1.8442
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 8 23 3537.58 -46.76 131.60 252.77 100.05 9 7 20 2537.6 -37.57 101.19
60.00 8 32 23 3473.70 -39.99 127.12 254.03 95.48 9 30 17 2473.7 -33.47 98.09
70.00 9 6 54 3372.11 -34.10 119.37 254.52 92.00 10 3 6 2372.1 -29.73 91.52
80.00 9 58 36 3210.10 -29.86 107.16 254.59 89.67 10 52 6 2210.1 -26.95 80.11
90.00 11 12 38 2971.16 -28.26 89.58 254.57 88.82 12 2 9 1971.2 -25.90 62.62
100.00 12 41 28 2684.56 -29.86 68.53 254.59 89.67 13 26 13 1684.6 -26.95 41.48
110.00 14 6 20 2418.93 -34.10 48.29 254.52 92.00 14 46 39 1418.9 -29.73 20.44

DIFFERENTIAL CORRECTIONS

TDE -.4424 TRA-1.1235 TC3 -.4291 BAW .4373
RDE -.5865 RRA -.1123 RC3 -.8913 FAU .44224
FDE .4822 FRA-5.3328 FC-11.5781 BSP 2119
BDE .7362 BRA 1.1291 BC3 .9892 FSP 2121

MID-COURSE EXECUTION ACCURACY

SGT 1329.7 SGR 1186.5 SG3 1244.6
RRF .5687 RRF .8190 RTF .6617
SGB 1782.1 R23 .2368 R13 .8194
SG1 1582.1 SG2 820.2 THA 39.32

ORBIT DETERMINATION ACCURACY

ST 28.0 SR 29.4 SS 20.5
CRT .8215 CRS .2037 CST -.3680
LSA 38.8 MSA 23.6 SSA 2.8
EL1 38.8 EL2 12.1 ALF 46.68

LAUNCH DATE SEP 5 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.848 GAL 7.64 AZL 88.38 HCA 117.92 SMA 194.93 ECC .26074 INC 1.6243 V1 29.542
RP 238.63 LAP 1.44 LOP 100.22 VP 20.773 GAP 7.86 AZP 90.76 TAL 38.32 TAP 156.24 RCA 144.11 APO 245.76 V2 23.024
RC 215.868 GL 9.26 GP -15.05 ZAL 33.22 ZAP 111.51 ETS 187.92 ZAE 146.16 ETE 207.87 ZAC 70.56 ETC 284.30 LVI -4.96

DISTANCE 396.574

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.921 VHL 5.738 DLA 14.17 RAL 9.52 RAD 6648.1 VEL 12.363 PTH 7.28 VHP 2.667 DPA -2.15 RAP 36.09 ECC 1.9418
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 7 20 3541.29 -46.80 131.95 252.87 99.78 9 6 22 2541.3 -37.70 101.44
60.00 8 31 3 3478.18 -40.02 127.50 254.10 95.23 9 29 1 2478.2 -33.59 96.40
70.00 9 5 13 3377.63 -34.11 119.80 254.55 91.75 10 1 30 2377.6 -29.84 91.91
80.00 9 56 34 3216.72 -29.85 107.65 254.60 89.41 10 50 11 2216.7 -27.06 80.58
90.00 11 10 26 2978.30 -28.25 90.10 254.56 88.56 12 0 4 1978.3 -25.99 63.31
100.00 12 39 26 2691.19 -29.85 69.02 254.60 89.41 13 24 17 1691.2 -27.06 41.94
110.00 14 4 39 2424.45 -34.11 48.72 254.55 91.75 14 45 3 1424.4 -29.84 20.83

DIFFERENTIAL CORRECTIONS

TDE -.4465 TRA-1.1632 TC3 -.5080 BAW .4633
RDE -.5792 RRA -.1275 RC3 -.9231 FAU .45182
FDE .5405 FRA-5.4542 FC-11.8614 BSP 2281
BDE .7313 BRA 1.1702 BC3 1.0527 FSP 2178

MID-COURSE EXECUTION ACCURACY

SGT 1404.0 SGR 1214.1 SG3 1274.9
RRF .6045 RRF .8300 RTF .6953
SGB 1856.1 R23 .2306 R13 .8335
SG1 1668.1 SG2 814.0 THA 38.22

ORBIT DETERMINATION ACCURACY

ST 28.6 SR 29.0 SS 20.9
CRT .8195 CRS .2207 CST -.3576
LSA 38.9 MSA 24.0 SSA 2.8
EL1 38.9 EL2 12.3 ALF 45.46

LAUNCH DATE SEP 5 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.845 GAL 7.61 AZL 88.34 HCA 118.87 SMA 194.86 ECC .26025 INC 1.6609 V1 29.542
RP 238.95 LAP 1.45 LOP 101.18 VP 20.731 GAP 7.59 AZP 90.80 TAL 38.22 TAP 157.09 RCA 144.15 APO 245.58 V2 22.991
RC 218.810 GL 9.49 GP -15.34 ZAL 33.36 ZAP 109.91 ETS 187.54 ZAE 144.49 ETE 206.64 ZAC 70.42 ETC 284.37 LVI -4.83

DISTANCE 400.377

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.777 VHL 5.725 DLA 14.41 RAL 9.50 RAD 6648.1 VEL 12.357 PTH 7.28 VHP 2.638 DPA -2.65 RAP 35.58 ECC 1.5394
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 6 17 3545.15 -46.84 132.31 252.98 99.51 9 5 23 2545.2 -37.84 101.71
60.00 8 29 41 3482.86 -40.05 127.89 254.17 94.96 9 27 44 2482.9 -33.72 98.73
70.00 9 3 29 3383.38 -34.13 120.25 254.59 91.48 9 59 53 2383.4 -29.96 92.32
80.00 9 54 29 3223.61 -29.85 108.16 254.62 89.14 10 48 12 2223.6 -27.16 81.06
90.00 11 8 11 2985.75 -28.23 90.64 254.57 88.29 11 57 56 1985.7 -26.09 63.84
100.00 12 37 21 2698.08 -29.85 69.53 254.62 89.14 13 22 19 1698.1 -27.16 42.43
110.00 14 2 36 2430.20 -34.13 49.17 254.59 91.48 14 43 26 1430.2 -29.96 21.24

DIFFERENTIAL CORRECTIONS

TDE -.4501 TRA-1.2041 TC3 -.5854 BAW .4908
RDE -.5896 RRA -.1427 RC3 -.9552 FAU .46094
FDE .6003 FRA-5.5666 FC-12.1747 BSP 2450
BDE .7259 BRA 1.2125 BC3 1.1204 FSP 2231

MID-COURSE EXECUTION ACCURACY

SGT 1483.3 SGR 1242.2 SG3 1304.0
RRF .6388 RRF .8403 RTF .7150
SGB 1934.7 R23 .2249 R13 .8463
SG1 1757.9 SG2 808.1 THA 37.18

ORBIT DETERMINATION ACCURACY

ST 29.3 SR 28.6 SS 21.4
CRT .8172 CRS .2351 CST -.3481
LSA 39.1 MSA 24.5 SSA 2.8
EL1 39.0 EL2 12.4 ALF 44.23

LAUNCH DATE SEP 5 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.842 GAL 7.58 AZL 88.30 HCA 119.82 SMA 194.81 ECC .25979 INC 1.6980 V1 29.542
RP 239.26 LAP 1.47 LOP 102.12 VP 20.691 GAP 7.33 AZP 90.84 TAL 38.11 TAP 157.93 RCA 144.20 APO 245.42 V2 22.980
RC 221.744 GL 9.72 GP -15.62 ZAL 33.50 ZAP 108.32 ETS 187.14 ZAE 142.80 ETE 205.49 ZAC 70.29 ETC 284.43 LVI -4.70

DISTANCE 404.181

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.636 VHL 5.715 DLA 14.66 RAL 9.48 RAD 6648.0 VEL 12.351 PTH 7.27 VHP 2.612 DPA -3.16 RAP 35.07 ECC 1.5371
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 5 14 3549.19 -46.89 132.69 253.11 99.22 9 4 23 2549.2 -37.98 101.99
60.00 8 28 19 3487.74 -40.07 128.30 254.26 94.68 9 26 27 2487.7 -33.85 99.08
70.00 9 1 44 3389.37 -34.14 120.72 254.64 91.21 9 58 14 2389.4 -30.08 92.75
80.00 9 52 21 3230.79 -29.84 108.70 254.64 88.86 10 46 12 2230.8 -27.27 81.57
90.00 11 5 52 2993.51 -28.22 91.21 254.59 88.00 11 55 45 1993.5 -26.20 64.38
100.00 12 35 13 2705.27 -29.84 70.07 254.64 88.86 13 20 18 1705.3 -27.27 42.94
110.00 14 1 10 2436.19 -34.14 49.64 254.64 91.21 14 41 47 1436.2 -30.08 21.66

DIFFERENTIAL CORRECTIONS

TDE -.4531 TRA-1.2461 TC3 -.6675 BAW .5201
RDE -.5596 RRA -.1579 RC3 -.9876 FAU .46963
FDE .6606 FRA-5.6741 FC-12.4579 BSP 2627
BDE .7201 BRA 1.2561 BC3 1.1920 FSP 2280

MID-COURSE EXECUTION ACCURACY

SGT 1567.5 SGR 1270.9 SG3 1331.9
RRF .6662 RRF .8500 RTF .7513
SGB 2018.0 R23 .2196 R13 .8578
SG1 1851.6 SG2 802.3 THA 36.20

ORBIT DETERMINATION ACCURACY

ST 29.9 SR 28.2 SS 21.8
CRT .8148 CRS .2482 CST -.3399
LSA 39.2 MSA 24.9 SSA 2.8
EL1 39.2 EL2 12.5 ALF 42.99



LAUNCH DATE SEP 5 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

DISTANCE 407.985

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.839 GAL 7.55 AZL 88.26 HCA 120.77 SMA 194.76 ECC .25937 INC 1.7357 V1 29.542  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.652 GAP 7.07 AZP 90.69 TAL 37.98 TAP 158.75 RCA 144.25 APO 245.20 V2 22.928  
 RC 224.672 GL 9.96 GP -15.90 ZAL 33.65 ZAP 106.74 ETS 186.74 ZAE 141.11 ETE 204.41 ZAC 70.15 ETC 284.50 LVI -4.58

PLANETOCENTRIC CONIC

C3 32.497 VHL 8.701 DLA 14.92 RAL 9.47 RAD 8646.0 VEL 12.346 PTH 7.27 VHP 2.588 DPA -3.86 RAP 34.57 ECC 1.8348  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 10 3593.39 -48.93 133.09 253.26 98.91 9 3 23 2553.4 -38.13 102.28  
 60.00 8 26 55 3492.82 -40.10 126.73 254.36 94.39 9 25 8 2492.8 -33.99 99.44  
 70.00 8 59 57 3395.61 -34.14 121.21 254.70 90.92 9 56 32 2395.6 -30.20 93.19  
 80.00 9 50 9 3236.27 -29.83 109.25 254.68 88.57 10 44 8 2236.3 -27.38 82.10  
 90.00 11 3 29 3001.60 -26.19 91.80 254.62 87.71 11 53 31 2001.6 -26.30 64.95  
 100.00 12 33 1 2712.75 -29.83 70.62 254.68 86.57 13 18 14 1712.7 -27.38 43.46  
 110.00 13 59 23 2442.43 -34.14 50.12 254.70 90.92 14 40 5 1442.4 -30.20 22.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4552 TRA-1.2889 TC3 -.7517 BAU .5505 SGT 1655.6 SGR 1300.1 S63 1358.7 ST 30.5 SR 27.8 SS 22.3  
 RDE -.5494 RRA -.1733 RC3-1.0202 FAU .47786 RRT .6928 RRF .8591 RTF .7744 CRT .8122 CRS .2600 CBT -.3330  
 FDE .7215 FRA-5.7756 FC-12.7305 BSP 2815 SGB 2105.1 R23 .2145 R13 .8682 LSA 39.3 MSA 25.3 SSA 2.8  
 BDE .7135 BRA 1.3005 BC3 1.2672 FSP 2322 SG1 1948.5 S62 796.7 THA 35.29 EL1 39.3 EL2 12.6 ALF 41.75

LAUNCH DATE SEP 5 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

DISTANCE 411.790

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.837 GAL 7.52 AZL 88.23 HCA 121.71 SMA 194.73 ECC .25898 INC 1.7741 V1 29.542  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.615 GAP 6.81 AZP 90.93 TAL 37.86 TAP 159.96 RCA 144.30 APO 245.16 V2 22.897  
 RC 227.591 GL 10.21 GP -16.18 ZAL 33.82 ZAP 105.17 ETS 186.33 ZAE 139.41 ETE 203.38 ZAC 70.02 ETC 284.56 LVI -4.43

PLANETOCENTRIC CONIC

C3 32.360 VHL 5.669 DLA 15.19 RAL 9.47 RAD 8647.9 VEL 12.340 PTH 7.27 VHP 2.568 DPA -4.17 RAP 34.07 ECC 1.8328  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 5 3537.76 -46.98 133.90 253.42 98.60 9 2 22 2557.8 -38.28 102.59  
 60.00 8 25 30 3498.10 -40.13 129.18 254.47 94.09 9 23 48 2498.1 -34.13 99.82  
 70.00 8 58 7 3402.10 -34.15 121.71 254.78 90.62 9 54 49 2402.1 -30.33 93.65  
 80.00 9 47 54 3246.06 -29.81 109.83 254.73 88.27 10 42 0 2246.1 -27.49 82.65  
 90.00 11 1 2 3010.02 -26.17 92.41 254.66 87.40 11 51 12 2010.0 -26.41 65.54  
 100.00 12 30 46 2720.53 -29.81 71.20 254.73 86.27 13 16 7 1720.5 -27.49 44.01  
 110.00 13 57 33 2448.91 -34.15 50.63 254.78 90.62 14 38 22 1448.9 -30.33 22.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4560 TRA-1.3319 TC3 -.8369 BAU .5821 SGT 1746.3 SGR 1331.0 S63 1365.4 ST 31.1 SR 27.4 SS 22.7  
 RDE -.5396 RRA -.1895 RC3-1.0537 FAU .48601 RRT .7167 RRF .8680 RTF .7949 CRT .8093 CRS .2653 CBT -.3328  
 FDE .7723 FRA-5.8804 FC-13.0024 BSP 3009 SGB 2195.8 R23 .2093 R13 .8781 LSA 39.5 MSA 25.6 SSA 2.7  
 BDE .7065 BRA 1.3453 BC3 1.3458 FSP 2347 SG1 2048.2 S62 791.4 THA 34.51 EL1 39.4 EL2 12.7 ALF 40.59

LAUNCH DATE SEP 5 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

DISTANCE 415.594

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.836 GAL 7.48 AZL 88.19 HCA 122.65 SMA 194.70 ECC .25861 INC 1.8131 V1 29.542  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.579 GAP 6.55 AZP 90.98 TAL 37.72 TAP 160.37 RCA 144.35 APO 245.06 V2 22.866  
 RC 230.502 GL 10.46 GP -18.46 ZAL 33.99 ZAP 103.61 ETS 185.92 ZAE 137.71 ETE 202.42 ZAC 69.89 ETC 284.61 LVI -4.29

PLANETOCENTRIC CONIC

C3 32.224 VHL 5.677 DLA 15.46 RAL 9.47 RAD 8647.9 VEL 12.335 PTH 7.26 VHP 2.547 DPA -4.66 RAP 33.59 ECC 1.8303  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 59 3562.32 -47.02 133.93 253.59 98.27 9 1 21 2562.3 -38.44 102.91  
 60.00 8 24 2 3503.80 -40.15 129.84 254.59 93.78 9 22 26 2503.6 -34.27 100.21  
 70.00 8 56 14 3408.85 -34.15 122.24 254.86 90.31 9 53 3 2408.9 -30.46 94.13  
 80.00 9 45 36 3254.17 -29.79 110.43 254.78 87.95 10 39 50 2254.2 -27.61 83.22  
 90.00 10 56 31 3018.80 -26.14 93.05 254.70 87.08 11 48 50 2018.8 -26.51 66.16  
 100.00 12 28 27 2728.84 -29.79 71.80 254.78 87.95 13 13 56 1728.6 -27.61 44.59  
 110.00 13 55 40 2455.87 -34.15 51.16 254.86 90.31 14 36 36 1455.7 -30.46 23.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.44605 TRA-1.3804 TC3 -.9308 BAU .8152 SGT 1849.8 SGR 1356.3 S63 1404.0 ST 31.8 SR 26.8 SS 23.2  
 RDE -.5261 RRA -.2023 RC3-1.0833 FAU .49147 RRT .7383 RRF .8751 RTF .5.19 CRT .8076 CRS .2933 CBT -.3083  
 FDE .8706 FRA-5.9312 FC-13.2039 BSP 3198 SGB 2293.8 R23 .2074 R13 .8689 LSA 39.7 MSA 26.2 SSA 2.7  
 BDE .6992 BRA 1.3892 BC3 1.4281 FSP 2420 SG1 2155.2 S62 785.1 THA 33.44 EL1 39.8 EL2 12.7 ALF 38.97

LAUNCH DATE SEP 5 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC

DISTANCE 419.398

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.835 GAL 7.45 AZL 88.15 HCA 123.59 SMA 194.69 ECC .25828 INC 1.8529 V1 29.542  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.544 GAP 6.30 AZP 91.03 TAL 37.57 TAP 161.16 RCA 144.40 APO 244.97 V2 22.836  
 RC 233.405 GL 10.71 GP -16.74 ZAL 34.17 ZAP 102.06 ETS 185.50 ZAE 136.02 ETE 201.50 ZAC 69.76 ETC 284.67 LVI -4.15

PLANETOCENTRIC CONIC

C3 32.091 VHL 5.665 DLA 15.74 RAL 9.48 RAD 8647.8 VEL 12.329 PTH 7.26 VHP 2.530 DPA -5.16 RAP 33.11 ECC 1.8281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 52 3567.05 -47.07 134.38 253.78 97.93 9 0 19 2567.1 -38.60 103.25  
 60.00 8 22 33 3509.30 -40.18 130.13 254.73 93.45 9 21 3 2509.3 -34.42 100.62  
 70.00 8 54 18 3415.87 -34.15 122.79 254.96 89.98 9 51 14 2415.9 -30.59 94.64  
 80.00 9 43 13 3262.61 -29.77 111.08 254.85 87.62 10 37 35 2262.6 -27.73 83.82  
 90.00 10 55 55 3027.94 -26.11 93.72 254.76 86.75 11 46 23 2027.9 -26.62 66.81  
 100.00 12 26 5 2737.08 -29.77 72.43 254.85 87.62 13 11 42 1737.1 -27.73 45.19  
 110.00 13 53 44 2462.68 -34.15 51.71 254.96 89.98 14 34 47 1462.7 -30.59 23.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.44616 TRA-1.4269 TC3-1.0224 BAU .6490 SGT 1931.4 SGR 1385.0 S63 1424.6 ST 32.5 SR 26.3 SS 23.7  
 RDE -.5141 RRA -.2189 RC3-1.1150 FAU .49750 RRT .7577 RRF .8824 RTF .8274 CRT .8050 CRS .3070 CBT -.2992  
 FDE .9439 FRA-5.9993 FC-13.4213 BSP 3401 SGB 2393.0 R23 .2041 R13 .8922 LSA 39.8 MSA 26.7 SSA 2.7  
 BDE .6909 BRA 1.4433 BC3 1.5128 FSP 2457 SG1 2262.4 S62 779.6 THA 32.62 EL1 39.8 EL2 12.7 ALF 37.81

LAUNCH DATE SEP 5 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 18 1974

Table with columns: HELIOCENTRIC CONIC, PLANETOCENTRIC CONIC, DIFFERENTIAL CORRECTIONS, DISTANCE 423.201, MID-COURSE EXECUTION ACCURACY, ORBIT DETERMINATION ACCURACY, EARTH TO MARS. Includes parameters like RL, RP, RC, C3, LNCH, etc.

LAUNCH DATE SEP 5 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 20 1974

Table with columns: HELIOCENTRIC CONIC, PLANETOCENTRIC CONIC, DIFFERENTIAL CORRECTIONS, DISTANCE 427.005, MID-COURSE EXECUTION ACCURACY, ORBIT DETERMINATION ACCURACY, EARTH TO MARS. Includes parameters like RL, RP, RC, C3, LNCH, etc.

LAUNCH DATE SEP 5 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 22 1974

Table with columns: HELIOCENTRIC CONIC, PLANETOCENTRIC CONIC, DIFFERENTIAL CORRECTIONS, DISTANCE 430.808, MID-COURSE EXECUTION ACCURACY, ORBIT DETERMINATION ACCURACY, EARTH TO MARS. Includes parameters like RL, RP, RC, C3, LNCH, etc.

LAUNCH DATE SEP 5 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 24 1974

Table with columns: HELIOCENTRIC CONIC, PLANETOCENTRIC CONIC, DIFFERENTIAL CORRECTIONS, DISTANCE 434.611, MID-COURSE EXECUTION ACCURACY, ORBIT DETERMINATION ACCURACY, EARTH TO MARS. Includes parameters like RL, RP, RC, C3, LNCH, etc.

LAUNCH DATE SEP 5 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 438.413

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.838 GAL 7.26 AZL 87.94 HCA 128.24 SMA 194.74 ECC .25695 INC 2.0644 V1 29.542
RP 241.92 LAP 1.62 LOP 110.55 VP 20.388 GAP 5.08 AZP 91.28 TAL 36.73 TAP 184.98 RCA 144.70 APO 244.78 V2 22.692
RC 247.731 GL 12.08 GP -18.12 ZAL 35.23 ZAP 94.80 ETS 183.29 ZAE 127.81 ETE 197.48 ZAC 69.09 ETC 284.92 LVI -2.38

PLANETOCENTRIC CONIC

C3 31.461 VHL 5.809 DLA 17.27 RAL 9.56 RAD 6647.6 VEL 12.304 PTH 7.24 VHP 2.473 DPA -7.57 RAP 30.88 ECC 1.5178
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 54 55 3593.62 -47.29 136.91 254.93 95.99 8 94 49 2593.6 -39.50 105.16
60.00 8 14 34 3541.31 -40.27 132.85 255.58 91.61 9 13 35 2541.3 -35.23 102.98
70.00 6 43 47 3455.27 -34.11 125.86 255.56 88.17 9 41 23 2455.3 -31.30 97.49
80.00 9 30 5 3310.21 -29.59 114.58 255.28 85.78 10 25 15 2310.2 -28.33 87.23
90.00 10 41 30 3079.66 -27.85 97.48 255.12 84.88 11 32 50 2079.7 -27.18 70.49
100.00 12 12 56 2784.68 -29.59 75.95 255.28 85.78 12 59 21 1784.7 -28.33 48.60
110.00 13 43 14 2502.09 -34.11 54.78 255.56 88.17 14 24 56 1502.1 -31.30 28.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4545 TRA-1.6695 TC3-1.5083 BAU .8303 SGT 2503.5 SGR 1532.2 S63 1503.6 ST 35.5 SR 23.5 S8 26.2
RDE -.4491 RRA -.2897 RC3-1.2736 FAU .51903 RRT .8300 RRF .9129 RTF .8811 CRT .7931 CRS .3522 CST -.2731
FDE 1.3062 FRA-6.2280 FC-14.2823 BSP 4475 SGB 2935.2 R23 .1926 R13 .9193 LSA 40.9 MSA 28.7 S8A 2.6
BDE .6390 BRA 1.6945 BC3 1.9740 FSP 2536 SGI 2836.6 S62 754.3 THA 29.19 EL1 40.7 EL2 12.5 ALF 30.90

LAUNCH DATE SEP 5 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 442.214

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.840 GAL 7.22 AZL 87.89 HCA 129.17 SMA 194.77 ECC .25674 INC 2.1095 V1 29.542
RP 242.19 LAP 1.64 LOP 111.48 VP 20.361 GAP 4.82 AZP 91.33 TAL 36.55 TAP 185.71 RCA 144.77 APO 244.78 V2 22.665
RC 250.580 GL 12.37 GP -18.39 ZAL 35.47 ZAP 93.17 ETS 182.84 ZAE 125.97 ETE 198.74 ZAC 68.94 ETC 284.96 LVI -2.21

PLANETOCENTRIC CONIC

C3 31.341 VHL 5.598 DLA 17.60 RAL 9.59 RAD 6647.5 VEL 12.299 PTH 7.23 VHP 2.466 DPA -8.03 RAP 30.49 ECC 1.5158
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 53 38 3599.56 -47.33 137.48 255.20 95.55 8 53 38 2599.6 -39.69 105.59
60.00 8 12 49 3548.47 -40.29 133.45 255.78 91.19 9 11 58 2548.5 -35.40 103.49
70.00 8 41 28 3464.12 -34.09 126.55 255.71 87.76 9 39 13 2464.1 -31.44 98.14
80.00 9 27 9 3320.96 -29.53 115.38 255.39 85.37 10 22 30 2320.1 -28.45 88.01
90.00 10 38 16 3091.39 -27.78 98.33 255.21 84.46 11 29 48 2091.4 -27.29 71.34
100.00 12 10 1 2795.43 -29.53 78.75 255.39 85.37 12 56 36 1795.4 -28.45 49.37
110.00 13 40 55 2510.94 -34.09 55.47 255.71 87.76 14 22 46 1510.9 -31.44 27.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4519 TRA-1.7213 TC3-1.6123 BAU .8679 SGT 2624.6 SGR 1555.4 S63 1507.8 ST 36.2 SR 22.7 S8 26.8
RDE -.4315 RRA -.3005 RC3-1.3005 FAU .51941 RRT .8400 RRF .9172 RTF .8872 CRT .7915 CRS .3748 CST -.2523
FDE 1.4233 FRA-6.2034 FC-14.3475 BSP 4710 SGB 3050.9 R23 .1934 R13 .9220 LSA 41.1 MSA 29.2 S8A 2.6
BDE .6248 BRA 1.7474 BC3 2.0714 FSP 2610 SGI 2957.5 S62 749.0 THA 28.45 EL1 40.9 EL2 12.3 ALF 29.29

LAUNCH DATE SEP 5 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC

DISTANCE 446.015

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.842 GAL 7.18 AZL 87.84 HCA 130.09 SMA 194.81 ECC .25656 INC 2.1558 V1 29.542
RP 242.46 LAP 1.65 LOP 112.40 VP 20.334 GAP 4.58 AZP 91.39 TAL 36.35 TAP 186.44 RCA 144.83 APO 244.80 V2 22.638
RC 253.394 GL 12.87 GP -18.66 ZAL 35.71 ZAP 91.77 ETS 182.37 ZAE 124.34 ETE 198.05 ZAC 68.80 ETC 285.00 LVI -3.03

PLANETOCENTRIC CONIC

C3 31.225 VHL 5.588 DLA 17.94 RAL 9.62 RAD 6647.5 VEL 12.294 PTH 7.23 VHP 2.462 DPA -8.49 RAP 30.11 ECC 1.5139
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 19 3609.72 -47.37 138.07 255.49 95.10 8 52 25 2609.7 -39.89 106.05
60.00 8 11 1 3555.90 -40.29 134.09 255.99 90.77 9 10 17 2555.9 -35.58 104.04
70.00 8 39 5 3473.31 -34.06 127.27 255.86 87.34 9 36 58 2473.3 -31.59 98.81
80.00 9 24 7 3332.15 -29.48 116.20 255.50 84.94 10 19 39 2332.2 -28.57 88.81
90.00 10 34 55 3103.62 -27.69 99.22 255.30 84.03 11 26 38 2103.6 -27.40 72.21
100.00 12 8 59 2806.62 -29.48 77.57 255.50 84.94 12 53 45 1806.6 -28.57 50.18
110.00 13 38 31 2520.13 -34.06 56.19 255.86 87.34 14 20 31 1520.1 -31.59 27.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4474 TRA-1.7722 TC3-1.7156 BAU .9083 SGT 2744.9 SGR 1583.5 S63 1514.9 ST 36.8 SR 22.0 S8 27.4
RDE -.4162 RRA -.3139 RC3-1.3304 FAU .52071 RRT .8496 RRF .9218 RTF .8335 CRT .7901 CRS .3814 CST -.2475
FDE 1.3052 FRA-6.2058 FC-14.4370 BSP 4937 SGB 3168.9 R23 .1928 R13 .9254 LSA 41.3 MSA 29.6 S8A 2.6
BDE .6110 BRA 1.7998 BC3 2.1710 FSP 2619 SGI 3080.3 S62 744.3 THA 27.88 EL1 41.2 EL2 12.1 ALF 27.93

LAUNCH DATE SEP 5 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC

DISTANCE 449.816

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.845 GAL 7.14 AZL 87.80 HCA 131.01 SMA 194.86 ECC .25639 INC 2.2033 V1 29.542
RP 242.73 LAP 1.66 LOP 113.32 VP 20.309 GAP 4.34 AZP 91.45 TAL 36.15 TAP 187.18 RCA 144.90 APO 244.82 V2 22.612
RC 256.191 GL 12.98 GP -18.94 ZAL 35.97 ZAP 90.38 ETS 181.90 ZAE 122.72 ETE 195.37 ZAC 68.85 ETC 285.04 LVI -2.85

PLANETOCENTRIC CONIC

C3 31.112 VHL 5.578 DLA 18.29 RAL 9.65 RAD 6647.4 VEL 12.290 PTH 7.23 VHP 2.459 DPA -8.94 RAP 29.74 ECC 1.5120
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 50 57 3612.11 -47.40 138.68 255.79 94.63 8 51 9 2612.1 -40.10 106.52
60.00 8 9 10 3563.61 -40.30 134.74 256.21 90.32 9 8 33 2563.6 -35.76 104.61
70.00 8 36 36 3482.86 -34.03 128.01 256.02 86.90 9 34 38 2482.9 -31.75 99.52
80.00 9 20 57 3343.82 -29.39 117.06 255.61 84.49 10 16 41 2343.8 -28.69 89.66
90.00 10 31 23 3116.38 -27.60 100.14 255.40 83.58 11 23 21 2116.4 -27.50 73.13
100.00 12 3 49 2818.29 -29.39 78.43 255.61 84.49 12 50 47 1818.3 -28.69 51.03
110.00 13 36 2 2529.68 -34.03 56.93 256.02 86.90 14 18 12 1529.7 -31.75 28.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4405 TRA-1.8219 TC3-1.8177 BAU .9455 SGT 2863.9 SGR 1618.3 S63 1526.7 ST 37.4 SR 21.6 S8 27.8
RDE -.4301 RRA -.3309 RC3-1.3649 FAU .52348 RRT .8590 RRF .9269 RTF .9002 CRT .7888 CRS .3698 CST -.2615
FDE 1.5422 FRA-6.2467 FC-14.5663 BSP 5155 SGB 3289.5 R23 .1905 R13 .9298 LSA 41.7 MSA 29.8 S8A 2.5
BDE .5978 BRA 1.8517 BC3 2.2731 FSP 2578 SGI 3205.1 S62 740.4 THA 27.48 EL1 41.4 EL2 11.9 ALF 26.89

LAUNCH DATE SEP 5 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.847 GAL 7.10 AZL 87.75 HCA 131.93 SMA 194.91 ECC .29624 INC 2.2519 V1 29.842
RP 242.99 LAP 1.68 LOP 114.24 VP 20.284 GAP 4.11 AZP 91.51 TAL 35.94 TAP 167.87 RCA 144.97 APO 244.86 V2 22.586
RC 258.972 GL 13.30 GP -19.21 ZAL 36.24 ZAP 88.03 ETS 181.43 ZAE 121.12 ETE 194.72 ZAC 68.49 ETC 285.08 LVI -2.87

DISTANCE 453.614

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.001 VHL 5.568 DLA 18.65 RAL 9.68 RAD 6647.4 VEL 12.285 PTH 7.22 VHP 2.457 DPA -9.38 RAP 29.40 ECC 1.5102
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 49 32 3618.76 -47.44 139.32 256.10 94.14 8 49 51 2618.8 -40.31 107.02
60.00 8 7 14 3571.64 -40.30 135.43 256.45 89.86 9 6 46 2571.6 -35.94 105.21
70.00 8 34 0 3492.82 -33.99 128.79 256.19 86.44 9 32 13 2492.8 -31.90 100.25
80.00 9 17 39 3356.03 -29.31 117.96 255.73 84.02 10 13 35 2356.0 -28.82 90.55
90.00 10 27 44 3129.78 -27.49 101.10 255.50 83.10 11 19 54 2129.8 -27.61 74.10
100.00 12 0 31 2830.50 -29.31 79.33 255.73 84.02 12 47 41 1830.5 -28.82 51.92
110.00 13 33 27 2539.64 -33.99 57.71 256.19 86.44 14 15 46 1539.6 -31.90 29.17

DIFFERENTIAL CORRECTIONS

TDE -.4346 TRA-1.8745 TC3-1.9246 BAU .9838
RDE -.3838 RRA -.3402 RC3-1.3895 FAU .52135
FDE 1.6735 FRA-6.1861 FC-14.5593 BSP 5402
BDE .5798 BRA 1.9051 BC3 2.3737 FSP 2629

MID-COURSE EXECUTION ACCURACY

SGT 2989.6 SGR 1639.1 SG3 1523.6
RRR .8663 RRF .9303 RTF .9039
SGB 3409.5 R23 .1925 R13 .9310
SG1 3329.2 SG2 735.3 THA 26.82

ORBIT DETERMINATION ACCURACY

ST 38.0 SR 20.6 SS 28.6
CRT .7885 CRS .3902 CST -.2404
LSA 41.9 MSA 30.4 SSA 2.5
EL1 41.7 EL2 11.6 ALF 25.29

LAUNCH DATE SEP 5 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.850 GAL 7.06 AZL 87.70 HCA 132.88 SMA 194.97 ECC .25611 INC 2.3019 V1 29.542
RP 243.24 LAP 1.69 LOP 115.16 VP 20.261 GAP 3.87 AZP 91.57 TAL 35.73 TAP 168.58 RCA 145.04 APO 244.90 V2 22.560
RC 261.736 GL 13.63 GP -19.49 ZAL 36.51 ZAP 87.71 ETS 180.95 ZAE 119.55 ETE 194.08 ZAC 68.33 ETC 285.11 LVI -2.47

DISTANCE 457.413

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.893 VHL 5.558 DLA 19.02 RAL 9.71 RAD 6647.4 VEL 12.281 PTH 7.22 VHP 2.457 DPA -9.82 RAP 29.08 ECC 1.5084
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 5 3625.67 -47.47 139.98 256.43 93.63 8 48 30 2625.7 -40.53 107.53
60.00 8 5 14 3579.98 -40.30 136.14 256.69 89.38 9 4 54 2580.0 -36.13 105.84
70.00 8 31 19 3503.19 -33.94 129.59 256.37 85.97 9 29 42 2503.2 -32.05 101.02
80.00 9 14 12 3368.78 -29.21 118.90 255.86 83.54 10 10 21 2368.8 -28.94 91.48
90.00 10 23 54 3143.79 -27.38 102.11 255.60 82.61 11 16 17 2143.8 -27.71 75.11
100.00 11 57 4 2843.25 -29.21 80.27 255.86 83.54 12 44 27 1843.2 -28.94 52.84
110.00 13 30 45 2550.01 -33.94 58.51 256.37 85.97 14 13 15 1550.0 -32.05 29.94

DIFFERENTIAL CORRECTIONS

TDE -.4265 TRA-1.9258 TC3-2.0301 BAU 1.0228
RDE -.3667 RRA -.3527 RC3-1.4181 FAU .52054
FDE 1.7802 FRA-6.1564 FC-14.5874 BSP 5640
BDE .5825 BRA 1.9578 BC3 2.4764 FSP 2633

MID-COURSE EXECUTION ACCURACY

SGT 3113.8 SGR 1666.1 SG3 1524.5
RRR .8735 RRF .9341 RTF .9082
SGB 3531.5 R23 .1930 R13 .9334
SG1 3455.0 SG2 731.1 THA 26.32

ORBIT DETERMINATION ACCURACY

ST 38.6 SR 19.9 SS 29.2
CRT .7886 CRS .3926 CST -.2373
LSA 42.2 MSA 30.8 SSA 2.5
EL1 41.9 EL2 11.3 ALF 23.99

LAUNCH DATE SEP 5 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.854 GAL 7.02 AZL 87.65 HCA 133.76 SMA 195.03 ECC .25599 INC 2.3533 V1 29.542
RP 243.50 LAP 1.70 LOP 116.08 VP 20.239 GAP 3.64 AZP 91.63 TAL 35.52 TAP 169.28 RCA 145.11 APO 244.96 V2 22.535
RC 264.483 GL 13.96 GP -19.77 ZAL 36.79 ZAP 86.41 ETS 180.47 ZAE 117.99 ETE 193.46 ZAC 68.16 ETC 285.15 LVI -2.27

DISTANCE 461.211

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.789 VHL 5.549 DLA 19.41 RAL 9.75 RAD 6647.3 VEL 12.277 PTH 7.22 VHP 2.459 DPA -10.25 RAP 28.79 ECC 1.5067
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 46 34 3632.84 -47.50 140.68 256.77 93.10 8 47 7 2632.8 -40.75 108.08
60.00 8 3 10 3588.65 -40.29 136.87 256.94 88.88 9 2 58 2588.6 -36.33 106.49
70.00 8 28 31 3513.99 -33.89 130.43 256.55 85.47 9 27 5 2514.0 -32.21 101.82
80.00 9 10 35 3382.11 -29.11 119.87 255.98 83.04 10 6 57 2382.1 -29.05 92.45
90.00 10 19 51 3158.49 -27.24 103.17 255.71 82.10 11 12 30 2158.5 -27.81 76.17
100.00 11 53 27 2856.59 -29.11 81.24 255.98 83.04 12 41 3 1856.6 -29.05 53.82
110.00 13 27 57 2560.81 -33.89 59.35 256.55 85.47 14 10 38 1560.8 -32.21 30.74

DIFFERENTIAL CORRECTIONS

TDE -.4175 TRA-1.9774 TC3-2.1364 BAU 1.0620
RDE -.3491 RRA -.3653 RC3-1.4466 FAU .51920
FDE 1.8473 FRA-6.1254 FC-14.5989 BSP 5878
BDE .5442 BRA 2.0109 BC3 2.5801 FSP 2631

MID-COURSE EXECUTION ACCURACY

SGT 3239.4 SGR 1693.3 SG3 1523.9
RRR .8801 RRF .9377 RTF .9120
SGB 3655.2 R23 .1936 R13 .9354
SG1 3582.2 SG2 727.1 THA 25.85

ORBIT DETERMINATION ACCURACY

ST 39.1 SR 19.1 SS 29.9
CRT .7898 CRS .3923 CST -.2355
LSA 42.6 MSA 31.2 SSA 2.4
EL1 42.2 EL2 10.9 ALF 22.73

LAUNCH DATE SEP 5 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.857 GAL 6.97 AZL 87.59 HCA 134.67 SMA 195.10 ECC .25588 INC 2.4062 V1 29.542
RP 243.74 LAP 1.71 LOP 116.99 VP 20.217 GAP 3.41 AZP 91.69 TAL 35.29 TAP 169.97 RCA 145.18 APO 245.02 V2 22.511
RC 267.212 GL 14.31 GP -20.05 ZAL 37.09 ZAP 85.14 ETS 179.98 ZAE 116.45 ETE 192.85 ZAC 67.98 ETC 285.18 LVI -2.06

DISTANCE 465.007

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.689 VHL 5.540 DLA 19.80 RAL 9.78 RAD 6647.3 VEL 12.273 PTH 7.21 VHP 2.461 DPA -10.68 RAP 28.51 ECC 1.5051
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 44 59 3640.29 -47.52 141.40 257.13 92.54 8 45 40 2640.3 -40.98 108.64
60.00 8 1 0 3597.67 -40.27 137.64 257.20 88.36 9 0 57 2597.7 -36.52 107.18
70.00 8 25 35 3525.26 -33.82 131.31 256.73 84.96 9 24 20 2525.3 -32.37 102.66
80.00 9 6 47 3396.09 -28.99 120.90 256.11 82.51 10 3 23 2396.1 -29.17 93.47
90.00 10 15 36 3173.94 -27.09 104.27 255.81 81.57 11 8 30 2173.9 -27.90 77.29
100.00 11 49 39 2870.56 -28.99 82.26 256.11 82.51 12 37 30 1870.6 -29.17 54.84
110.00 13 25 1 2572.08 -33.82 60.22 256.73 84.96 14 7 54 1572.1 -32.37 31.58

DIFFERENTIAL CORRECTIONS

TDE -.4071 TRA-2.0290 TC3-2.2430 BAU 1.1014
RDE -.3312 RRA -.3780 RC3-1.4751 FAU .51735
FDE 1.9311 FRA-6.0868 FC-14.5945 BSP 6113
BDE .5248 BRA 2.0639 BC3 2.6846 FSP 2624

MID-COURSE EXECUTION ACCURACY

SGT 3365.7 SGR 1720.7 SG3 1521.8
RRR .8862 RRF .9411 RTF .9154
SGB 3780.0 R23 .1947 R13 .9374
SG1 3710.2 SG2 723.2 THA 25.41

ORBIT DETERMINATION ACCURACY

ST 39.7 SR 18.4 SS 30.5
CRT .7919 CRS .3882 CST -.2360
LSA 43.0 MSA 31.6 SSA 2.4
EL1 42.5 EL2 10.5 ALF 21.52

LAUNCH DATE SEP 5 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 11 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.861 GAL 6.93 AZL 87.54 HCA 135.58 SMA 195.17 ECC .25579 INC 2.4808 V1 29.542  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.197 GAP 3.18 AZP 91.76 TAL 35.07 TAP 170.65 RCA 148.25 APO 245.10 V2 22.467  
 RC 269.924 GL 14.67 GP -20.33 ZAL 37.39 ZAP 83.90 ETS 179.48 ZAE 114.93 ETE 192.26 ZAC 67.60 ETC 265.22 LVI -1.04

Distance 468.803 Earth to Mars

Planetary Conic: C3 30.592 VHL 5.531 DLA 20.20 RAL 9.81 RAD 6647.2 VEL 12.269 PTH 7.21 VHP 2.465 DPA -11.10 RAP 28.26 ECC 1.5035  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 21 3648.05 -47.55 142.14 257.50 91.97 8 44 9 2648.0 -41.22 109.24  
 60.00 7 58 44 3607.05 -40.25 138.44 257.48 87.81 8 58 51 2607.1 -36.72 107.90  
 70.00 8 22 31 3537.02 -33.75 132.22 256.92 84.43 9 21 28 2537.0 -32.52 103.55  
 80.00 9 2 48 3410.75 -28.85 121.96 256.24 81.97 9 59 39 2410.7 -29.28 94.55  
 90.00 10 11 7 3190.19 -26.93 105.43 255.91 81.01 11 4 17 2190.2 -27.99 78.48  
 100.00 11 45 40 2985.22 -26.85 83.33 256.24 81.97 12 33 45 1885.2 -29.28 55.91  
 110.00 13 21 58 2583.84 -33.75 61.13 256.92 84.43 14 5 2 1563.8 -32.52 32.46

Differential Corrections: TDE -.3956 TRA-2.0807 TC3-2.3502 BAU 1.1410 SGT 3493.1 SGR 1748.0 SG3 1517.8 ST 40.3 SR 17.6 SS 31.2  
 RDE -.3125 RRA -.3905 RC3-1.5032 FAU .51488 RRT .8918 RRF .9443 RTF .9185 CRT .7955 CR8 .3812 CST -.2369  
 FDE 2.0171 FRA-8.0407 FC-14.5707 BSP 6352 SGB 3906.0 R23 .1959 R13 .9391 LSA 43.4 MSA 32.0 SSA 2.4  
 BDE .3041 BRA 2.1171 BC3 2.7898 FSP 2616 SG1 3839.2 SG2 719.4 THA 24.99 EL1 42.8 EL2 10.0 ALF 20.35

LAUNCH DATE SEP 5 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 13 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.865 GAL 6.88 AZL 87.48 HCA 136.49 SMA 195.25 ECC .25571 INC 2.5168 V1 29.542  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.178 GAP 2.95 AZP 91.83 TAL 34.83 TAP 171.33 RCA 145.32 APO 245.18 V2 22.464  
 RC 272.618 GL 15.04 GP -20.62 ZAL 37.70 ZAP 82.68 ETS 178.98 ZAE 113.44 ETE 191.68 ZAC 67.60 ETC 265.25 LVI -1.62

Distance 472.598 Earth to Mars

Planetary Conic: C3 30.500 VHL 5.523 DLA 20.62 RAL 9.84 RAD 6647.2 VEL 12.265 PTH 7.21 VHP 2.471 DPA -11.52 RAP 28.03 ECC 1.5019  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 41 38 3656.11 -47.56 142.92 257.88 91.37 8 42 34 2656.1 -41.46 109.86  
 60.00 7 56 23 3616.83 -40.22 139.27 257.76 87.25 8 56 40 2616.8 -36.92 108.65  
 70.00 8 19 19 3549.31 -33.67 133.17 257.12 83.87 9 18 28 2549.3 -32.68 104.47  
 80.00 8 58 36 3426.15 -28.70 123.08 256.37 81.40 9 55 42 2426.1 -29.39 95.68  
 90.00 10 6 22 3207.34 -26.74 106.65 256.02 80.43 10 59 50 2207.3 -28.07 79.72  
 100.00 11 41 28 2900.62 -28.70 84.45 256.37 81.40 12 29 48 1900.6 -29.39 57.05  
 110.00 13 18 45 2596.13 -33.67 62.08 257.12 83.87 14 2 1 1596.1 -32.68 33.39

Differential Corrections: TDE -.3825 TRA-2.1322 TC3-2.4568 BAU 1.1803 SGT 3620.4 SGR 1774.7 SG3 1511.8 ST 40.8 SR 16.8 SS 31.9  
 RDE -.2932 RRA -.4028 RC3-1.5305 FAU .51170 RRT .8970 RRF .9474 RTF .9211 CRT .8006 CR8 .3706 CST -.2390  
 FDE 2.1040 FRA-5.9856 FC-14.5247 BSP 6994 SGB 4032.0 R23 .1974 R13 .9405 LSA 43.8 MSA 32.3 SSA 2.3  
 BDE .4820 BRA 2.1699 BC3 2.8946 FSP 2606 SG1 3967.9 SG2 715.9 THA 24.59 EL1 43.1 EL2 9.5 ALF 19.22

LAUNCH DATE SEP 5 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 15 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.870 GAL 6.84 AZL 87.43 HCA 137.40 SMA 195.33 ECC .25565 INC 2.5747 V1 29.542  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.159 GAP 2.73 AZP 91.90 TAL 34.60 TAP 172.00 RCA 145.40 APO 245.27 V2 22.441  
 RC 275.293 GL 15.42 GP -20.92 ZAL 38.02 ZAP 81.50 ETS 178.47 ZAE 111.97 ETE 191.11 ZAC 67.40 ETC 265.29 LVI -1.38

Distance 476.392 Earth to Mars

Planetary Conic: C3 30.412 VHL 5.518 DLA 21.05 RAL 9.88 RAD 6647.2 VEL 12.261 PTH 7.21 VHP 2.477 DPA -11.93 RAP 27.83 ECC 1.5005  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 51 3664.51 -47.57 143.74 258.28 90.74 8 40 55 2664.5 -41.70 110.52  
 60.00 7 53 55 3627.03 -40.19 140.13 258.05 86.67 8 54 22 2627.0 -37.13 109.44  
 70.00 8 15 57 3562.17 -33.57 134.16 257.32 83.29 9 15 19 2562.2 -32.84 103.44  
 80.00 8 54 9 3442.38 -28.53 124.26 256.50 80.80 9 51 32 2442.4 -29.49 96.87  
 90.00 10 1 20 3225.48 -26.53 107.94 256.11 79.82 10 55 6 2225.5 -28.14 81.04  
 100.00 11 37 1 2916.83 -28.53 85.63 256.50 80.80 12 25 38 1916.8 -29.49 58.24  
 110.00 13 15 23 2608.99 -33.57 63.07 257.32 83.29 13 58 52 1609.0 -32.84 34.38

Differential Corrections: TDE -.3682 TRA-2.1835 TC3-2.5639 BAU 1.2198 SGT 3748.5 SGR 1802.2 SG3 1504.7 ST 41.4 SR 18.0 SS 32.7  
 RDE -.2734 RRA -.4151 RC3-1.5583 FAU .50821 RRT .9017 RRF .9503 RTF .9235 CRT .8076 CR8 .3549 CST -.2429  
 FDE 2.1887 FRA-5.9252 FC-14.4674 BSP 6834 SGB 4159.3 R23 .1991 R13 .9419 LSA 44.3 MSA 32.7 SSA 2.3  
 BDE .4586 BRA 2.2226 BC3 3.0003 FSP 2591 SG1 4097.8 SG2 712.7 THA 24.22 EL1 43.5 EL2 9.0 ALF 18.16

LAUNCH DATE SEP 5 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 17 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.874 GAL 6.79 AZL 87.37 HCA 138.31 SMA 195.42 ECC .25559 INC 2.6346 V1 29.542  
 RP 244.68 LAP 1.75 LOP 120.63 VP 20.142 GAP 2.50 AZP 91.97 TAL 34.36 TAP 172.66 RCA 145.47 APO 245.36 V2 22.418  
 RC 277.948 GL 15.81 GP -21.22 ZAL 38.36 ZAP 80.35 ETS 177.96 ZAE 110.52 ETE 190.55 ZAC 67.18 ETC 265.32 LVI -1.13

Distance 480.185 Earth to Mars

Planetary Conic: C3 30.329 VHL 5.507 DLA 21.49 RAL 9.91 RAD 6647.1 VEL 12.258 PTH 7.20 VHP 2.485 DPA -12.34 RAP 27.65 ECC 1.4991  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 59 3673.25 -47.58 144.58 258.69 90.09 8 39 12 2673.3 -41.96 111.20  
 60.00 7 51 20 3637.67 -40.14 141.03 258.35 86.06 8 51 58 2637.7 -37.34 110.26  
 70.00 8 12 24 3575.63 -33.46 135.19 257.52 82.69 9 12 0 2575.6 -32.99 106.46  
 80.00 8 49 27 3459.46 -28.34 125.49 256.63 80.18 9 47 7 2459.5 -29.58 98.14  
 90.00 9 55 59 3244.68 -26.29 109.29 256.21 79.18 10 50 3 2244.7 -28.20 82.45  
 100.00 11 32 19 2933.93 -28.34 86.86 256.63 80.18 12 21 13 1933.9 -29.58 59.50  
 110.00 13 11 50 2622.45 -33.46 64.11 257.52 82.69 13 55 33 1622.4 -32.99 35.38

Differential Corrections: TDE -.3525 TRA-2.2349 TC3-2.6705 BAU 1.2593 SGT 3877.0 SGR 1829.8 SG3 1496.0 ST 42.0 SR 15.2 SS 33.4  
 RDE -.2531 RRA -.4276 RC3-1.5856 FAU .50416 RRT .9062 RRF .9530 RTF .9256 CRT .8170 CR8 .3332 CST -.2486  
 FDE 2.2723 FRA-5.8611 FC-14.3912 BSP 7076 SGB 4287.1 R23 .2010 R13 .9431 LSA 44.9 MSA 33.0 SSA 2.2  
 BDE .4339 BRA 2.2755 BC3 3.1058 FSP 2573 SG1 4227.9 SG2 709.6 THA 23.87 EL1 43.8 EL2 8.4 ALF 17.16

LAUNCH DATE SEP 5 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

DISTANCE 483.977

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.879 GAL 6.75 AZL 87.30 HCA 139.21 SMA 195.81 ECC .25555 INC 2.6984 V1 29.542
RP 244.90 LAP 1.76 LOP 121.33 VP 20.125 GAP 2.28 AZP 92.04 TAL 34.11 TAP 173.32 RCA 145.54 APO 245.47 V2 22.397
RC 280.584 GL 16.22 GP -21.53 ZAL 30.70 ZAP 79.23 ETS 177.44 ZAE 109.10 ETE 190.00 ZAC 66.95 ETC 285.36 LVI -.87

PLANETOCENTRIC CONIC

C3 30.251 VHL 5.500 DLA 21.95 RAL 9.93 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 2.494 DPA -12.74 RAP 27.50 ECC 1.4979
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 36 1 3682.37 -47.57 145.46 259.12 89.41 8 37 23 2682.4 -42.22 111.93
60.00 7 48 38 3648.77 -40.08 141.97 258.85 85.42 8 49 26 2648.8 -37.55 111.13
70.00 8 8 40 3589.75 -33.33 136.27 257.73 82.06 9 8 30 2589.8 -33.14 107.53
80.00 8 44 27 3477.53 -28.12 126.79 256.75 79.53 9 42 25 2477.5 -29.66 99.47
90.00 9 50 15 3265.11 -26.02 110.73 256.29 78.51 10 44 40 2265.1 -28.24 83.94
100.00 11 27 19 2952.00 -28.12 88.16 256.75 79.53 12 16 31 1952.0 -29.66 60.84
110.00 13 8 6 2636.97 -33.33 65.19 257.73 82.06 13 52 3 1636.6 -33.14 36.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3353 TRA-2.2860 TC3-2.7768 BAU 1.2987 SGT 4005.5 SGR 1857.4 SG3 1485.7 ST 42.5 SR 14.4 SS 34.2
RDE -.2320 RRA -.4400 RC3-1.6128 FAU .49961 RRT .9102 RRF .9537 RTF .9275 CRT .8292 CR8 .3050 CST -.2552
FDE 2.3566 FRA-5.7696 FC-14.2980 BSP 7316 SGB 4415.2 R23 .2031 R13 .9441 LSA 45.5 MSA 33.3 S8A 2.2
BDE .4077 BRA 2.3279 BC3 3.2112 F8P 2554 SG1 4358.3 SG2 706.8 THA 23.54 EL1 44.2 EL2 7.8 ALF 16.22

LAUNCH DATE SEP 5 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

DISTANCE 487.768

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.884 GAL 6.70 AZL 87.24 HCA 140.11 SMA 195.80 ECC .25552 INC 2.7806 V1 29.542
RP 245.11 LAP 1.77 LOP 122.44 VP 20.109 GAP 2.06 AZP 92.12 TAL 33.86 TAP 173.97 RCA 145.62 APO 245.58 V2 22.375
RC 283.198 GL 16.64 GP -21.85 ZAL 39.05 ZAP 78.15 ETS 176.91 ZAE 107.70 ETE 189.45 ZAC 66.71 ETC 285.39 LVI -.60

PLANETOCENTRIC CONIC

C3 30.179 VHL 5.494 DLA 22.42 RAL 9.96 RAD 6647.1 VEL 12.252 PTH 7.20 VHP 2.504 DPA -13.15 RAP 27.37 ECC 1.4967
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 33 57 3691.87 -47.56 146.38 259.56 88.70 8 35 29 2691.9 -42.48 112.68
60.00 7 45 47 3660.38 -40.02 142.95 258.97 84.76 8 46 47 2660.4 -37.76 112.05
70.00 8 4 43 3604.58 -33.18 137.41 257.93 81.41 9 4 48 2604.6 -33.29 108.67
80.00 8 39 8 3496.69 -27.88 128.16 256.86 78.85 9 37 24 2496.7 -29.74 100.89
90.00 9 44 6 3286.91 -25.71 112.25 256.36 77.80 10 38 53 2286.9 -28.27 85.53
100.00 11 21 59 2971.16 -27.88 89.53 256.86 78.85 12 11 31 1971.2 -29.74 62.26
110.00 13 4 10 2651.40 -33.18 66.32 257.93 81.41 13 48 21 1651.4 -33.29 37.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3160 TRA-2.3367 TC3-2.8827 BAU 1.3381 SGT 4134.1 SGR 1885.6 SG3 1474.2 ST 43.1 SR 13.6 SS 35.0
RDE -.2101 RRA -.4925 RC3-1.6400 FAU .49489 RRT .9141 RRF .9582 RTF .9291 CRT .8442 CR8 .2682 CST -.2638
FDE 2.4412 FRA-5.7141 FC-14.1908 BSP 7559 SGB 4843.8 R23 .2034 R13 .9451 LSA 46.2 MSA 33.6 S8A 2.2
BDE .3795 BRA 2.3801 BC3 3.3166 F8P 2531 SG1 4488.9 SG2 704.3 THA 23.24 EL1 44.7 EL2 7.1 ALF 15.35

LAUNCH DATE SEP 5 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

DISTANCE 491.558

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.889 GAL 6.65 AZL 87.17 HCA 141.01 SMA 195.70 ECC .25550 INC 2.8270 V1 29.542
RP 245.32 LAP 1.78 LOP 123.34 VP 20.094 GAP 1.84 AZP 92.20 TAL 33.61 TAP 174.62 RCA 145.70 APO 245.70 V2 22.354
RC 285.791 GL 17.07 GP -22.17 ZAL 39.41 ZAP 77.09 ETS 176.38 ZAE 106.32 ETE 188.92 ZAC 66.45 ETC 285.43 LVI -.31

PLANETOCENTRIC CONIC

C3 30.114 VHL 5.488 DLA 22.91 RAL 9.98 RAD 6647.0 VEL 12.249 PTH 7.20 VHP 2.515 DPA -13.55 RAP 27.27 ECC 1.4958
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 31 47 3701.80 -47.54 147.34 260.02 87.96 8 33 29 2701.8 -42.75 113.48
60.00 7 42 47 3672.53 -39.94 143.98 259.29 84.07 8 43 59 2672.3 -37.97 113.01
70.00 8 0 33 3620.18 -33.02 138.59 258.14 80.72 9 0 33 2620.2 -33.43 109.86
80.00 8 33 26 3517.06 -27.60 129.61 256.97 78.14 9 32 3 2517.1 -29.80 102.40
90.00 9 37 28 3310.28 -25.37 113.87 256.42 77.06 10 32 38 2310.3 -28.28 87.24
100.00 11 16 17 2991.53 -27.60 90.98 256.97 78.14 12 6 9 1991.5 -29.80 63.77
110.00 12 59 59 2667.00 -33.02 67.51 258.14 80.72 13 44 26 1667.0 -33.43 38.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2956 TRA-2.3872 TC3-2.9877 BAU 1.3773 SGT 4262.5 SGR 1913.7 SG3 1481.0 ST 43.7 SR 12.9 SS 35.8
RDE -.1875 RRA -.4649 RC3-1.6888 FAU .48919 RRT .9175 RRF .9605 RTF .9305 CRT .8625 CR8 .2217 CST -.2736
FDE 2.5244 FRA-5.6315 FC-14.0635 BSP 7804 SGB 4872.4 R23 .2080 R13 .9459 LSA 46.9 MSA 33.9 S8A 2.1
BDE .3500 BRA 2.4321 BC3 3.4212 F8P 2508 SG1 4619.4 SG2 702.2 THA 22.95 EL1 45.1 EL2 6.3 ALF 14.59

LAUNCH DATE SEP 5 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

DISTANCE 495.348

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.894 GAL 6.60 AZL 87.10 HCA 141.91 SMA 195.80 ECC .25549 INC 2.8959 V1 29.542
RP 245.53 LAP 1.79 LOP 124.24 VP 20.080 GAP 1.82 AZP 92.28 TAL 33.35 TAP 175.26 RCA 145.77 APO 245.82 V2 22.334
RC 288.361 GL 17.83 GP -22.31 ZAL 39.79 ZAP 76.06 ETS 175.84 ZAE 104.97 ETE 188.39 ZAC 66.18 ETC 285.47 LVI -.01

PLANETOCENTRIC CONIC

C3 30.056 VHL 5.482 DLA 23.41 RAL 10.00 RAD 6647.0 VEL 12.247 PTH 7.19 VHP 2.527 DPA -13.95 RAP 27.20 ECC 1.4948
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 29 30 3712.17 -47.51 148.34 260.49 87.19 8 31 22 2712.2 -43.02 114.33
60.00 7 39 37 3685.25 -39.84 145.05 259.62 83.35 8 41 2 2685.2 -38.19 114.02
70.00 7 56 7 3636.62 -32.83 139.84 258.34 80.01 8 56 43 2636.6 -33.57 111.12
80.00 8 27 18 3538.47 -27.29 131.15 257.06 77.38 9 26 17 2538.8 -29.84 104.02
90.00 9 30 16 3335.47 -24.97 115.61 256.46 76.28 10 25 52 2335.5 -28.26 89.08
100.00 11 10 10 3013.26 -27.29 92.52 257.06 77.38 12 0 23 2013.3 -29.84 65.38
110.00 12 55 33 2683.44 -32.83 68.76 258.34 80.01 13 40 17 1683.4 -33.57 40.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2737 TRA-2.4380 TC3-3.0924 BAU 1.4168 SGT 4391.7 SGR 1943.1 SG3 1447.0 ST 44.3 SR 12.2 SS 36.5
RDE -.1847 RRA -.4780 RC3-1.6930 FAU .48348 RRT .9209 RRF .9628 RTF .9319 CRT .8837 CR8 .1629 CST -.2857
FDE 2.6027 FRA-5.5497 FC-13.9257 BSP 8042 SGB 4802.4 R23 .2108 R13 .9466 LSA 47.8 MSA 34.1 S8A 2.1
BDE .3194 BRA 2.4844 BC3 3.5259 F8P 2478 SG1 4751.1 SG2 700.3 THA 22.69 EL1 45.6 EL2 5.5 ALF 13.88

LAUNCH DATE SEP 5 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

DISTANCE 499.136

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.899 GAL 6.55 AZL 87.03 HCA 142.81 SMA 195.90 ECC .25549 INC 2.9676 V1 29.542
RP 245.73 LAP 1.79 LOP 125.14 VP 20.067 GAP 1.40 AZP 92.36 TAL 33.09 TAP 175.90 RCA 145.85 APO 245.95 V2 22.314
RC 290.907 GL 17.99 GP -22.85 ZAL 40.17 ZAP 75.07 ETS 175.29 ZAE 103.65 ETE 187.86 ZAC 65.89 ETC 285.51 LVI .30

PLANETOCENTRIC CONIC

C3 30.005 VHL 5.478 DLA 23.93 RAL 10.01 RAD 6647.0 VEL 12.245 PTH 7.19 VHP 2.541 DPA -14.35 RAP 27.15 ECC 1.4938
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 27 5 3723.01 -47.47 149.39 260.98 86.39 8 29 8 2723.0 -43.31 115.22
60.00 7 36 16 3898.59 -39.73 146.16 259.95 82.60 8 37 54 2698.6 -38.40 115.09
70.00 7 51 24 3653.99 -32.62 141.15 258.54 79.26 8 52 18 2654.0 -33.70 112.46
80.00 8 20 42 3562.08 -26.93 132.79 257.14 76.59 9 20 4 2562.1 -29.86 105.75
90.00 9 22 24 3362.80 -24.52 117.48 256.46 75.45 10 18 27 2362.8 -28.21 91.08
100.00 11 3 33 3036.55 -26.93 94.16 257.14 76.59 11 54 10 2036.6 -29.86 67.11
110.00 12 50 50 2700.81 -32.62 70.07 258.54 79.26 13 35 51 1700.8 -33.70 41.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2496 TRA-2.4882 TC3-3.1957 BAU 1.4559 SGT 4520.3 SGR 1972.5 SG3 1431.5 ST 45.0 SR 11.5 SS 37.4
RDE -.1405 RRA -.4910 RC3-1.7207 FAU .47722 RRT .9239 RRF .9650 RTF .9330 CRT .9076 CRS .0904 CST -.2990
FDE 2.6845 FRA-5.4611 FC-13.7694 B8P 8283 SGB 4931.9 R23 .2135 R13 .9473 LSA 48.7 MSA 34.3 SSA 2.0
BDE .2664 BRA 2.5362 BC3 3.6295 FSP 2449 SG1 4882.2 SG2 698.7 THA 22.44 EL1 46.2 EL2 4.7 ALF 13.25

LAUNCH DATE SEP 5 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

DISTANCE 502.923

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.905 GAL 6.50 AZL 86.96 HCA 143.71 SMA 196.00 ECC .25549 INC 3.0421 V1 29.542
RP 245.93 LAP 1.80 LOP 126.04 VP 20.055 GAP 1.19 AZP 92.45 TAL 32.82 TAP 176.53 RCA 145.93 APO 246.08 V2 22.295
RC 293.430 GL 18.48 GP -23.21 ZAL 40.57 ZAP 74.11 ETS 174.73 ZAE 102.35 ETE 187.33 ZAC 65.59 ETC 285.55 LVI .63

PLANETOCENTRIC CONIC

C3 29.962 VHL 5.474 DLA 24.46 RAL 10.01 RAD 6647.0 VEL 12.243 PTH 7.19 VHP 2.555 DPA -14.75 RAP 27.13 ECC 1.4931
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 24 32 3734.37 -47.42 150.48 261.48 85.55 8 26 47 2734.4 -43.59 116.16
60.00 7 32 42 3712.60 -39.60 147.33 260.29 81.81 8 34 35 2712.6 -38.61 116.22
70.00 7 46 22 3672.37 -32.38 142.53 258.74 78.48 8 47 34 2672.4 -33.82 113.88
80.00 8 13 31 3587.17 -26.52 134.54 257.20 75.76 9 13 18 2587.2 -29.85 107.61
90.00 9 13 44 3392.71 -23.99 119.52 256.46 74.56 10 10 16 2392.7 -28.12 93.26
100.00 10 56 23 3061.64 -26.52 95.91 257.20 75.76 11 47 24 2061.6 -29.85 68.98
110.00 12 45 48 2719.19 -32.38 71.45 258.74 78.48 13 31 7 1719.2 -33.82 42.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2239 TRA-2.5383 TC3-3.2981 BAU 1.4951 SGT 4648.9 SGR 2002.8 SG3 1414.8 ST 45.6 SR 11.0 SS 38.2
RDE -.1157 RRA -.5044 RC3-1.7476 FAU .47064 RRT .9268 RRF .9670 RTF .9340 CRT .9325 CRS .0030 CST -.3139
FDE 2.7632 FRA-5.3698 FC-13.5990 B8P 8525 SGB 5062.0 R23 .2165 R13 .9478 LSA 49.7 MSA 34.5 SSA 1.9
BDE .2920 BRA 2.5879 BC3 3.7325 FSP 2418 SG1 5013.7 SG2 697.5 THA 22.22 EL1 46.8 EL2 3.9 ALF 12.73

LAUNCH DATE SEP 5 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

DISTANCE 506.709

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.911 GAL 6.45 AZL 86.88 HCA 144.60 SMA 196.11 ECC .25551 INC 3.1198 V1 29.542
RP 246.12 LAP 1.81 LOP 126.93 VP 20.044 GAP .98 AZP 92.54 TAL 32.55 TAP 177.16 RCA 146.00 APO 246.22 V2 22.276
RC 295.928 GL 18.99 GP -23.58 ZAL 40.98 ZAP 73.13 ETS 174.17 ZAE 101.07 ETE 186.81 ZAC 65.27 ETC 285.59 LVI .97

PLANETOCENTRIC CONIC

C3 29.929 VHL 5.471 DLA 25.02 RAL 10.01 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 2.571 DPA -15.16 RAP 27.14 ECC 1.4926
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 21 50 3746.27 -47.35 151.82 261.99 84.67 8 24 16 2746.3 -43.88 117.16
60.00 7 28 56 3727.34 -39.45 148.56 260.63 81.00 8 31 4 2727.3 -38.83 117.41
70.00 7 40 58 3691.88 -32.10 143.98 258.92 77.66 8 42 30 2691.9 -33.93 115.40
80.00 8 5 40 3614.36 -26.05 136.42 257.23 74.87 9 5 55 2614.4 -29.81 109.63
90.00 9 4 3 3425.81 -23.37 121.74 256.40 73.61 10 1 9 2425.8 -27.97 95.67
100.00 10 48 32 3088.84 -26.05 97.79 257.23 74.87 11 40 1 2088.8 -29.81 71.00
110.00 12 40 24 2738.70 -32.10 72.90 258.92 77.66 13 26 3 1738.7 -33.93 44.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1961 TRA-2.5878 TC3-3.3988 BAU 1.5340 SGT 4778.6 SGR 2033.7 SG3 1398.8 ST 46.4 SR 10.5 SS 39.1
RDE -.0900 RRA -.5179 RC3-1.7743 FAU .46368 RRT .9294 RRF .9690 RTF .9348 CRT .9558 CRS -.0992 CST -.3308
FDE 2.8407 FRA-5.2741 FC-13.4125 B8P 8767 SGB 5191.5 R23 .2197 R13 .9483 LSA 50.9 MSA 34.6 SSA 1.9
BDE .2158 BRA 2.6391 BC3 3.8339 FSP 2384 SG1 5144.5 SG2 696.7 THA 22.01 EL1 47.5 EL2 3.0 ALF 12.32

LAUNCH DATE SEP 5 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

DISTANCE 510.494

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 32.916 GAL 6.40 AZL 86.80 HCA 145.49 SMA 196.22 ECC .25553 INC 3.2008 V1 29.542
RP 246.30 LAP 1.81 LOP 127.83 VP 20.033 GAP .76 AZP 92.64 TAL 32.28 TAP 177.78 RCA 146.08 APO 246.36 V2 22.258
RC 298.401 GL 19.51 GP -23.97 ZAL 41.40 ZAP 72.29 ETS 173.59 ZAE 99.82 ETE 186.29 ZAC 64.93 ETC 285.64 LVI 1.34

PLANETOCENTRIC CONIC

C3 29.905 VHL 5.469 DLA 25.59 RAL 10.01 RAD 6647.0 VEL 12.241 PTH 7.19 VHP 2.588 DPA -15.56 RAP 27.18 ECC 1.4922
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 18 58 3758.75 -47.26 152.82 262.52 83.76 8 21 36 2758.8 -44.18 118.22
60.00 7 24 55 3742.86 -39.28 149.84 260.97 80.14 8 27 18 2742.9 -39.03 118.68
70.00 7 35 10 3712.66 -31.79 145.52 259.09 76.80 8 37 3 2712.7 -34.02 117.01
80.00 7 57 1 3644.08 -25.51 138.46 257.23 73.93 8 57 45 2644.1 -29.73 111.84
90.00 8 53 5 3463.00 -22.64 124.22 256.28 72.58 9 50 48 2463.0 -27.75 98.37
100.00 10 39 53 3118.55 -23.51 99.83 257.23 73.93 11 31 51 2118.6 -29.73 73.20
110.00 12 34 37 2759.47 -31.79 74.44 259.09 76.80 13 20 36 1759.5 -34.02 45.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1661 TRA-2.6372 TC3-3.4974 BAU 1.5728 SGT 4904.0 SGR 2065.2 SG3 1377.6 ST 47.1 SR 10.3 SS 40.0
RDE -.0630 RRA -.5318 RC3-1.8007 FAU .45629 RRT .9319 RRF .9708 RTF .9356 CRT .9742 CRS -.2150 CST -.3467
FDE 2.9187 FRA-5.1759 FC-13.2092 B8P 9013 SGB 5321.1 R23 .2230 R13 .9487 LSA 52.1 MSA 34.8 SSA 1.8
BDE .1777 BRA 2.6903 BC3 3.9338 FSP 2351 SG1 5275.3 SG2 696.2 THA 21.83 EL1 48.2 EL2 2.3 ALF 12.02

LAUNCH DATE SEP 5 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 32.922 GAL 6.35 AZL 86.71 HCA 146.39 SMA 196.34 ECC .25557 INC 3.2854 V1 29.842  
 RP 246.48 LAP 1.82 LOP 128.72 VP 20.023 GAP .55 AZP 92.74 TAL 32.01 TAP 178.39 RCA 146.16 APO 246.51 V2 22.241  
 RC 300.850 GL 20.06 GP -24.37 ZAL 41.84 ZAP 71.43 ETS 173.00 ZAE 98.60 ETE 185.78 ZAC 64.56 ETC 285.69 LVI 1.72

PLANETOCENTRIC CONIC  
 C3 29.893 VHL 5.467 DLA 26.19 RAL 9.99 RAD 6647.0 VEL 12.240 PTH 7.19 VHP 2.606 DPA -15.98 RAP 27.25 ECC 1.4920  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 15 54 3771.87 -47.16 154.07 263.06 82.80 8 18 46 2771.9 -44.47 119.34  
 60.00 7 20 38 3759.25 -39.08 151.19 261.31 79.25 8 23 18 2759.2 -39.24 120.03  
 70.00 7 28 55 3734.85 -31.43 147.15 259.25 75.90 8 31 10 2734.8 -34.09 118.74  
 80.00 7 47 22 3676.90 -24.87 140.69 257.17 72.92 8 48 39 2676.9 -29.59 114.26  
 90.00 8 40 20 3505.78 -21.74 127.03 256.08 71.45 9 38 46 2505.8 -27.42 101.45  
 100.00 10 30 14 3151.37 -24.87 102.06 257.17 72.92 11 22 45 2151.4 -29.59 75.63  
 110.00 12 28 21 2781.67 -31.43 76.07 259.25 75.90 13 14 43 1781.7 -34.09 47.66

DIFFERENTIAL CORRECTIONS  
 TDE -.1349 TRA-2.6870 TC3-3.5952 BAV 1.6118 SGT 5032.2 SGR 2098.4 SG3 1357.7 ST 48.0 SR 10.2 SS 40.9  
 RDE -.0356 RRA -.5465 RC3-1.8277 FAU .44874 RRT .9343 RRF .9726 RTF .9362 CRT .9838 CRS -.3366 CST -.3682  
 FDE 2.9909 FRA-5.0779 FC-12.9938 BSP 9246 SGB 5452.2 R23 .2263 R13 .9490 LSA 53.4 MSA 34.8 SSA 1.8  
 BDE .1395 BRA 2.7421 BC3 4.0332 FSP 2311 SG1 5407.5 SG2 696.3 THA 21.66 EL1 49.0 EL2 1.6 ALF 11.84

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 5 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 32.928 GAL 6.30 AZL 86.63 HCA 147.28 SMA 196.45 ECC .25561 INC 3.3740 V1 29.542  
 RP 246.65 LAP 1.82 LOP 129.61 VP 20.014 GAP .34 AZP 92.84 TAL 31.73 TAP 179.01 RCA 146.24 APO 246.67 V2 22.224  
 RC 303.274 GL 20.63 GP -24.79 ZAL 42.29 ZAP 70.60 ETS 172.40 ZAE 97.40 ETE 185.26 ZAC 64.18 ETC 285.75 LVI 2.12

PLANETOCENTRIC CONIC  
 C3 29.893 VHL 5.467 DLA 26.81 RAL 9.96 RAD 6647.0 VEL 12.240 PTH 7.19 VHP 2.625 DPA -16.40 RAP 27.34 ECC 1.4920  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 39 3785.66 -47.03 155.38 263.61 81.80 8 15 44 2785.7 -44.77 120.53  
 60.00 7 16 3 3776.57 -38.85 152.60 261.65 78.31 8 19 0 2776.6 -39.43 121.46  
 70.00 7 22 8 3758.66 -31.02 148.89 259.38 74.94 8 24 46 2758.7 -34.14 120.60  
 80.00 7 36 27 3713.67 -24.11 143.16 257.06 71.84 8 38 21 2713.7 -29.37 116.98  
 90.00 8 24 59 3556.87 -20.59 130.34 255.75 70.18 9 24 16 2556.9 -26.93 105.11  
 100.00 10 19 19 3188.14 -24.11 104.53 257.06 71.84 11 12 27 2188.1 -29.37 78.34  
 110.00 12 21 34 2805.48 -31.02 77.81 259.38 74.94 13 8 19 1805.5 -34.14 49.52

DIFFERENTIAL CORRECTIONS  
 TDE -.1012 TRA-2.7358 TC3-3.6908 BAV 1.6507 SGT 5159.0 SGR 2132.3 SG3 1336.5 ST 48.8 SR 10.3 SS 41.7  
 RDE -.0069 RRA -.5612 RC3-1.8546 FAU .44081 RRT .9364 RRF .9742 RTF .9367 CRT .9823 CRS -.4578 CST -.3889  
 FDE 3.0628 FRA-4.9736 FC-12.7662 BSP 9495 SGB 5582.3 R23 .2299 R13 .9493 LSA 54.9 MSA 34.9 SSA 1.7  
 BDE .1014 BRA 2.7927 BC3 4.1303 FSP 2274 SG1 5538.6 SG2 696.8 THA 21.92 EL1 49.9 EL2 1.9 ALF 11.77

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 5 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 32.935 GAL 6.25 AZL 86.53 HCA 148.17 SMA 196.57 ECC .25566 INC 3.4669 V1 29.542  
 RP 246.82 LAP 1.83 LOP 130.50 VP 20.006 GAP .13 AZP 92.95 TAL 31.45 TAP 179.81 RCA 146.32 APO 246.82 V2 22.207  
 RC 305.673 GL 21.22 GP -25.23 ZAL 42.75 ZAP 69.81 ETS 171.79 ZAE 96.23 ETE 184.74 ZAC 63.77 ETC 285.80 LVI 2.94

PLANETOCENTRIC CONIC  
 C3 29.907 VHL 5.469 DLA 27.45 RAL 9.93 RAD 6647.0 VEL 12.241 PTH 7.19 VHP 2.648 DPA -16.82 RAP 27.47 ECC 1.4922  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 9 3800.20 -46.88 156.75 264.17 80.75 8 12 30 2800.2 -45.07 121.80  
 60.00 7 11 8 3794.93 -38.58 154.09 261.96 77.33 8 14 23 2794.9 -39.62 122.98  
 70.00 7 14 43 3784.34 -30.56 150.74 259.49 73.94 8 17 48 2784.3 -34.15 122.60  
 80.00 7 23 50 3755.73 -23.19 145.95 256.85 70.65 8 26 26 2755.7 -29.05 120.06  
 90.00 8 5 0 3622.85 -19.02 134.52 255.20 68.87 9 3 23 2622.6 -26.13 109.77  
 100.00 10 6 42 3230.20 -23.19 107.31 256.85 70.65 11 0 32 2230.2 -29.05 81.43  
 110.00 12 14 10 2831.16 -30.56 79.66 259.49 73.94 13 1 21 1831.2 -34.15 51.52

DIFFERENTIAL CORRECTIONS  
 TDE -.0852 TRA-2.7849 TC3-3.7837 BAV 1.8898 SGT 5285.9 SGR 2167.6 SG3 1314.3 ST 49.8 SR 10.7 SS 42.8  
 RDE .0232 RRA -.5769 RC3-1.8813 FAU .43253 RRT .9385 RRF .9798 RTF .5072 CRT .9695 CRS -.5708 CST -.4110  
 FDE 3.1338 FRA-4.8704 FC-12.5207 BSP 9731 SGB 5713.1 R23 .2334 R13 .9495 LSA 56.5 MSA 34.9 SSA 1.8  
 BDE .0692 BRA 2.8440 BC3 4.2258 FSP 2232 SG1 5670.3 SG2 697.7 THA 21.39 EL1 50.9 EL2 2.6 ALF 11.84

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 5 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 32.941 GAL 6.20 AZL 86.44 HCA 149.03 SMA 196.69 ECC .25571 INC 3.5643 V1 29.542  
 RP 246.98 LAP 1.83 LOP 131.39 VP 19.998 GAP -.08 AZP 93.06 TAL 31.17 TAP 180.22 RCA 146.39 APO 246.99 V2 22.191  
 RC 308.046 GL 21.85 GP -25.69 ZAL 43.23 ZAP 69.06 ETS 171.16 ZAE 95.09 ETE 184.21 ZAC 63.34 ETC 285.86 LVI 2.99

PLANETOCENTRIC CONIC  
 C3 29.936 VHL 5.471 DLA 28.11 RAL 9.88 RAD 6647.0 VEL 12.242 PTH 7.19 VHP 2.668 DPA -17.26 RAP 27.62 ECC 1.4927  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 5 25 3815.53 -46.70 158.19 264.73 79.65 8 9 1 2815.5 -45.37 123.16  
 60.00 7 5 50 3814.44 -38.28 155.66 262.30 76.30 8 9 24 2814.4 -39.79 124.61  
 70.00 7 6 36 3812.19 -30.01 152.73 259.55 72.88 8 10 8 2812.2 -34.13 124.78  
 80.00 7 8 44 3805.49 -22.03 149.19 256.52 69.32 8 12 9 2805.5 -28.58 123.68  
 90.00 7 31 38 3731.37 -16.19 141.25 254.01 66.49 8 33 49 2731.4 -24.49 117.29  
 100.00 9 51 36 3279.96 -22.03 110.55 256.52 69.32 10 46 16 2280.0 -28.58 85.05  
 110.00 12 6 2 2859.01 -30.01 81.65 259.55 72.88 12 53 41 1859.0 -34.13 53.70

DIFFERENTIAL CORRECTIONS  
 TDE -.0266 TRA-2.8337 TC3-3.8738 BAV 1.7282 SGT 5411.9 SGR 2204.1 SG3 1290.9 ST 50.9 SR 11.4 SS 43.6  
 RDE .0546 RRA -.5931 RC3-1.9079 FAU .42393 RRT .9404 RRF .9773 RTF .9375 CRT .9479 CRS -.6687 CST -.4342  
 FDE 3.2031 FRA-4.7645 FC-12.2605 BSP 9980 SGB 5843.6 R23 .2371 R13 .9497 LSA 58.2 MSA 35.0 SSA 1.6  
 BDE .0607 BRA 2.8951 BC3 4.3182 FSP 2192 SG1 5801.6 SG2 699.1 THA 21.28 EL1 52.0 EL2 3.5 ALF 12.03

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE SEP 5 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 13 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.947 GAL 6.14 AZL 86.33 HCA 149.94 SMA 196.81 ECC .25578 INC 3.6668 V1 29.542  
 RP 247.14 LAP 1.84 LOP 132.28 VP 19.992 GAP -.28 AZP 93.17 TAL 30.88 TAP 180.82 RCA 146.47 APO 247.15 V2 22.176  
 RC 310.395 GL 22.50 GP -26.17 ZAL 43.73 ZAP 68.34 ETS 170.52 ZAE 93.98 ETE 183.69 ZAC 62.88 ETC 285.93 LVI 3.48

Distance 529.403 Earth to Mars

Planetocentric Conic: C3 29.982 VHL 5.476 DLA 28.80 RAL 9.81 RAD 6647.0 VEL 12.244 PTH 7.19 VHP 2.691 DPA -17.70 RAP 27.81 ECC 1.4934  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 1 25 3831.74 -46.50 159.70 265.31 78.51 8 5 17 2831.7 -45.87 124.61  
 60.00 7 0 6 3835.22 -37.93 157.32 262.61 75.23 8 4 2 2835.2 -39.95 126.36  
 70.00 6 57 36 3842.64 -29.38 154.88 259.57 71.75 8 1 38 2842.6 -34.06 127.15  
 80.00 6 49 28 3868.20 -20.47 153.19 255.95 67.78 7 53 57 2868.2 -27.82 128.19  
 84.30 6 16 52 3973.20 -13.96 157.92 252.95 64.55 7 23 5 2973.2 -23.26 134.63  
 100.00 9 32 20 3342.67 -20.47 114.56 255.95 67.78 10 28 3 2342.7 -27.82 89.55  
 110.00 11 57 2 2889.46 -29.38 83.79 259.57 71.75 12 45 12 1889.5 -34.06 56.07

Differential Corrections: TDE .0138 TRA-2.8828 TC3-3.9618 BAU 1.7673 SGT 5358.5 SGR 2242.7 SCS 1266.8 ST 52.1 SR 12.3 SS 44.5  
 RDE .0871 RRA -.6103 RC3-1.9350 FAU .41517 RRT .9422 RRF .9788 RTF .9378 CRT .9220 CRS -.7478 CST -.4581  
 FDE 3.2676 FRA-4.6585 FC-11.9881 BSP 10211 SGB 5975.3 R23 .2407 R13 .9498 LSA 60.1 MSA 35.0 S8A 1.5  
 BDE .0882 BRA 2.9467 BC3 4.4091 FSP 2145 SGI 5934.0 SGI 701.0 THA 21.19 EL1 53.3 EL2 4.6 ALF 12.33

LAUNCH DATE SEP 5 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 15 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.954 GAL 6.09 AZL 86.23 HCA 150.83 SMA 196.93 ECC .25585 INC 3.7749 V1 29.542  
 RP 247.29 LAP 1.84 LOP 133.17 VP 19.986 GAP -.49 AZP 93.30 TAL 30.59 TAP 181.42 RCA 146.55 APO 247.32 V2 22.161  
 RC 312.717 GL 23.18 GP -26.67 ZAL 44.24 ZAP 67.65 ETS 169.86 ZAE 92.88 ETE 183.16 ZAC 62.39 ETC 286.00 LVI 3.96

Distance 533.185 Earth to Mars

Planetocentric Conic: C3 30.048 VHL 5.482 DLA 29.52 RAL 9.73 RAD 6647.0 VEL 12.247 PTH 7.19 VHP 2.716 DPA -18.16 RAP 28.02 ECC 1.4945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 57 6 3848.89 -46.25 161.28 265.88 77.31 8 1 15 2848.9 -45.96 126.16  
 60.00 6 53 54 3857.41 -37.53 159.07 262.90 74.10 7 58 11 2857.4 -40.09 128.23  
 70.00 6 47 32 3876.21 -28.65 157.21 259.52 70.55 7 52 8 2876.2 -33.91 129.78  
 80.00 6 20 15 3962.24 -17.94 159.02 254.86 65.73 7 26 17 2962.2 -26.39 134.80  
 81.16 5 51 32 4054.16 -14.27 164.04 253.06 63.88 6 59 6 3054.2 -23.81 140.79  
 100.00 9 3 7 3436.71 -17.94 120.39 254.86 65.73 10 0 23 2436.7 -26.39 96.17  
 110.00 11 46 58 2923.02 -28.65 86.13 259.52 70.55 12 35 41 1923.0 -33.91 58.68

Differential Corrections: TDE .0492 TRA-2.9389 TC3-4.0553 BAU 1.8119 SGT 5677.2 SGR 2299.0 SCS 1250.4 ST 53.4 SR 13.3 SS 44.8  
 RDE .1122 RRA -.6375 RC3-1.9744 FAU .40917 RRT .9449 RRF .9805 RTF .9397 CRT .9077 CRS -.7953 CST -.4875  
 FDE 3.2673 FRA-4.6168 FC-11.7890 BSP 10316 SGB 6125.0 R23 .2402 R13 .9515 LSA 62.0 MSA 34.5 S8A 1.5  
 BDE .1225 BRA 3.0073 BC3 4.5104 FSP 2030 SGI 6084.6 SGI 702.2 THA 21.24 EL1 54.8 EL2 5.4 ALF 12.86

LAUNCH DATE SEP 5 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 17 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.960 GAL 6.04 AZL 86.11 HCA 151.71 SMA 197.06 ECC .25592 INC 3.8888 V1 29.542  
 RP 247.44 LAP 1.84 LOP 134.06 VP 19.981 GAP -.69 AZP 93.43 TAL 30.30 TAP 182.01 RCA 146.63 APO 247.49 V2 22.147  
 RC 315.013 GL 23.89 GP -27.20 ZAL 44.78 ZAP 67.00 ETS 169.19 ZAE 91.83 ETE 182.62 ZAC 61.88 ETC 286.08 LVI 4.49

Distance 536.962 Earth to Mars

Planetocentric Conic: C3 30.133 VHL 5.489 DLA 30.27 RAL 9.63 RAD 6647.1 VEL 12.250 PTH 7.20 VHP 2.742 DPA -18.64 RAP 28.28 ECC 1.4959  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 26 3867.10 -45.97 162.95 266.45 76.06 7 56 53 2867.1 -46.25 127.82  
 60.00 6 47 8 3881.24 -37.07 160.92 263.16 72.92 7 51 49 2881.2 -40.20 130.25  
 70.00 6 36 6 3913.82 -27.77 159.78 259.39 69.26 7 41 20 2913.8 -33.68 132.86  
 78.73 5 32 39 4113.91 -14.58 168.64 253.18 63.18 6 41 13 3113.9 -24.38 145.44  
 78.73 5 32 39 4113.91 -14.58 168.64 253.18 63.18 6 41 13 3113.9 -24.38 145.44  
 78.73 5 32 39 4113.91 -14.58 168.64 253.18 63.18 6 41 13 3113.9 -24.38 145.44  
 110.00 11 35 32 2980.64 -27.77 88.70 259.39 69.26 12 24 53 1980.6 -33.68 61.59

Differential Corrections: TDE .0964 TRA-2.8868 TC3-4.1338 BAU 1.8499 SGT 5799.5 SGR 2336.5 SCS 1221.5 ST 54.8 SR 14.6 SS 45.8  
 RDE .1502 RRA -.6541 RC3-1.9976 FAU .39883 RRT .9462 RRF .9816 RTF .9394 CRT .8803 CRS -.8484 CST -.5103  
 FDE 3.3449 FRA-4.4888 FC-11.4584 BSP 10584 SGB 6252.5 R23 .2451 R13 .9511 LSA 64.2 MSA 34.6 S8A 1.4  
 BDE .1785 BRA 3.0574 BC3 4.5911 FSP 2000 SGI 6212.5 SGI 705.5 THA 21.15 EL1 56.3 EL2 6.7 ALF 13.39

LAUNCH DATE SEP 5 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 19 1974

Heliocentric Conic: RL 150.83 LAL .00 LOL 342.29 VL 32.987 GAL 5.98 AZL 85.99 HCA 152.59 SMA 197.19 ECC .25600 INC 4.0094 V1 29.542  
 RP 247.58 LAP 1.84 LOP 134.94 VP 19.976 GAP -.89 AZP 93.56 TAL 30.00 TAP 182.80 RCA 146.71 APO 247.67 V2 22.133  
 RC 317.282 GL 24.84 GP -27.76 ZAL 45.33 ZAP 66.40 ETS 168.51 ZAE 90.80 ETE 182.08 ZAC 61.33 ETC 286.16 LVI 5.04

Distance 540.739 Earth to Mars

Planetocentric Conic: C3 30.242 VHL 5.499 DLA 31.05 RAL 9.51 RAD 6647.1 VEL 12.255 PTH 7.20 VHP 2.770 DPA -19.13 RAP 28.58 ECC 1.4977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 47 23 3886.46 -45.83 164.89 267.01 74.74 7 52 9 2886.5 -46.52 129.61  
 60.00 6 39 43 3906.91 -36.54 162.89 263.38 71.67 7 44 50 2906.9 -40.27 132.43  
 70.00 6 22 52 3958.73 -26.70 162.66 259.12 67.86 7 28 48 2956.7 -33.33 135.97  
 76.62 5 16 47 4163.57 -14.90 172.53 253.30 62.44 6 26 10 3163.6 -24.96 149.38  
 76.62 5 16 47 4163.57 -14.90 172.53 253.30 62.44 6 26 10 3163.6 -24.96 149.38  
 76.62 5 16 47 4163.57 -14.90 172.53 253.30 62.44 6 26 10 3163.6 -24.96 149.38  
 110.00 11 22 18 3003.55 -26.70 91.58 259.12 67.86 12 12 22 2003.5 -33.33 64.89

Differential Corrections: TDE .1465 TRA-3.0339 TC3-4.2085 BAU 1.8877 SGT 5921.3 SGR 2377.1 SCS 1192.2 ST 56.3 SR 16.1 SS 46.9  
 RDE .1898 RRA -.6720 RC3-2.0218 FAU .38848 RRT .9475 RRF .9827 RTF .9391 CRT .8574 CRS -.8871 CST -.5343  
 FDE 3.4184 FRA-4.3625 FC-11.1202 BSP 10848 SGB 6360.6 R23 .2498 R13 .9508 LSA 66.5 MSA 34.6 S8A 1.3  
 BDE .2398 BRA 3.1074 BC3 4.6689 FSP 1965 SGI 6341.0 SGI 709.5 THA 21.10 EL1 58.0 EL2 8.0 ALF 14.05

LAUNCH DATE SEP 5 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.973 GAL 5.93 AZL 85.86 HCA 153.48 SMA 197.32 ECC .25809 INC 4.1372 V1 29.542
RP 247.71 LAP 1.85 LOP 135.83 VP 19.973 GAP -1.09 AZP 93.70 TAL 29.71 TAP 183.18 RCA 146.78 APO 247.85 V2 22.120
RC 319.522 GL 25.42 GP -28.34 ZAL 45.90 ZAP 65.83 ETS 167.80 ZAE 89.80 ETE 181.53 ZAC 60.75 ETC 286.26 LVI 5.83

PLANETOCENTRIC CONIC

C3 30.378 VHL 5.512 DLA 31.86 RAL 9.36 RAD 6647.2 VEL 12.280 PTH 7.20 VHP 2.800 DPA -19.63 RAP 28.88 ECC 1.5000
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 41 54 3907.10 -45.25 166.53 267.56 73.37 7 47 1 2907.1 -46.78 131.53
60.00 6 31 33 3934.70 -35.93 165.00 263.55 70.36 7 37 8 2934.7 -40.30 134.79
70.00 6 7 3 4007.18 -25.36 165.97 258.68 66.32 7 13 50 3007.2 -32.79 139.81
74.68 5 2 43 4207.07 -15.22 176.00 253.42 61.67 6 12 50 3207.1 -25.56 152.90
74.68 5 2 43 4207.07 -15.22 176.00 253.42 61.67 6 12 50 3207.1 -25.56 152.90
74.68 5 2 43 4207.07 -15.22 176.00 253.42 61.67 6 12 50 3207.1 -25.56 152.90
110.00 11 6 29 3054.00 -25.36 94.89 258.68 66.32 11 57 23 2054.0 -32.79 68.73

DIFFERENTIAL CORRECTIONS

TDE .1991 TRA-3.0820 TC3-4.2780 BAU 1.9257 SGT 6042.5 SGR 2419.8 SG3 1161.9 ST 58.0 SR 17.8 SS 47.9
RDE .2312 RRA -.6915 RC3-2.0449 FAU .37776 RRT .9488 RRF .9837 RTF .9388 CRT .8398 CRS -.9151 CST -.5584
FDE .4822 FRA-4.2386 FC-10.7654 BSP 11112 SGB 6509.0 R23 .2544 R13 .9504 LSA 69.0 MSA 34.6 S8A 1.3
BDE .3051 BRA 3.1587 BC3 4.7416 F8P 1927 SG1 6469.7 SG2 714.0 THA 21.07 EL1 59.9 EL2 9.4 ALF 14.84

LAUNCH DATE SEP 5 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.980 GAL 5.87 AZL 85.73 HCA 154.36 SMA 197.45 ECC .25619 INC 4.2731 V1 29.542
RP 247.84 LAP 1.85 LOP 136.71 VP 19.970 GAP -1.29 AZP 93.85 TAL 29.41 TAP 183.76 RCA 146.86 APO 248.03 V2 22.107
RC 321.734 GL 26.25 GP -28.96 ZAL 46.50 ZAP 65.31 ETS 167.08 ZAE 88.83 ETE 180.97 ZAC 60.13 ETC 286.36 LVI 6.26

PLANETOCENTRIC CONIC

C3 30.545 VHL 5.527 DLA 32.71 RAL 9.19 RAD 6647.2 VEL 12.257 PTH 7.21 VHP 2.832 DPA -20.16 RAP 29.23 ECC 1.5027
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 35 54 3929.16 -44.80 168.47 268.09 71.94 7 41 23 2929.2 -47.02 133.81
60.00 6 22 30 3964.97 -35.21 167.25 263.65 68.98 7 28 35 2965.0 -40.27 137.37
70.00 5 47 4 4069.89 -23.58 169.97 257.94 64.55 6 54 54 3069.9 -31.94 144.50
72.84 4 49 49 4246.45 -15.55 179.19 253.54 60.85 6 0 36 3246.4 -26.18 156.16
72.84 4 49 49 4246.45 -15.55 179.19 253.54 60.85 6 0 36 3246.4 -26.18 156.16
72.84 4 49 49 4246.45 -15.55 179.19 253.54 60.85 6 0 36 3246.4 -26.18 156.16
110.00 10 46 30 3116.71 -23.58 98.89 257.94 64.55 11 38 27 2116.7 -31.94 73.42

DIFFERENTIAL CORRECTIONS

TDE .2546 TRA-3.1301 TC3-4.3421 BAU 1.9641 SGT 6162.6 SGR 2466.1 SG3 1131.1 ST 59.8 SR 19.7 SS 48.8
RDE .2741 RRA -.7129 RC3-2.0688 FAU .36702 RRT .9500 RRF .9847 RTF .9385 CRT .8285 CRS -.9351 CST -.5831
FDE 3.5385 FRA-4.1175 FC-10.4023 BSP 11373 SGB 6637.7 R23 .2586 R13 .9502 LSA 71.7 MSA 34.6 S8A 1.2
BDE .3741 BRA 3.2102 BC3 4.8098 F8P 1882 SG1 6598.7 SG2 719.0 THA 21.08 EL1 62.0 EL2 10.6 ALF 15.73

LAUNCH DATE SEP 5 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.987 GAL 5.82 AZL 85.58 HCA 155.24 SMA 197.58 ECC .25629 INC 4.4178 V1 29.542
RP 247.97 LAP 1.85 LOP 137.59 VP 19.968 GAP -1.49 AZP 94.01 TAL 29.11 TAP 184.34 RCA 146.94 APO 248.21 V2 22.095
RC 323.917 GL 27.12 GP -29.62 ZAL 47.12 ZAP 64.82 ETS 166.34 ZAE 87.89 ETE 180.40 ZAC 59.47 ETC 286.47 LVI 6.92

PLANETOCENTRIC CONIC

C3 30.746 VHL 5.545 DLA 33.60 RAL 8.99 RAD 6647.3 VEL 12.275 PTH 7.22 VHP 2.867 DPA -20.71 RAP 29.62 ECC 1.5060
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 29 21 3952.80 -44.28 170.51 268.58 70.44 7 35 14 2952.8 -47.23 135.86
60.00 6 12 21 3998.20 -34.37 169.67 263.67 67.52 7 18 59 2998.2 -40.17 140.19
70.00 5 17 58 4159.70 -20.85 175.51 256.55 62.31 6 27 18 3159.7 -30.40 151.04
71.06 4 37 46 4282.74 -15.87 182.18 253.66 59.99 5 49 9 3282.7 -26.82 159.22
71.06 4 37 46 4282.74 -15.87 182.18 253.66 59.99 5 49 9 3282.7 -26.82 159.22
71.06 4 37 46 4282.74 -15.87 182.18 253.66 59.99 5 49 9 3282.7 -26.82 159.22
110.00 10 17 24 3206.52 -20.85 104.42 256.55 62.31 11 10 51 2206.5 -30.40 79.96

DIFFERENTIAL CORRECTIONS

TDE .3129 TRA-3.1791 TC3-4.4013 BAU 2.0032 SGT 6283.5 SGR 2515.3 SG3 1099.5 ST 61.8 SR 21.7 SS 49.7
RDE .3197 RRA -.7360 RC3-2.0923 FAU .35600 RRT .9512 RRF .9856 RTF .9381 CRT .8214 CRS -.9497 CST -.6071
FDE 3.5920 FRA-3.9964 FC-10.0241 BSP 11630 SGB 6768.2 R23 .2629 R13 .9499 LSA 74.6 MSA 34.6 S8A 1.1
BDE .4473 BRA 3.2632 BC3 4.8733 F8P 1834 SG1 6729.3 SG2 724.9 THA 21.10 EL1 64.4 EL2 11.9 ALF 16.71

LAUNCH DATE SEP 5 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC

RL 150.83 LAL .00 LOL 342.29 VL 32.994 GAL 5.78 AZL 85.43 HCA 156.12 SMA 197.71 ECC .25639 INC 4.5722 V1 29.542
RP 248.09 LAP 1.85 LOP 138.48 VP 19.966 GAP -1.69 AZP 94.18 TAL 28.80 TAP 184.92 RCA 147.02 APO 248.40 V2 22.084
RC 326.069 GL 28.04 GP -30.31 ZAL 47.77 ZAP 64.39 ETS 165.58 ZAE 86.98 ETE 179.82 ZAC 58.77 ETC 286.59 LVI 7.62

PLANETOCENTRIC CONIC

C3 30.987 VHL 5.567 DLA 34.52 RAL 8.75 RAD 6647.4 VEL 12.285 PTH 7.22 VHP 2.904 DPA -21.29 RAP 30.05 ECC 1.5100
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 22 8 3978.24 -43.68 172.66 269.03 68.87 7 28 26 2978.2 -47.40 138.29
60.00 6 0 52 4035.07 -33.38 172.29 263.57 65.97 7 8 7 3035.1 -39.97 143.30
69.32 4 26 20 4316.71 -16.20 185.03 253.79 59.09 5 38 17 3316.7 -27.47 162.16
69.32 4 26 20 4316.71 -16.20 185.03 253.79 59.09 5 38 17 3316.7 -27.47 162.16
69.32 4 26 20 4316.71 -16.20 185.03 253.79 59.09 5 38 17 3316.7 -27.47 162.16
69.32 4 26 20 4316.71 -16.20 185.03 253.79 59.09 5 38 17 3316.7 -27.47 162.16
69.32 4 26 20 4316.71 -16.20 185.03 253.79 59.09 5 38 17 3316.7 -27.47 162.16

DIFFERENTIAL CORRECTIONS

TDE .3728 TRA-3.2297 TC3-4.4547 BAU 2.0430 SGT 6405.0 SGR 2568.2 SG3 1066.9 ST 63.9 SR 23.9 SS 50.5
RDE .3669 RRA -.7615 RC3-2.1156 FAU .34480 RRT .9523 RRF .9864 RTF .9378 CRT .8186 CRS -.9602 CST -.6300
FDE 3.6346 FRA-3.8783 FC3-9.6333 BSP 11873 SGB 6900.7 R23 .2670 R13 .9496 LSA 77.6 MSA 34.5 S8A 1.1
BDE .5231 BRA 3.3183 BC3 4.9315 F8P 1780 SG1 6861.8 SG2 731.3 THA 21.15 EL1 67.0 EL2 13.1 ALF 17.74

LAUNCH DATE SEP 5 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 29 1974

MELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.001 GAL 5.70 AZL 85.26 HCA 156.99 SMA 197.84 ECC .25650 INC 4.7376 V1 29.542  
 RP 248.20 LAP 1.85 LOP 139.36 VP 19.966 GAP -1.89 AZP 94.36 TAL 28.50 TAP 185.49 RCA 147.10 APO 248.59 V2 22.073  
 RC 328.191 GL 29.01 GP -31.05 ZAL 46.44 ZAP 64.00 ETS 164.80 ZAE 86.12 ETE 179.22 ZAC 56.03 ETC 286.72 LVI 8.37

PLANETOCENTRIC CONIC  
 C3 31.274 VHL 5.592 DLA 35.49 RAL 8.47 RAD 6647.5 VEL 12.296 PTH 7.23 VHP 2.943 DPA -21.90 RAP 30.52 ECC 1.5147  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 14 9 4005.70 -42.98 174.93 269.41 67.24 7 20 54 3005.7 -47.52 140.94  
 60.00 5 47 40 4076.52 -32.19 175.16 263.30 64.32 6 55 36 3076.5 -39.63 146.70  
 67.60 4 15 20 4348.84 -16.53 187.77 253.91 58.13 5 27 49 3348.8 -28.15 165.01  
 67.60 4 15 20 4348.84 -16.53 187.77 253.91 58.13 5 27 49 3348.8 -28.15 165.01  
 67.60 4 15 20 4348.84 -16.53 187.77 253.91 58.13 5 27 49 3348.8 -28.15 165.01  
 67.60 4 15 20 4348.84 -16.53 187.77 253.91 58.13 5 27 49 3348.8 -28.15 165.01  
 67.60 4 15 20 4348.84 -16.53 187.77 253.91 58.13 5 27 49 3348.8 -28.15 165.01

DIFFERENTIAL CORRECTIONS  
 TDE .4365 TRA-3.2797 TC3-4.4991 BAW 2.0825 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4174 RRA -.7886 RC3-2.1373 FAW .33314 SGT 6523.4 SGR 2623.3 SG3 1032.8 ST 66.3 SR 26.3 SS 51.3  
 FDE 3.6732 FRA-3.7566 FC3-9.2223 BSP 12127 RRT .9534 RRF .9872 RTF .9374 CRT .8188 CR8 -.9681 C8T -.6522  
 BDE .6040 BRA 3.3732 BC3 4.9809 F8P 1725 SGB 7031.1 R23 .2712 R13 .9493 LSA 80.8 MSA 34.5 S8A 1.0  
 SGI 6992.3 SG2 738.4 THA 21.23 EL1 69.8 EL2 14.3 ALP 18.83

LAUNCH DATE SEP 5 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 31 1974

MELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.007 GAL 5.65 AZL 85.08 HCA 157.87 SMA 197.98 ECC .25662 INC 4.9153 V1 29.542  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.966 GAP -2.08 AZP 94.55 TAL 28.19 TAP 186.06 RCA 147.17 APO 248.78 V2 22.062  
 RC 330.283 GL 30.04 GP -31.82 ZAL 49.14 ZAP 63.66 ETS 164.00 ZAE 85.28 ETE 178.62 ZAC 57.24 ETC 286.87 LVI 9.16

PLANETOCENTRIC CONIC  
 C3 31.613 VHL 5.623 DLA 36.51 RAL 8.15 RAD 6647.6 VEL 12.310 PTH 7.24 VHP 2.986 DPA -22.53 RAP 31.03 ECC 1.5203  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 5 16 4035.49 -42.17 177.33 269.71 65.53 7 12 31 3035.5 -47.57 143.82  
 60.00 5 32 9 4124.11 -30.74 178.36 262.81 62.55 6 40 53 3124.1 -39.11 150.71  
 65.88 4 4 37 4379.62 -16.84 190.45 254.02 57.12 5 17 37 3379.6 -28.83 167.80  
 65.88 4 4 37 4379.62 -16.84 190.45 254.02 57.12 5 17 37 3379.6 -28.83 167.80  
 65.88 4 4 37 4379.62 -16.84 190.45 254.02 57.12 5 17 37 3379.6 -28.83 167.80  
 65.88 4 4 37 4379.62 -16.84 190.45 254.02 57.12 5 17 37 3379.6 -28.83 167.80  
 65.88 4 4 37 4379.62 -16.84 190.45 254.02 57.12 5 17 37 3379.6 -28.83 167.80

DIFFERENTIAL CORRECTIONS  
 TDE .5023 TRA-3.3319 TC3-4.5365 BAW 2.1233 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4704 RRA -.8189 RC3-2.1589 FAW .32136 RRT .9545 RRF .9878 RTF .9370 CRT .8217 CR8 -.9738 C8T -.6732  
 FDE 3.7012 FRA-3.6387 FC3-8.8006 BSP 12367 SGB 7164.7 R23 .2750 R13 .9490 LSA 84.1 MSA 34.4 S8A 1.0  
 BDE .6882 BRA 3.4311 BC3 5.0240 F8P 1664 SGI 7125.7 SG2 746.1 THA 21.33 EL1 72.9 EL2 15.5 ALP 19.84

LAUNCH DATE SEP 5 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 2 1974

MELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.014 GAL 5.89 AZL 84.89 HCA 158.75 SMA 198.11 ECC .25674 INC 5.1066 V1 29.542  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.966 GAP -2.28 AZP 94.76 TAL 27.88 TAP 186.63 RCA 147.25 APO 248.98 V2 22.032  
 RC 332.344 GL 31.13 GP -32.85 ZAL 49.88 ZAP 63.36 ETS 163.18 ZAE 84.49 ETE 178.00 ZAC 56.40 ETC 287.03 LVI 10.00

PLANETOCENTRIC CONIC  
 C3 32.012 VHL 5.858 DLA 37.58 RAL 7.77 RAD 6647.8 VEL 12.326 PTH 7.26 VHP 3.033 DPA -23.20 RAP 31.59 ECC 1.5268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 55 19 4087.99 -41.22 179.87 269.89 63.75 7 3 7 3088.0 -47.59 146.96  
 60.00 5 13 18 4180.60 -28.91 182.02 261.99 60.81 6 22 59 3180.6 -38.30 155.30  
 64.15 3 54 5 4409.28 -17.16 193.07 254.13 56.04 5 7 34 3409.3 -29.53 170.56  
 64.15 3 54 5 4409.28 -17.16 193.07 254.13 56.04 5 7 34 3409.3 -29.53 170.56  
 64.15 3 54 5 4409.28 -17.16 193.07 254.13 56.04 5 7 34 3409.3 -29.53 170.56  
 64.15 3 54 5 4409.28 -17.16 193.07 254.13 56.04 5 7 34 3409.3 -29.53 170.56  
 64.15 3 54 5 4409.28 -17.16 193.07 254.13 56.04 5 7 34 3409.3 -29.53 170.56

DIFFERENTIAL CORRECTIONS  
 TDE .5707 TRA-3.3845 TC3-4.5638 BAW 2.1641 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5274 RRA -.8511 RC3-2.1777 FAW .30898 RRT .9555 RRF .9884 RTF .9364 CRT .8257 CR8 -.9781 C8T -.6828  
 FDE 3.7239 FRA-3.5156 FC3-8.3581 BSP 12619 SGB 7297.1 R23 .2792 R13 .9488 LSA 87.6 MSA 34.4 S8A .9  
 BDE .7771 BRA 3.4899 BC3 5.0567 F8P 1605 SGI 7257.9 SG2 754.8 THA 21.45 EL1 76.3 EL2 16.6 ALP 21.06

LAUNCH DATE SEP 5 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 4 1974

MELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.021 GAL 5.93 AZL 84.69 HCA 159.62 SMA 198.25 ECC .25687 INC 5.3135 V1 29.542  
 RP 248.50 LAP 1.85 LOP 141.99 VP 19.966 GAP -2.47 AZP 94.98 TAL 27.57 TAP 187.19 RCA 147.33 APO 249.17 V2 22.043  
 RC 334.378 GL 32.28 GP -33.53 ZAL 50.86 ZAP 63.15 ETS 162.34 ZAE 83.74 ETE 177.36 ZAC 55.50 ETC 287.21 LVI 10.89

PLANETOCENTRIC CONIC  
 C3 32.484 VHL 5.899 DLA 38.70 RAL 7.32 RAD 6648.0 VEL 12.345 PTH 7.27 VHP 3.084 DPA -23.91 RAP 32.20 ECC 1.5346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 44 4 4103.69 -40.11 182.57 269.92 61.89 6 52 28 3103.7 -47.41 150.40  
 60.00 4 48 48 4252.15 -26.44 186.46 260.58 58.40 5 59 40 3252.1 -37.00 160.93  
 62.40 3 43 41 4438.03 -17.46 195.65 254.22 54.90 4 57 39 3438.0 -30.25 173.31  
 62.40 3 43 41 4438.03 -17.46 195.65 254.22 54.90 4 57 39 3438.0 -30.25 173.31  
 62.40 3 43 41 4438.03 -17.46 195.65 254.22 54.90 4 57 39 3438.0 -30.25 173.31  
 62.40 3 43 41 4438.03 -17.46 195.65 254.22 54.90 4 57 39 3438.0 -30.25 173.31  
 62.40 3 43 41 4438.03 -17.46 195.65 254.22 54.90 4 57 39 3438.0 -30.25 173.31

DIFFERENTIAL CORRECTIONS  
 TDE .6416 TRA-3.4391 TC3-4.5811 BAW 2.2082 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5877 RRA -.8875 RC3-2.1955 FAW .29641 RRT .9565 RRF .9889 RTF .9358 ST 74.3 SR 34.4 SS 53.1  
 FDE 3.7354 FRA-3.3961 FC3-7.8997 BSP 12859 SGB 7431.6 R23 .2829 R13 .9482 CRT .8313 CR8 -.9813 C8T -.7106  
 BDE .8701 BRA 3.5516 BC3 5.0801 F8P 1538 SGI 7392.3 SG2 763.8 THA 21.62 LSA 91.3 MSA 34.3 S8A .8  
 EL1 79.9 EL2 17.8 ALP 22.19

LAUNCH DATE SEP 5 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 6 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.028 GAL 5.47 AZL 84.46 HCA 160.50 SMA 198.39 ECC .25700 INC 5.5379 V1 29.842  
 RP 248.59 LAP 1.85 LOP 142.87 VP 19.970 GAP -2.66 AZP 95.22 TAL 27.26 TAP 187.75 RCA 147.40 APO 249.37 V2 22.034  
 RC 336.377 GL 33.50 GP -34.46 ZAL 51.47 ZAP 62.98 ETS 161.48 ZAE 83.03 ETE 176.71 ZAC 54.54 ETC 287.41 LVI 11.85

PLANETOCENTRIC CONIC  
 C3 33.039 VHL 5.748 DLA 39.88 RAL 6.81 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 3.139 DPA -24.65 RAP 32.85 ECC 1.5437  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 31 13 4143.23 -38.80 185.45 269.75 59.95 6 40 16 3143.2 -47.12 154.18  
 60.00 4 9 53 4362.82 -22.33 192.94 257.76 53.53 5 22 36 3362.8 -34.44 169.20  
 60.63 3 33 15 4466.16 -17.75 198.23 254.30 53.69 4 47 41 3466.2 -30.97 176.08  
 60.63 3 33 15 4466.16 -17.75 198.23 254.30 53.69 4 47 41 3466.2 -30.97 176.08  
 60.63 3 33 15 4466.16 -17.75 198.23 254.30 53.69 4 47 41 3466.2 -30.97 176.08  
 60.63 3 33 15 4466.16 -17.75 198.23 254.30 53.69 4 47 41 3466.2 -30.97 176.08  
 60.63 3 33 15 4466.16 -17.75 198.23 254.30 53.69 4 47 41 3466.2 -30.97 176.08

DIFFERENTIAL CORRECTIONS  
 TDE .7142 TRA-3.4951 TC3-4.5862 BAU 2.2486 SGT 6993.7 SGR 2885.5 SG3 884.2 ST 77.2 SR 37.4 SS 53.5  
 RDE .6524 RRA -.9267 RC3-2.2100 FAU .26325 RRT .9574 RRF .9893 RTF .9350 CRT .8370 CRS -.9837 CST -.7265  
 FDE .7382 FRA-3.2709 FC3-7.4221 BSP 13101 SGB 7565.6 R23 .2871 R13 .9476 LSA 95.1 MSA 34.4 SSA .8  
 BDE .9674 BRA 3.6159 BC3 5.0909 FSP 1471 SG1 7525.9 SG2 773.9 THA 21.80 EL1 83.7 EL2 18.9 ALF 23.31

LAUNCH DATE SEP 5 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.036 GAL 5.41 AZL 84.22 HCA 161.37 SMA 198.53 ECC .25714 INC 5.7823 V1 29.542  
 RP 248.67 LAP 1.84 LOP 143.75 VP 19.972 GAP -2.85 AZP 95.48 TAL 26.94 TAP 188.31 RCA 147.48 APO 249.58 V2 22.026  
 RC 338.347 GL 34.81 GP -35.45 ZAL 52.32 ZAP 62.88 ETS 160.60 ZAE 82.38 ETE 176.05 ZAC 53.53 ETC 287.63 LVI 12.86

PLANETOCENTRIC CONIC  
 C3 33.694 VHL 5.805 DLA 41.11 RAL 6.21 RAD 6648.4 VEL 12.394 PTH 7.31 VHP 3.200 DPA -25.44 RAP 33.56 ECC 1.5545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 16 21 4187.56 -37.24 188.55 269.30 57.93 6 26 9 3187.6 -46.64 158.36  
 58.82 3 22 45 4493.82 -18.01 200.80 254.35 52.40 4 37 38 3493.8 -31.70 178.88  
 58.82 3 22 45 4493.82 -18.01 200.80 254.35 52.40 4 37 38 3493.8 -31.70 178.88  
 58.82 3 22 45 4493.82 -18.01 200.80 254.35 52.40 4 37 38 3493.8 -31.70 178.88  
 58.82 3 22 45 4493.82 -18.01 200.80 254.35 52.40 4 37 38 3493.8 -31.70 178.88  
 58.82 3 22 45 4493.82 -18.01 200.80 254.35 52.40 4 37 38 3493.8 -31.70 178.88

DIFFERENTIAL CORRECTIONS  
 TDE .7798 TRA-3.5610 TC3-4.5873 BAU 2.2976 SGT 7121.7 SGR 2973.5 SG3 846.4 ST 80.3 SR 40.4 SS 53.5  
 RDE .7148 RRA -.9776 RC3-2.2303 FAU .27096 RRT .9589 RRF .9897 RTF .9352 CRT .8438 CRS -.9851 CST -.7401  
 FDE 3.7034 FRA-3.1726 FC3-6.9622 BSP 13224 SGB 7717.6 R23 .2885 R13 .9480 LSA 98.8 MSA 34.3 SSA .7  
 BDE 1.0578 BRA 3.6928 BC3 5.1007 FSP 1374 SG1 7677.8 SG2 782.4 THA 22.06 EL1 87.6 EL2 19.8 ALF 24.32

LAUNCH DATE SEP 5 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.043 GAL 5.36 AZL 83.95 HCA 162.24 SMA 198.67 ECC .25728 INC 6.0497 V1 29.542  
 RP 248.75 LAP 1.84 LOP 144.63 VP 19.978 GAP -3.04 AZP 95.76 TAL 26.63 TAP 188.87 RCA 147.55 APO 249.78 V2 22.019  
 RC 340.287 GL 36.20 GP -36.51 ZAL 53.23 ZAP 62.85 ETS 159.71 ZAE 81.77 ETE 175.37 ZAC 52.44 ETC 287.88 LVI 13.95

PLANETOCENTRIC CONIC  
 C3 34.466 VHL 5.871 DLA 42.41 RAL 5.51 RAD 6648.7 VEL 12.425 PTH 7.33 VHP 3.268 DPA -26.28 RAP 34.34 ECC 1.5672  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 58 47 4238.14 -35.36 191.91 268.48 55.81 6 9 25 3238.1 -45.90 163.01  
 56.97 3 12 5 4521.18 -18.25 203.38 254.37 51.02 4 27 26 3521.2 -32.43 181.72  
 56.97 3 12 5 4521.18 -18.25 203.38 254.37 51.02 4 27 26 3521.2 -32.43 181.72  
 56.97 3 12 5 4521.18 -18.25 203.38 254.37 51.02 4 27 26 3521.2 -32.43 181.72  
 56.97 3 12 5 4521.18 -18.25 203.38 254.37 51.02 4 27 26 3521.2 -32.43 181.72  
 56.97 3 12 5 4521.18 -18.25 203.38 254.37 51.02 4 27 26 3521.2 -32.43 181.72

DIFFERENTIAL CORRECTIONS  
 TDE .8610 TRA-3.6141 TC3-4.5559 BAU 2.3372 SGT 7221.2 SGR 3049.3 SG3 800.5 ST 83.3 SR 43.9 SS 53.8  
 RDE .7948 RRA-1.0196 RC3-2.2300 FAU .25569 RRT .9594 RRF .9897 RTF .9332 CRT .8486 CRS -.9867 CST -.7523  
 FDE 3.7030 FRA-3.0183 FC3-6.4226 BSP 13583 SGB 7837.0 R23 .2954 R13 .9464 LSA 102.9 MSA 34.6 SSA .7  
 BDE 1.1717 BRA 3.7551 BC3 5.0724 FSP 1326 SG1 7796.5 SG2 795.9 THA 22.27 EL1 91.9 EL2 21.1 ALF 25.50

LAUNCH DATE SEP 5 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 12 1974

HELIOCENTRIC CONIC  
 RL 150.83 LAL .00 LOL 342.29 VL 33.050 GAL 5.30 AZL 83.66 HCA 163.11 SMA 198.81 ECC .25743 INC 6.3437 V1 29.542  
 RP 248.82 LAP 1.84 LOP 145.50 VP 19.980 GAP -3.23 AZP 96.07 TAL 26.31 TAP 189.42 RCA 147.63 APO 249.98 V2 22.012  
 RC 342.198 GL 37.68 GP -37.64 ZAL 54.18 ZAP 62.89 ETS 158.81 ZAE 81.23 ETE 174.68 ZAC 51.28 ETC 288.16 LVI 15.11

PLANETOCENTRIC CONIC  
 C3 35.381 VHL 5.948 DLA 43.78 RAL 4.69 RAD 6849.0 VEL 12.461 PTH 7.36 VHP 3.343 DPA -27.17 RAP 35.17 ECC 1.5823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 37 24 4297.43 -33.03 195.65 267.10 53.57 5 49 2 3297.4 -44.78 168.28  
 55.07 3 1 6 4548.53 -18.44 205.98 254.34 49.56 4 16 55 3548.5 -33.15 184.64  
 55.07 3 1 6 4548.53 -18.44 205.98 254.34 49.56 4 16 55 3548.5 -33.15 184.64  
 55.07 3 1 6 4548.53 -18.44 205.98 254.34 49.56 4 16 55 3548.5 -33.15 184.64  
 55.07 3 1 6 4548.53 -18.44 205.98 254.34 49.56 4 16 55 3548.5 -33.15 184.64  
 55.07 3 1 6 4548.53 -18.44 205.98 254.34 49.56 4 16 55 3548.5 -33.15 184.64

DIFFERENTIAL CORRECTIONS  
 TDE .9428 TRA-3.6689 TC3-4.5073 BAU 2.3772 SGT 7316.9 SGR 3120.1 SG3 752.5 ST 86.7 SR 47.7 SS 54.1  
 RDE .8827 RRA-1.0650 RC3-2.2229 FAU .23968 RRT .9596 RRF .9895 RTF .9304 CRT .8525 CRS -.9879 CST -.7616  
 FDE 3.6936 FRA-2.8558 FC3-5.8646 BSP 13978 SGB 7954.4 R23 .3037 R13 .9442 LSA 107.2 MSA 35.0 SSA .6  
 BDE 1.2915 BRA 3.8204 BC3 5.0256 FSP 1280 SG1 7912.9 SG2 811.9 THA 22.50 EL1 96.4 EL2 22.4 ALF 26.70

LAUNCH DATE SEP 5 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC

DISTANCE 589.750

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.057 GAL 5.24 AZL 83.33 HCA 163.98 SMA 198.95 ECC .25758 INC 6.6684 V1 29.542  
 RP 246.88 LAP 1.84 LOP 146.38 VP 19.985 GAP -3.42 AZP 96.41 TAL 25.99 TAP 189.98 RCA 147.70 APO 250.19 V2 22.008  
 RC 344.074 GL 39.27 GP -38.84 ZAL 55.19 ZAP 63.02 ETS 157.90 ZAE 80.74 ETE 173.98 ZAC 90.04 ETC 288.48 LVI 16.34

PLANETOCENTRIC CONIC

C3 36.472 VHL 6.039 DLA 43.22 RAL 3.73 RAD 6649.4 VEL 12.505 PTH 7.39 VHP 3.427 DPA -28.11 RAP 36.08 ECC 1.6002  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 9 59 4370.56 -29.98 199.97 264.85 51.15 3 22 49 3370.6 -43.04 174.45  
 53.12 2 49 46 4575.90 -18.59 208.62 254.25 48.00 4 6 2 3575.9 -33.84 187.65  
 53.12 2 49 46 4575.90 -18.59 208.62 254.25 48.00 4 6 2 3575.9 -33.84 187.65  
 53.12 2 49 46 4575.90 -18.59 208.62 254.25 48.00 4 6 2 3575.9 -33.84 187.65  
 53.12 2 49 46 4575.90 -18.59 208.62 254.25 48.00 4 6 2 3575.9 -33.84 187.65  
 53.12 2 49 46 4575.90 -18.59 208.62 254.25 48.00 4 6 2 3575.9 -33.84 187.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0018 TRA-3.7448 TC3-4.4590 BAW 2.4300 SGT 7439.7 SGR 3227.8 S63 709.0 ST 89.7 SR 51.1 88 53.4  
 RDE .9590 RRA-1.1349 RC3-2.2300 FAU .22580 RRT .9611 RRF .9895 RTF .9302 CRT .8571 CR8 -.9880 C8T -.7678  
 FDE 3.6105 FRA-2.7484 FC3-5.3598 B8P 14075 SGB 8109.7 R23 .3055 R13 .9442 L8A 110.8 M8A 35.2 88A .6  
 BDE 1.3869 BRA 3.9129 BC3 4.9855 F8P 1172 S61 8068.0 S62 821.8 T8A 22.89 EL1 100.5 EL2 23.5 ALF 27.66

LAUNCH DATE SEP 5 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC

DISTANCE 593.511

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.064 GAL 5.18 AZL 82.97 HCA 164.85 SMA 199.08 ECC .25774 INC 7.0292 V1 29.542  
 RP 246.94 LAP 1.83 LOP 147.26 VP 19.990 GAP -3.61 AZP 96.79 TAL 25.67 TAP 190.53 RCA 147.78 APO 250.40 V2 22.000  
 RC 345.920 GL 40.97 GP -40.13 ZAL 56.26 ZAP 63.23 ETS 157.00 ZAE 80.33 ETE 173.28 ZAC 48.72 ETC 288.85 LVI 17.66

PLANETOCENTRIC CONIC

C3 37.775 VHL 6.146 DLA 46.73 RAL 2.60 RAD 6649.9 VEL 12.556 PTH 7.43 VHP 3.522 DPA -29.11 RAP 37.07 ECC 1.6217  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 29 17 4474.59 -25.40 205.63 260.75 46.31 4 43 52 3474.6 -39.99 182.56  
 51.11 2 37 54 4603.62 -18.67 211.29 254.07 46.34 3 54 38 3603.6 -34.51 190.77  
 51.11 2 37 54 4603.62 -18.67 211.29 254.07 46.34 3 54 38 3603.6 -34.51 190.77  
 51.11 2 37 54 4603.62 -18.67 211.29 254.07 46.34 3 54 38 3603.6 -34.51 190.77  
 51.11 2 37 54 4603.62 -18.67 211.29 254.07 46.34 3 54 38 3603.6 -34.51 190.77  
 51.11 2 37 54 4603.62 -18.67 211.29 254.07 46.34 3 54 38 3603.6 -34.51 190.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0705 TRA-3.8083 TC3-4.3739 BAW 2.4753 SGT 7331.9 SGR 3318.2 S63 657.9 ST 92.7 SR 55.1 88 53.0  
 RDE 1.0566 RRA-1.1960 RC3-2.2122 FAU .20894 RRT .9614 RRF .9889 RTF .9268 CRT .8586 CR8 -.9882 C8T -.7705  
 FDE 3.5552 FRA-2.5832 FC3-4.7885 B8P 14456 SGB 8230.4 R23 .3147 R13 .9416 L8A 114.7 M8A 35.8 88A .5  
 BDE 1.5041 BRA 3.9916 BC3 4.9015 F8P 1113 S61 8187.5 S62 839.8 T8A 23.21 EL1 104.9 EL2 23.0 ALF 26.83

LAUNCH DATE SEP 5 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 18 1974

HELIOCENTRIC CONIC

DISTANCE 597.274

EARTH TO MARS

RL 150.83 LAL .00 LOL 342.29 VL 33.071 GAL 5.12 AZL 82.57 HCA 165.72 SMA 199.23 ECC .25790 INC 7.4328 V1 29.542  
 RP 249.00 LAP 1.83 LOP 148.13 VP 19.998 GAP -3.80 AZP 97.21 TAL 25.35 TAP 191.08 RCA 147.85 APO 250.61 V2 21.898  
 RC 347.734 GL 42.79 GP -41.50 ZAL 57.39 ZAP 63.54 ETS 156.10 ZAE 79.99 ETE 172.87 ZAC 47.31 ETC 289.26 LVI 19.07

PLANETOCENTRIC CONIC

C3 39.345 VHL 6.273 DLA 48.31 RAL 1.26 RAD 6650.4 VEL 12.618 PTH 7.47 VHP 3.630 DPA -30.16 RAP 38.19 ECC 1.6475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00  
 49.04 2 25 23 4631.76 -18.67 214.01 253.76 44.59 3 42 35 3631.8 -35.12 194.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1112 TRA-3.8907 TC3-4.2808 BAW 2.5328 SGT 7643.8 SGR 3442.2 S63 609.9 ST 95.2 SR 58.7 88 51.7  
 RDE 1.1426 RRA-1.2840 RC3-2.2047 FAU .19371 RRT .9629 RRF .9885 RTF .9258 CRT .8599 CR8 -.9876 C8T -.7685  
 FDE 3.4303 FRA-2.4605 FC3-4.2623 B8P 14578 SGB 8363.1 R23 .3177 R13 .9410 L8A 117.7 M8A 36.3 88A .5  
 BDE 1.5938 BRA 4.0971 BC3 4.8152 F8P 1001 S61 8339.8 S62 850.9 T8A 23.71 EL1 108.7 EL2 26.2 ALF 29.82

LAUNCH DATE SEP 6 1973

FLIGHT TIME 126.00

ARRIVAL DATE JAN 12 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.308 GAL 8.41 AZL 89.20 HCA 91.75 SMA 203.90 ECC .29633 INC .8015 V1 29.549  
 RP 229.48 LAP .80 LOP 75.01 VP 22.490 GAP 15.70 AZP 90.02 TAL 38.00 TAP 129.74 RCA 143.48 APO 264.33 V2 23.967  
 RC 141.241 GL 4.18 GP -8.18 ZAL 32.88 ZAP 149.04 ETS 195.72 ZAE 167.19 ETE 311.73 ZAC 74.81 ETC 282.66 LVI -8.34

PLANETOCENTRIC CONIC  
 C3 39.948 VHL 6.320 DLA 10.12 RAL 13.02 RAD 6650.6 VEL 12.642 PTH 7.49 VHP 4.494 DPA 8.47 RAP 45.30 ECC 1.6574  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 33 10 3507.84 -46.37 128.83 257.07 102.15 9 31 30 2507.8 -36.40 99.17  
 60.00 9 1 44 3431.81 -39.66 123.61 258.69 97.85 9 58 56 2431.8 -32.28 95.18  
 70.00 9 41 36 3314.54 -33.87 114.89 259.48 94.64 10 36 50 2314.5 -28.47 87.51  
 80.00 10 38 28 3136.38 -29.76 101.68 259.78 92.55 11 30 44 2136.4 -25.69 75.00  
 90.00 11 54 52 2889.80 -28.23 83.63 259.85 91.80 12 43 2 1889.8 -24.64 57.19  
 100.00 13 21 20 2610.85 -29.76 63.05 259.78 92.55 14 4 51 1610.8 -25.69 36.37  
 110.00 14 41 2 2361.36 -33.87 43.81 259.48 94.64 15 20 23 1361.4 -28.47 16.43

DIFFERENTIAL CORRECTIONS  
 TOE -.3305 TRA -.6538 TC3 .4688 BAU .2886 SGT 894.6 SGR 753.0 SG3 434.8 ST 17.5 SR 32.7 SS 10.2  
 RDE -.7187 RRA .1896 RC3 -.2847 FAU .17326 RRT -.1594 RRF .3565 RTF -.3953 CRT .8104 CRS -.0775 CST -.6047  
 FDE -.0866 FRA-1.8013 FC3-3.7549 BSP 1048 SGB 1169.3 R23 -.1678 R13 .4653 LSA 35.9 MSA 13.4 S8A 2.6  
 BDE .7910 BRA .6808 BC3 .5366 FSP 632 SGI 917.8 SG2 724.6 THA 158.69 EL1 35.9 EL2 9.3 ALF 64.69

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 6 1973

FLIGHT TIME 130.00

ARRIVAL DATE JAN 14 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.288 GAL 8.40 AZL 89.17 HCA 92.77 SMA 203.07 ECC .29364 INC .8319 V1 29.549  
 RP 229.86 LAP .83 LOP 76.04 VP 22.387 GAP 15.35 AZP 90.04 TAL 38.25 TAP 131.02 RCA 143.44 APO 262.70 V2 23.927  
 RC 144.046 GL 4.36 GP -8.39 ZAL 32.66 ZAP 147.77 ETS 195.39 ZAE 167.69 ETE 307.16 ZAC 74.65 ETC 282.71 LVI -8.21

PLANETOCENTRIC CONIC  
 C3 39.578 VHL 6.291 DLA 10.16 RAL 12.72 RAD 6650.5 VEL 12.627 PTH 7.48 VHP 4.373 DPA 8.20 RAP 45.14 ECC 1.6513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 31 44 3506.81 -46.35 128.74 256.62 102.22 9 30 11 2506.8 -36.45 99.10  
 60.00 9 0 14 3430.98 -39.65 123.54 258.24 97.89 9 57 25 2431.0 -32.25 95.12  
 70.00 9 40 0 3313.97 -33.87 114.85 259.03 94.67 10 35 14 2314.0 -28.46 87.47  
 80.00 10 36 47 3136.06 -29.76 101.66 259.34 92.56 11 29 3 2136.1 -25.69 74.98  
 90.00 11 53 9 2889.60 -28.23 83.61 259.41 91.81 12 41 19 1889.6 -24.64 57.17  
 100.00 13 19 39 2610.54 -29.76 63.03 259.34 92.56 14 3 10 1610.5 -25.69 36.35  
 110.00 14 39 26 2360.79 -33.87 43.77 259.03 94.67 15 18 47 1360.8 -28.46 16.39

DIFFERENTIAL CORRECTIONS  
 TDE -.3337 TRA -.6570 TC3 .4617 BAU .2858 SGT 894.1 SGR 761.2 SG3 459.4 ST 17.7 SR 32.8 SS 10.6  
 RDE -.7171 RRA .1821 RC3 -.2804 FAU .18204 RRT -.1600 RRF .3756 RTF -.3798 CRT .8133 CRS -.0732 CST -.5988  
 FDE -.0878 FRA-1.9211 FC3-3.9823 BSP 1044 SGB 1174.3 R23 -.1850 R13 .4602 LSA 36.1 MSA 13.7 S8A 2.7  
 BDE .7910 BRA .6818 BC3 .5402 FSP 695 SGI 918.9 SG2 731.2 THA 157.64 EL1 36.1 EL2 9.4 ALF 64.37

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 6 1973

FLIGHT TIME 132.00

ARRIVAL DATE JAN 16 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.230 GAL 8.39 AZL 89.14 HCA 93.80 SMA 202.30 ECC .29113 INC .8622 V1 29.549  
 RP 230.25 LAP .86 LOP 77.06 VP 22.289 GAP 15.00 AZP 90.06 TAL 38.48 TAP 132.28 RCA 143.40 APO 261.19 V2 23.887  
 RC 146.870 GL 4.53 GP -8.60 ZAL 32.46 ZAP 146.48 ETS 195.06 ZAE 168.12 ETE 302.05 ZAC 74.49 ETC 282.75 LVI -8.09

PLANETOCENTRIC CONIC  
 C3 39.228 VHL 6.263 DLA 10.28 RAL 12.44 RAD 6650.4 VEL 12.613 PTH 7.47 VHP 4.258 DPA 7.91 RAP 44.95 ECC 1.6456  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 30 21 3506.04 -46.34 128.67 256.19 102.27 9 28 47 2506.0 -36.42 99.05  
 60.00 8 58 45 3430.43 -39.65 123.49 257.82 97.92 9 55 56 2430.4 -32.24 95.08  
 70.00 9 38 25 3313.71 -33.87 114.83 258.62 94.68 10 33 39 2313.7 -28.45 87.46  
 80.00 10 35 7 3136.09 -29.76 101.66 258.92 92.56 11 27 24 2136.1 -25.69 74.98  
 90.00 11 51 27 2889.76 -28.23 83.63 258.99 91.80 12 39 37 1889.8 -24.64 57.19  
 100.00 13 17 59 2610.56 -29.76 63.03 258.92 92.56 14 1 30 1610.6 -25.69 36.35  
 110.00 14 37 52 2360.53 -33.87 43.75 258.62 94.68 15 17 12 1360.5 -28.45 16.37

DIFFERENTIAL CORRECTIONS  
 TDE -.3370 TRA -.6613 TC3 .4546 BAU .2847 SGT 892.9 SGR 769.9 SG3 465.3 ST 18.0 SR 32.8 SS 11.0  
 RDE -.7155 RRA .1742 RC3 -.2968 FAU .19115 RRT -.1592 RRF .3953 RTF -.3718 CRT .8159 CRS -.0695 CST -.5935  
 FDE -.0889 FRA-2.0462 FC3-4.2189 BSP 1037 SGB 1179.0 R23 -.2037 R13 .4543 LSA 36.3 MSA 14.1 S8A 2.7  
 BDE .7908 BRA .6838 BC3 .5429 FSP 740 SGI 919.1 SG2 738.4 THA 156.52 EL1 36.2 EL2 9.4 ALF 64.03

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 6 1973

FLIGHT TIME 134.00

ARRIVAL DATE JAN 18 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.195 GAL 8.38 AZL 89.11 HCA 94.82 SMA 201.58 ECC .28878 INC .8926 V1 29.549  
 RP 230.63 LAP .89 LOP 78.08 VP 22.193 GAP 14.65 AZP 90.08 TAL 38.69 TAP 133.51 RCA 143.37 APO 259.80 V2 23.847  
 RC 149.713 GL 4.71 GP -8.82 ZAL 32.28 ZAP 145.16 ETS 194.75 ZAE 168.47 ETE 296.41 ZAC 74.33 ETC 282.80 LVI -7.96

PLANETOCENTRIC CONIC  
 C3 38.895 VHL 6.237 DLA 10.34 RAL 12.18 RAD 6650.3 VEL 12.600 PTH 7.48 VHP 4.147 DPA 7.61 RAP 44.75 ECC 1.6401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 28 59 3505.52 -46.33 128.62 255.80 102.31 9 27 25 2505.5 -36.40 99.01  
 60.00 8 57 18 3430.16 -39.64 123.47 257.43 97.94 9 54 28 2430.2 -32.23 95.06  
 70.00 9 36 52 3313.75 -33.87 114.83 258.23 94.68 10 32 6 2313.7 -28.46 87.46  
 80.00 10 33 28 3136.44 -29.76 101.69 258.54 92.55 11 25 45 2136.4 -25.69 75.00  
 90.00 11 49 45 2890.26 -28.23 83.66 258.60 91.78 12 37 55 1890.3 -24.65 57.22  
 100.00 13 16 20 2610.92 -29.76 63.06 258.54 92.55 13 59 51 1610.9 -25.69 36.37  
 110.00 14 36 19 2360.56 -33.87 43.75 258.23 94.68 15 15 39 1360.6 -28.46 16.38

DIFFERENTIAL CORRECTIONS  
 TDE -.3405 TRA -.6668 TC3 .4452 BAU .2832 SGT 891.0 SGR 779.1 SG3 512.3 ST 18.2 SR 32.9 SS 11.4  
 RDE -.7137 RRA .1658 RC3 -.3138 FAU .20060 RRT -.1565 RRF .4154 RTF -.3411 CRT .8184 CRS -.0654 CST -.5862  
 FDE -.0892 FRA-2.1757 FC3-4.4650 BSP 1029 SGB 1183.6 R23 -.2243 R13 .4477 LSA 36.4 MSA 14.4 S8A 2.7  
 BDE .7907 BRA .6871 BC3 .5447 FSP 787 SGI 918.6 SG2 746.4 THA 155.34 EL1 36.4 EL2 9.5 ALF 63.66

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 6 1973 FLIGHT TIME 136.00 ARRIVAL DATE JAN 20 1974

HELIOCENTRIC CONIC DISTANCE 312.358 EARTH TO MARS  
 RL 130.79 LAL .00 LOL 343.26 VL 33.183 GAL 8.37 AZL 89.00 HCA 95.84 SMA 200.92 ECC .28697 INC .9229 V1 29.549  
 RP 231.01 LAP .92 LOP 79.10 VP 22.101 GAP 14.31 AZP 90.09 TAL 38.89 TAP 134.73 RCA 143.34 APO 259.50 V2 23.807  
 RC 152.872 GL 4.88 GP -9.05 ZAL 32.11 ZAP 143.83 ETS 194.44 ZAE 168.71 ETE 290.27 ZAC 74.17 ETC 282.85 LVI -7.84

PLANETOCENTRIC CONIC  
 C3 38.584 VHL 6.212 DLA 10.42 RAL 11.93 RAD 6650.2 VEL 12.588 PTH 7.45 VHP 4.040 DPA 7.29 RAP 44.52 ECC 1.6350  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 27 40 3505.22 -46.33 128.59 255.44 102.33 9 26 5 2505.2 -36.39 98.99  
 60.00 8 55 33 3430.13 -39.64 123.47 257.08 97.94 9 53 3 2430.1 -32.23 95.06  
 70.00 9 35 20 3314.06 -33.87 114.86 257.87 94.67 10 30 34 2314.1 -28.46 87.48  
 80.00 10 31 49 3137.10 -29.76 101.74 258.17 92.52 11 24 6 2137.1 -25.70 75.05  
 90.00 11 48 3 2891.07 -28.23 83.72 258.24 91.75 12 36 14 1891.1 -24.67 57.26  
 100.00 13 14 41 2611.57 -29.76 63.11 258.17 92.52 13 50 13 1611.6 -25.70 36.42  
 110.00 14 34 46 2360.87 -33.87 43.77 257.87 94.67 15 14 7 1360.9 -28.46 16.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3330 TRA -.6622 TC3 .4452 BAW .2866 SGT 886.6 SGR 789.7 SG3 541.8 ST 18.0 SR 32.9 SS 11.9  
 RDE -.7123 RRA .1564 RC3 -.3322 FAU .21092 RRT -.1679 RRF .4378 RTF -.3366 CRT .8166 CR8 -.0758 CST -.5990  
 FDE -.1000 FRA -2.3215 FC3 -4.7326 B8P 902 SGB 1187.3 R23 -.2235 R13 .4615 L8A 36.4 M8A 14.7 S8A 2.7  
 BDE .7864 BRA .6804 BC3 .5555 F8P 823 SG1 920.7 SG2 749.6 THA 152.32 EL1 36.3 EL2 9.4 ALF 64.10

LAUNCH DATE SEP 6 1973 FLIGHT TIME 138.00 ARRIVAL DATE JAN 22 1974

HELIOCENTRIC CONIC DISTANCE 316.089 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 33.132 GAL 8.36 AZL 89.05 HCA 96.85 SMA 200.31 ECC .28451 INC .9532 V1 29.549  
 RP 231.39 LAP .95 LOP 80.11 VP 22.013 GAP 13.97 AZP 90.11 TAL 39.07 TAP 135.92 RCA 143.32 APO 257.30 V2 23.767  
 RC 155.447 GL 5.08 GP -9.28 ZAL 31.96 ZAP 142.47 ETS 194.14 ZAE 168.82 ETE 293.74 ZAC 74.01 ETC 282.90 LVI -7.72

PLANETOCENTRIC CONIC  
 C3 38.287 VHL 6.188 DLA 10.52 RAL 11.70 RAD 6650.1 VEL 12.576 PTH 7.44 VHP 3.939 DPA 6.97 RAP 44.27 ECC 1.6301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 26 23 3505.18 -46.33 128.59 255.12 102.33 9 24 48 2505.2 -36.38 98.99  
 60.00 8 54 29 3430.37 -39.64 123.49 256.75 97.93 9 51 40 2430.4 -32.23 95.08  
 70.00 9 33 49 3314.67 -33.88 114.90 257.54 94.64 10 29 3 2314.7 -28.48 87.52  
 80.00 10 30 11 3138.08 -29.76 101.81 257.84 92.48 11 22 29 2138.1 -25.72 75.12  
 90.00 11 46 22 2892.23 -28.23 83.81 257.90 91.71 12 34 34 1892.2 -24.68 57.35  
 100.00 13 13 3 2612.55 -29.76 63.18 257.84 92.48 13 56 35 1612.6 -25.72 36.46  
 110.00 14 33 15 2361.49 -33.88 43.82 257.54 94.64 15 12 37 1361.5 -28.48 16.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3415 TRA -.6748 TC3 .4266 BAW .2826 SGT 894.6 SGR 799.8 SG3 570.1 ST 18.5 SR 32.9 SS 12.3  
 RDE -.7100 RRA .1473 RC3 -.3503 FAU .22083 RRT -.1545 RRF .4580 RTF -.3022 CRT .8203 CR8 -.0647 CST -.5869  
 FDE -.0942 FRA -2.4561 FC3 -4.9932 B8P 939 SGB 1192.5 R23 -.2558 R13 .4463 L8A 36.6 M8A 15.1 S8A 2.7  
 BDE .7879 BRA .6907 BC3 .5521 F8P 878 SG1 917.4 SG2 761.9 THA 151.59 EL1 36.6 EL2 9.5 ALF 63.34

LAUNCH DATE SEP 6 1973 FLIGHT TIME 140.00 ARRIVAL DATE JAN 24 1974

HELIOCENTRIC CONIC DISTANCE 319.829 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 33.104 GAL 8.34 AZL 89.02 HCA 97.86 SMA 199.74 ECC .28259 INC .9835 V1 29.549  
 RP 231.77 LAP .97 LOP 81.12 VP 21.928 GAP 13.64 AZP 90.13 TAL 39.23 TAP 137.09 RCA 143.30 APO 256.19 V2 23.728  
 RC 158.336 GL 5.23 GP -9.51 ZAL 31.83 ZAP 141.10 ETS 193.85 ZAE 168.79 ETE 276.97 ZAC 73.84 ETC 282.95 LVI -7.80

PLANETOCENTRIC CONIC  
 C3 38.006 VHL 6.165 DLA 10.62 RAL 11.48 RAD 6650.0 VEL 12.565 PTH 7.43 VHP 3.842 DPA 6.63 RAP 44.01 ECC 1.6235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 25 8 3505.35 -46.33 128.60 254.82 102.32 9 23 33 2505.3 -36.39 99.00  
 60.00 8 53 7 3430.86 -39.65 123.53 256.45 97.90 9 50 18 2430.9 -32.25 95.11  
 70.00 9 32 19 3315.55 -33.88 114.97 257.23 94.60 10 27 34 2315.5 -28.50 87.58  
 80.00 10 28 33 3139.37 -29.77 101.91 257.53 92.43 11 20 52 2139.4 -25.75 75.20  
 90.00 11 44 40 2893.71 -28.24 83.91 257.59 91.68 12 32 54 1893.7 -24.71 57.46  
 100.00 13 11 25 2613.84 -29.77 63.27 257.53 92.43 13 54 59 1613.8 -25.75 36.57  
 110.00 14 31 45 2362.37 -33.88 43.89 257.23 94.60 15 11 7 1362.4 -28.50 16.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3488 TRA -.6871 TC3 .4069 BAW .2793 SGT 892.5 SGR 810.6 SG3 599.6 ST 18.9 SR 32.9 SS 12.7  
 RDE -.7078 RRA .1378 RC3 -.3686 FAU .23109 RRT -.1401 RRF .4785 RTF -.2770 CRT .8232 CR8 -.0549 CST -.5765  
 FDE -.0881 FRA -2.3959 FC3 -5.2641 B8P 959 SGB 1198.3 R23 -.2871 R13 .4328 L8A 36.8 M8A 15.8 S8A 2.7  
 BDE .7888 BRA .7008 BC3 .5497 F8P 933 SG1 913.9 SG2 775.0 THA 150.64 EL1 36.7 EL2 9.6 ALF 62.66

LAUNCH DATE SEP 6 1973 FLIGHT TIME 142.00 ARRIVAL DATE JAN 26 1974

HELIOCENTRIC CONIC DISTANCE 323.577 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 33.077 GAL 8.33 AZL 88.99 HCA 98.87 SMA 199.22 ECC .28078 INC 1.0138 V1 29.549  
 RP 232.14 LAP 1.00 LOP 82.13 VP 21.846 GAP 13.31 AZP 90.16 TAL 39.38 TAP 138.25 RCA 143.28 APO 255.16 V2 23.689  
 RC 161.238 GL 5.41 GP -9.75 ZAL 31.72 ZAP 139.70 ETS 193.56 ZAE 168.60 ETE 270.12 ZAC 73.68 ETC 283.01 LVI -7.48

PLANETOCENTRIC CONIC  
 C3 37.737 VHL 6.143 DLA 10.73 RAL 11.28 RAD 6649.9 VEL 12.555 PTH 7.43 VHP 3.749 DPA 6.28 RAP 43.72 ECC 1.6211  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 23 54 3505.73 -46.34 128.64 254.55 102.29 9 22 20 2505.7 -36.41 99.03  
 60.00 8 51 46 3431.58 -39.66 123.59 256.17 97.86 9 48 58 2431.6 -32.27 95.16  
 70.00 9 30 49 3316.69 -33.89 115.06 256.98 94.55 10 28 6 2316.7 -28.52 87.66  
 80.00 10 26 55 3140.84 -29.77 102.02 257.25 92.37 11 19 18 2140.9 -25.78 75.31  
 90.00 11 42 59 2895.48 -28.24 84.04 257.31 91.59 12 31 14 1895.5 -24.74 57.58  
 100.00 13 9 47 2615.41 -29.77 63.39 257.25 92.37 13 53 23 1615.4 -25.78 36.68  
 110.00 14 30 15 2363.51 -33.89 43.98 256.95 94.55 15 9 39 1363.5 -28.52 16.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3550 TRA -.7000 TC3 .3856 BAW .2765 SGT 880.7 SGR 822.1 SG3 630.0 ST 19.3 SR 32.9 SS 13.1  
 RDE -.7049 RRA .1278 RC3 -.3895 FAU .24167 RRT -.1238 RRF .4994 RTF -.2295 CRT .8253 CR8 -.0456 CST -.5673  
 FDE -.0812 FRA -2.7403 FC3 -5.5441 B8P 970 SGB 1204.8 R23 -.3185 R13 .4201 L8A 37.0 M8A 15.9 S8A 2.8  
 BDE .7892 BRA .7115 BC3 .5481 F8P 990 SG1 910.1 SG2 789.4 THA 149.54 EL1 36.9 EL2 9.7 ALF 62.03

LAUNCH DATE SEP 6 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 28 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.053 GAL 8.31 AZL 88.96 HCA 99.87 SMA 198.74 ECC .27909 INC 1.0443 V1 29.549  
 RP 232.51 LAP 1.03 LOP 83.14 VP 21.766 GAP 12.98 AZP 90.18 TAL 39.51 TAP 139.38 RCA 143.27 APO 254.20 V2 23.650  
 RC 184.150 GL 5.59 GP -10.00 ZAL 31.62 ZAP 139.29 ETS 193.27 ZAE 168.25 ETE 263.40 ZAC 73.52 ETC 283.07 LVI -7.36

PLANETOCENTRIC CONIC  
 C3 37.481 VHL 6.122 DLA 10.84 RAL 11.09 RAD 6649.8 VEL 12.545 PTH 7.42 VHP 3.660 DPA 5.92 RAP 43.41 ECC 1.6168  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 22 43 3506.32 -46.34 128.69 254.31 102.25 9 21 9 2506.3 -36.43 99.06  
 60.00 8 30 27 3432.52 -39.66 123.66 255.92 97.61 9 47 39 2432.5 -32.30 95.23  
 70.00 9 29 20 3318.09 -33.89 115.17 256.70 94.48 10 24 38 2318.1 -28.55 87.76  
 80.00 10 25 18 3142.79 -29.70 102.16 256.98 92.30 11 17 40 2142.8 -25.81 75.44  
 90.00 11 41 17 2897.55 -28.24 84.19 257.04 91.52 12 29 35 1897.5 -24.77 57.72  
 100.00 13 8 9 2617.26 -29.78 63.53 256.98 92.30 13 51 47 1617.3 -25.81 38.81  
 110.00 14 28 47 2364.91 -33.89 44.09 256.70 94.48 15 8 11 1364.9 -28.55 16.68

DIFFERENTIAL CORRECTIONS  
 TDE -.3608 TRA -.7135 TC3 .3626 BAU .2743 SGT 879.4 SGR 834.5 SG3 661.4 ST 19.7 SR 32.9 SS 13.5  
 RDE -.7021 RRA .1173 RC3 -.4101 FAU .25254 RRT -.1050 RRF .5204 RTF -.1896 CRT .8270 CR8 -.0369 CST -.5589  
 FDE -.0735 FRA -2.8887 FC3 -5.8331 BSP 973 SGB 1212.3 R23 -.3497 R13 .4085 LSA 37.2 MSA 16.3 SSA 2.8  
 BDE .7894 BRA .7231 BC3 .5474 FSP 1048 SG1 906.1 SG2 805.4 THA 148.27 EL1 37.1 EL2 9.8 ALF 61.42

LAUNCH DATE SEP 6 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 30 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.030 GAL 8.30 AZL 88.93 HCA 100.87 SMA 198.29 ECC .27751 INC 1.0748 V1 29.549  
 RP 232.89 LAP 1.06 LOP 84.14 VP 21.690 GAP 12.66 AZP 90.20 TAL 39.62 TAP 140.50 RCA 143.26 APO 253.32 V2 23.612  
 RC 167.073 GL 5.77 GP -10.25 ZAL 31.54 ZAP 136.85 ETS 192.98 ZAE 167.74 ETE 256.98 ZAC 73.36 ETC 283.13 LVI -7.24

PLANETOCENTRIC CONIC  
 C3 37.236 VHL 6.102 DLA 10.96 RAL 10.92 RAD 6649.7 VEL 12.535 PTH 7.41 VHP 3.575 DPA 5.54 RAP 43.09 ECC 1.6128  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 21 35 3507.11 -46.35 128.77 254.09 102.20 9 20 0 2507.1 -36.46 99.12  
 60.00 8 49 8 3433.68 -39.68 123.76 255.70 97.74 9 46 22 2433.7 -32.33 95.31  
 70.00 9 27 52 3319.73 -33.90 115.30 256.46 94.41 10 23 12 2319.7 -28.59 87.87  
 80.00 10 23 40 3144.92 -29.78 102.32 256.74 92.22 11 16 5 2144.9 -25.85 75.59  
 90.00 11 39 35 2899.91 -28.25 84.37 256.80 91.43 12 27 55 1899.9 -24.81 57.88  
 100.00 13 6 32 2619.39 -29.78 63.69 256.74 92.22 13 50 11 1619.4 -25.85 36.95  
 110.00 14 27 18 2366.55 -33.90 44.21 256.46 94.41 15 6 45 1366.5 -28.59 16.79

DIFFERENTIAL CORRECTIONS  
 TDE -.3664 TRA -.7281 TC3 .3372 BAU .2726 SGT 879.0 SGR 847.6 SG3 693.6 ST 20.1 SR 32.9 SS 13.9  
 RDE -.6990 RRA .1063 RC3 -.4315 FAU .26367 RRT -.0829 RRF .5414 RTF -.1463 CRT .8284 CR8 -.0276 CST -.5506  
 FDE -.0641 FRA -3.0416 FC3 -6.1302 BSP 976 SGB 1221.1 R23 -.3497 R13 .3977 LSA 37.3 MSA 16.7 SSA 2.8  
 BDE .7892 BRA .7358 BC3 .5476 FSP 1108 SG1 901.6 SG2 823.5 THA 146.85 EL1 37.2 EL2 10.0 ALF 60.80

LAUNCH DATE SEP 6 1973

FLIGHT TIME 148.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.009 GAL 8.28 AZL 88.89 HCA 101.87 SMA 197.88 ECC .27803 INC 1.1055 V1 29.549  
 RP 233.25 LAP 1.08 LOP 85.13 VP 21.616 GAP 12.34 AZP 90.23 TAL 39.72 TAP 141.59 RCA 143.26 APO 252.50 V2 23.573  
 RC 170.003 GL 5.95 GP -10.50 ZAL 31.48 ZAP 135.40 ETS 192.70 ZAE 167.08 ETE 250.98 ZAC 73.20 ETC 283.20 LVI -7.12

PLANETOCENTRIC CONIC  
 C3 37.001 VHL 6.083 DLA 11.09 RAL 10.75 RAD 6649.6 VEL 12.528 PTH 7.41 VHP 3.495 DPA 5.16 RAP 42.74 ECC 1.6089  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 20 24 3508.09 -46.37 128.86 253.90 102.13 9 18 52 2508.1 -36.49 99.18  
 60.00 8 47 51 3435.06 -39.69 123.88 255.49 97.66 9 45 6 2435.1 -32.37 95.40  
 70.00 9 26 24 3321.61 -33.91 115.44 256.25 94.32 10 21 46 2321.6 -28.63 88.00  
 80.00 10 22 2 3147.32 -29.79 102.50 256.52 92.12 11 14 29 2147.3 -25.89 75.75  
 90.00 11 37 53 2902.55 -28.25 84.56 256.58 91.33 12 26 15 1902.5 -24.86 58.06  
 100.00 13 4 54 2621.79 -29.79 63.86 256.52 92.12 13 48 36 1621.8 -25.89 37.12  
 110.00 14 25 50 2368.43 -33.91 44.36 256.25 94.32 15 5 19 1368.4 -28.63 16.92

DIFFERENTIAL CORRECTIONS  
 TDE -.3719 TRA -.7440 TC3 .3093 BAU .2716 SGT 879.9 SGR 861.6 SG3 726.5 ST 20.5 SR 32.8 SS 14.4  
 RDE -.6958 RRA .0950 RC3 -.4536 FAU .27503 RRT -.0570 RRF .5823 RTF -.1596 CRT .8293 CR8 -.0189 CST -.5431  
 FDE -.0535 FRA -3.1968 FC3 -6.4350 BSP 977 SGB 1231.5 R23 -.4117 R13 .3889 LSA 37.5 MSA 16.1 SSA 2.8  
 BDE .7889 BRA .7501 BC3 .5490 FSP 1167 SG1 896.9 SG2 844.0 THA 145.14 EL1 37.4 EL2 10.1 ALF 60.18

LAUNCH DATE SEP 6 1973

FLIGHT TIME 150.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.990 GAL 8.26 AZL 88.86 HCA 102.88 SMA 197.50 ECC .27464 INC 1.1363 V1 29.549  
 RP 233.62 LAP 1.11 LOP 86.13 VP 21.545 GAP 12.03 AZP 90.25 TAL 39.81 TAP 142.67 RCA 143.26 APO 251.74 V2 23.536  
 RC 172.941 GL 6.13 GP -10.76 ZAL 31.43 ZAP 133.92 ETS 192.41 ZAE 166.28 ETE 245.48 ZAC 73.04 ETC 283.27 LVI -7.01

PLANETOCENTRIC CONIC  
 C3 36.776 VHL 6.064 DLA 11.22 RAL 10.60 RAD 6649.5 VEL 12.517 PTH 7.40 VHP 3.418 DPA 4.76 RAP 42.38 ECC 1.6052  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 19 17 3509.25 -46.39 128.96 253.73 102.05 9 17 46 2509.3 -36.54 99.26  
 60.00 8 46 34 3436.64 -39.70 124.01 255.31 97.58 9 43 51 2436.6 -32.42 95.51  
 70.00 9 24 56 3323.73 -33.92 115.61 256.06 94.22 10 20 20 2323.7 -28.68 88.15  
 80.00 10 20 24 3149.99 -29.80 102.69 256.32 92.02 11 12 54 2150.0 -25.94 75.93  
 90.00 11 36 10 2905.47 -28.26 84.77 256.37 91.23 12 24 35 1905.5 -24.90 58.26  
 100.00 13 3 16 2624.46 -29.80 64.06 256.32 92.02 13 47 0 1624.5 -25.94 37.30  
 110.00 14 24 23 2370.55 -33.92 44.52 256.06 94.22 15 3 53 1370.6 -28.68 17.06

DIFFERENTIAL CORRECTIONS  
 TDE -.3773 TRA -.7613 TC3 .2787 BAU .2714 SGT 882.6 SGR 876.5 SG3 760.2 ST 21.0 SR 32.7 SS 14.8  
 RDE -.6923 RRA .0831 RC3 -.4766 FAU .28663 RRT -.0270 RRF .5831 RTF -.0492 CRT .8300 CR8 -.0100 CST -.5359  
 FDE -.0414 FRA -3.3555 FC3 -6.7474 BSP 984 SGB 1243.9 R23 -.4349 R13 .3899 LSA 37.6 MSA 17.6 SSA 2.8  
 BDE .7884 BRA .7658 BC3 .5520 FSP 1228 SG1 891.8 SG2 867.2 THA 142.18 EL1 37.5 EL2 10.2 ALF 59.53



LAUNCH DATE SEP 6 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

DISTANCE 342.404

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.972 GAL 8.24 AZL 88.83 HCA 103.86 SMA 197.15 ECC .27335 INC 1.1672 V1 29.549  
 RP 233.99 LAP 1.13 LOP 87.12 VP 21.476 GAP 11.72 AZP 90.28 TAL 39.87 TAP 143.73 RCA 143.26 APO 251.04 V2 23.498  
 RC 175.886 GL 6.31 GP -11.02 ZAL 31.39 ZAP 132.43 ETS 192.32 ZAE 185.35 ETE 240.50 ZAC 72.88 ETC 283.33 LVI -6.80

PLANETOCENTRIC CONIC

C3 36.558 VHL 6.046 DLA 11.36 RAL 10.46 RAD 8649.5 VEL 12.508 PTH 7.39 VHP 3.348 DPA 4.35 RAP 42.00 ECC 1.6017  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 11 3510.60 -46.40 129.09 253.59 101.95 9 16 42 2510.6 -36.59 99.35  
 60.00 8 45 18 3436.43 -39.72 124.18 255.15 97.48 9 42 37 2438.4 -32.47 95.63  
 70.00 9 23 29 3326.08 -33.93 115.79 255.88 94.12 10 18 55 2326.1 -28.74 88.31  
 80.00 10 16 46 3192.91 -29.80 102.91 256.14 91.91 11 11 19 2192.9 -25.99 78.14  
 90.00 11 34 27 2908.66 -28.26 85.01 256.19 91.11 12 22 55 1908.7 -24.86 58.48  
 100.00 13 1 38 2627.38 -29.80 64.28 256.14 91.91 13 45 25 1627.4 -25.99 37.80  
 110.00 14 22 59 2372.90 -33.93 44.71 255.88 94.12 15 2 28 1372.9 -28.74 17.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3630 TRA -.7804 TC3 .2490 BAW .2722 SGT 888.0 SGR 892.3 SG3 794.4 ST 21.4 SR 32.7 SS 15.2  
 RDE -.6885 RRA .0709 RC3 -.5002 FAU .29835 RRT .0074 RRF .6035 RTF .0080 CRT .8304 CRS -.0005 CBT -.5284  
 FDE -.0270 FRA -3.5156 FC3 -7.0652 B8P 997 SGB 1258.8 R23 .2844 R13 .5323 LSA 37.7 MSA 18.0 SSA 2.8  
 BDE .7879 BRA .7836 BC3 .5570 F8P 1290 SG1 894.1 SG2 886.2 THA 81.62 EL1 37.6 EL2 10.3 ALF 58.64

LAUNCH DATE SEP 6 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

DISTANCE 346.184

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.955 GAL 8.22 AZL 88.80 HCA 104.84 SMA 196.83 ECC .27213 INC 1.1983 V1 29.549  
 RP 234.35 LAP 1.16 LOP 88.11 VP 21.410 GAP 11.41 AZP 90.31 TAL 39.93 TAP 144.77 RCA 143.27 APO 250.59 V2 23.461  
 RC 178.836 GL 6.50 GP -11.28 ZAL 31.37 ZAP 130.92 ETS 191.82 ZAE 164.31 ETE 236.03 ZAC 72.73 ETC 283.40 LVI -6.78

PLANETOCENTRIC CONIC

C3 36.348 VHL 6.029 DLA 11.51 RAL 10.33 RAD 8649.4 VEL 12.500 PTH 7.39 VHP 3.276 DPA 3.93 RAP 41.60 ECC 1.5982  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 6 3512.12 -46.43 129.23 253.46 101.85 9 15 39 2512.1 -36.64 99.43  
 60.00 8 44 3 3440.41 -39.74 124.32 255.01 97.36 9 41 24 2440.4 -32.53 95.77  
 70.00 9 22 2 3328.66 -33.95 115.99 255.73 94.00 10 17 31 2328.7 -28.79 88.49  
 80.00 10 17 7 3196.09 -29.81 103.15 255.98 91.78 11 9 43 2196.1 -26.05 78.36  
 90.00 11 32 42 2912.13 -28.26 85.26 256.02 90.98 12 21 15 1912.1 -25.01 58.72  
 100.00 12 59 59 2630.56 -29.81 64.52 255.98 91.78 13 43 49 1630.6 -26.05 37.72  
 110.00 14 21 28 2375.48 -33.95 44.91 255.73 94.00 15 1 4 1375.5 -28.79 17.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3888 TRA -.8010 TC3 .2085 BAW .2743 SGT 896.2 SGR 909.0 SG3 829.1 ST 21.6 SR 32.5 SS 15.6  
 RDE -.6844 RRA .0584 RC3 -.5245 FAU .31021 RRT .0459 RRF .6235 RTF .0621 CRT .8306 CRS .0101 CBT -.5208  
 FDE -.0095 FRA -3.6768 FC3 -7.3885 B8P 1020 SGB 1276.5 R23 .3312 R13 .5293 LSA 37.9 MSA 18.4 SSA 2.8  
 BDE .7871 BRA .8031 BC3 .5644 F8P 1355 SG1 924.0 SG2 880.7 THA 53.58 EL1 37.8 EL2 10.5 ALF 58.11

LAUNCH DATE SEP 6 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 9 1974

HELIOCENTRIC CONIC

DISTANCE 349.988

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.940 GAL 8.20 AZL 88.77 HCA 105.83 SMA 196.54 ECC .27099 INC 1.2295 V1 29.549  
 RP 234.71 LAP 1.18 LOP 89.09 VP 21.348 GAP 11.11 AZP 90.34 TAL 39.97 TAP 145.80 RCA 143.28 APO 249.80 V2 23.424  
 RC 181.791 GL 6.68 GP -11.55 ZAL 31.36 ZAP 129.40 ETS 191.52 ZAE 183.18 ETE 232.05 ZAC 72.37 ETC 283.48 LVI -6.87

PLANETOCENTRIC CONIC

C3 36.145 VHL 6.012 DLA 11.66 RAL 10.22 RAD 8649.3 VEL 12.492 PTH 7.38 VHP 3.210 DPA 3.50 RAP 41.19 ECC 1.5948  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 3 3513.82 -46.45 129.39 253.36 101.73 9 14 37 2513.6 -36.70 99.57  
 60.00 8 42 49 3442.59 -39.75 124.51 254.89 97.24 9 40 11 2442.6 -32.59 95.92  
 70.00 9 20 35 3331.45 -33.96 116.21 255.59 93.87 10 16 6 2331.5 -28.86 88.68  
 80.00 10 15 27 3199.53 -29.82 103.40 255.83 91.65 11 8 7 2199.5 -26.11 78.59  
 90.00 11 30 57 2915.88 -28.27 85.53 255.87 90.85 12 19 33 1915.9 -25.07 58.98  
 100.00 12 58 19 2634.00 -29.82 64.77 255.83 91.65 13 42 13 1634.0 -26.11 37.98  
 110.00 14 20 1 2378.27 -33.96 45.12 255.59 93.87 14 59 39 1378.3 -28.86 17.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3946 TRA -.8231 TC3 .1690 BAW .2778 SGT 907.9 SGR 926.6 SG3 884.2 ST 22.3 SR 32.4 SS 16.0  
 RDE -.6801 RRA .0454 RC3 -.5496 FAU .32217 RRT .0880 RRF .6431 RTF .1218 CRT .8306 CRS .0200 CBT -.5129  
 FDE .0092 FRA -3.8398 FC3 -7.7188 B8P 1051 SGB 1297.3 R23 .3248 R13 .5589 LSA 38.0 MSA 18.8 SSA 2.8  
 BDE .7862 BRA .8243 BC3 .5750 F8P 1418 SG1 957.8 SG2 874.9 THA 51.55 EL1 37.9 EL2 10.6 ALF 57.37

LAUNCH DATE SEP 6 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 11 1974

HELIOCENTRIC CONIC

DISTANCE 353.754

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.926 GAL 8.18 AZL 88.74 HCA 106.81 SMA 196.27 ECC .26992 INC 1.2611 V1 29.549  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.284 GAP 10.81 AZP 90.36 TAL 39.99 TAP 146.80 RCA 143.29 APO 249.28 V2 23.387  
 RC 184.750 GL 6.87 GP -11.82 ZAL 31.36 ZAP 127.86 ETS 191.22 ZAE 161.95 ETE 228.50 ZAC 72.42 ETC 283.55 LVI -6.96

PLANETOCENTRIC CONIC

C3 35.947 VHL 5.996 DLA 11.82 RAL 10.11 RAD 8649.2 VEL 12.484 PTH 7.37 VHP 3.148 DPA 3.06 RAP 40.76 ECC 1.5916  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 0 3515.68 -46.48 129.56 253.28 101.60 9 13 36 2515.7 -36.77 99.69  
 60.00 8 41 34 3444.95 -39.77 124.70 254.79 97.11 9 38 59 2445.0 -32.66 96.08  
 70.00 9 19 7 3334.47 -33.97 116.44 255.48 93.73 10 14 42 2334.5 -28.92 88.89  
 80.00 10 13 47 3163.21 -29.82 103.68 255.70 91.50 11 6 30 2163.2 -26.17 76.85  
 90.00 11 29 11 2919.85 -28.27 85.82 255.73 90.70 12 17 51 1919.9 -25.13 59.25  
 100.00 12 56 39 2637.68 -29.82 65.04 255.70 91.50 13 40 37 1637.7 -26.17 38.21  
 110.00 14 16 34 2381.29 -33.97 45.36 255.48 93.73 14 58 15 1381.3 -28.92 17.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4005 TRA -.8471 TC3 .1264 BAW .2830 SGT 923.8 SGR 945.1 SG3 899.5 ST 22.8 SR 32.3 SS 16.4  
 RDE -.6793 RRA .0322 RC3 -.5752 FAU .33414 RRT .1333 RRF .6620 RTF .1826 CRT .8303 CRS .0315 CBT -.5045  
 FDE .0317 FRA -4.0012 FC3 -8.0473 B8P 1095 SGB 1321.6 R23 .3158 R13 .5896 LSA 38.1 MSA 19.3 SSA 2.8  
 BDE .7852 BRA .8477 BC3 .5890 F8P 1483 SG1 995.7 SG2 869.0 THA 49.86 EL1 38.0 EL2 10.8 ALF 56.57

LAUNCH DATE SEP 6 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 13 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.913 GAL 8.16 AZL 88.71 HCA 107.79 SMA 196.02 ECC .26892 INC 1.2927 V1 29.549  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.224 GAP 10.51 AZP 90.40 TAL 40.01 TAP 147.80 RCA 143.31 APO 248.74 V2 23.351  
 RC 187.714 GL 7.06 GP -12.09 ZAL 31.38 ZAP 126.31 ETS 190.91 ZAE 160.65 ETE 225.34 ZAC 72.27 ETC 283.62 LVI -6.48

PLANETOCENTRIC CONIC  
 C3 35.757 VHL 5.980 DLA 11.99 RAL 10.01 RAD 6649.2 VEL 12.476 PTH 7.37 VHP 3.089 DPA 2.61 RAP 40.31 ECC 1.5885  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 58 3517.70 -46.50 129.75 253.21 101.45 9 12 36 2517.7 -36.85 99.83  
 60.00 8 40 21 3447.50 -39.80 124.92 254.70 96.97 9 37 48 2447.5 -32.73 96.26  
 70.00 9 17 40 3337.69 -33.99 116.69 255.37 93.59 10 13 17 2337.7 -26.99 89.11  
 80.00 10 12 6 3167.13 -29.83 103.97 255.59 91.35 11 4 53 2167.1 -26.24 77.12  
 90.00 11 27 24 2924.10 -26.28 86.14 255.61 90.54 12 16 8 1924.1 -25.20 59.55  
 100.00 12 54 58 2641.60 -29.83 65.34 255.59 91.35 13 39 0 1641.6 -26.24 38.49  
 110.00 14 17 6 2384.51 -33.99 45.61 255.37 93.59 14 56 50 1384.5 -28.99 18.03

DIFFERENTIAL CORRECTIONS  
 TDE -.4002 TRA -.8664 TC3 .0878 BAU .2913 SGT 937.1 SGR 986.6 SG3 937.8 ST 23.0 SR 32.2 SS 16.9  
 RDE -.6716 RRA .0173 RC3 -.6029 FAU .34709 RRT .1729 RRF .6821 RTF .2369 CRT .8280 CRS .0261 CST -.5134  
 FDE .0350 FRA -4.1843 FC3 -8.4037 B8P 1141 SGB 1346.3 R23 .2925 R13 .6279 LSA 38.1 MSA 19.7 SSA 2.8  
 BDE .7818 BRA .8665 BC3 .6093 FSP 1525 SG1 1032.2 SG2 864.4 THA 50.08 EL1 38.0 EL2 10.9 ALF 56.22

LAUNCH DATE SEP 6 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 15 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.901 GAL 8.13 AZL 88.68 HCA 108.77 SMA 195.80 ECC .26799 INC 1.3247 V1 29.549  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.166 GAP 10.22 AZP 90.43 TAL 40.00 TAP 148.77 RCA 143.33 APO 248.28 V2 23.315  
 RC 190.680 GL 7.25 GP -12.36 ZAL 31.41 ZAP 124.75 ETS 190.60 ZAE 159.29 ETE 222.52 ZAC 72.12 ETC 283.62 LVI -6.33

PLANETOCENTRIC CONIC  
 C3 35.570 VHL 5.964 DLA 12.16 RAL 9.93 RAD 6649.1 VEL 12.489 PTH 7.36 VHP 3.033 DPA 2.15 RAP 39.86 ECC 1.5854  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 57 3519.89 -46.53 129.95 253.17 101.30 9 11 37 2519.9 -36.93 99.98  
 60.00 8 39 7 3450.24 -39.82 125.15 254.64 96.81 9 36 37 2450.2 -32.81 96.45  
 70.00 9 16 12 3341.14 -34.00 116.96 255.29 93.43 10 11 53 2341.1 -29.07 89.35  
 80.00 10 10 24 3171.31 -29.84 104.28 255.49 91.19 11 3 15 2171.3 -26.32 77.41  
 90.00 11 25 36 2928.63 -28.28 86.47 255.51 90.38 12 14 24 1928.6 -25.27 59.86  
 100.00 12 53 16 2645.78 -29.84 65.65 255.49 91.19 13 37 22 1645.8 -26.32 38.78  
 110.00 14 15 38 2387.96 -34.00 45.88 255.29 93.43 14 55 26 1388.0 -29.07 18.27

DIFFERENTIAL CORRECTIONS  
 TDE -.4110 TRA -.8985 TC3 .0335 BAU .2994 SGT 960.1 SGR 985.4 SG3 971.1 ST 23.8 SR 32.0 SS 17.2  
 RDE -.6653 RRA .0043 RC3 -.6288 FAU .35832 RRT .2292 RRF .6985 RTF .3045 CRT .8287 CRS .0504 CST -.4925  
 FDE .0779 FRA -4.3303 FC3 -8.7212 B8P 1217 SGB 1381.4 R23 .2930 R13 .6512 LSA 38.4 MSA 20.1 SSA 2.8  
 BDE .7820 BRA .8985 BC3 .6297 FSP 1608 SG1 1083.2 SG2 857.2 THA 47.22 EL1 38.3 EL2 11.1 ALF 54.98

LAUNCH DATE SEP 6 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.891 GAL 8.11 AZL 88.64 HCA 109.74 SMA 195.60 ECC .26711 INC 1.3570 V1 29.549  
 RP 236.12 LAP 1.28 LOP 93.01 VP 21.110 GAP 9.93 AZP 90.46 TAL 39.99 TAP 149.73 RCA 143.35 APO 247.85 V2 23.279  
 RC 193.649 GL 7.45 GP -12.64 ZAL 31.45 ZAP 123.17 ETS 190.28 ZAE 157.87 ETE 219.99 ZAC 71.98 ETC 283.77 LVI -6.22

PLANETOCENTRIC CONIC  
 C3 35.387 VHL 5.949 DLA 12.34 RAL 9.85 RAD 6649.0 VEL 12.461 PTH 7.36 VHP 2.980 DPA 1.69 RAP 39.39 ECC 1.5824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 57 3522.23 -46.56 130.17 253.15 101.13 9 10 39 2522.2 -37.01 100.14  
 60.00 8 37 54 3453.16 -39.84 125.39 254.59 96.65 9 35 27 2453.2 -32.89 96.65  
 70.00 9 14 43 3344.80 -34.02 117.24 255.22 93.26 10 10 28 2344.8 -29.15 89.61  
 80.00 10 8 41 3175.74 -29.84 104.61 255.40 91.01 11 1 37 2175.7 -26.39 77.71  
 90.00 11 23 46 2933.42 -28.28 86.82 255.42 90.20 12 12 39 1933.4 -25.34 60.19  
 100.00 12 51 33 2650.21 -29.84 65.97 255.40 91.01 13 35 43 1650.2 -26.39 39.08  
 110.00 14 14 9 2391.62 -34.02 46.18 255.22 93.26 14 54 1 1391.6 -29.15 18.53

DIFFERENTIAL CORRECTIONS  
 TDE -.4188 TRA -.9291 TC3 -.0203 BAU .3105 SGT 1001.1 SGR 1006.1 SG3 1005.7 ST 24.4 SR 31.8 SS 17.6  
 RDE -.6592 RRA -.0094 RC3 -.6560 FAU .36994 RRT .2812 RRF .7191 RTF .5539 CRT .8282 CRS .0671 CST -.4797  
 FDE .1138 FRA -4.4827 FC3 -9.0305 B8P 1299 SGB 1419.4 R23 .2855 R13 .6778 LSA 38.5 MSA 20.6 SSA 2.8  
 BDE .7809 BRA .9292 BC3 .6563 FSP 1679 SG1 1136.1 SG2 850.9 THA 45.51 EL1 38.4 EL2 11.3 ALF 53.94

LAUNCH DATE SEP 6 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.881 GAL 8.08 AZL 88.61 HCA 110.71 SMA 195.42 ECC .26629 INC 1.3895 V1 29.549  
 RP 236.46 LAP 1.30 LOP 93.98 VP 21.057 GAP 9.64 AZP 90.49 TAL 39.96 TAP 150.68 RCA 143.38 APO 247.46 V2 23.244  
 RC 196.619 GL 7.65 GP -12.91 ZAL 31.51 ZAP 121.59 ETS 189.96 ZAE 156.39 ETE 217.71 ZAC 71.83 ETC 283.84 LVI -6.11

PLANETOCENTRIC CONIC  
 C3 35.210 VHL 5.934 DLA 12.53 RAL 9.78 RAD 6649.0 VEL 12.454 PTH 7.35 VHP 2.931 DPA 1.22 RAP 38.91 ECC 1.5799  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 57 3524.74 -46.60 130.40 253.14 100.96 9 9 41 2524.7 -37.10 100.31  
 60.00 8 36 40 3456.26 -39.87 125.65 254.55 96.47 9 34 17 2456.3 -32.98 96.87  
 70.00 9 13 14 3348.67 -34.03 117.55 255.16 93.08 10 9 3 2348.7 -29.23 89.88  
 80.00 10 6 56 3180.40 -29.85 104.95 255.33 90.83 10 59 57 2180.4 -26.47 78.04  
 90.00 11 21 54 2938.46 -28.28 87.19 255.35 90.02 12 10 53 1938.5 -25.42 60.54  
 100.00 12 49 48 2654.87 -29.85 66.32 255.33 90.83 13 34 3 1654.9 -26.47 39.41  
 110.00 14 12 40 2395.49 -34.03 46.46 255.16 93.08 14 52 38 1395.5 -29.23 18.80

DIFFERENTIAL CORRECTIONS  
 TDE -.4247 TRA -.9600 TC3 -.0756 BAU .3239 SGT 1038.2 SGR 1028.1 SG3 1040.6 ST 25.0 SR 31.6 SS 18.0  
 RDE -.6531 RRA -.0237 RC3 -.6839 FAU .38160 RRT .3314 RRF .7313 RTF .4236 CRT .8272 CRS .0800 CST -.4709  
 FDE .1472 FRA -4.6384 FC3 -9.3827 B8P 1392 SGB 1461.1 R23 .2760 R13 .7040 LSA 38.7 MSA 21.0 SSA 2.8  
 BDE .7791 BRA .9603 BC3 .6880 FSP 1744 SG1 1192.2 SG2 844.7 THA 44.15 EL1 38.6 EL2 11.5 ALF 52.98

LAUNCH DATE SEP 6 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC DISTANCE 372.728 EARTH TO MARS  
 RL 180.79 LAL .00 LOL 343.26 VL 32.873 GAL 8.08 AZL 88.58 HCA 111.88 BMA 198.26 ECC .26583 INC 1.4224 V1 29.849  
 RP 236.81 LAP 1.32 LOP 94.93 VP 21.005 GAP 9.38 AZP 90.93 TAL 39.93 TAP 151.61 RCA 143.41 APO 247.10 V2 23.209  
 RC 199.89 GL 7.88 GP -13.19 ZAL 31.57 ZAP 120.00 ETS 189.63 ZAE 154.88 ETE 215.65 ZAC 71.69 ETC 263.91 LVI -6.00

PLANETOCENTRIC CONIC  
 C3 35.036 VHL 5.919 DLA 12.72 RAL 9.72 RAD 6648.9 VEL 12.447 PTH 7.35 VHP 2.885 DPA .74 RAP 38.42 ECC 1.8766  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 57 3527.40 -48.63 130.65 253.15 100.77 9 8 44 2527.4 -37.20 100.49  
 60.00 8 35 27 3459.54 -39.89 125.93 254.54 96.29 9 33 6 2459.5 -33.07 97.09  
 70.00 9 11 44 3352.75 -34.05 117.86 255.12 92.89 10 7 37 2352.8 -29.32 90.16  
 80.00 10 5 11 3185.31 -29.85 105.32 255.28 90.64 10 58 16 2185.3 -26.55 78.38  
 90.00 11 20 1 2943.77 -28.28 87.57 255.28 89.82 12 9 5 1943.8 -25.50 60.91  
 100.00 12 48 2 2659.78 -29.85 66.69 255.28 90.64 13 32 22 1659.8 -26.55 39.75  
 110.00 14 11 10 2399.57 -34.05 46.78 255.12 92.89 14 51 10 1399.6 -29.32 19.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4307 TRA -.9924 TC3 -.1339 BAV .3395 SGT 1081.1 SGR 1030.8 SG3 1075.2 ST 25.6 SR 31.3 SS 18.4  
 RDE -.6468 RRA -.0383 RC3 -.7123 FAU .39311 RRT .3802 RRF .7468 RTF .4779 CRT .8260 CRS .0933 CBT -.4618  
 FDE .1838 FRA -4.7909 FC3 -9.7137 B8P 1498 SGB 1507.7 R23 .2667 R13 .7284 LSA 38.8 MSA 21.5 SSA 2.8  
 BDE .7770 BRA .9931 BC3 .7248 F8P 1809 SG1 1252.9 S2 838.7 THA 42.87 EL1 38.7 EL2 11.7 ALF 51.98

LAUNCH DATE SEP 6 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC DISTANCE 376.526 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 32.865 GAL 8.03 AZL 88.54 HCA 112.64 BMA 195.11 ECC .26481 INC 1.4556 V1 29.549  
 RP 237.14 LAP 1.34 LOP 95.91 VP 20.954 GAP 9.07 AZP 90.56 TAL 39.88 TAP 152.52 RCA 143.45 APO 246.78 V2 23.174  
 RC 202.557 GL 8.05 GP -13.47 ZAL 31.65 ZAP 118.40 ETS 189.29 ZAE 153.33 ETE 213.78 ZAC 71.56 ETC 263.99 LVI -9.89

PLANETOCENTRIC CONIC  
 C3 34.866 VHL 5.905 DLA 12.92 RAL 9.67 RAD 6648.8 VEL 12.441 PTH 7.34 VHP 2.842 DPA .26 RAP 37.93 ECC 1.5730  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 58 3530.21 -48.67 130.91 253.18 100.57 9 7 48 2530.2 -37.30 100.88  
 60.00 8 34 13 3482.99 -39.92 126.22 254.53 96.09 9 31 56 2483.0 -33.17 97.34  
 70.00 9 10 13 3357.04 -34.06 118.20 255.10 92.70 10 6 10 2357.0 -29.41 90.46  
 80.00 10 3 23 3190.47 -29.85 105.70 255.23 90.44 10 56 34 2190.5 -26.64 78.74  
 90.00 11 18 6 2949.34 -28.28 87.98 255.23 89.62 12 7 15 1949.3 -25.58 61.29  
 100.00 12 46 15 2664.94 -29.85 67.07 255.23 90.44 13 30 40 1664.9 -26.64 40.11  
 110.00 14 9 39 2403.86 -34.06 47.12 255.10 92.70 14 49 43 1403.9 -29.41 19.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4384 TRA -1.0262 TC3 -.1949 BAV .3573 SGT 1129.8 SGR 1074.5 SG3 1109.4 ST 26.1 SR 31.1 SS 18.8  
 RDE -.6398 RRA -.0530 RC3 -.7412 FAU .40443 RRT .4270 RRF .7618 RTF .5283 CRT .8245 CRS .1061 CBT -.4534  
 FDE .2222 FRA -4.9407 FC -10.0422 B8P 1614 SGB 1559.0 R23 .2578 R13 .7510 LSA 38.9 MSA 21.9 SSA 2.8  
 BDE .7744 BRA 1.0276 BC3 .7864 F8P 1870 SG1 1318.0 S2 832.7 THA 41.66 EL1 38.8 EL2 11.8 ALF 50.86

LAUNCH DATE SEP 6 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC DISTANCE 380.328 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 32.858 GAL 8.00 AZL 88.51 HCA 113.81 BMA 194.88 ECC .26414 INC 1.4892 V1 29.849  
 RP 237.48 LAP 1.36 LOP 96.88 VP 20.908 GAP 8.80 AZP 90.60 TAL 39.82 TAP 153.42 RCA 143.48 APO 246.49 V2 23.140  
 RC 205.523 GL 8.25 GP -13.74 ZAL 31.74 ZAP 118.80 ETS 188.94 ZAE 151.74 ETE 212.07 ZAC 71.42 ETC 264.06 LVI -5.77

PLANETOCENTRIC CONIC  
 C3 34.700 VHL 5.891 DLA 13.12 RAL 9.62 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 2.801 DPA -.23 RAP 37.42 ECC 1.8711  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 59 3533.18 -48.70 131.19 253.22 100.36 9 8 52 2533.2 -37.41 100.88  
 60.00 8 32 59 3486.82 -39.94 126.52 254.54 95.88 9 30 45 2486.6 -33.27 97.98  
 70.00 9 8 41 3361.54 -34.07 118.55 255.08 92.49 10 4 43 2361.8 -29.51 90.78  
 80.00 10 1 34 3195.87 -29.86 106.10 255.20 90.23 10 54 50 2195.9 -26.73 79.12  
 90.00 11 18 9 2955.17 -28.27 88.41 255.19 89.41 12 5 24 1955.2 -25.87 61.70  
 100.00 12 44 28 2670.34 -29.86 67.47 255.20 90.23 13 28 56 1670.3 -26.73 40.48  
 110.00 14 8 8 2408.36 -34.07 47.47 255.08 92.49 14 48 16 1408.4 -29.51 19.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4397 TRA -1.0994 TC3 -.2884 BAV .3771 SGT 1180.6 SGR 1100.0 SG3 1144.8 ST 26.8 SR 30.8 SS 19.2  
 RDE -.6334 RRA -.0688 RC3 -.7714 FAU .41599 RRT .4701 RRF .7761 RTF .5339 CRT .8222 CRS .1118 CBT -.4628  
 FDE .2517 FRA -5.0984 FC -10.3788 B8P 1749 SGB 1613.6 R23 .2478 R13 .7727 LSA 39.1 MSA 22.3 SSA 2.8  
 BDE .7710 BRA 1.0817 BC3 .8129 F8P 1917 SG1 1385.4 S2 827.4 THA 40.72 EL1 38.9 EL2 12.0 ALF 50.09

LAUNCH DATE SEP 6 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC DISTANCE 384.130 EARTH TO MARS  
 RL 150.79 LAL .00 LOL 343.26 VL 32.852 GAL 7.98 AZL 88.48 HCA 114.57 BMA 194.87 ECC .26351 INC 1.5232 V1 29.849  
 RP 237.81 LAP 1.39 LOP 97.84 VP 20.859 GAP 8.52 AZP 90.63 TAL 39.75 TAP 154.31 RCA 143.52 APO 246.22 V2 23.106  
 RC 208.485 GL 8.48 GP -14.02 ZAL 31.84 ZAP 119.20 ETS 188.59 ZAE 150.13 ETE 210.51 ZAC 71.29 ETC 284.13 LVI -5.86

PLANETOCENTRIC CONIC  
 C3 34.535 VHL 5.877 DLA 13.34 RAL 9.58 RAD 6648.7 VEL 12.427 PTH 7.33 VHP 2.783 DPA -.72 RAP 36.92 ECC 1.5684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 0 3536.30 -48.74 131.48 253.26 100.14 9 5 56 2536.3 -37.52 101.10  
 60.00 8 31 44 3470.44 -39.97 126.84 254.57 95.67 9 29 35 2470.4 -33.38 97.88  
 70.00 9 7 8 3366.26 -34.09 118.92 255.08 92.27 10 3 15 2366.3 -29.61 91.11  
 80.00 9 59 43 3201.53 -29.86 106.52 255.18 90.01 10 53 4 2201.5 -26.82 79.51  
 90.00 11 14 9 2961.28 -28.27 88.85 255.17 89.18 12 3 30 1961.3 -25.76 62.13  
 100.00 12 42 35 2676.01 -29.86 67.89 255.18 90.01 13 27 11 1676.0 -26.82 40.86  
 110.00 14 6 35 2413.08 -34.09 47.83 255.08 92.27 14 46 48 1413.1 -29.61 20.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4481 TRA -1.0994 TC3 -.3272 BAV .3990 SGT 1245.9 SGR 1123.2 SG3 1174.9 ST 27.4 SR 30.5 SS 19.6  
 RDE -.6247 RRA -.0826 RC3 -.7998 FAU .42593 RRT .5136 RRF .7885 RTF .6171 CRT .8213 CRS .1358 CBT -.4333  
 FDE .3123 FRA -5.2197 FC -10.6772 B8P 1879 SGB 1677.5 R23 .2422 R13 .7901 LSA 39.3 MSA 22.7 SSA 2.8  
 BDE .7688 BRA 1.1025 BC3 .8842 F8P 1994 SG1 1463.0 S2 820.7 THA 39.28 EL1 39.2 EL2 12.2 ALF 48.74

LAUNCH DATE SEP 6 1973 FLIGHT TIME 176.00 ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 130.79 LAL .00 LOL 343.26 VL 32.847 GAL 7.95 AZL 88.44 HCA 115.52 SMA 194.77 ECC .26293 INC 1.5577 V1 29.549  
 RP 238.14 LAP 1.41 LOP 98.79 VP 20.814 GAP 8.25 AZP 90.67 TAL 39.66 TAP 155.19 RCA 143.56 APO 245.98 V2 23.073  
 RC 211.443 GL 8.68 GP -14.30 ZAL 31.95 ZAP 113.60 ETS 188.23 ZAE 148.49 ETE 209.06 ZAC 71.16 ETC 284.20 LVI -9.95

DISTANCE 387.933 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.374 VHL 5.863 DLA 13.55 RAL 9.55 RAD 6648.7 VEL 12.421 PTH 7.33 VHP 2.728 DPA -1.21 RAP 36.41 ECC 1.5657  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 1 3539.58 -46.78 131.79 253.35 99.90 9 5 0 2539.6 -37.64 101.32  
 60.00 8 30 29 3474.43 -39.99 127.18 254.61 95.44 9 28 23 2474.4 -33.49 98.14  
 70.00 9 5 34 3371.19 -34.10 119.30 255.09 92.05 10 1 45 2371.2 -29.71 91.46  
 80.00 9 57 50 3207.45 -29.86 106.96 255.17 89.78 10 31 17 2207.4 -26.91 79.93  
 90.00 11 12 7 2967.67 -28.26 89.32 255.15 88.95 12 1 35 1967.7 -25.85 62.57  
 100.00 12 40 41 2681.92 -29.86 68.33 255.17 89.78 13 25 23 1681.9 -26.91 41.29  
 110.00 14 5 0 2418.01 -34.10 48.22 255.09 92.05 14 45 18 1418.0 -29.71 20.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4533 TRA-1.1580 TC3 -.3974 BAU .4227 SGT 1312.3 SGR 1148.4 S63 1206.4 ST 28.0 SR 30.2 SS 20.0  
 RDE -.6166 RRA -.0975 RC3 -.8295 FAU .43615 RRT .5525 RRF .8009 RTF .6549 CRT .8194 CRS .1503 CST -.4236  
 FDE .3613 FRA-5.3513 FC-10.9848 BSP 2027 SGB 1743.8 R23 .2351 R13 .8070 LSA 39.4 MSA 23.2 SSA 2.8  
 BDE .7653 BRA 1.1422 BC3 .9198 FSP 2053 SG1 1541.7 S62 814.9 THA 38.19 EL1 39.3 EL2 12.3 ALF 47.60

LAUNCH DATE SEP 6 1973 FLIGHT TIME 178.00 ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.842 GAL 7.91 AZL 88.41 HCA 116.48 SMA 194.69 ECC .26238 INC 1.5925 V1 29.549  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.770 GAP 7.98 AZP 90.71 TAL 39.57 TAP 156.05 RCA 143.61 APO 245.77 V2 23.040  
 RC 214.394 GL 8.89 GP -14.57 ZAL 32.06 ZAP 112.00 ETS 187.86 ZAE 146.84 ETE 207.73 ZAC 71.03 ETC 284.26 LVI -5.43

DISTANCE 391.737 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.216 VHL 5.849 DLA 13.78 RAL 9.53 RAD 6648.6 VEL 12.415 PTH 7.32 VHP 2.696 DPA -1.71 RAP 35.90 ECC 1.5631  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 1 3543.01 -46.82 132.11 253.44 99.66 9 4 4 2543.0 -37.76 101.56  
 60.00 8 29 13 3478.61 -40.02 127.53 254.66 95.20 9 27 12 2478.6 -33.60 98.43  
 70.00 9 3 58 3376.34 -34.11 119.70 255.11 91.81 10 0 14 2376.3 -29.82 91.82  
 80.00 9 55 54 3213.62 -29.85 107.42 255.17 89.53 10 49 28 2213.6 -27.01 80.36  
 90.00 11 10 2 2974.33 -28.25 89.81 255.15 88.70 11 59 37 1974.3 -25.94 63.04  
 100.00 12 38 46 2688.09 -29.85 68.79 255.17 89.53 13 23 34 1688.1 -27.01 41.73  
 110.00 14 3 24 2423.16 -34.11 48.62 255.11 91.81 14 43 48 1423.2 -29.82 20.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4586 TRA-1.1783 TC3 -.4708 BAU .4483 SGT 1384.7 SGR 1174.2 S63 1236.8 ST 28.7 SR 29.9 SS 20.4  
 RDE -.6081 RRA -.1124 RC3 -.8595 FAU .44597 RRT .5880 RRF .8126 RTF .6887 CRT .8175 CRS .1650 CST -.4138  
 FDE -.4127 FRA-5.4753 FC-11.2839 BSP 2182 SGB 1815.5 R23 .2286 R13 .8222 LSA 39.6 MSA 23.6 SSA 2.8  
 BDE .7616 BRA 1.1836 BC3 .9800 FSP 2108 SG1 1625.2 S62 809.2 THA 37.13 EL1 39.5 EL2 12.5 ALF 46.41

LAUNCH DATE SEP 6 1973 FLIGHT TIME 180.00 ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.838 GAL 7.88 AZL 88.37 HCA 117.43 SMA 194.62 ECC .26187 INC 1.6279 V1 29.549  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.728 GAP 7.71 AZP 90.75 TAL 39.47 TAP 156.90 RCA 143.65 APO 245.56 V2 23.008  
 RC 217.340 GL 9.11 GP -14.84 ZAL 32.19 ZAP 110.40 ETS 187.49 ZAE 145.17 ETE 206.48 ZAC 70.90 ETC 284.33 LVI -5.31

DISTANCE 395.542 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.060 VHL 5.836 DLA 14.01 RAL 9.51 RAD 6648.5 VEL 12.408 PTH 7.32 VHP 2.666 DPA -2.20 RAP 35.39 ECC 1.5605  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 2 3546.60 -46.86 132.45 253.54 99.40 9 3 9 2546.6 -37.89 101.81  
 60.00 8 27 56 3482.96 -40.05 127.90 254.73 94.96 9 25 59 2483.0 -33.72 98.74  
 70.00 9 2 21 3381.70 -34.12 120.12 255.15 91.56 9 58 42 2381.7 -29.93 92.20  
 80.00 9 53 56 3220.05 -29.85 107.90 255.19 89.28 10 47 36 2220.1 -27.11 80.81  
 90.00 11 7 55 2981.28 -28.24 90.32 255.15 88.45 11 57 36 1981.3 -26.03 63.52  
 100.00 12 36 48 2694.52 -29.85 69.27 255.19 89.28 13 21 43 1694.5 -27.11 42.18  
 110.00 14 1 47 2428.92 -34.12 49.04 255.15 91.56 14 42 16 1428.5 -29.93 21.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4633 TRA-1.2190 TC3 -.5467 BAU .4754 SGT 1462.0 SGR 1200.1 S63 1265.7 ST 29.3 SR 29.5 SS 20.8  
 RDE -.5990 RRA -.1273 RC3 -.8894 FAU .45520 RRT .8206 RRF .8235 RTF .1.87 CRT .8154 CRS .1804 CST -.4034  
 FDE .4683 FRA-5.5921 FC-11.5702 BSP 2348 SGB 1891.5 R23 .2227 R13 .8359 LSA 39.7 MSA 24.0 SSA 2.7  
 BDE .7573 BRA 1.2264 BC3 1.0440 FSP 2164 SG1 1712.3 S62 803.4 THA 36.12 EL1 39.6 EL2 12.6 ALF 45.20

LAUNCH DATE SEP 6 1973 FLIGHT TIME 182.00 ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.835 GAL 7.85 AZL 88.34 HCA 118.38 SMA 194.56 ECC .26139 INC 1.6837 V1 29.549  
 RP 239.10 LAP 1.46 LOP 101.85 VP 20.687 GAP 7.44 AZP 90.79 TAL 39.36 TAP 157.74 RCA 143.70 APO 245.41 V2 22.975  
 RC 220.278 GL 9.33 GP -15.12 ZAL 32.33 ZAP 108.81 ETS 187.11 ZAE 143.48 ETE 205.32 ZAC 70.78 ETC 284.39 LVI -5.19

DISTANCE 399.346 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 33.907 VHL 5.823 DLA 14.25 RAL 9.50 RAD 6648.5 VEL 12.402 PTH 7.31 VHP 2.639 DPA -2.69 RAP 34.88 ECC 1.5580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 2 3550.34 -46.90 132.80 253.66 99.13 9 2 12 2550.3 -38.02 102.07  
 60.00 8 26 38 3487.50 -40.07 128.28 254.80 94.70 9 24 46 2487.5 -33.85 99.06  
 70.00 9 0 41 3387.30 -34.13 120.56 255.19 91.30 9 57 9 2387.3 -30.04 92.60  
 80.00 9 51 56 3226.75 -29.84 108.40 255.21 89.02 10 45 42 2226.8 -27.21 81.28  
 90.00 11 5 44 2988.52 -28.23 90.84 255.16 88.19 11 55 33 1988.5 -26.13 64.03  
 100.00 12 34 47 2701.23 -29.84 69.77 255.21 89.02 13 19 49 1701.2 -27.21 42.65  
 110.00 14 0 8 2434.11 -34.13 49.47 255.19 91.30 14 40 42 1434.1 -30.04 21.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4676 TRA-1.2625 TC3 -.6252 BAU .5041 SGT 1544.2 SGR 1226.5 S63 1293.6 ST 30.0 SR 29.1 SS 21.2  
 RDE -.5896 RRA -.1423 RC3 -.9196 FAU .46401 RRT .6504 RRF .8339 RTF .7452 CRT .8132 CRS .1953 CST -.3935  
 FDE .5257 FRA-5.7029 FC-11.8476 BSP 2521 SGB 1972.1 R23 .2172 R13 .8482 LSA 39.9 MSA 24.4 SSA 2.7  
 BDE .7525 BRA 1.2705 BC3 1.1120 FSP 2214 SG1 1803.5 S62 797.8 THA 35.17 EL1 39.8 EL2 12.8 ALF 43.96

LAUNCH DATE SEP 6 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

DISTANCE 403.132

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.833 GAL 7.82 AZL 88.30 HCA 119.32 SMA 194.51 ECC .26095 INC 1.7002 V1 29.549
RP 239.42 LAP 1.48 LOP 102.60 VP 20.648 GAP 7.18 AZP 90.83 TAL 39.24 TAP 158.56 RCA 143.75 APO 245.27 V2 22.944
RC 223.209 GL 9.56 GP -15.39 ZAL 32.48 ZAP 107.23 ETS 186.72 ZAE 141.79 ETE 204.23 ZAC 70.66 ETC 284.45 LVI -5.07

PLANETOCENTRIC CONIC

C3 33.753 VHL 5.810 DLA 14.50 RAL 9.50 RAD 6648.4 VEL 12.396 PTH 7.31 VHP 2.814 DPA -3.19 RAP 34.37 ECC 1.5555
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 2 3554.25 -46.94 133.17 253.79 98.85 9 1 18 2554.2 -38.16 102.34
60.00 8 25 20 3492.23 -40.10 128.68 254.89 94.43 9 23 32 2492.2 -33.97 99.40
70.00 8 59 0 3393.11 -34.14 121.01 255.25 91.04 9 55 33 2393.1 -30.15 93.01
80.00 9 49 52 3233.73 -29.83 108.92 255.24 88.75 10 43 46 2233.7 -27.31 81.77
90.00 11 3 30 2996.06 -26.21 91.40 255.19 87.91 11 53 26 1996.1 -26.23 64.56
100.00 12 32 44 2708.20 -29.83 70.28 255.24 88.75 13 17 52 1708.2 -27.31 43.14
110.00 13 58 27 2439.93 -34.14 49.93 255.25 91.04 14 39 6 1439.9 -30.15 21.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4712 TRA-1.3061 TC3 -.7060 BAU .5341 SGT 1830.6 SGR 1253.5 SG3 1320.2 ST 30.7 SR 28.7 SA 21.6
RDE -.5799 RRA -.1571 RC3 -.9500 FAU .47238 RRT .6773 RRF .8438 RTF .7685 CRT .8108 CR8 .2092 CBT -.3846
FDE .5837 FRA-5.8052 FC-12.1152 B8P 2703 SGB 2036.7 R23 .2121 R13 .6593 LSA 40.1 MSA 24.8 SA 2.7
BDE .7472 BRA 1.3156 BC3 1.1636 F8P 2260 SGI 1898.0 SG2 792.3 THA 34.27 EL1 40.0 EL2 12.9 ALF 42.73

LAUNCH DATE SEP 6 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

DISTANCE 406.957

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.831 GAL 7.78 AZL 88.28 HCA 120.27 SMA 194.47 ECC .26054 INC 1.7372 V1 29.549
RP 239.73 LAP 1.50 LOP 103.54 VP 20.610 GAP 6.92 AZP 90.88 TAL 39.11 TAP 159.30 RCA 143.81 APO 245.14 V2 22.912
RC 226.132 GL 9.79 GP -15.68 ZAL 32.64 ZAP 105.65 ETS 186.32 ZAE 140.10 ETE 203.21 ZAC 70.54 ETC 284.51 LVI -4.95

PLANETOCENTRIC CONIC

C3 33.607 VHL 5.797 DLA 14.75 RAL 9.50 RAD 6648.4 VEL 12.390 PTH 7.30 VHP 2.891 DPA -3.68 RAP 33.87 ECC 1.5531
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 8 1 1 3558.31 -46.98 133.55 253.94 98.56 9 0 19 2558.3 -38.30 102.63
60.00 8 23 59 3497.15 -40.12 129.10 254.99 94.15 9 22 18 2497.2 -34.10 99.78
70.00 8 57 17 3399.17 -34.15 121.48 255.31 90.78 9 53 58 2399.2 -30.27 93.44
80.00 9 47 46 3240.99 -29.82 109.46 255.28 88.47 10 41 47 2241.0 -27.42 82.29
90.00 11 1 13 3003.91 -26.19 91.97 255.22 87.62 11 51 17 2003.9 -26.33 65.11
100.00 12 30 37 2715.46 -29.82 70.82 255.28 88.47 13 15 53 1715.5 -27.42 43.66
110.00 13 56 43 2445.98 -34.15 50.40 255.31 90.78 14 37 29 1446.0 -30.27 22.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4739 TRA-1.3504 TC3 -.7885 BAU .5654 SGT 1720.5 SGR 1281.3 SG3 1346.1 ST 31.3 SR 28.4 SA 22.0
RDE -.5702 RRA -.1725 RC3 -.9808 FAU .48041 RRT .7017 RRF .8529 RTF .7892 CRT .8082 CR8 .2197 CBT -.3798
FDE .6380 FRA-5.9068 FC-12.3758 B8P 2891 SGB 2145.2 R23 .2072 R13 .8696 LSA 40.3 MSA 25.2 SA 2.7
BDE .7414 BRA 1.3614 BC3 1.2584 F8P 2295 SGI 1995.6 SG2 787.1 THA 33.46 EL1 40.2 EL2 13.0 ALF 41.92

LAUNCH DATE SEP 6 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC

DISTANCE 410.763

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.829 GAL 7.75 AZL 88.23 HCA 121.21 SMA 194.48 ECC .26016 INC 1.7748 V1 29.549
RP 240.03 LAP 1.52 LOP 104.48 VP 20.574 GAP 6.86 AZP 90.92 TAL 38.97 TAP 160.18 RCA 143.86 APO 245.03 V2 22.882
RC 229.048 GL 10.03 GP -15.92 ZAL 32.81 ZAP 104.09 ETS 185.92 ZAE 138.40 ETE 202.23 ZAC 70.42 ETC 284.57 LVI -4.82

PLANETOCENTRIC CONIC

C3 33.460 VHL 5.784 DLA 15.01 RAL 9.50 RAD 6648.3 VEL 12.384 PTH 7.30 VHP 2.870 DPA -4.17 RAP 33.37 ECC 1.5507
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 7 59 59 3562.54 -47.03 133.95 254.10 98.25 8 59 22 2562.5 -39.44 102.93
60.00 8 22 38 3502.27 -40.18 129.53 255.11 93.85 9 21 0 2502.3 -34.24 100.12
70.00 8 55 31 3405.45 -34.15 121.97 255.39 90.47 9 52 17 2405.5 -30.39 93.89
80.00 9 45 36 3248.54 -29.81 110.02 255.33 88.17 10 39 44 2248.5 -27.53 82.82
90.00 10 58 52 3012.07 -26.16 92.56 255.26 87.33 11 49 4 2012.1 -26.43 65.69
100.00 12 28 28 2723.01 -29.81 71.38 255.33 88.17 13 13 51 1723.0 -27.53 44.19
110.00 13 54 58 2452.27 -34.15 50.89 255.39 90.47 14 35 50 1452.3 -30.39 22.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4750 TRA-1.3847 TC3 -.8720 BAU .5977 SGT 1812.4 SGR 1310.7 SG3 1371.9 ST 31.9 SR 28.0 SA 22.4
RDE -.5608 RRA -.1884 RC3 -1.0125 FAU .48835 RRT .7238 RRF .8619 RTF .8278 CRT .8053 CR8 .2247 CBT -.3794
FDE .6838 FRA-6.0097 FC-12.6354 B8P 3091 SGB 2236.8 R23 .2022 R13 .8792 LSA 40.5 MSA 25.6 SA 2.7
BDE .7349 BRA 1.4074 BC3 1.3382 F8P 2315 SGI 2095.4 SG2 782.2 THA 32.75 EL1 40.3 EL2 13.1 ALF 40.38

LAUNCH DATE SEP 6 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC

DISTANCE 414.567

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.828 GAL 7.71 AZL 88.19 HCA 122.15 SMA 194.43 ECC .25980 INC 1.8132 V1 29.549
RP 240.34 LAP 1.54 LOP 103.42 VP 20.539 GAP 6.41 AZP 90.97 TAL 38.82 TAP 160.97 RCA 143.92 APO 244.94 V2 22.881
RC 231.955 GL 10.27 GP -16.18 ZAL 32.89 ZAP 102.54 ETS 185.81 ZAE 136.70 ETE 201.32 ZAC 70.30 ETC 284.62 LVI -4.69

PLANETOCENTRIC CONIC

C3 33.314 VHL 5.772 DLA 15.28 RAL 9.51 RAD 6648.3 VEL 12.378 PTH 7.30 VHP 2.592 DPA -4.63 RAP 32.89 ECC 1.5483
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG
50.00 7 58 57 3566.94 -47.07 134.37 254.28 97.94 8 58 23 2566.9 -38.60 103.24
60.00 8 21 14 3507.59 -40.17 129.98 255.23 93.55 9 19 42 2507.6 -34.38 100.50
70.00 8 53 43 3412.00 -34.15 122.49 255.48 90.16 9 50 35 2412.0 -30.52 94.36
80.00 9 43 22 3256.41 -29.79 110.80 255.39 87.87 10 37 39 2256.4 -27.64 83.38
90.00 10 56 26 3020.59 -26.14 93.19 255.30 87.02 11 46 46 2020.6 -26.54 66.29
100.00 12 26 14 2730.86 -29.79 71.97 255.39 87.87 13 11 45 1730.9 -27.64 44.75
110.00 13 53 9 2458.82 -34.15 51.40 255.48 90.16 14 34 8 1458.8 -30.52 23.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4808 TRA-1.4454 TC3 -.9642 BAU .6314 SGT 1918.0 SGR 1333.1 SG3 1386.2 ST 32.7 SR 27.4 SA 22.6
RDE -.5470 RRA -.2004 RC3 -1.0394 FAU .49309 RRT .7436 RRF .8888 RTF .8225 CRT .8037 CR8 .2592 CBT -.3502
FDE .7876 FRA-6.0478 FC-12.8138 B8P 3279 SGB 2335.8 R23 .2008 R13 .8855 LSA 40.7 MSA 26.0 SA 2.7
BDE .7283 BRA 1.4592 BC3 1.4178 F8P 2392 SGI 2203.1 SG2 775.9 THA 31.72 EL1 40.6 EL2 13.1 ALF 38.73

LAUNCH DATE SEP 6 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.828 GAL 7.68 AZL 88.15 HCA 123.09 SMA 194.42 ECC .25947 INC 1.8521 V1 29.549  
 RP 240.63 LAP 1.55 LOP 106.36 VP 20.505 GAP 6.15 AZP 91.01 TAL 38.67 TAP 161.76 RCA 143.98 APO 244.87 V2 22.921  
 RC 234.852 GL 10.52 GP -16.45 ZAL 33.17 ZAP 101.01 ETS 185.09 ZAE 135.01 ETE 200.44 ZAC 70.18 ETC 284.67 LVI -4.56

PLANETOCENTRIC CONIC  
 C3 33.172 VHL 5.759 DLA 15.55 RAL 9.52 RAD 6648.2 VEL 12.373 PTH 7.29 VHP 2.535 DPA -5.13 RAP 32.41 ECC 1.5459  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 57 53 3571.52 -47.11 134.80 254.46 97.60 8 57 24 2571.5 -38.75 103.56  
 60.00 8 19 49 3513.11 -40.19 130.45 255.37 93.23 9 18 22 2513.1 -34.52 100.90  
 70.00 8 51 52 3418.79 -34.15 123.02 255.57 89.85 9 48 51 2418.8 -30.65 94.85  
 80.00 9 41 5 3264.58 -29.77 111.21 255.45 87.55 10 35 29 2264.6 -27.75 83.96  
 90.00 10 53 56 3029.43 -26.10 93.83 255.36 86.70 11 44 25 2029.4 -26.64 66.92  
 100.00 12 23 57 2739.05 -29.77 72.57 255.45 87.55 13 9 36 1739.0 -27.75 45.33  
 110.00 13 51 18 2465.61 -34.15 51.93 255.57 89.85 14 32 24 1465.6 -30.65 23.77

DIFFERENTIAL CORRECTIONS  
 TDE -.4826 TRA-1.4934 TC3-1.0545 BAU .6660 SGT 2020.9 SGR 1360.1 SG3 1407.8 ST 33.4 SR 26.9 SS 23.3  
 RDE -.5353 RRA -.2147 RC3-1.0693 FAU .49889 RRT .7617 RRF .8782 RTF .8364 CRT .8012 CRS .2726 CST -.3404  
 FDE .8571 FRA-6.1117 FC-13.0203 BSP 3482 SGB 2435.9 R23 .1978 R13 .8925 LSA 40.9 MSA 26.4 SSA 2.7  
 BDE .7207 BRA 1.5088 BC3 1.5018 FSP 2427 SG1 2310.8 SG2 770.7 THA 30.96 EL1 40.8 EL2 13.2 ALF 37.40

LAUNCH DATE SEP 6 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.828 GAL 7.64 AZL 88.11 HCA 124.02 SMA 194.43 ECC .25916 INC 1.8919 V1 29.549  
 RP 240.93 LAP 1.57 LOP 107.30 VP 20.472 GAP 5.90 AZP 91.06 TAL 38.51 TAP 162.53 RCA 144.04 APO 244.81 V2 22.792  
 RC 237.739 GL 10.77 GP -16.72 ZAL 33.37 ZAP 99.49 ETS 184.67 ZAE 133.32 ETE 199.60 ZAC 70.06 ETC 284.72 LVI -4.42

PLANETOCENTRIC CONIC  
 C3 33.031 VHL 5.747 DLA 15.83 RAL 9.54 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 2.521 DPA -5.61 RAP 31.95 ECC 1.5436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 56 48 3576.27 -47.15 135.25 254.66 97.26 8 56 24 2576.3 -38.91 103.90  
 60.00 8 18 22 3518.84 -40.21 130.94 255.51 92.90 9 17 1 2518.8 -34.67 101.31  
 70.00 8 49 58 3425.85 -34.15 123.57 255.68 89.52 9 47 4 2425.8 -30.78 95.36  
 80.00 9 38 43 3273.07 -29.74 111.84 255.53 87.22 10 33 16 2273.1 -27.87 84.57  
 90.00 10 51 21 3038.64 -26.06 94.50 255.42 86.36 11 42 0 2038.6 -26.75 67.57  
 100.00 12 21 35 2747.54 -29.74 73.20 255.53 87.22 13 7 23 1747.5 -27.87 45.94  
 110.00 13 49 24 2472.67 -34.15 52.48 255.68 89.52 14 30 37 1472.7 -30.78 24.27

DIFFERENTIAL CORRECTIONS  
 TDE -.4837 TRA-1.5422 TC3-1.1465 BAU .7013 SGT 2126.8 SGR 1386.9 SG3 1425.4 ST 34.1 SR 26.4 SS 23.7  
 RDE -.5232 RRA -.2287 RC3-1.0988 FAU .50392 RRT .7780 RRF .8831 RTF .8485 CRT .7987 CRS .2868 CST -.3306  
 FDE .9291 FRA-6.1657 FC-13.2078 BSP 3692 SGB 2539.0 R23 .1953 R13 .8988 LSA 41.2 MSA 26.8 SSA 2.7  
 BDE .7125 BRA 1.5591 BC3 1.5880 FSP 2460 SG1 2420.9 SG2 765.5 THA 30.23 EL1 41.0 EL2 13.2 ALF 36.05

LAUNCH DATE SEP 6 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.829 GAL 7.60 AZL 88.07 HCA 124.95 SMA 194.44 ECC .25888 INC 1.9325 V1 29.549  
 RP 241.22 LAP 1.58 LOP 108.23 VP 20.441 GAP 5.65 AZP 91.11 TAL 38.34 TAP 163.29 RCA 144.10 APO 244.77 V2 22.763  
 RC 240.615 GL 11.03 GP -16.98 ZAL 33.57 ZAP 97.99 ETS 184.25 ZAE 131.63 ETE 198.80 ZAC 69.94 ETC 284.77 LVI -4.28

PLANETOCENTRIC CONIC  
 C3 32.892 VHL 5.735 DLA 16.13 RAL 9.56 RAD 6648.1 VEL 12.362 PTH 7.28 VHP 2.509 DPA -6.08 RAP 31.49 ECC 1.5413  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 55 42 3581.20 -47.19 135.72 254.88 96.90 8 55 23 2581.2 -39.08 104.26  
 60.00 8 16 53 3524.79 -40.23 131.44 255.67 92.56 9 15 38 2524.8 -34.82 101.75  
 70.00 8 48 1 3433.17 -34.15 124.14 255.79 89.19 9 45 14 2433.2 -30.91 95.89  
 80.00 9 36 17 3281.90 -29.71 112.49 255.61 86.87 10 30 59 2281.9 -27.98 85.20  
 90.00 10 48 41 3048.22 -26.02 95.20 255.49 86.02 11 39 29 2048.2 -26.85 68.25  
 100.00 12 19 9 2756.37 -29.71 73.86 255.61 86.87 13 5 5 1756.4 -27.98 46.57  
 110.00 13 47 27 2479.99 -34.15 53.06 255.79 89.19 14 28 47 1480.0 -30.91 24.80

DIFFERENTIAL CORRECTIONS  
 TDE -.4842 TRA-1.5919 TC3-1.2402 BAU .7372 SGT 2235.7 SGR 1413.4 SG3 1441.0 ST 34.7 SR 25.8 SS 24.2  
 RDE -.5104 RRA -.2428 RC3-1.1280 FAU .50828 RRT .7927 RRF .8896 RTF .8591 CRT .7962 CRS .3012 CST -.3205  
 FDE 1.0045 FRA-6.2098 FC-13.3780 BSP 3904 SGB 2645.0 R23 .1932 R13 .9043 LSA 41.4 MSA 27.2 SSA 2.7  
 BDE .7036 BRA 1.6102 BC3 1.6765 FSP 2489 SG1 2533.3 SG2 760.4 THA 29.54 EL1 41.2 EL2 13.2 ALF 34.69

LAUNCH DATE SEP 6 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.830 GAL 7.57 AZL 88.03 HCA 125.88 SMA 194.45 ECC .25862 INC 1.9738 V1 29.549  
 RP 241.50 LAP 1.60 LOP 109.16 VP 20.410 GAP 5.40 AZP 91.16 TAL 38.17 TAP 164.05 RCA 144.16 APO 244.75 V2 22.734  
 RC 243.479 GL 11.29 GP -17.24 ZAL 33.79 ZAP 96.51 ETS 183.81 ZAE 129.96 ETE 198.04 ZAC 69.82 ETC 284.81 LVI -4.14

PLANETOCENTRIC CONIC  
 C3 32.756 VHL 5.723 DLA 16.42 RAL 9.59 RAD 6648.1 VEL 12.356 PTH 7.28 VHP 2.498 DPA -6.54 RAP 31.05 ECC 1.5391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 34 3586.31 -47.23 136.21 255.10 96.53 8 54 21 2586.3 -39.25 104.63  
 60.00 8 15 22 3530.97 -40.25 131.97 255.84 92.20 9 14 13 2531.0 -34.97 102.20  
 70.00 8 46 0 3440.78 -34.14 124.73 255.91 88.83 9 43 21 2440.8 -31.04 96.44  
 80.00 9 33 46 3291.08 -29.67 113.17 255.70 86.52 10 28 37 2291.1 -26.10 85.86  
 90.00 10 45 55 3058.19 -27.97 95.92 255.56 85.66 11 36 53 2058.2 -26.96 68.96  
 100.00 12 16 38 2765.56 -29.67 74.54 255.70 86.52 13 2 43 1765.6 -26.10 47.22  
 110.00 13 45 26 2487.60 -34.14 53.65 255.91 88.83 14 26 54 1487.6 -31.04 25.35

DIFFERENTIAL CORRECTIONS  
 TDE -.4839 TRA-1.6420 TC3-1.3356 BAU .7739 SGT 2347.1 SGR 1440.0 SG3 1455.0 ST 35.4 SR 25.3 SS 24.6  
 RDE -.4973 RRA -.2564 RC3-1.1571 FAU .51199 RRT .8061 RRF .8957 RTF .8685 CRT .7938 CRS .3144 CST -.3113  
 FDE 1.0803 FRA-6.2459 FC-13.5319 BSP 4120 SGB 2753.7 R23 .1915 R13 .9093 LSA 41.6 MSA 27.5 SSA 2.6  
 BDE .6939 BRA 1.6619 BC3 1.7671 FSP 2511 SG1 2648.0 SG2 755.3 THA 28.89 EL1 41.5 EL2 13.1 ALF 33.34

LAUNCH DATE SEP 6 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC

DISTANCE 433.588

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.831 GAL 7.53 AZL 87.98 HCA 126.81 SMA 194.48 ECC .29339 INC 2.0160 V1 29.549  
 RP 241.78 LAP 1.61 LOP 110.09 VP 20.381 GAP 5.16 AZP 91.21 TAL 37.98 TAP 164.79 RCA 144.23 APO 244.73 V2 22.706  
 RC 246.330 GL 11.56 GP -17.50 ZAL 34.01 ZAP 95.05 ETS 183.38 ZAE 128.30 ETE 197.30 ZAC 69.69 ETC 284.86 LVI -3.99

PLANETOCENTRIC CONIC

C3 32.622 VHL 5.712 DLA 16.73 RAL 9.62 RAD 6648.0 VEL 12.351 PTH 7.27 VHP 2.409 DPA -7.00 RAP 30.63 ECC 1.5369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 25 3591.62 -47.27 136.72 255.34 96.14 8 53 17 2591.6 -39.43 105.01  
 60.00 8 13 48 3537.37 -40.27 132.51 256.02 91.83 9 12 45 2537.4 -35.13 102.67  
 70.00 8 43 56 3446.66 -34.12 125.35 256.04 88.47 9 41 24 2446.7 -31.18 97.01  
 80.00 9 31 10 3300.64 -29.63 113.88 255.79 86.15 10 26 10 2300.6 -29.21 86.54  
 90.00 10 43 3 3068.56 -27.92 96.68 255.64 85.28 11 34 12 2068.6 -27.07 69.70  
 100.00 12 14 2 2775.11 -29.63 75.25 255.79 86.15 13 0 17 1775.1 -28.21 47.91  
 110.00 13 43 22 2495.50 -34.12 54.27 256.04 88.47 14 24 57 1495.5 -31.18 25.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4826 TRA-1.6926 TC3-1.4324 BAU .8112 SGT 2460.7 SGR 1467.4 SG3 1467.8 ST 36.0 SR 24.7 88 25.1  
 RDE -.4842 RRA -.2703 RC3-1.1865 FAU .51533 RRT .8183 RRF .9015 RTF .8769 CRT .7915 CRS .3243 CBT -.3050  
 FDE 1.1512 FRA-6.2766 FC-13.6762 B8P 4339 SGB 2865.0 R23 .1899 R13 .9140 LSA 41.9 MSA 27.9 88A 2.6  
 BDE .6836 BRA 1.7140 BC3 1.8600 F8P 2526 SG1 2765.0 SG2 750.9 THA 28.28 EL1 41.7 EL2 13.1 ALF 32.02

LAUNCH DATE SEP 6 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC

DISTANCE 437.391

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.833 GAL 7.49 AZL 87.94 HCA 127.74 SMA 194.51 ECC .25816 INC 2.0592 V1 29.549  
 RP 242.06 LAP 1.63 LOP 111.02 VP 20.353 GAP 4.92 AZP 91.26 TAL 37.79 TAP 165.53 RCA 144.30 APO 244.73 V2 22.679  
 RC 249.167 GL 11.84 GP -17.75 ZAL 34.24 ZAP 93.61 ETS 182.93 ZAE 126.64 ETE 196.58 ZAC 69.57 ETC 284.90 LVI -3.84

PLANETOCENTRIC CONIC

C3 32.491 VHL 5.700 DLA 17.05 RAL 9.65 RAD 6648.0 VEL 12.345 PTH 7.27 VHP 2.402 DPA -7.45 RAP 30.22 ECC 1.5347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 14 3597.13 -47.31 137.24 255.60 95.73 8 52 11 2597.1 -39.61 105.42  
 60.00 8 12 11 3544.02 -40.28 133.08 256.21 91.45 9 11 15 2544.0 -35.29 103.16  
 70.00 8 41 47 3456.88 -34.11 125.99 256.18 88.09 9 39 24 2456.9 -31.32 97.61  
 80.00 9 28 26 3310.57 -29.58 114.61 255.89 85.77 10 23 39 2310.6 -29.33 87.26  
 90.00 10 40 5 3079.39 -27.85 97.46 255.73 84.89 11 31 25 2079.4 -27.17 70.48  
 100.00 12 11 20 2785.04 -29.58 75.98 255.89 85.77 12 57 45 1785.0 -28.33 48.62  
 110.00 13 41 13 2503.69 -34.11 54.91 256.18 88.09 14 22 57 1503.7 -31.32 26.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4794 TRA-1.7424 TC3-1.5288 BAU .8491 SGT 2974.0 SGR 1498.4 SG3 1482.7 ST 36.6 SR 24.3 88 25.8  
 RDE -.4729 RRA -.2862 RC3-1.2182 FAU .51926 RRT .8299 RRF .9075 RTF .8851 CRT .7892 CR8 .3214 CBT -.3116  
 FDE 1.1948 FRA-6.3267 FC-13.8360 B8P 4586 SGB 2978.4 R23 .1875 R13 .9189 LSA 42.2 MSA 28.1 88A 2.6  
 BDE .6758 BRA 1.7657 BC3 1.9548 F8P 2505 SG1 2883.3 SG2 746.4 THA 27.81 EL1 42.0 EL2 13.0 ALF 30.80

LAUNCH DATE SEP 6 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC

DISTANCE 441.192

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.835 GAL 7.45 AZL 87.90 HCA 128.88 SMA 194.55 ECC .25796 INC 2.1034 V1 29.549  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.327 GAP 4.67 AZP 91.31 TAL 37.60 TAP 166.26 RCA 144.37 APO 244.74 V2 22.652  
 RC 251.989 GL 12.13 GP -18.01 ZAL 34.48 ZAP 92.20 ETS 182.48 ZAE 125.01 ETE 195.89 ZAC 69.43 ETC 284.94 LVI -3.88

PLANETOCENTRIC CONIC

C3 32.360 VHL 5.688 DLA 17.37 RAL 9.68 RAD 6647.8 VEL 12.340 PTH 7.27 VHP 2.476 DPA -7.90 RAP 29.63 ECC 1.5328  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 51 1 3602.85 -47.38 137.79 255.86 95.31 8 51 4 2602.9 -39.60 105.84  
 60.00 8 10 31 3550.92 -40.29 133.66 256.41 91.05 9 9 42 2550.9 -35.46 103.67  
 70.00 8 39 34 3465.41 -34.09 126.69 256.32 87.70 9 37 19 2465.4 -31.46 98.23  
 80.00 9 25 40 3320.93 -29.53 115.38 256.00 85.37 10 21 1 2320.9 -28.45 88.00  
 90.00 10 37 0 3090.69 -27.78 98.28 255.82 84.49 11 28 31 2090.7 -27.28 71.28  
 100.00 12 8 32 2795.40 -29.53 76.74 256.00 85.37 12 55 7 1795.4 -28.45 48.37  
 110.00 13 39 0 2512.23 -34.09 55.57 256.32 87.70 14 20 53 1512.2 -31.46 27.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4782 TRA-1.7958 TC3-1.6307 BAU .8889 SGT 2895.5 SGR 1518.2 SG3 1484.6 ST 37.4 SR 23.5 88 26.1  
 RDE -.4849 RRA -.2959 RC3-1.2423 FAU .51889 RRT .8393 RRF .9118 RTF .504 CRT .7874 CR8 .3510 CBT -.2844  
 FDE 1.3190 FRA-6.2887 FC-13.8819 B8P 4789 SGB 3093.6 R23 .1887 R13 .9212 LSA 42.4 MSA 28.7 88A 2.6  
 BDE .6800 BRA 1.8200 BC3 2.0300 F8P 2567 SG1 3003.6 SG2 740.8 THA 27.08 EL1 42.2 EL2 12.8 ALF 28.28

LAUNCH DATE SEP 6 1973

FLIGHT TIME 206.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC

DISTANCE 444.994

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.838 GAL 7.40 AZL 87.83 HCA 129.58 SMA 194.60 ECC .25778 INC 2.1488 V1 29.549  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.301 GAP 4.44 AZP 91.37 TAL 37.40 TAP 166.98 RCA 144.44 APO 244.74 V2 22.628  
 RC 254.795 GL 12.42 GP -18.27 ZAL 34.73 ZAP 90.81 ETS 182.03 ZAE 123.59 ETE 195.23 ZAC 69.30 ETC 284.97 LVI -3.91

PLANETOCENTRIC CONIC

C3 32.233 VHL 5.677 DLA 17.70 RAL 9.71 RAD 6647.9 VEL 12.338 PTH 7.26 VHP 2.472 DPA -8.34 RAP 29.46 ECC 1.5318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CBT TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 49 46 3606.79 -47.39 138.36 256.14 94.87 8 49 53 2606.8 -39.99 106.27  
 60.00 8 8 48 3558.09 -40.30 134.27 256.82 90.64 9 8 6 2558.1 -35.63 104.20  
 70.00 8 37 16 3474.27 -34.06 127.34 256.47 87.29 9 35 11 2474.3 -31.61 98.88  
 80.00 9 22 46 3331.72 -29.47 116.17 256.11 84.95 10 18 17 2331.7 -28.57 88.78  
 90.00 10 33 47 3102.46 -27.70 99.13 255.92 84.07 11 25 29 2102.5 -27.39 72.13  
 100.00 12 5 37 2806.19 -29.47 77.54 256.11 84.95 12 52 24 1806.2 -28.57 50.15  
 110.00 13 36 43 2521.09 -34.06 56.26 256.47 87.29 14 18 44 1521.1 -31.61 27.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4743 TRA-1.8478 TC3-1.7310 BAU .9252 SGT 2814.9 SGR 1543.8 SG3 1490.5 ST 38.0 SR 22.8 88 26.6  
 RDE -.4399 RRA -.3087 RC3-1.2699 FAU .51979 RRT .8484 RRF .9165 RTF .8961 CRT .7857 CR8 .3609 CBT -.2769  
 FDE 1.4003 FRA-6.2846 FC-13.9609 B8P 5018 SGB 3210.4 R23 .1885 R13 .9244 LSA 42.7 MSA 29.0 88A 2.6  
 BDE .6469 BRA 1.8732 BC3 2.1469 F8P 2577 SG1 3124.9 SG2 736.1 THA 26.54 EL1 42.5 EL2 12.6 ALF 27.96

LAUNCH DATE SEP 6 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

DISTANCE 448.794

EARTH TO MARS

RL 130.79 LAL .00 LOL 343.26 VL 32.840 GAL 7.36 AZL 87.81 HCA 130.50 SMA 194.65 ECC .25762 INC 2.1949 V1 29.549
RP 242.86 LAP 1.87 LOP 113.78 VP 20.276 GAP 4.20 AZP 91.43 TAL 37.19 TAP 167.69 RCA 144.51 APO 244.80 V2 22.999
RC 257.584 GL 12.72 GP -18.53 ZAL 34.98 ZAP 89.44 ETS 161.57 ZAE 121.79 ETE 194.98 ZAC 69.16 ETC 285.01 LVI -3.34

PLANETOCENTRIC CONIC

C3 32.109 VHL 5.666 DLA 18.05 RAL 9.75 RAD 6647.8 VEL 12.330 PTH 7.26 VHP 2.470 DPA -8.77 RAP 29.11 ECC 1.5284
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 28 3814.94 -47.42 138.95 256.44 94.42 8 48 43 2614.9 -40.19 106.73
60.00 8 7 2 3565.52 -40.30 134.91 256.83 90.21 9 6 27 2565.5 -35.80 104.75
70.00 8 34 54 3483.48 -34.03 128.06 256.63 86.87 9 32 57 2483.5 -31.76 99.58
80.00 9 19 44 3342.95 -29.40 117.00 256.22 84.52 10 15 27 2343.0 -28.69 89.60
90.00 10 30 26 3114.75 -27.61 100.02 256.01 83.63 11 22 20 2114.7 -27.49 73.01
100.00 12 2 36 2817.43 -29.40 78.37 256.22 84.52 12 49 33 1817.4 -28.69 50.97
110.00 13 34 20 2530.30 -34.03 56.98 256.63 86.87 14 16 30 1530.3 -31.76 28.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4698 TRA-1.8999 TC3-1.8329 BAU .0640 SGT 2936.4 SGR 1589.5 SG3 1495.1 ST 38.6 SR 22.2 SS 27.2
RDE -.4243 RRA -.3215 RC3-1.2976 FAU .52020 RRT .8568 RRF .9210 RTF .9011 CRT .7844 CRS .3696 CST -.2699
FDE 1.4834 FRA-6.2737 FC-14.0280 BSP 5246 SGB 3329.6 R23 .1885 R13 .9273 LSA 43.0 MSA 29.4 SSA 2.5
BDE .6329 BRA 1.9270 BC3 2.2457 FSP 2584 SG1 3248.2 SG2 731.6 THA 26.03 EL1 42.8 EL2 12.4 ALF 26.66

LAUNCH DATE SEP 6 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

DISTANCE 452.594

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.843 GAL 7.32 AZL 87.76 HCA 131.42 SMA 194.71 ECC .25747 INC 2.2425 V1 29.549
RP 243.12 LAP 1.68 LOP 114.70 VP 20.253 GAP 3.96 AZP 91.48 TAL 36.98 TAP 168.40 RCA 144.58 APO 244.84 V2 22.573
RC 260.356 GL 13.02 GP -18.79 ZAL 35.25 ZAP 88.11 ETS 181.11 ZAE 120.20 ETE 193.95 ZAC 69.01 ETC 285.04 LVI -3.16

PLANETOCENTRIC CONIC

C3 31.987 VHL 5.656 DLA 18.40 RAL 9.79 RAD 6647.8 VEL 12.325 PTH 7.25 VHP 2.469 DPA -9.19 RAP 28.78 ECC 1.5264
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 47 8 3621.33 -47.45 139.57 256.74 93.95 8 47 29 2621.3 -40.39 107.21
60.00 8 5 12 3573.24 -40.30 135.56 257.06 89.76 9 4 45 2573.2 -35.98 105.33
70.00 8 32 26 3493.06 -33.99 128.81 256.80 86.43 9 30 39 2493.1 -31.90 100.27
80.00 9 16 34 3354.68 -29.32 117.86 256.34 84.08 10 12 29 2354.7 -28.80 90.45
90.00 10 26 55 3127.59 -27.51 100.95 256.12 83.18 11 19 3 2127.6 -27.59 73.94
100.00 11 59 26 2829.15 -29.32 79.23 256.34 84.08 12 46 35 1829.1 -28.80 51.82
110.00 13 31 52 2539.88 -33.99 57.72 256.80 86.43 14 14 12 1539.9 -31.90 29.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4636 TRA-1.9520 TC3-1.9347 BAU 1.0028 SGT 3058.3 SGR 1595.3 SG3 1497.9 ST 39.2 SR 21.5 SS 27.7
RDE -.4085 RRA -.3342 RC3-1.3250 FAU .51999 RRT .8646 RRF .9252 RTF .9056 CRT .7834 CRS .3755 CST -.2651
FDE 1.5631 FRA-6.2566 FC-14.0736 BSP 5480 SGB 3449.4 R23 .1887 R13 .9299 LSA 43.3 MSA 29.7 SSA 2.5
BDE .6179 BRA 1.9804 BC3 2.3450 FSP 2585 SG1 3371.8 SG2 727.1 THA 25.55 EL1 43.0 EL2 12.2 ALF 25.40

LAUNCH DATE SEP 6 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC

DISTANCE 456.393

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.847 GAL 7.28 AZL 87.71 HCA 132.33 SMA 194.77 ECC .25733 INC 2.2912 V1 29.549
RP 243.37 LAP 1.69 LOP 115.62 VP 20.230 GAP 3.73 AZP 91.54 TAL 36.76 TAP 169.09 RCA 144.65 APO 244.89 V2 22.548
RC 263.112 GL 13.34 GP -19.05 ZAL 35.52 ZAP 86.80 ETS 180.64 ZAE 118.64 ETE 193.34 ZAC 68.86 ETC 285.08 LVI -2.98

PLANETOCENTRIC CONIC

C3 31.868 VHL 5.645 DLA 18.78 RAL 9.83 RAD 6647.7 VEL 12.320 PTH 7.25 VHP 2.469 DPA -9.61 RAP 28.47 ECC 1.5245
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 45 45 3627.97 -47.48 140.21 257.06 93.46 8 46 13 2628.0 -40.60 107.71
60.00 8 3 17 3581.26 -40.30 136.24 257.30 89.30 9 2 58 2581.3 -36.16 105.94
70.00 8 29 51 3503.03 -33.94 129.58 256.97 85.97 9 28 14 2503.0 -32.05 101.01
80.00 9 13 17 3366.92 -29.23 118.76 256.47 83.61 10 9 24 2366.9 -28.92 91.34
90.00 10 23 15 3141.03 -27.40 101.91 256.22 82.71 11 15 36 2141.0 -27.69 74.91
100.00 11 56 9 2841.39 -29.23 80.13 256.47 83.61 12 43 30 1841.4 -28.92 52.71
110.00 13 29 18 2549.85 -33.94 58.50 256.97 85.97 14 11 48 1549.8 -32.05 29.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4568 TRA-2.0045 TC3-2.0378 BAU 1.0419 SGT 3181.9 SGR 1620.8 SG3 1498.7 ST 39.8 SR 20.8 SS 28.3
RDE -.3920 RRA -.3465 RC3-1.3521 FAU .51916 RRT .8716 RRF .9292 RTF .9096 CRT .7831 CRS .3807 CST -.2600
FDE 1.6437 FRA-6.2274 FC-14.1034 BSP 5713 SGB 3570.9 R23 .1894 R13 .9321 LSA 43.7 MSA 30.1 SSA 2.5
BDE .6019 BRA 2.0348 BC3 2.4456 FSP 2585 SG1 3497.0 SG2 723.0 THA 25.09 EL1 43.3 EL2 11.9 ALF 24.15

LAUNCH DATE SEP 6 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC

DISTANCE 460.191

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.850 GAL 7.23 AZL 87.66 HCA 133.25 SMA 194.84 ECC .25721 INC 2.3413 V1 29.549
RP 243.82 LAP 1.71 LOP 116.53 VP 20.209 GAP 3.50 AZP 91.60 TAL 36.53 TAP 169.78 RCA 144.73 APO 244.96 V2 22.523
RC 265.850 GL 13.67 GP -19.32 ZAL 35.81 ZAP 85.51 ETS 180.17 ZAE 117.10 ETE 192.74 ZAC 68.70 ETC 285.11 LVI -2.78

PLANETOCENTRIC CONIC

C3 31.753 VHL 5.635 DLA 19.13 RAL 9.87 RAD 6647.7 VEL 12.316 PTH 7.25 VHP 2.471 DPA -10.02 RAP 28.18 ECC 1.5226
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 44 18 3634.86 -47.51 140.87 257.39 92.95 8 44 53 2634.9 -40.81 108.23
60.00 8 1 18 3589.59 -40.29 136.95 257.55 88.82 9 1 8 2589.6 -36.35 106.57
70.00 8 27 11 3513.41 -33.89 130.39 257.15 85.50 9 25 44 2513.4 -32.20 101.78
80.00 9 9 50 3379.71 -29.13 119.70 256.59 83.13 10 6 10 2379.7 -29.03 92.27
90.00 10 19 24 3155.11 -27.27 102.92 256.32 82.22 11 12 0 2155.1 -27.79 75.93
100.00 11 52 42 2854.19 -29.13 81.07 256.59 83.13 12 40 18 1854.2 -29.03 53.64
110.00 13 26 37 2560.23 -33.89 59.31 257.15 85.50 14 9 17 1560.2 -32.20 30.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4488 TRA-2.0570 TC3-2.1414 BAU 1.0812 SGT 3306.6 SGR 1645.9 SG3 1497.6 ST 40.5 SR 20.1 SS 28.9
RDE -.3750 RRA -.3587 RC3-1.3788 FAU .51764 RRT .8781 RRF .9330 RTF .9130 CRT .7834 CRS .3841 CST -.2556
FDE 1.7295 FRA-6.1899 FC-14.1134 BSP 5947 SGB 3693.6 R23 .1904 R13 .9341 LSA 44.0 MSA 30.4 SSA 2.4
BDE .5849 BRA 2.0881 BC3 2.5469 FSP 2582 SG1 3623.0 SG2 718.9 THA 24.64 EL1 43.7 EL2 11.6 ALF 22.93



LAUNCH DATE SEP 6 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC

DISTANCE 463.988

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.894 GAL 7.19 AZL 87.61 HCA 134.16 SMA 194.91 ECC .25711 INC 2.3929 V1 29.549  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.188 GAP 3.27 AZP 91.67 TAL 36.31 TAP 170.47 RCA 144.80 APO 245.03 V2 22.499  
 RC 288.570 GL 14.00 GP -19.58 ZAL 36.10 ZAP 84.26 ETS 179.69 ZAE 115.57 ETE 192.16 ZAC 68.53 ETC 285.14 LVI -2.59

PLANETOCENTRIC CONIC

C3 31.641 VHL 5.025 DLA 19.92 RAL 9.91 RAD 6647.6 VEL 12.311 PTH 7.24 VHP 2.474 DPA -10.43 RAP 27.92 ECC 1.5207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 49 3642.02 -47.53 141.56 257.74 92.41 8 43 31 2642.0 -41.03 108.76  
 60.00 7 59 15 3598.26 -40.27 137.69 257.81 88.32 8 59 13 2598.3 -36.93 107.23  
 70.00 8 24 23 3524.23 -33.63 131.23 257.33 85.01 9 23 7 2524.2 -32.35 102.59  
 80.00 9 6 13 3393.10 -29.01 120.68 256.72 82.63 10 2 46 2393.1 -29.15 93.25  
 90.00 10 15 22 3169.88 -27.13 103.98 256.43 81.71 11 8 12 2169.9 -27.88 77.00  
 100.00 11 49 5 2867.57 -29.01 82.05 256.72 82.63 12 36 52 1867.6 -29.15 54.62  
 110.00 13 25 50 2571.05 -33.83 60.14 257.33 85.01 14 6 41 1571.0 -32.35 31.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4397 TRA-2.1098 TC3-2.2453 BAU 1.1205 SGT 3432.1 SGR 1671.4 SG3 1495.3 ST 41.1 SR 19.3 SS 29.5  
 RDE -.3576 RRA -.3711 RC3-1.4055 FAU .81567 RRT .8841 RRF .9365 RTF .9162 CRT .7847 CR8 .3842 C8T -.2533  
 FDE 1.8116 FRA-6.1505 FC-14.1093 B8P 6181 SGB 3817.5 R23 .1914 R13 .9360 LSA 44.4 MSA 30.8 S8A 2.4  
 BDE .5667 BRA 2.1422 BC3 2.6489 F8P 2575 SGI 3749.9 SG2 714.8 THA 24.23 EL1 44.0 EL2 11.2 ALF 21.75

LAUNCH DATE SEP 6 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC

DISTANCE 467.784

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.898 GAL 7.14 AZL 87.55 HCA 135.07 SMA 194.99 ECC .25701 INC 2.4459 V1 29.549  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.168 GAP 3.04 AZP 91.73 TAL 36.07 TAP 171.14 RCA 144.88 APO 245.11 V2 22.475  
 RC 271.273 GL 14.35 GP -19.86 ZAL 36.40 ZAP 83.04 ETS 179.21 ZAE 114.07 ETE 191.58 ZAC 68.36 ETC 285.17 LVI -2.38

PLANETOCENTRIC CONIC

C3 31.533 VHL 5.615 DLA 19.91 RAL 9.95 RAD 6647.6 VEL 12.307 PTH 7.24 VHP 2.478 DPA -10.83 RAP 27.68 ECC 1.5190  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 41 16 3649.46 -47.55 142.28 258.10 91.86 8 42 5 2649.5 -41.26 109.35  
 60.00 7 57 6 3607.28 -40.25 138.46 258.07 87.80 8 57 13 2607.3 -36.72 107.01  
 70.00 8 21 28 3535.51 -33.76 132.10 257.52 84.49 9 20 24 2535.5 -32.50 103.43  
 80.00 9 2 25 3407.13 -28.89 121.70 256.85 82.10 9 59 13 2407.1 -29.25 94.28  
 90.00 10 11 6 3185.41 -26.98 105.09 256.54 81.17 11 4 12 2185.4 -27.96 78.13  
 100.00 11 45 17 2881.60 -28.89 83.07 256.85 82.10 12 33 19 1881.6 -29.25 55.65  
 110.00 13 20 55 2582.33 -33.76 61.02 257.52 84.49 14 3 57 1582.3 -32.50 32.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4292 TRA-2.1619 TC3-2.3492 BAU 1.1597 SGT 3557.7 SGR 1696.4 SG3 1490.9 ST 41.6 SR 18.6 SS 30.1  
 RDE -.3395 RRA -.3630 RC3-1.4316 FAU .51303 RRT .8896 RRF .9399 RTF .9189 CRT .7868 CR8 .3825 C8T -.2512  
 FDE 1.8953 FRA-6.0985 FC-14.0853 B8P 6421 SGB 3841.4 R23 .1929 R13 .9376 LSA 44.8 MSA 31.2 S8A 2.4  
 BDE .5472 BRA 2.1956 BC3 2.7511 F8P 2568 SGI 3876.7 SG2 711.1 THA 23.84 EL1 44.3 EL2 10.8 ALF 20.61

LAUNCH DATE SEP 6 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

DISTANCE 471.579

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.863 GAL 7.10 AZL 87.50 HCA 135.98 SMA 195.08 ECC .25893 INC 2.5006 V1 29.549  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.150 GAP 2.81 AZP 91.80 TAL 35.83 TAP 171.81 RCA 144.95 APO 245.20 V2 22.452  
 RC 273.957 GL 14.70 GP -20.13 ZAL 38.71 ZAP 81.84 ETS 178.72 ZAE 112.59 ETE 191.03 ZAC 68.17 ETC 285.20 LVI -2.16

PLANETOCENTRIC CONIC

C3 31.429 VHL 5.606 DLA 20.32 RAL 9.99 RAD 6647.6 VEL 12.303 PTH 7.24 VHP 2.483 DPA -11.23 RAP 27.46 ECC 1.5172  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 38 3657.19 -47.56 143.03 258.47 91.29 8 40 38 2657.2 -41.49 109.95  
 60.00 7 54 52 3616.86 -40.22 139.25 258.35 87.26 8 55 8 2616.7 -36.92 108.64  
 70.00 8 18 25 3547.29 -33.68 133.01 257.72 83.98 9 17 32 2547.3 -32.66 104.32  
 80.00 8 58 26 3421.84 -28.75 122.77 256.98 81.58 9 55 28 2421.8 -29.38 95.38  
 90.00 10 6 36 3201.78 -26.80 108.25 256.64 80.62 10 59 58 2201.8 -28.04 79.32  
 100.00 11 41 18 2898.32 -28.75 84.14 256.98 81.58 12 29 34 1898.3 -29.36 56.73  
 110.00 13 17 51 2594.11 -33.68 61.93 257.72 83.98 14 1 5 1594.1 -32.66 33.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4175 TRA-2.2142 TC3-2.4839 BAU 1.1991 SGT 3684.1 SGR 1721.7 SG3 1485.2 ST 42.2 SR 17.8 SS 30.8  
 RDE -.3208 RRA -.3950 RC3-1.4578 FAU .50995 RRT .8947 RRF .9431 RTF .9214 CRT .7904 CR8 .3775 C8T -.2502  
 FDE 1.9794 FRA-6.0413 FC-14.0471 B8P 6636 SGB 4066.6 R23 .1947 R13 .9390 LSA 45.2 MSA 31.5 S8A 2.3  
 BDE .5265 BRA 2.2492 BC3 2.8939 F8P 2555 SGI 4004.6 SG2 707.5 THA 23.47 EL1 44.6 EL2 10.3 ALF 19.50

LAUNCH DATE SEP 6 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

DISTANCE 475.374

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.867 GAL 7.05 AZL 87.44 HCA 136.89 SMA 195.16 ECC .25887 INC 2.5570 V1 29.549  
 RP 244.58 LAP 1.75 LOP 120.18 VP 20.132 GAP 2.58 AZP 91.87 TAL 35.99 TAP 172.48 RCA 145.03 APO 245.29 V2 22.430  
 RC 276.623 GL 15.07 GP -20.41 ZAL 37.03 ZAP 80.68 ETS 178.23 ZAE 111.14 ETE 190.48 ZAC 67.98 ETC 285.23 LVI -1.94

PLANETOCENTRIC CONIC

C3 31.329 VHL 5.597 DLA 20.73 RAL 10.03 RAD 6647.5 VEL 12.299 PTH 7.23 VHP 2.490 DPA -11.62 RAP 27.27 ECC 1.5158  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 57 3665.24 -47.57 143.81 258.86 90.69 8 39 2 2665.2 -41.73 110.57  
 60.00 7 52 31 3626.44 -40.19 140.08 258.63 86.70 8 52 57 2626.4 -37.12 109.39  
 70.00 8 15 13 3559.61 -33.59 133.98 257.91 83.41 9 14 32 2559.6 -32.81 105.25  
 80.00 8 54 13 3437.31 -28.59 123.89 257.11 80.99 9 51 30 2437.3 -29.46 96.50  
 90.00 10 1 50 3218.99 -26.80 107.48 256.74 80.03 10 55 29 2219.0 -28.11 80.57  
 100.00 11 37 5 2911.78 -28.59 85.28 257.11 80.99 12 25 37 1911.8 -29.46 57.87  
 110.00 13 14 39 2606.42 -33.59 62.88 257.91 83.41 13 58 5 1606.4 -32.81 34.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4042 TRA-2.2662 TC3-2.5575 BAU 1.2384 SGT 3810.6 SGR 1747.0 SG3 1477.9 ST 42.8 SR 17.0 SS 31.4  
 RDE -.3018 RRA -.4069 RC3-1.4836 FAU .50650 RRT .8994 RRF .9462 RTF .9236 CRT .7953 CR8 .3687 C8T -.2509  
 FDE 2.0628 FRA-5.9781 FC-13.9911 B8P 6898 SGB 4191.9 R23 .1986 R13 .9403 LSA 45.7 MSA 31.9 S8A 2.3  
 BDE .5044 BRA 2.3025 BC3 2.9567 F8P 2542 SGI 4132.4 SG2 704.1 THA 23.12 EL1 45.0 EL2 9.8 ALF 18.45

LAUNCH DATE SEP 6 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.872 GAL 7.00 AZL 87.38 HCA 137.79 SMA 195.25 ECC .25681 INC 2.6152 V1 29.549  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.115 GAP 2.36 AZP 91.94 TAL 35.34 TAP 173.13 RCA 145.11 APO 245.39 V2 22.407  
 RC 279.288 GL 15.45 GP -20.70 ZAL 37.36 ZAP 79.54 ETS 177.73 ZAE 109.71 ETE 189.93 ZAC 67.77 ETC 285.26 LVI -1.70

DISTANCE 479.167

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.233 VHL 5.589 DLA 21.16 RAL 10.07 RAD 6647.5 VEL 12.295 PTH 7.23 VHP 2.498 DPA -12.01 RAP 27.10 ECC 1.5140  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 11 3673.62 -47.58 144.62 259.26 90.08 8 37 24 2673.6 -41.97 111.23  
 60.00 7 30 4 3636.63 -40.14 140.95 258.92 86.11 8 50 41 2636.6 -37.32 110.18  
 70.00 8 11 51 3572.49 -33.48 134.95 258.12 82.83 9 11 23 2572.5 -32.96 108.22  
 80.00 8 49 46 3453.59 -28.41 125.07 257.24 80.39 9 47 19 2453.6 -29.55 97.70  
 90.00 9 56 47 3237.23 -26.38 108.77 256.84 79.42 10 50 44 2237.2 -28.18 81.90  
 100.00 11 32 38 2928.07 -28.41 86.44 257.24 80.39 12 21 26 1928.1 -29.55 59.07  
 110.00 13 11 17 2619.30 -33.48 63.87 258.12 82.83 13 54 56 1819.3 -32.96 35.14

DIFFERENTIAL CORRECTIONS

TDE -.3898 TRA-2.3180 TC3-2.6615 BAU 1.2776  
 RDE -.2819 RRA -.4189 RC3-1.5094 FAU .50222  
 FDE 2.1457 FRA-5.9090 FC-13.9207 BSP 7139  
 BDE .4810 BRA 2.3556 BC3 3.0597 FSP 2527

MID-COURSE EXECUTION ACCURACY

SGT 3937.5 SGR 1772.5 SG3 1469.2  
 RRT .9038 RRF .9491 RTF .9255  
 SGB 4318.1 R23 .1988 R13 .9414  
 SG1 4260.8 SG2 701.0 THA 22.79

ORBIT DETERMINATION ACCURACY

ST 43.4 SR 16.2 SS 32.1  
 CRT .8022 CRS .3553 CST -.2529  
 LSA 46.2 MSA 32.2 SSA 2.3  
 EL1 45.4 EL2 9.3 ALF 17.45

LAUNCH DATE SEP 6 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.877 GAL 6.95 AZL 87.32 HCA 138.69 SMA 195.35 ECC .25676 INC 2.6753 V1 29.549  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.099 GAP 2.14 AZP 92.01 TAL 35.09 TAP 173.78 RCA 145.19 APO 245.50 V2 22.386  
 RC 281.893 GL 15.84 GP -20.99 ZAL 37.70 ZAP 78.44 ETS 177.23 ZAE 108.30 ETE 189.40 ZAC 67.55 ETC 285.30 LVI -1.45

DISTANCE 482.959

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.143 VHL 5.581 DLA 21.61 RAL 10.10 RAD 6647.4 VEL 12.291 PTH 7.23 VHP 2.507 DPA -12.39 RAP 26.96 ECC 1.5125  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 19 3682.35 -47.57 145.46 259.68 89.41 8 35 42 2682.4 -42.21 111.92  
 60.00 7 47 30 3647.27 -40.09 141.85 259.22 85.51 8 48 17 2647.3 -37.32 111.01  
 70.00 8 8 18 3585.98 -33.36 135.98 258.32 82.23 9 8 4 2586.0 -33.10 107.25  
 80.00 8 45 2 3470.77 -28.20 126.31 257.37 79.77 9 42 53 2470.8 -29.63 98.97  
 90.00 9 51 23 3256.57 -26.13 110.13 256.93 78.79 10 45 40 2256.6 -28.23 83.31  
 100.00 11 27 54 2945.25 -28.20 87.67 257.37 79.77 12 17 0 1945.2 -29.63 60.34  
 110.00 13 7 44 2632.80 -33.36 64.90 258.32 82.23 13 51 37 1632.8 -33.10 36.16

DIFFERENTIAL CORRECTIONS

TDE -.3738 TRA-2.3700 TC3-2.7653 BAU 1.3169  
 RDE -.2815 RRA -.4311 RC3-1.5351 FAU .49770  
 FDE 2.2275 FRA-5.8374 FC-13.8354 BSP 7376  
 BDE .4562 BRA 2.4089 BC3 3.1628 FSP 2506

MID-COURSE EXECUTION ACCURACY

SGT 4064.9 SGR 1798.4 SG3 1459.2  
 RRT .9079 RRF .9519 RTF .9272  
 SGB 4444.9 R23 .2011 R13 .9424  
 SG1 4389.8 SG2 698.0 THA 22.48

ORBIT DETERMINATION ACCURACY

ST 43.9 SR 15.4 SS 32.8  
 CRT .8114 CRS .3361 CST -.2566  
 LSA 46.7 MSA 32.5 SSA 2.2  
 EL1 45.8 EL2 8.7 ALF 18.50

LAUNCH DATE SEP 6 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.882 GAL 6.91 AZL 87.26 HCA 139.59 SMA 195.44 ECC .25673 INC 2.7376 V1 29.549  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.084 GAP 1.92 AZP 92.09 TAL 34.84 TAP 174.43 RCA 145.27 APO 245.62 V2 22.365  
 RC 284.497 GL 16.25 GP -21.30 ZAL 38.05 ZAP 77.36 ETS 176.72 ZAE 106.91 ETE 188.88 ZAC 67.32 ETC 285.33 LVI -1.19

DISTANCE 486.751

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.058 VHL 5.573 DLA 22.07 RAL 10.14 RAD 6647.4 VEL 12.288 PTH 7.23 VHP 2.517 DPA -12.77 RAP 26.84 ECC 1.5111  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 32 22 3691.45 -47.56 146.34 260.11 88.73 8 33 54 2691.5 -42.47 112.65  
 60.00 7 44 48 3658.37 -40.03 142.78 259.53 84.87 8 45 48 2658.4 -37.72 111.89  
 70.00 8 4 34 3600.13 -33.23 137.07 258.52 81.60 9 4 34 2600.1 -33.25 108.33  
 80.00 8 40 1 3488.95 -27.98 127.61 257.49 79.12 9 38 10 2488.9 -29.71 100.32  
 90.00 9 45 37 3277.15 -25.85 111.57 257.01 78.12 10 40 14 2277.1 -28.26 84.82  
 100.00 11 22 53 2963.42 -27.98 88.98 257.49 79.12 12 12 16 1963.4 -29.71 61.69  
 110.00 13 4 0 2646.95 -33.23 65.98 258.52 81.60 13 48 7 1646.9 -33.25 37.24

DIFFERENTIAL CORRECTIONS

TDE -.3582 TRA-2.4214 TC3-2.8885 BAU 1.3559  
 RDE -.2404 RRA -.4432 RC3-1.5603 FAU .49267  
 FDE 2.3105 FRA-5.7592 FC-13.7329 BSP 7618  
 BDE .4297 BRA 2.4617 BC3 3.2654 FSP 2485

MID-COURSE EXECUTION ACCURACY

SGT 4191.9 SGR 1824.3 SG3 1447.7  
 RRT .9117 RRF .9545 RTF .9287  
 SGB 4571.6 R23 .2037 R13 .9433  
 SG1 4518.4 SG2 695.3 THA 22.20

ORBIT DETERMINATION ACCURACY

ST 44.5 SR 14.8 SS 33.8  
 CRT .8231 CRS .3108 CST -.2818  
 LSA 47.3 MSA 32.9 SSA 2.2  
 EL1 46.2 EL2 8.0 ALF 15.61

LAUNCH DATE SEP 6 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.888 GAL 6.86 AZL 87.20 HCA 140.49 SMA 195.54 ECC .25670 INC 2.8020 V1 29.549  
 RP 245.43 LAP 1.78 LOP 123.79 VP 20.070 GAP 1.70 AZP 92.16 TAL 34.58 TAP 175.07 RCA 145.35 APO 245.74 V2 22.344  
 RC 287.079 GL 16.67 GP -21.61 ZAL 38.41 ZAP 76.32 ETS 176.20 ZAE 105.55 ETE 188.36 ZAC 67.07 ETC 285.36 LVI -0.92

DISTANCE 490.541

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 30.980 VHL 5.566 DLA 22.54 RAL 10.17 RAD 6647.4 VEL 12.284 PTH 7.22 VHP 2.528 DPA -13.15 RAP 26.75 ECC 1.5098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 19 3700.95 -47.54 147.26 260.55 88.03 8 32 0 2700.9 -42.73 113.42  
 60.00 7 41 57 3669.98 -39.95 143.76 259.84 84.21 8 43 7 2670.0 -37.93 112.80  
 70.00 8 0 37 3615.00 -33.07 138.20 258.73 80.95 9 0 52 2615.0 -33.39 109.46  
 80.00 8 34 40 3508.22 -27.72 128.98 257.60 78.44 9 33 8 2508.2 -29.77 101.75  
 90.00 9 39 25 3299.13 -25.53 113.10 257.08 77.41 10 34 24 2299.1 -28.28 86.42  
 100.00 11 17 32 2982.69 -27.72 90.35 257.60 78.44 12 7 14 1982.7 -29.77 63.11  
 110.00 13 0 3 2661.82 -33.07 67.12 258.73 80.95 13 44 25 1661.8 -33.39 38.58

DIFFERENTIAL CORRECTIONS

TDE -.3374 TRA-2.4728 TC3-2.9714 BAU 1.3951  
 RDE -.2189 RRA -.4555 RC3-1.5863 FAU .48740  
 FDE 2.3900 FRA-5.6777 FC-13.6206 BSP 7854  
 BDE .4022 BRA 2.5144 BC3 3.3683 FSP 2460

MID-COURSE EXECUTION ACCURACY

SGT 4319.4 SGR 1851.1 SG3 1435.4  
 RRT .9153 RRF .9571 RTF .9300  
 SGB 4699.3 R23 .2065 R13 .9441  
 SG1 4647.9 SG2 692.9 THA 21.93

ORBIT DETERMINATION ACCURACY

ST 45.1 SR 13.9 SS 34.3  
 CRT .8378 CRS .2771 CST -.2683  
 LSA 47.9 MSA 33.2 SSA 2.1  
 EL1 46.6 EL2 7.3 ALF 14.80

LAUNCH DATE SEP 6 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC DISTANCE 494.330 EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.893 GAL 6.01 AZL 87.13 HCA 141.39 SMA 195.65 ECC .25669 INC 2.8689 V1 29.549  
 RP 245.63 LAP 1.79 LOP 124.69 VP 20.057 GAP 1.48 AZP 92.24 TAL 34.31 TAP 175.71 RCA 145.43 APO 245.87 V2 22.324  
 RC 289.637 GL 17.10 GP -21.93 ZAL 38.78 ZAP 75.31 ETS 175.67 ZAE 104.22 ETE 187.84 ZAC 66.81 ETC 285.40 LVI -.63

PLANETOCENTRIC CONIC

C3 30.908 VHL 5.559 DLA 23.02 RAL 10.19 RAD 6647.4 VEL 12.282 PTH 7.22 VHP 2.540 DPA -13.53 RAP 26.69 ECC 1.5087  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 10 3710.86 -47.52 148.22 261.01 87.29 8 30 1 2710.9 -42.99 114.22  
 60.00 7 38 57 3682.13 -39.87 144.78 260.16 83.52 8 40 19 2682.1 -38.13 113.77  
 70.00 7 56 26 3630.65 -32.90 139.39 258.93 80.27 8 56 56 2630.6 -33.52 110.66  
 80.00 8 28 55 3528.72 -27.43 130.44 257.70 77.73 9 27 44 2528.7 -29.82 103.27  
 90.00 9 32 43 3322.72 -25.17 114.73 257.13 76.67 10 28 6 2322.7 -28.27 88.15  
 100.00 11 11 47 3003.19 -27.43 91.81 257.70 77.73 12 1 50 2003.2 -29.82 64.84  
 110.00 12 55 52 2677.46 -32.90 68.31 258.93 80.27 13 40 29 1677.5 -33.52 39.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3166 TRA-2.5237 TC3-3.0737 BAU 1.4341 SGT 4446.7 SGR 1878.2 SG3 1421.6 ST 45.7 SR 13.1 SS 35.1  
 RDE -.1966 RRA -.4679 RC3-1.6119 FAU .48168 RRT .9186 RRF .9595 RTF .9312 CRT .8555 CRS .2344 CBT -.2764  
 FDE 2.4699 FRA-5.5909 FC-13.4920 BSP 8093 SGB 4827.1 R23 .2094 R13 .9448 LSA 48.6 MSA 33.5 SBA 2.1  
 BDE .3728 BRA 2.5667 BC3 3.4707 FSP 2434 SGI 4777.4 SG2 690.9 THA 21.68 EL1 47.1 EL2 6.6 ALF 14.05

LAUNCH DATE SEP 6 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC DISTANCE 498.118 EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.899 GAL 6.78 AZL 87.06 HCA 142.29 SMA 195.78 ECC .25668 INC 2.9383 V1 29.549  
 RP 245.83 LAP 1.80 LOP 125.59 VP 20.044 GAP 1.28 AZP 92.33 TAL 34.05 TAP 176.34 RCA 145.51 APO 246.00 V2 22.305  
 RC 292.172 GL 17.55 GP -22.26 ZAL 39.16 ZAP 74.33 ETS 175.14 ZAE 102.91 ETE 187.33 ZAC 66.54 ETC 285.44 LVI -.33

PLANETOCENTRIC CONIC

C3 30.843 VHL 5.554 DLA 23.53 RAL 10.22 RAD 6647.3 VEL 12.279 PTH 7.22 VHP 2.553 DPA -13.91 RAP 26.65 ECC 1.5076  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 53 3721.22 -47.48 149.22 261.48 86.52 8 27 55 2721.2 -43.26 115.07  
 60.00 7 35 47 3694.86 -39.76 145.85 260.49 82.81 8 37 22 2694.9 -38.34 114.79  
 70.00 7 51 59 3647.14 -32.70 140.63 259.13 79.55 8 52 46 2647.1 -33.65 111.93  
 80.00 8 22 45 3550.62 -27.11 131.98 257.79 76.98 9 21 56 2550.6 -29.85 104.89  
 90.00 9 25 27 3348.17 -24.78 116.48 257.16 75.89 10 21 15 2348.2 -28.24 90.01  
 100.00 11 5 37 3025.09 -27.11 93.35 257.79 76.98 11 56 2 2025.1 -29.85 66.26  
 110.00 12 51 25 2693.96 -32.70 69.55 259.13 79.55 13 36 19 1694.0 -33.65 40.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2946 TRA-2.5746 TC3-3.1750 BAU 1.4731 SGT 4574.0 SGR 1906.0 SG3 1406.8 ST 46.3 SR 12.4 SS 35.8  
 RDE -.1736 RRA -.4807 RC3-1.6375 FAU .47559 RRT .9217 RRF .9618 RTF .9323 CRT .8764 CRS .1802 CBT -.2864  
 FDE 2.5483 FRA-5.5028 FC-13.3493 BSP 8330 SGB 4955.3 R23 .2125 R13 .9454 LSA 49.4 MSA 33.8 SBA 2.0  
 BDE .3419 BRA 2.6191 BC3 3.5724 FSP 2405 SGI 4907.1 SG2 689.0 THA 21.45 EL1 47.6 EL2 5.8 ALF 13.39

LAUNCH DATE SEP 6 1973

FLIGHT TIME 236.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC DISTANCE 501.906 EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.905 GAL 6.71 AZL 86.99 HCA 143.19 SMA 195.87 ECC .25669 INC 3.0105 V1 29.549  
 RP 246.02 LAP 1.80 LOP 126.49 VP 20.033 GAP 1.05 AZP 92.41 TAL 33.78 TAP 176.98 RCA 145.59 APO 246.14 V2 22.286  
 RC 294.682 GL 18.02 GP -22.60 ZAL 39.55 ZAP 73.39 ETS 174.60 ZAE 101.82 ETE 186.82 ZAC 66.24 ETC 285.47 LVI -.01

PLANETOCENTRIC CONIC

C3 30.786 VHL 5.548 DLA 24.05 RAL 10.23 RAD 6647.3 VEL 12.277 PTH 7.22 VHP 2.567 DPA -14.29 RAP 26.64 ECC 1.5067  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 23 29 3732.08 -47.43 150.26 261.97 85.72 8 25 41 2732.1 -43.53 115.97  
 60.00 7 32 26 3708.22 -39.64 146.97 260.82 82.06 8 34 14 2708.2 -38.55 115.86  
 70.00 7 47 15 3664.58 -32.48 141.94 259.33 78.81 8 48 19 2664.6 -33.77 113.28  
 80.00 8 16 5 3574.10 -26.74 133.63 257.86 76.19 9 15 39 2574.1 -29.86 106.64  
 90.00 9 17 29 3375.84 -24.29 118.37 257.17 75.06 10 13 45 2375.8 -28.17 92.03  
 100.00 10 58 57 3048.58 -26.74 98.00 257.86 76.19 11 49 45 2048.6 -29.86 68.01  
 110.00 12 46 41 2711.39 -32.48 70.86 259.33 78.81 13 31 52 1711.4 -33.77 42.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2703 TRA-2.6250 TC3-3.2751 BAU 1.5118 SGT 4700.8 SGR 1934.5 SG3 1390.8 ST 47.0 SR 11.7 SS 36.8  
 RDE -.1488 RRA -.4936 RC3-1.6633 FAU .46917 RRT .9246 RRF .9640 RTF .9332 CRT .8999 CRS .1131 CBT -.2988  
 FDE 2.6253 FRA-5.4101 FC-13.1935 BSP 8371 SGB 5083.2 R23 .2158 R13 .9459 LSA 50.2 MSA 34.0 SBA 2.0  
 BDE .3001 BRA 2.6710 BC3 3.6732 FSP 2375 SGI 5036.5 SG2 687.7 THA 21.25 EL1 48.2 EL2 5.0 ALF 12.80

LAUNCH DATE SEP 6 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC DISTANCE 505.892 EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 32.910 GAL 6.66 AZL 86.91 HCA 144.08 SMA 195.98 ECC .25670 INC 3.0856 V1 29.549  
 RP 246.21 LAP 1.81 LOP 127.38 VP 20.022 GAP .83 AZP 92.50 TAL 33.50 TAP 177.88 RCA 145.67 APO 246.28 V2 22.267  
 RC 297.167 GL 18.50 GP -22.85 ZAL 39.96 ZAP 72.47 ETS 174.05 ZAE 100.38 ETE 186.32 ZAC 65.93 ETC 285.52 LVI .32

PLANETOCENTRIC CONIC

C3 30.737 VHL 5.544 DLA 24.89 RAL 10.24 RAD 6647.3 VEL 12.275 PTH 7.22 VHP 2.583 DPA -14.68 RAP 26.66 ECC 1.5059  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 56 3743.42 -47.37 151.35 262.47 84.88 8 23 19 2743.4 -43.81 116.92  
 60.00 7 28 52 3722.25 -39.50 148.14 261.15 81.28 8 30 55 2722.3 -38.75 117.00  
 70.00 7 42 11 3683.04 -32.23 143.33 259.32 78.03 8 43 34 2683.0 -33.88 114.71  
 80.00 8 8 50 3599.44 -26.31 135.39 257.91 75.36 9 8 49 2599.4 -29.84 108.52  
 90.00 9 8 40 3406.17 -23.74 120.42 257.14 74.17 10 5 26 2406.2 -28.06 94.24  
 100.00 10 51 41 3073.91 -26.31 96.76 257.91 75.36 11 42 55 2073.9 -29.84 69.89  
 110.00 12 41 37 2729.86 -32.23 72.24 259.32 78.03 13 27 7 1729.9 -33.88 43.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2445 TRA-2.6752 TC3-3.3743 BAU 1.5506 SGT 4827.6 SGR 1963.6 SG3 1373.7 ST 47.7 SR 11.1 SS 37.5  
 RDE -.1250 RRA -.5089 RC3-1.6889 FAU .46236 RRT .9274 RRF .9661 RTF .9339 CRT .9250 CRS .0313 CBT -.3111  
 FDE 2.7027 FRA-5.3144 FC-13.0227 BSP 8813 SGB 5211.7 R23 .2192 R13 .9463 LSA 51.2 MSA 34.3 SBA 1.9  
 BDE .2746 BRA 2.7228 BC3 3.7733 FSP 2344 SGI 5166.3 SG2 686.8 THA 21.06 EL1 48.8 EL2 4.1 ALF 12.30

LAUNCH DATE SEP 6 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.916 GAL 6.81 AZL 86.84 HCA 144.97 SMA 186.09 ECC .25672 INC 3.1639 V1 29.549  
 RP 246.39 LAP 1.82 LOP 126.27 VP 20.012 GAP .62 AZP 92.59 TAL 33.23 TAP 178.20 RCA 145.75 APO 246.43 V2 22.249  
 RC 299.826 GL 19.01 GP -23.32 ZAL 40.37 ZAP 71.59 ETS 173.48 ZAE 99.12 ETE 185.82 ZAC 65.60 ETC 285.56 LVI 1.67

DISTANCE 509.477 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.698 VHL 5.541 DLA 25.14 RAL 10.25 RAD 6647.3 VEL 12.273 PTH 7.21 VHP 2.599 DPA -15.06 RAP 26.70 ECC 1.8052  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 14 3755.32 -47.29 152.49 262.98 84.01 8 20 49 2755.3 -44.10 117.92  
 60.00 7 25 6 3737.02 -39.34 149.36 261.49 80.46 8 27 23 2737.0 -38.96 118.20  
 70.00 7 36 45 3702.65 -31.94 144.78 259.70 77.21 8 36 28 2702.7 -35.98 118.23  
 80.00 8 0 53 3626.94 -25.83 137.29 257.93 74.47 9 1 20 2626.9 -29.78 110.56  
 90.00 8 58 49 3439.83 -23.10 122.68 257.07 73.22 9 56 9 2439.8 -27.89 96.69  
 100.00 10 43 45 3101.41 -25.83 98.66 257.93 74.47 11 35 26 2101.4 -29.78 71.93  
 110.00 12 36 12 2749.47 -31.94 73.70 259.70 77.21 13 22 1 1749.5 -33.98 45.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2169 TRA-2.7253 TC3-3.4720 BAU 1.5892 SGT 4954.2 SGR 1993.6 SG3 1355.6 ST 48.4 SR 10.7 SS 36.3  
 RDE -.0993 RRA -.5208 RC3-1.7146 FAU .45524 RRT .9299 RRF .9681 RTF .9346 CRT .9494 CRS -.0654 CST -.3258  
 FDE 2.7773 FRA-5.2168 FC-12.6383 BSP 9051 SGB 5340.3 R23 .2227 R13 .9467 LSA 52.2 MSA 34.5 SSA 1.9  
 BDE .2387 BRA 2.7745 BC3 3.6723 FSP 2310 SG1 5296.1 SG2 685.8 THA 20.88 EL1 49.4 EL2 3.3 ALF 11.90

LAUNCH DATE SEP 6 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.923 GAL 6.55 AZL 86.75 HCA 145.86 SMA 196.21 ECC .25675 INC 3.2457 V1 29.549  
 RP 246.57 LAP 1.82 LOP 129.17 VP 20.003 GAP .41 AZP 92.69 TAL 32.95 TAP 178.81 RCA 145.83 APO 246.59 V2 22.232  
 RC 302.065 GL 19.54 GP -23.71 ZAL 40.80 ZAP 70.74 ETS 172.91 ZAE 97.91 ETE 185.31 ZAC 65.25 ETC 285.61 LVI 1.03

DISTANCE 513.261 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.670 VHL 5.538 DLA 25.72 RAL 10.24 RAD 6647.3 VEL 12.272 PTH 7.21 VHP 2.617 DPA -15.45 RAP 26.77 ECC 1.5047  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 15 21 3767.81 -47.19 153.68 263.50 83.09 8 18 9 2767.8 -44.38 118.99  
 60.00 7 21 4 3752.50 -39.16 150.64 261.83 79.61 8 23 37 2752.6 -39.16 119.48  
 70.00 7 30 55 3723.55 -31.62 146.32 259.86 76.35 8 32 59 2723.5 -34.06 117.86  
 80.00 7 52 6 3657.05 -25.26 139.35 257.92 73.53 8 53 3 2657.0 -29.68 112.80  
 90.00 8 47 36 3477.81 -22.33 125.20 256.93 72.18 9 45 33 2477.8 -27.64 99.44  
 100.00 10 34 58 3131.52 -25.26 100.72 257.92 73.53 11 27 10 2131.5 -29.68 74.16  
 110.00 12 30 21 2770.37 -31.62 75.24 259.86 76.35 13 16 32 1770.4 -34.06 46.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1872 TRA-2.7750 TC3-3.5682 BAU 1.6278 SGT 5080.5 SGR 2024.7 SG3 1336.5 ST 49.1 SR 10.4 SS 39.1  
 RDE -.0731 RRA -.5346 RC3-1.7406 FAU .44784 RRT .9323 RRF .9700 RTF .9351 CRT .9699 CRS -.1755 CST -.3422  
 FDE 2.8508 FRA-5.1163 FC-12.6415 BSP 9286 SGB 5469.1 R23 .2264 R13 .9470 LSA 53.3 MSA 34.7 SSA 1.8  
 BDE .2009 BRA 2.8260 BC3 3.9701 FSP 2274 SG1 5425.9 SG2 685.8 THA 20.73 EL1 50.1 EL2 2.5 ALF 11.59

LAUNCH DATE SEP 6 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.929 GAL 6.50 AZL 86.67 HCA 146.75 SMA 196.33 ECC .25678 INC 3.3312 V1 29.549  
 RP 246.74 LAP 1.83 LOP 130.06 VP 19.994 GAL .20 AZP 92.79 TAL 32.66 TAP 179.42 RCA 145.92 APO 246.74 V2 22.215  
 RC 304.476 GL 20.08 GP -24.11 ZAL 41.24 ZAP 69.92 ETS 172.33 ZAE 96.73 ETE 184.81 ZAC 64.88 ETC 285.65 LVI 1.42

DISTANCE 517.045 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.653 VHL 5.536 DLA 26.31 RAL 10.23 RAD 6647.3 VEL 12.271 PTH 7.21 VHP 2.635 DPA -15.85 RAP 26.88 ECC 1.5045  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 17 3780.94 -47.08 154.93 264.04 82.14 8 15 18 2780.9 -44.67 120.12  
 60.00 7 16 46 3769.02 -38.95 151.99 262.17 78.72 8 19 35 2769.0 -39.35 120.83  
 70.00 7 24 36 3745.89 -31.25 147.96 260.01 75.45 8 27 2 2745.9 -34.12 119.60  
 80.00 7 42 17 3690.36 -24.60 141.60 257.83 72.52 8 43 48 2690.4 -29.52 115.26  
 90.00 8 34 29 3521.74 -21.39 128.07 256.70 71.04 9 33 11 2521.7 -27.28 102.60  
 100.00 10 25 9 3164.85 -24.60 102.97 257.85 72.52 11 17 54 2164.9 -29.52 76.63  
 110.00 12 24 3 2792.71 -31.25 78.88 260.01 75.45 13 10 35 1792.7 -34.12 48.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1950 TRA-2.8242 TC3-3.6622 BAU 1.6662 SGT 5205.9 SGR 2056.7 SG3 1316.3 ST 49.9 SR 10.2 SS 40.0  
 RDE -.0454 RRA -.5490 RC3-1.7664 FAU .44011 RRT .9346 RRF .8718 RTF .5556 CRT .9828 CRS -.2956 CST -.3601  
 FDE 2.9243 FRA-5.0133 FC-12.4301 BSP 9526 SGB 5597.5 R23 .2302 R13 .9472 LSA 54.6 MSA 34.9 SSA 1.7  
 BDE .1615 BRA 2.8771 BC3 4.0660 FSP 2236 SG1 5555.3 SG2 685.7 THA 20.59 EL1 50.9 EL2 1.9 ALF 11.39

LAUNCH DATE SEP 6 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.935 GAL 6.45 AZL 86.58 HCA 147.64 SMA 196.45 ECC .25682 INC 3.4206 V1 29.549  
 RP 246.90 LAP 1.83 LOP 130.93 VP 19.987 GAP -.01 AZP 92.89 TAL 32.38 TAP 180.02 RCA 146.00 APO 246.90 V2 22.199  
 RC 306.893 GL 20.85 GP -24.53 ZAL 41.70 ZAP 69.13 ETS 171.73 ZAE 95.57 ETE 184.30 ZAC 64.49 ETC 285.71 LVI 1.83

DISTANCE 520.825 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 30.648 VHL 5.536 DLA 26.93 RAL 10.21 RAD 6647.3 VEL 12.271 PTH 7.21 VHP 2.655 DPA -16.25 RAP 27.01 ECC 1.5044  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 1 3794.76 -46.94 156.24 264.58 81.14 8 12 16 2794.8 -44.96 121.32  
 60.00 7 12 9 3786.41 -38.71 153.40 262.50 77.78 8 15 16 2786.4 -39.54 122.27  
 70.00 7 17 45 3769.89 -30.82 149.70 260.13 74.50 8 20 35 2769.9 -34.15 121.48  
 80.00 7 31 8 3727.86 -23.81 144.11 257.72 71.43 8 33 16 2727.9 -29.27 118.02  
 90.00 8 18 30 3574.78 -20.17 131.49 256.33 69.75 9 18 5 2574.8 -26.73 106.39  
 100.00 10 14 0 3202.33 -23.81 105.47 257.72 71.43 11 7 22 2202.3 -29.27 79.39  
 110.00 12 17 12 2816.71 -30.82 78.62 260.13 74.50 13 4 8 1816.7 -34.15 50.39

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1213 TRA-2.8736 TC3-3.7547 BAU 1.7048 SGT 5331.6 SGR 2090.2 SG3 1295.3 ST 50.8 SR 10.3 SS 40.9  
 RDE -.0169 RRA -.5642 RC3-1.7926 FAU .43213 RRT .9367 RRF .9735 RTF .9359 CRT .9849 CRS -.4169 CST -.3792  
 FDE 2.9938 FRA-4.9094 FC-12.2066 BSP 9765 SGB 5726.7 R23 .2340 R13 .9474 LSA 55.9 MSA 35.0 SSA 1.7  
 BDE .1225 BRA 2.9284 BC3 4.1606 FSP 2198 SG1 5685.4 SG2 686.4 THA 20.48 EL1 51.8 EL2 1.7 ALF 11.31

LAUNCH DATE SEP 6 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC										DISTANCE 524.608										EARTH TO MARS																																													
RL	150.79	LAL	.00	LOL	343.26	VL	32.942	GAL	6.39	AZL	86.49	HCA	148.53	SMA	196.57	ECC	.25607	INC	3.5145	V1	29.549	RP	247.06	LAP	1.83	LOP	131.84	VP	19.980	GAP	-.21	AZP	93.00	TAL	32.09	TAP	180.62	RCA	146.08	APO	247.07	V2	22.183	RC	309.224	GL	21.25	GP	-24.96	ZAL	42.17	ZAP	68.38	ETS	171.12	ZAE	94.44	ETE	183.80	ZAC	64.07	ETC	285.76	LVI	2.26
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.658	VHL	5.537	DLA	27.58	RAL	10.17	RAD	6647.3	VEL	12.271	PTH	7.21	VHP	2.678	DPA	-16.67	RAP	27.17	ECC	1.5046	SGT	5457.4	SGR	2125.3	SG3	1273.4	ST	51.8	SR	10.6	SS	41.7																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9387	RRF	.9751	RTF	.9363	CRT	.9756	CRS	-.5318	CST	-.3998																												
50.00	7	5	31	3809.32	-46.78	157.61	265.14	80.10	8	9	1	2809.3	-45.25	122.61	SG8	5856.7	R23	.2379	R13	.9476	LSA	57.4	MSA	35.1	SSA	1.6																																							
60.00	7	7	12	3804.85	-38.43	154.89	262.82	76.81	8	10	37	2804.8	-39.71	123.81	SG1	5816.2	SG2	687.5	THA	20.38	EL1	52.8	EL2	2.3	ALF	11.34																																							
70.00	7	10	16	3795.80	-30.34	151.56	260.22	73.50	8	13	32	2795.8	-34.15	123.50																																																			
80.00	7	18	10	3770.96	-22.85	146.94	257.48	70.24	8	21	1	2771.0	-28.92	121.17																																																			
90.00	7	57	12	3644.75	-18.46	135.91	255.71	68.19	8	57	57	2644.8	-25.85	111.31																																																			
100.00	10	1	2	3245.43	-22.85	108.31	257.48	70.24	10	55	8	2245.4	-28.92	82.54																																																			
110.00	12	9	42	2842.62	-30.34	80.48	260.22	73.50	12	57	5	1842.6	-34.15	52.42																																																			

LAUNCH DATE SEP 6 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC										DISTANCE 528.389										EARTH TO MARS																																													
RL	150.79	LAL	.00	LOL	343.26	VL	32.948	GAL	6.34	AZL	86.39	HCA	149.42	SMA	196.70	ECC	.25693	INC	3.6131	V1	29.549	RP	247.22	LAP	1.84	LOP	132.73	VP	19.974	GAP	-.42	AZP	93.11	TAL	31.80	TAP	181.21	RCA	146.16	APO	247.24	V2	22.168	RC	311.559	GL	21.87	GP	-25.42	ZAL	42.66	ZAP	67.67	ETS	170.50	ZAE	93.33	ETE	183.29	ZAC	63.63	ETC	285.83	LVI	2.71
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.684	VHL	5.539	DLA	28.24	RAL	10.12	RAD	6647.3	VEL	12.272	PTH	7.21	VHP	2.699	DPA	-17.09	RAP	27.36	ECC	1.5050	SGT	5581.3	SGR	2161.0	SG3	1250.2	ST	52.8	SR	11.2	SS	42.6																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9405	RRF	.9767	RTF	.9364	CRT	.9561	CRS	-.6352	CST	-.4213																												
50.00	7	1	46	3824.70	-48.59	159.04	265.70	79.00	8	5	31	2824.7	-45.54	123.97	SG8	5985.1	R23	.2420	R13	.9477	LSA	59.1	MSA	35.2	SSA	1.6																																							
60.00	7	1	52	3824.46	-38.12	156.46	263.14	75.78	8	5	36	2824.5	-39.87	125.45	SG1	5945.3	SG2	689.1	THA	20.29	EL1	53.9	EL2	3.2	ALF	11.48																																							
70.00	7	2	2	3823.95	-29.78	153.56	260.28	72.44	8	5	46	2823.9	-34.11	125.70																																																			
80.00	7	2	32	3822.40	-21.62	150.27	257.11	68.89	8	6	14	2822.4	-28.39	124.90																																																			
90.00	7	14	23	3783.99	-14.74	144.42	254.07	65.59	8	17	27	2784.0	-23.54	120.86																																																			
100.00	9	45	23	3296.87	-21.62	111.64	257.11	68.89	10	40	20	2296.9	-28.39	86.27																																																			
110.00	12	1	28	2870.77	-29.78	82.48	260.28	72.44	12	49	19	1870.8	-34.11	54.61																																																			

LAUNCH DATE SEP 6 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC										DISTANCE 532.170										EARTH TO MARS																																													
RL	150.79	LAL	.00	LOL	343.26	VL	32.955	GAL	6.29	AZL	86.28	HCA	150.30	SMA	196.83	ECC	.25699	INC	3.7169	V1	29.549	RP	247.37	LAP	1.84	LOP	133.61	VP	19.969	GAP	-.62	AZP	93.23	TAL	31.51	TAP	181.81	RCA	146.24	APO	247.41	V2	22.154	RC	313.869	GL	22.52	GP	-25.91	ZAL	43.16	ZAP	66.99	ETS	169.86	ZAE	92.25	ETE	182.77	ZAC	63.16	ETC	285.89	LVI	3.19
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.728	VHL	5.543	DLA	28.93	RAL	10.06	RAD	6647.3	VEL	12.274	PTH	7.22	VHP	2.722	DPA	-17.52	RAP	27.57	ECC	1.5057	SGT	5718.9	SGR	2214.1	SG3	1234.7	ST	54.1	SR	12.0	SS	42.9																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9432	RRF	.9783	RTF	.9382	CRT	.9412	CRS	-.7018	CST	-.4491																												
50.00	6	57	44	3840.95	-46.37	160.55	266.26	77.86	8	1	45	2841.0	-45.83	125.44	SG8	6132.5	R23	.2420	R13	.9492	LSA	60.8	MSA	34.8	SSA	1.5																																							
60.00	6	56	5	3845.34	-37.76	158.12	263.43	74.71	8	0	11	2845.3	-40.02	127.21	SG1	6093.5	SG2	690.2	THA	20.33	EL1	55.2	EL2	4.0	ALF	11.85																																							
70.00	6	52	54	3854.74	-29.12	155.72	260.28	71.32	7	57	9	2854.7	-34.01	128.09																																																			
80.00	6	42	13	3888.37	-19.95	154.46	256.47	67.31	7	47	2	2888.4	-27.54	129.62																																																			
85.61	6	8	21	3997.31	-13.84	159.63	253.61	64.34	7	14	58	2997.3	-23.24	136.39																																																			
100.00	9	25	5	3362.84	-19.95	115.82	256.47	67.31	10	21	8	2362.8	-27.54	90.99																																																			
110.00	11	52	21	2901.56	-29.12	84.64	260.28	71.32	12	40	42	1901.6	-34.01	57.01																																																			

LAUNCH DATE SEP 6 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC										DISTANCE 535.948										EARTH TO MARS																																													
RL	150.79	LAL	.00	LOL	343.26	VL	32.981	GAL	6.23	AZL	86.17	HCA	151.18	SMA	196.96	ECC	.25706	INC	3.8263	V1	29.549	RP	247.51	LAP	1.84	LOP	134.50	VP	19.964	GAP	-.83	AZP	93.35	TAL	31.21	TAP	182.39	RCA	146.33	APO	247.59	V2	22.140	RC	316.151	GL	23.21	GP	-26.41	ZAL	43.69	ZAP	66.34	ETS	169.21	ZAE	91.20	ETE	182.25	ZAC	62.66	ETC	285.96	LVI	3.69
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	30.790	VHL	5.549	DLA	29.66	RAL	9.98	RAD	6647.3	VEL	12.277	PTH	7.22	VHP	2.748	DPA	-17.97	RAP	27.82	ECC	1.5067	SGT	5840.0	SGR	2250.1	SG3	1207.5	ST	55.3	SR	13.0	SS	44.0																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9446	RRF	.9798	RTF	.9379	CRT	.9122	CRS	-.7764	CST	-.4703																												
50.00	6	53	23	3858.19	-46.11	162.13	266.82	76.67	7	57	41	2858.2	-46.11	127.00	SG8	6258.5	R23	.2471	R13	.9488	LSA	62.7	MSA	34.9	SSA	1.4																																							
60.00	6	49	49	3867.71	-37.34	159.87	263.71	73.59	7	54	17	2867.7	-40.14	129.10	SG1	6220.0	SG2	693.2	THA	20.26	EL1	56.5	EL2	5.2	ALF	12.19																																							
70.00	6	42	39	3888.86	-28.36	158.08	260.21	70.11	7	47	28	2888.9	-33.85	130.74																																																			
80.00	6	8	42	3995.99	-16.98	161.07	255.14	65.07	7	15	18	2996.0	-25.79	137.13																																																			
80.68	5	44	50	4072.32	-14.15	165.32	253.72	63.66	6	52	42	3072.3	-23.79	142.13																																																			
100.00	8	51	34	3470.46	-16.98	122.44	255.14	65.07	9	49	24	2470.5	-25.79	98.50																																																			
110.00	11	42	6	2935.68	-28.36	87.00	260.21	70.11	12	31	1	1935.7	-33.85	59.66																																																			

LAUNCH DATE SEP 6 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC

RL 180.79 LAL .00 LOL 343.26 VL 32.968 GAL 6.18 AZL 86.06 HCA 152.07 SMA 197.09 ECC .25714 INC 3.9419 V1 29.549
RP 247.65 LAP 1.85 LOP 135.39 VP 19.960 GAP -1.03 AZP 93.48 TAL 30.91 TAP 182.98 RCA 146.41 APO 247.76 V2 22.128
RC 318.406 GL 23.92 GP -26.95 ZAL 44.23 ZAP 65.74 ETS 168.54 ZAE 90.17 ETE 181.72 ZAC 62.14 ETC 286.04 LVI 4.23

PLANETOCENTRIC CONIC

C3 30.875 VHL 5.556 DLA 30.41 RAL 9.88 RAD 6647.3 VEL 12.280 PTH 7.22 VHP 2.775 DPA -18.44 RAP 28.11 ECC 1.5081
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 48 41 3876.49 -45.81 163.80 267.38 75.42 7 53 17 2876.5 -46.39 128.68
60.00 6 42 58 3891.73 -36.86 161.73 263.95 72.40 7 47 50 2891.7 -40.23 131.14
70.00 6 30 59 3927.16 -27.44 160.68 260.04 68.82 7 36 26 2927.2 -33.59 133.70
78.33 5 26 43 4129.51 -14.46 169.74 253.84 62.95 6 35 32 3129.5 -24.35 146.59
78.33 5 26 43 4129.51 -14.46 169.74 253.84 62.95 6 35 32 3129.5 -24.35 146.59
78.33 5 26 43 4129.51 -14.46 169.74 253.84 62.95 6 35 32 3129.5 -24.35 146.59
110.00 11 30 25 2973.98 -27.44 89.60 260.04 68.82 12 19 59 1974.0 -33.59 62.62

DIFFERENTIAL CORRECTIONS

TDE .0791 TRA-3.1219 TC3-4.1800 BAU 1.9004
RDE .1416 RRA -.6555 RC3-1.9302 FAU .38949
FDE 3.2828 FRA-4.3988 FC-10.9214 BSP 10880
BDE .1622 BRA 3.1900 BC3 4.6042 FSP 1945

MID-COURSE EXECUTION ACCURACY

SGT 5959.7 SGR 2288.4 SG3 1179.7
RRR .9460 RRF .9810 RTF .9375
SGB 6383.9 R23 .2521 R13 .9485
SG1 6345.8 SG2 696.8 THA 20.22

ORBIT DETERMINATION ACCURACY

ST 56.6 SR 14.2 SS 45.0
CRT .8839 CRS -.8335 CST -.4932
LSA 64.8 MSA 35.1 SBA 1.4
EL1 58.0 EL2 6.5 ALF 12.68

LAUNCH DATE SEP 6 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.975 GAL 6.12 AZL 85.94 HCA 152.95 SMA 197.22 ECC .25722 INC 4.0643 V1 29.549
RP 247.78 LAP 1.85 LOP 136.27 VP 19.957 GAP -1.23 AZP 93.62 TAL 30.61 TAP 183.56 RCA 146.49 APO 247.95 V2 22.113
RC 320.632 GL 24.68 GP -27.51 ZAL 44.79 ZAP 65.17 ETS 167.85 ZAE 89.18 ETE 181.18 ZAC 61.57 ETC 286.13 LVI 4.80

PLANETOCENTRIC CONIC

C3 30.984 VHL 5.566 DLA 31.19 RAL 9.76 RAD 6647.4 VEL 12.285 PTH 7.22 VHP 2.803 DPA -18.92 RAP 28.42 ECC 1.5099
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 35 3895.97 -45.46 165.54 267.94 74.11 7 48 31 2896.0 -46.65 130.49
60.00 6 35 28 3917.63 -36.31 163.71 264.16 71.16 7 40 46 2917.6 -40.29 133.34
70.00 6 17 24 3971.05 -26.33 163.61 259.75 67.41 7 23 35 2971.0 -33.19 137.07
76.26 5 11 17 4177.71 -14.77 173.53 253.96 62.21 6 20 54 3177.7 -24.93 150.43
76.26 5 11 17 4177.71 -14.77 173.53 253.96 62.21 6 20 54 3177.7 -24.93 150.43
76.26 5 11 17 4177.71 -14.77 173.53 253.96 62.21 6 20 54 3177.7 -24.93 150.43
110.00 11 16 50 3017.86 -26.33 92.52 259.75 67.41 12 7 8 2017.9 -33.19 65.99

DIFFERENTIAL CORRECTIONS

TDE .1287 TRA-3.1705 TC3-4.2523 BAU 1.9388
RDE .1803 RRA -.6747 RC3-1.9548 FAU .37939
FDE 3.3476 FRA-4.2789 FC-10.8007 BSP 11134
BDE .2215 BRA 3.2415 BC3 4.6801 FSP 1906

MID-COURSE EXECUTION ACCURACY

SGT 6081.2 SGR 2330.1 SG3 1151.6
RRR .9473 RRF .9821 RTF .9372
SGB 6512.3 R23 .2568 R13 .9482
SG1 6474.5 SG2 700.9 THA 20.20

ORBIT DETERMINATION ACCURACY

ST 58.0 SR 15.7 SS 45.9
CRT .8601 CRS -.8748 CST -.5166
LSA 67.0 MSA 35.1 SBA 1.3
EL1 59.6 EL2 7.8 ALF 13.29

LAUNCH DATE SEP 6 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.982 GAL 6.06 AZL 85.81 HCA 153.83 SMA 197.35 ECC .25731 INC 4.1942 V1 29.549
RP 247.91 LAP 1.85 LOP 137.15 VP 19.955 GAP -1.43 AZP 93.77 TAL 30.31 TAP 184.13 RCA 146.57 APO 248.13 V2 22.101
RC 322.829 GL 25.47 GP -28.10 ZAL 45.37 ZAP 64.64 ETS 167.15 ZAE 88.21 ETE 180.63 ZAC 60.98 ETC 286.22 LVI 5.40

PLANETOCENTRIC CONIC

C3 31.121 VHL 5.579 DLA 32.01 RAL 9.61 RAD 6647.4 VEL 12.290 PTH 7.23 VHP 2.834 DPA -19.42 RAP 28.77 ECC 1.5122
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 38 2 3916.75 -45.06 167.38 268.47 72.74 7 43 19 2916.7 -46.89 132.44
60.00 6 27 11 3945.72 -35.67 165.82 264.31 69.85 7 32 57 2945.7 -40.30 135.73
70.00 6 1 2 4023.05 -24.92 166.99 259.25 65.85 7 8 5 3023.0 -32.59 141.01
74.34 4 57 30 4220.19 -15.09 176.92 254.08 61.43 6 7 50 3220.2 -25.54 153.89
74.34 4 57 30 4220.19 -15.09 176.92 254.08 61.43 6 7 50 3220.2 -25.54 153.89
74.34 4 57 30 4220.19 -15.09 176.92 254.08 61.43 6 7 50 3220.2 -25.54 153.89
110.00 11 0 29 3069.87 -24.92 95.91 259.25 65.85 11 51 39 2069.9 -32.59 69.92

DIFFERENTIAL CORRECTIONS

TDE .1814 TRA-3.2183 TC3-4.3190 BAU 1.9788
RDE .2210 RRA -.6890 RC3-1.9790 FAU .36898
FDE 3.4083 FRA-4.1574 FC-10.2646 BSP 11392
BDE .2860 BRA 3.2925 BC3 4.7508 FSP 1865

MID-COURSE EXECUTION ACCURACY

SGT 8200.8 SGR 2373.8 SG3 1122.4
RRR .9486 RRF .9832 RTF .9368
SGB 6639.7 R23 .2615 R13 .9478
SG1 8602.1 SG2 705.6 THA 20.20

ORBIT DETERMINATION ACCURACY

ST 59.8 SR 17.3 SS 46.8
CRT .8412 CRS -.9053 CST -.5406
LSA 69.4 MSA 35.2 SBA 1.2
EL1 61.4 EL2 9.1 ALF 14.02

LAUNCH DATE SEP 6 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

RL 150.79 LAL .00 LOL 343.26 VL 32.989 GAL 6.01 AZL 85.87 HCA 154.71 SMA 197.48 ECC .25740 INC 4.3323 V1 29.549
RP 248.03 LAP 1.88 LOP 138.03 VP 19.953 GAP -1.63 AZP 93.92 TAL 30.00 TAP 184.71 RCA 146.65 APO 248.32 V2 22.089
RC 324.997 GL 26.30 GP -28.73 ZAL 45.88 ZAP 64.16 ETS 166.43 ZAE 87.28 ETE 180.07 ZAC 60.34 ETC 286.32 LVI 6.03

PLANETOCENTRIC CONIC

C3 31.290 VHL 5.594 DLA 32.86 RAL 9.44 RAD 6647.5 VEL 12.297 PTH 7.23 VHP 2.866 DPA -19.94 RAP 29.16 ECC 1.5149
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 31 58 3938.98 -44.59 189.32 268.98 71.31 7 37 37 2939.0 -47.11 134.54
60.00 6 17 58 3976.36 -34.93 168.08 264.39 68.47 7 24 14 2976.4 -40.25 138.33
70.00 5 40 3 4088.71 -23.03 171.15 258.42 64.05 6 48 12 3088.7 -31.65 145.89
72.52 4 44 49 4258.81 -15.41 180.06 254.20 60.61 5 55 48 3258.8 -26.15 157.09
72.52 4 44 49 4258.81 -15.41 180.06 254.20 60.61 5 55 48 3258.8 -26.15 157.09
72.52 4 44 49 4258.81 -15.41 180.06 254.20 60.61 5 55 48 3258.8 -26.15 157.09
110.00 10 39 29 3135.53 -23.03 100.07 258.42 64.05 11 31 45 2135.5 -31.65 74.81

DIFFERENTIAL CORRECTIONS

TDE .2373 TRA-3.2667 TC3-4.3804 BAU 2.0148
RDE .2643 RRA -.7169 RC3-2.0028 FAU .35831
FDE 3.4662 FRA-4.0361 FC3-9.9140 BSP 11647
BDE .3552 BRA 3.3444 BC3 4.8165 FSP 1820

MID-COURSE EXECUTION ACCURACY

SGT 6320.0 SGR 2420.3 SG3 1092.3
RRR .9498 RRF .9842 RTF .9364
SGB 6767.6 R23 .2662 R13 .9475
SG1 6730.1 SG2 711.1 THA 20.22

ORBIT DETERMINATION ACCURACY

ST 61.4 SR 19.1 SS 47.8
CRT .8274 CRS -.9276 CST -.5646
LSA 72.0 MSA 35.2 SBA 1.2
EL1 63.5 EL2 10.4 ALF 14.87

LAUNCH DATE SEP 6 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 32.996 GAL 5.95 AZL 85.52 HCA 155.59 SMA 197.62 ECC .25750 INC 4.4795 V1 29.549  
 RP 248.14 LAP 1.85 LOP 138.92 VP 19.953 GAP -1.83 AZP 94.08 TAL 29.69 TAP 185.28 RCA 146.73 APO 248.51 V2 22.078  
 RC 327.134 GL 27.18 GP -29.40 ZAL 46.61 ZAP 63.72 ETS 165.68 ZAE 86.38 ETE 179.51 ZAC 59.67 ETC 286.43 LVI 6.71

DISTANCE 554.824 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 31.495 VHL 5.612 DLA 33.78 RAL 9.23 RAD 6647.6 VEL 12.305 PTH 7.24 VHP 2.901 DPA -20.49 RAP 29.58 ECC 1.5183  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 25 19 3962.83 -44.05 171.36 269.45 69.81 7 31 22 2962.8 -47.30 136.82  
 60.00 6 7 38 4010.08 -34.06 170.52 264.37 67.01 7 14 28 3010.1 -40.11 141.19  
 70.00 5 7 48 4187.92 -19.95 177.20 256.80 61.68 6 17 36 3187.9 -29.84 153.05  
 70.75 4 32 55 4294.55 -15.73 183.01 254.32 59.74 5 44 30 3294.5 -26.79 160.13  
 70.75 4 32 55 4294.55 -15.73 183.01 254.32 59.74 5 44 30 3294.5 -26.79 160.13  
 70.75 4 32 55 4294.55 -15.73 183.01 254.32 59.74 5 44 30 3294.5 -26.79 160.13  
 110.00 10 7 14 3234.74 -19.95 106.11 256.80 61.68 11 1 9 2234.7 -29.84 81.97

DIFFERENTIAL CORRECTIONS  
 TDE .2945 TRA-3.3160 TC3-4.4367 BAU 2.0538  
 RDE .3086 RRA -.7411 RC3-2.0270 FAU .34754  
 FDE 3.5116 FRA-3.9184 FC3-9.5532 BSP 11892  
 BDE .4265 BRA 3.3978 BC3 4.8778 FSP 1769

MID-COURSE EXECUTION ACCURACY  
 SGT 6439.7 SGR 2470.5 SG3 1061.6  
 RRT .8510 RRF .9851 RTF .9361  
 SGB 6897.3 R23 .2705 R13 .9472  
 SGI 6859.9 SG2 717.0 THA 20.28

ORBIT DETERMINATION ACCURACY  
 ST 63.3 SR 21.1 SS 48.6  
 CRT .8192 CRS -.9434 CST -.5881  
 LSA 74.7 MSA 35.1 SSA 1.1  
 EL1 65.7 EL2 11.7 ALF 15.79

LAUNCH DATE SEP 6 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.003 GAL 5.89 AZL 85.36 HCA 156.47 SMA 197.76 ECC .25760 INC 4.6368 V1 29.549  
 RP 248.25 LAP 1.85 LOP 139.80 VP 19.952 GAP -2.02 AZP 94.25 TAL 29.38 TAP 185.85 RCA 146.81 APO 248.70 V2 22.067  
 RC 329.241 GL 28.10 GP -30.10 ZAL 47.27 ZAP 63.32 ETS 164.92 ZAE 85.51 ETE 178.92 ZAC 58.95 ETC 286.55 LVI 7.42

DISTANCE 558.597 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 31.741 VHL 5.634 DLA 34.69 RAL 8.99 RAD 6647.7 VEL 12.315 PTH 7.25 VHP 2.939 DPA -21.06 RAP 30.04 ECC 1.5224  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 17 59 3988.52 -43.42 173.52 269.88 68.25 7 24 28 2988.5 -47.45 139.28  
 60.00 5 55 54 4047.58 -33.03 173.16 264.24 65.46 7 3 21 3047.6 -39.88 144.35  
 69.02 4 21 34 4328.13 -16.05 185.84 254.43 58.83 5 33 42 3328.1 -27.44 163.05  
 69.02 4 21 34 4328.13 -16.05 185.84 254.43 58.83 5 33 42 3328.1 -27.44 163.05  
 69.02 4 21 34 4328.13 -16.05 185.84 254.43 58.83 5 33 42 3328.1 -27.44 163.05  
 69.02 4 21 34 4328.13 -16.05 185.84 254.43 58.83 5 33 42 3328.1 -27.44 163.05  
 69.02 4 21 34 4328.13 -16.05 185.84 254.43 58.83 5 33 42 3328.1 -27.44 163.05

DIFFERENTIAL CORRECTIONS  
 TDE .3548 TRA-3.3666 TC3-4.4869 BAU 2.0934  
 RDE .3562 RRA -.7673 RC3-2.0506 FAU .33645  
 FDE 3.5556 FRA-3.8002 FC3-9.1768 BSP 12129  
 BDE .5027 BRA 3.4529 BC3 4.9333 FSP 1717

MID-COURSE EXECUTION ACCURACY  
 SGT 6559.7 SGR 2524.0 SG3 1029.9  
 RRT .9521 RRF .9859 RTF .9356  
 SGB 7028.5 R23 .2750 R13 .9468  
 SGI 6991.1 SG2 724.0 THA 20.35

ORBIT DETERMINATION ACCURACY  
 ST 65.5 SR 23.3 SS 49.4  
 CRT .8147 CRS -.9552 CST -.6108  
 LSA 77.7 MSA 35.1 SSA 1.1  
 EL1 68.3 EL2 13.0 ALF 16.79

LAUNCH DATE SEP 6 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.010 GAL 5.84 AZL 85.19 HCA 157.34 SMA 197.89 ECC .25771 INC 4.8055 V1 29.549  
 RP 248.35 LAP 1.85 LOP 140.68 VP 19.953 GAP -2.22 AZP 94.44 TAL 29.07 TAP 186.41 RCA 146.90 APO 248.89 V2 22.057  
 RC 331.317 GL 29.08 GP -30.85 ZAL 47.95 ZAP 62.97 ETS 164.13 ZAE 84.68 ETE 178.33 ZAC 58.19 ETC 286.69 LVI 8.18

DISTANCE 562.369 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 32.035 VHL 5.660 DLA 35.67 RAL 8.70 RAD 6647.8 VEL 12.327 PTH 7.26 VHP 2.979 DPA -21.66 RAP 30.54 ECC 1.5272  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 52 4016.31 -42.70 175.79 270.23 66.62 7 16 49 3016.3 -47.55 141.96  
 60.00 5 42 21 4089.90 -31.80 176.07 263.92 63.81 6 50 31 3089.9 -39.50 147.89  
 67.30 4 10 39 4359.88 -16.38 188.56 254.55 57.86 5 23 19 3359.9 -28.12 165.87  
 67.30 4 10 39 4359.88 -16.38 188.56 254.55 57.86 5 23 19 3359.9 -28.12 165.87  
 67.30 4 10 39 4359.88 -16.38 188.56 254.55 57.86 5 23 19 3359.9 -28.12 165.87  
 67.30 4 10 39 4359.88 -16.38 188.56 254.55 57.86 5 23 19 3359.9 -28.12 165.87  
 67.30 4 10 39 4359.88 -16.38 188.56 254.55 57.86 5 23 19 3359.9 -28.12 165.87

DIFFERENTIAL CORRECTIONS  
 TDE .4178 TRA-3.4175 TC3-4.5290 BAU 2.1333  
 RDE .4060 RRA -.7957 RC3-2.0733 FAU .32506  
 FDE 3.5899 FRA-3.6819 FC3-8.7846 BSP 12373  
 BDE .5826 BRA 3.5089 BC3 4.9810 FSP 1860

MID-COURSE EXECUTION ACCURACY  
 SGT 6678.0 SGR 2580.7 SG3 996.9  
 RRT .9532 RRF .9867 RTF .9351  
 SGB 7159.3 R23 .2793 R13 .9465  
 SGI 7121.9 SG2 731.4 THA 20.45

ORBIT DETERMINATION ACCURACY  
 ST 67.7 SR 25.6 SS 50.2  
 CRT .8139 CRS -.9638 CST -.6329  
 LSA 80.8 MSA 35.1 SSA 1.0  
 EL1 71.0 EL2 14.2 ALF 17.85

LAUNCH DATE SEP 6 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.017 GAL 5.78 AZL 85.01 HCA 158.22 SMA 198.03 ECC .25782 INC 4.9870 V1 29.549  
 RP 248.45 LAP 1.85 LOP 141.56 VP 19.954 GAP -2.41 AZP 94.63 TAL 28.78 TAP 186.98 RCA 146.98 APO 249.09 V2 22.048  
 RC 333.364 GL 30.12 GP -31.64 ZAL 48.67 ZAP 62.67 ETS 163.33 ZAE 83.88 ETE 177.72 ZAC 57.38 ETC 286.84 LVI 8.99

DISTANCE 566.140 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 32.384 VHL 5.691 DLA 36.69 RAL 8.57 RAD 6647.9 VEL 12.341 PTH 7.27 VHP 3.023 DPA -22.30 RAP 31.08 ECC 1.5330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 0 49 4046.49 -41.85 178.20 270.50 64.92 7 8 16 3046.5 -47.57 144.88  
 60.00 5 26 22 4138.74 -30.28 179.32 263.37 62.03 6 35 20 3138.7 -38.92 151.91  
 65.58 3 59 59 4390.40 -16.69 191.21 254.66 56.84 5 13 9 3390.4 -28.80 168.66  
 65.58 3 59 59 4390.40 -16.69 191.21 254.66 56.84 5 13 9 3390.4 -28.80 168.66  
 65.58 3 59 59 4390.40 -16.69 191.21 254.66 56.84 5 13 9 3390.4 -28.80 168.66  
 65.58 3 59 59 4390.40 -16.69 191.21 254.66 56.84 5 13 9 3390.4 -28.80 168.66  
 65.58 3 59 59 4390.40 -16.69 191.21 254.66 56.84 5 13 9 3390.4 -28.80 168.66

DIFFERENTIAL CORRECTIONS  
 TDE .4839 TRA-3.4689 TC3-4.5622 BAU 2.1734  
 RDE .4593 RRA -.8266 RC3-2.0947 FAU .31330  
 FDE 3.6183 FRA-3.5630 FC3-8.3754 BSP 12620  
 BDE .6672 BRA 3.5661 BC3 5.0201 FSP 1602

MID-COURSE EXECUTION ACCURACY  
 SGT 6794.9 SGR 2641.1 SG3 962.7  
 RRT .9543 RRF .9873 RTF .9346  
 SGB 7290.2 R23 .2835 R13 .9461  
 SGI 7252.6 SG2 739.5 THA 20.57

ORBIT DETERMINATION ACCURACY  
 ST 70.2 SR 28.1 SS 50.8  
 CRT .8157 CRS -.9703 CST -.6541  
 LSA 84.1 MSA 35.1 SSA .9  
 EL1 74.0 EL2 15.4 ALF 18.95

LAUNCH DATE SEP 6 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.024 GAL 5.72 AZL 84.82 HCA 159.09 SMA 198.17 ECC .25794 INC 5.1826 V1 29.949  
 RP 248.54 LAP 1.85 LOP 142.43 VP 19.956 GAP -2.60 AZP 94.84 TAL 28.44 TAP 187.54 RCA 147.06 APO 249.29 V2 22.039  
 RC 339.380 GL 31.22 GP -32.48 ZAL 49.42 ZAP 82.43 ETS 162.50 ZAE 83.13 ETE 177.10 ZAC 56.52 ETC 287.00 LVI 9.85

PLANETOCENTRIC CONIC  
 C3 32.798 VHL 5.727 DLA 37.77 RAL 7.98 RAD 6648.1 VEL 12.358 PTH 7.28 VHP 3.070 DPA -22.97 RAP 31.67 ECC 1.9398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 50 39 4079.48 -40.87 180.75 270.64 63.14 6 58 39 3079.5 -47.51 148.07  
 60.00 5 6 44 4197.23 -28.35 183.07 262.45 60.07 6 16 41 3197.2 -38.02 156.62  
 63.84 3 49 28 4419.86 -17.00 193.82 254.75 55.75 5 3 8 3419.9 -29.50 171.41  
 63.84 3 49 28 4419.86 -17.00 193.82 254.75 55.75 5 3 8 3419.9 -29.50 171.41  
 63.84 3 49 28 4419.86 -17.00 193.82 254.75 55.75 5 3 8 3419.9 -29.50 171.41  
 63.84 3 49 28 4419.86 -17.00 193.82 254.75 55.75 5 3 8 3419.9 -29.50 171.41  
 63.84 3 49 28 4419.86 -17.00 193.82 254.75 55.75 5 3 8 3419.9 -29.50 171.41

DIFFERENTIAL CORRECTIONS  
 TDE .5508 TRA-3.5229 TC3-4.5879 BAU 2.2153 SGT 6913.7 SGR 2708.5 SG3 927.5 ST 72.8 SR 30.7 SS 51.4  
 RDE .5153 RRA -.8609 RC3-2.1156 FAU .30132 RRT .9554 RRF .9879 RTF .9340 CRT .8191 CRS -.9750 CST -.8734  
 FDE 3.6359 FRA-3.4449 FC3-7.9536 BSP 12850 SGB 7424.6 R23 .2875 R13 .9457 LSA 87.5 MSA 35.1 SSA .8  
 BDE .7543 BRA 3.6266 BC3 5.0522 FSP 1539 SG1 7386.8 SG2 748.4 THA 20.73 EL1 77.2 EL2 16.6 ALF 20.05

LAUNCH DATE SEP 6 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.031 GAL 5.66 AZL 84.61 HCA 159.97 SMA 198.31 ECC .25807 INC 5.3943 V1 29.949  
 RP 248.63 LAP 1.85 LOP 143.31 VP 19.959 GAP -2.79 AZP 95.07 TAL 28.13 TAP 188.09 RCA 147.14 APO 249.49 V2 22.030  
 RC 337.366 GL 32.39 GP -33.37 ZAL 50.21 ZAP 62.24 ETS 161.65 ZAE 82.41 ETE 176.46 ZAC 55.62 ETC 287.18 LVI 10.77

PLANETOCENTRIC CONIC  
 C3 33.287 VHL 5.769 DLA 38.90 RAL 7.52 RAD 6648.3 VEL 12.377 PTH 7.29 VHP 3.122 DPA -23.68 RAP 32.31 ECC 1.5478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 39 8 4115.80 -39.72 183.46 270.62 61.28 6 47 44 3115.8 -47.33 151.56  
 60.00 4 40 43 4272.80 -25.70 187.71 260.87 57.82 5 51 56 3272.8 -36.57 162.51  
 62.09 3 39 3 4448.45 -17.30 196.40 254.84 54.60 4 53 12 3448.4 -30.21 174.16  
 62.09 3 39 3 4448.45 -17.30 196.40 254.84 54.60 4 53 12 3448.4 -30.21 174.16  
 62.09 3 39 3 4448.45 -17.30 196.40 254.84 54.60 4 53 12 3448.4 -30.21 174.16  
 62.09 3 39 3 4448.45 -17.30 196.40 254.84 54.60 4 53 12 3448.4 -30.21 174.16  
 62.09 3 39 3 4448.45 -17.30 196.40 254.84 54.60 4 53 12 3448.4 -30.21 174.16

DIFFERENTIAL CORRECTIONS  
 TDE .6206 TRA-3.5784 TC3-4.6026 BAU 2.2577 SGT 7031.1 SGR 2775.9 SG3 890.7 ST 75.5 SR 33.6 SS 51.9  
 RDE .5757 RRA -.8984 RC3-2.1342 FAU .28886 RRT .9564 RRF .9884 RTF .9333 CRT .8238 CRS -.9786 CST -.6912  
 FDE 3.6470 FRA-3.3248 FC3-7.5128 BSP 13081 SGB 7559.3 R23 .2917 R13 .9452 LSA 91.1 MSA 35.1 SSA .8  
 BDE .8485 BRA 3.6894 BC3 5.0733 FSP 1474 SG1 7521.2 SG2 758.2 THA 20.91 EL1 80.7 EL2 17.8 ALF 21.19

LAUNCH DATE SEP 6 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.039 GAL 5.60 AZL 84.38 HCA 160.84 SMA 198.45 ECC .25820 INC 5.6246 V1 29.949  
 RP 248.71 LAP 1.84 LOP 144.19 VP 19.962 GAP -2.98 AZP 95.31 TAL 27.81 TAP 188.65 RCA 147.21 APO 249.69 V2 22.023  
 RC 339.321 GL 33.63 GP -34.33 ZAL 51.04 ZAP 62.11 ETS 162.79 ZAE 81.75 ETE 175.80 ZAC 54.62 ETC 287.38 LVI 11.75

PLANETOCENTRIC CONIC  
 C3 33.864 VHL 5.819 DLA 40.09 RAL 6.99 RAD 6648.5 VEL 12.401 PTH 7.31 VHP 3.179 DPA -24.44 RAP 33.00 ECC 1.5573  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 25 57 4156.13 -38.36 186.37 270.38 59.35 6 35 13 3156.1 -47.00 155.40  
 60.00 3 54 57 4402.33 -20.79 195.14 257.37 54.66 5 8 19 3402.3 -33.38 172.01  
 60.31 3 28 35 4476.50 -17.58 198.97 254.91 53.37 4 43 12 3476.5 -30.94 176.93  
 60.31 3 28 35 4476.50 -17.58 198.97 254.91 53.37 4 43 12 3476.5 -30.94 176.93  
 60.31 3 28 35 4476.50 -17.58 198.97 254.91 53.37 4 43 12 3476.5 -30.94 176.93  
 60.31 3 28 35 4476.50 -17.58 198.97 254.91 53.37 4 43 12 3476.5 -30.94 176.93  
 60.31 3 28 35 4476.50 -17.58 198.97 254.91 53.37 4 43 12 3476.5 -30.94 176.93

DIFFERENTIAL CORRECTIONS  
 TDE .6889 TRA-3.6375 TC3-4.6075 BAU 2.3027 SGT 7150.6 SGR 2854.9 SG3 853.8 ST 78.4 SR 36.4 SS 52.1  
 RDE .6366 RRA -.9428 RC3-2.1541 FAU .27637 RRT .9576 RRF .9888 RTF .9331 CRT .8301 CRS -.9810 CST -.7076  
 FDE 3.6330 FRA-3.2158 FC3-7.0708 BSP 13264 SGB 7699.5 R23 .2944 R13 .9452 LSA 94.7 MSA 35.0 SSA .8  
 BDE .9380 BRA 3.7577 BC3 5.0861 FSP 1391 SG1 7661.2 SG2 767.4 THA 21.15 EL1 84.4 EL2 18.9 ALF 22.27

LAUNCH DATE SEP 6 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC  
 RL 150.79 LAL .00 LOL 343.26 VL 33.046 GAL 5.54 AZL 84.12 HCA 161.71 SMA 198.80 ECC .25833 INC 5.8756 V1 29.949  
 RP 248.78 LAP 1.84 LOP 145.07 VP 19.966 GAP -3.17 AZP 95.58 TAL 27.49 TAP 189.20 RCA 147.29 APO 249.90 V2 22.015  
 RC 341.246 GL 34.95 GP -35.34 ZAL 51.92 ZAP 62.06 ETS 159.90 ZAE 81.13 ETE 175.13 ZAC 53.97 ETC 287.61 LVI 12.79

PLANETOCENTRIC CONIC  
 C3 34.947 VHL 5.878 DLA 41.34 RAL 6.38 RAD 6648.7 VEL 12.428 PTH 7.33 VHP 3.242 DPA -25.24 RAP 33.74 ECC 1.5688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 10 36 4201.52 -38.73 189.49 269.85 57.33 6 20 38 3201.5 -46.46 159.65  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74  
 58.49 3 18 3 4504.09 -17.83 201.54 254.95 52.06 4 33 7 3504.1 -31.66 179.74

DIFFERENTIAL CORRECTIONS  
 TDE .7628 TRA-3.6946 TC3-4.5936 BAU 2.3453 SGT 7261.1 SGR 2931.2 SG3 812.7 ST 81.4 SR 39.6 SS 52.4  
 RDE .7071 RRA -.9869 RC3-2.1646 FAU .26278 RRT .9585 RRF .9890 RTF .9318 CRT .8352 CRS -.9831 CST -.7216  
 FDE 3.6284 FRA-3.0841 FC3-6.5853 BSP 13529 SGB 7830.4 R23 .2995 R13 .9443 LSA 98.5 MSA 35.2 SSA .7  
 BDE 1.0401 BRA 3.8241 BC3 5.0780 FSP 1328 SG1 7791.5 SG2 779.0 THA 21.38 EL1 88.3 EL2 20.1 ALF 23.42



LAUNCH DATE SEP 6 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC

DISTANCE 584.978

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 33.053 GAL 5.48 AZL 83.85 HCA 162.59 SMA 190.74 ECC .25047 INC 6.1309 V1 29.549
RP 248.85 LAP 1.84 LOP 145.94 VP 19.971 GAP -3.36 AZP 95.87 TAL 27.17 TAP 189.75 RCA 147.33 APO 250.11 V2 22.009
RC 343.139 GL 36.38 GP -36.43 ZAL 52.84 ZAP 62.08 ETS 159.01 ZAE 80.57 ETE 174.44 ZAC 52.45 ETC 287.87 LVI 13.91

PLANETOCENTRIC CONIC

C3 35.354 VHL 5.946 DLA 42.66 RAL 5.65 RAD 6649.0 VEL 12.460 PTH 7.36 VHP 3.311 DPA -26.09 RAP 34.55 ECC 1.5818
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 52 22 4253.59 -34.78 192.91 268.92 59.20 6 3 16 3253.6 -45.63 164.41
56.62 3 7 17 4531.50 -18.06 204.12 254.95 50.67 4 22 48 3531.5 -32.39 182.60
56.62 3 7 17 4531.50 -18.06 204.12 254.95 50.67 4 22 48 3531.5 -32.39 182.60
56.62 3 7 17 4531.50 -18.06 204.12 254.95 50.67 4 22 48 3531.5 -32.39 182.60
56.62 3 7 17 4531.50 -18.06 204.12 254.95 50.67 4 22 48 3531.5 -32.39 182.60
56.62 3 7 17 4531.50 -18.06 204.12 254.95 50.67 4 22 48 3531.5 -32.39 182.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8505 TRA-3.7402 TC3-4.5500 BAU 2.3798 SGT 7346.3 SGR 2992.5 SG3 764.4 ST 84.6 SR 43.4 SS 53.0
RDE .7953 RRA-1.0221 RC3-2.1561 FAU .24629 RRT .9582 RRF .9887 RTF .9280 CRT .8382 CRS -.9852 CST -.7332
FDE 3.6542 FRA-2.8999 FC3-6.0311 B5P 14016 SGB 7932.4 R23 .3105 R13 .9411 LSA 102.8 MSA 35.7 SSA .7
BDE 1.1644 BRA 3.8774 BC3 5.0350 F5P 1310 SGI 7892.3 SG2 796.8 THA 21.55 EL1 92.6 EL2 21.6 ALF 24.74

LAUNCH DATE SEP 6 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 15 1974

HELIOCENTRIC CONIC

DISTANCE 588.745

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 33.060 GAL 5.42 AZL 83.55 HCA 163.46 SMA 190.88 ECC .25861 INC 6.4540 V1 29.549
RP 248.92 LAP 1.83 LOP 146.82 VP 19.976 GAP -3.55 AZP 96.19 TAL 26.85 TAP 190.30 RCA 147.45 APO 250.31 V2 22.003
RC 345.001 GL 37.87 GP -37.58 ZAL 53.82 ZAP 62.17 ETS 158.10 ZAE 80.07 ETE 173.74 ZAC 51.26 ETC 288.16 LVI 15.09

PLANETOCENTRIC CONIC

C3 36.316 VHL 6.026 DLA 44.05 RAL 4.80 RAD 6649.4 VEL 12.498 PTH 7.39 VHP 3.388 DPA -26.99 RAP 35.42 ECC 1.5977
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 30 1 4315.06 -32.31 196.72 267.38 52.96 5 41 57 3315.1 -44.39 169.80
54.71 2 56 13 4558.85 -18.24 206.73 254.90 49.19 4 12 12 3558.8 -33.10 185.54
54.71 2 56 13 4558.85 -18.24 206.73 254.90 49.19 4 12 12 3558.8 -33.10 185.54
54.71 2 56 13 4558.85 -18.24 206.73 254.90 49.19 4 12 12 3558.8 -33.10 185.54
54.71 2 56 13 4558.85 -18.24 206.73 254.90 49.19 4 12 12 3558.8 -33.10 185.54
54.71 2 56 13 4558.85 -18.24 206.73 254.90 49.19 4 12 12 3558.8 -33.10 185.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9115 TRA-3.8126 TC3-4.5148 BAU 2.4321 SGT 7469.5 SGR 3096.9 SG3 724.2 ST 87.6 SR 46.6 SS 52.5
RDE .8660 RRA-1.0880 RC3-2.1702 FAU .23327 RRT .9599 RRF .9889 RTF .9282 CRT .8444 CRS -.9857 CST -.7426
FDE 3.5832 FRA-2.8017 FC3-5.5609 B5P 14120 SGB 8086.0 R23 .3116 R13 .9415 LSA 106.4 MSA 35.7 SSA .8
BDE 1.2573 BRA 3.9648 BC3 5.0093 F5P 1201 SGI 8045.8 SG2 806.1 THA 21.93 EL1 96.6 EL2 22.7 ALF 25.74

LAUNCH DATE SEP 6 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC

DISTANCE 592.508

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 33.068 GAL 5.36 AZL 83.21 HCA 164.33 SMA 199.03 ECC .25876 INC 6.7895 V1 29.549
RP 248.97 LAP 1.83 LOP 147.69 VP 19.982 GAP -3.74 AZP 96.54 TAL 26.52 TAP 190.85 RCA 147.53 APO 250.52 V2 21.997
RC 346.831 GL 39.49 GP -38.82 ZAL 54.85 ZAP 62.34 ETS 157.18 ZAE 79.64 ETE 173.03 ZAC 49.98 ETC 288.48 LVI 16.38

PLANETOCENTRIC CONIC

C3 37.463 VHL 6.121 DLA 45.50 RAL 3.81 RAD 6649.8 VEL 12.544 PTH 7.42 VHP 3.475 DPA -27.95 RAP 36.37 ECC 1.6166
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 0 47 4392.30 -29.05 201.20 264.85 50.50 5 14 0 3392.3 -42.46 176.21
52.74 2 44 43 4586.39 -18.37 209.38 254.77 47.60 4 1 9 3586.4 -33.79 188.58
52.74 2 44 43 4586.39 -18.37 209.38 254.77 47.60 4 1 9 3586.4 -33.79 188.58
52.74 2 44 43 4586.39 -18.37 209.38 254.77 47.60 4 1 9 3586.4 -33.79 188.58
52.74 2 44 43 4586.39 -18.37 209.38 254.77 47.60 4 1 9 3586.4 -33.79 188.58
52.74 2 44 43 4586.39 -18.37 209.38 254.77 47.60 4 1 9 3586.4 -33.79 188.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9808 TRA-3.8753 TC3-4.4478 BAU 2.4771 SGT 7568.3 SGR 3186.3 SG3 676.5 ST 90.6 SR 50.4 SS 52.3
RDE .9560 RRA-1.1458 RC3-2.1827 FAU .21739 RRT .9603 RRF .9884 RTF .9252 CRT .8468 CRS -.9862 CST -.7477
FDE 3.5413 FRA-2.8468 FC3-4.9237 B5P 14441 SGB 8211.7 R23 .3198 R13 .9392 LSA 110.3 MSA 36.2 SSA .8
BDE 1.3697 BRA 4.0411 BC3 4.9457 F5P 1140 SGI 8170.3 SG2 823.1 THA 22.25 EL1 100.8 EL2 24.1 ALF 26.91

LAUNCH DATE SEP 6 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC

DISTANCE 596.272

EARTH TO MARS

RL 150.79 LAL .00 LOL 343.26 VL 33.075 GAL 5.30 AZL 82.84 HCA 165.20 SMA 199.17 ECC .25891 INC 7.1633 V1 29.549
RP 249.02 LAP 1.83 LOP 148.57 VP 19.989 GAP -3.92 AZP 96.93 TAL 26.20 TAP 191.39 RCA 147.60 APO 250.74 V2 21.992
RC 348.628 GL 41.22 GP -40.13 ZAL 55.95 ZAP 62.61 ETS 156.27 ZAE 79.27 ETE 172.31 ZAC 48.62 ETC 288.86 LVI 17.72

PLANETOCENTRIC CONIC

C3 38.842 VHL 6.232 DLA 47.04 RAL 2.83 RAD 6650.3 VEL 12.598 PTH 7.46 VHP 3.573 DPA -28.97 RAP 37.40 ECC 1.6392
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 3 14 27 4509.68 -23.80 207.44 259.97 47.50 4 29 37 3509.7 -38.83 185.11
50.71 2 32 40 4614.19 -18.44 212.06 254.56 45.92 3 49 35 3614.2 -34.44 191.72
50.71 2 32 40 4614.19 -18.44 212.06 254.56 45.92 3 49 35 3614.2 -34.44 191.72
50.71 2 32 40 4614.19 -18.44 212.06 254.56 45.92 3 49 35 3614.2 -34.44 191.72
50.71 2 32 40 4614.19 -18.44 212.06 254.56 45.92 3 49 35 3614.2 -34.44 191.72
50.71 2 32 40 4614.19 -18.44 212.06 254.56 45.92 3 49 35 3614.2 -34.44 191.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0269 TRA-3.9550 TC3-4.3728 BAU 2.5336 SGT 7685.1 SGR 3305.5 SG3 631.5 ST 93.3 SR 53.9 SS 51.3
RDE 1.0368 RRA-1.2272 RC3-2.1642 FAU .20294 RRT .9619 RRF .9881 RTF .9245 CRT .8495 CRS -.9859 CST -.7496
FDE 3.4380 FRA-2.5315 FC3-4.9233 B5P 14547 SGB 8365.9 R23 .3225 R13 .9388 LSA 113.6 MSA 36.6 SSA .5
BDE 1.4593 BRA 4.1410 BC3 4.8791 F5P 1031 SGI 8324.2 SG2 834.4 THA 22.72 EL1 104.7 EL2 25.3 ALF 27.92

LAUNCH DATE SEP 7 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 21 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.136 GAL 8.65 AZL 89.06 HCA 95.37 SMA 200.25 ECC .28698 INC .9363 V1 29.557
RP 231.20 LAP .93 LOP 79.61 VP 22.030 GAP 14.17 AZP 90.09 TAL 40.27 TAP 135.64 RCA 142.78 APO 257.72 V2 23.787
RC 154.008 GL 4.86 GP -9.02 ZAL 30.89 ZAP 142.89 ETS 193.98 ZAE 168.99 ETE 285.72 ZAC 74.28 ETC 282.90 LVI -8.00

PLANETOCENTRIC CONIC

C3 39.953 VHL 6.321 DLA 10.30 RAL 11.70 RAD 6650.6 VEL 12.642 PTH 7.49 VHP 4.008 DPA 7.17 RAP 44.07 ECC 1.6575
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 23 16 3511.58 -46.42 129.18 255.94 101.88 9 21 47 2511.6 -36.62 99.42
60.00 8 51 37 3436.12 -39.70 123.97 257.52 97.80 9 48 53 2436.1 -32.40 95.47
70.00 9 31 14 3319.57 -33.90 115.28 258.28 94.41 10 26 33 2319.6 -28.59 87.86
80.00 10 27 53 3142.13 -29.78 102.11 258.56 92.33 11 20 15 2142.1 -25.80 75.39
90.00 11 44 11 2895.88 -28.24 84.07 258.62 91.58 12 32 26 1895.9 -24.75 57.60
100.00 13 10 44 2616.60 -29.78 63.48 258.56 92.33 13 54 21 1616.6 -25.80 36.76
110.00 14 30 40 2366.39 -33.90 44.20 258.28 94.41 15 10 7 1366.4 -28.59 16.78

DIFFERENTIAL CORRECTIONS

TDE -.3412 TRA -.6830 TC3 .4115 BAU .2802
RDE -.7289 RRA .1568 RC3 -.3252 FAU .21566
FDE -.1335 FRA -2.4417 FC3 -4.6730 BSP .865
BDE .8048 BRA .7008 BC3 .5245 FSP .833

MID-COURSE EXECUTION ACCURACY

SGT 873.1 SGR 791.5 SG3 546.3
RRR -.1454 RRF .4363 RTF -.2935
SGB 1178.5 R23 -.2441 R13 .4300
SG1 903.1 SG2 757.1 THA 152.03

ORBIT DETERMINATION ACCURACY

ST 18.1 SR 33.1 S8 12.3
CRT .8159 CRS -.1127 CST -.6310
LSA 36.7 MSA 15.0 SSA 2.7
EL1 36.5 EL2 9.5 ALF 64.04

LAUNCH DATE SEP 7 1973

FLIGHT TIME 136.00

ARRIVAL DATE JAN 23 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.107 GAL 8.64 AZL 89.03 HCA 96.39 SMA 199.66 ECC .28499 INC .9663 V1 29.557
RP 231.58 LAP .96 LOP 80.62 VP 21.943 GAP 13.83 AZP 90.11 TAL 40.44 TAP 136.83 RCA 142.76 APO 258.57 V2 23.748
RC 156.890 GL 5.03 GP -9.25 ZAL 30.76 ZAP 141.52 ETS 193.68 ZAE 169.01 ETE 278.90 ZAC 74.13 ETC 282.95 LVI -7.89

PLANETOCENTRIC CONIC

C3 39.650 VHL 6.297 DLA 10.40 RAL 11.48 RAD 6650.5 VEL 12.630 PTH 7.48 VHP 3.908 DPA 6.85 RAP 43.80 ECC 1.6525
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 22 2 3511.58 -46.42 129.18 255.63 101.88 9 20 34 2511.6 -36.62 99.42
60.00 8 50 17 3436.41 -39.70 123.99 257.21 97.59 9 47 33 2436.4 -32.41 95.49
70.00 9 29 46 3320.23 -33.91 115.33 257.97 94.38 10 25 6 2320.2 -28.60 87.91
80.00 10 26 18 3143.17 -29.78 102.19 258.25 92.28 11 18 41 2143.2 -25.82 75.47
90.00 11 42 32 2897.10 -28.24 84.16 258.31 91.53 12 30 49 1897.1 -24.77 57.69
100.00 13 9 9 2617.64 -29.78 63.56 258.25 92.28 13 52 47 1617.6 -25.82 36.83
110.00 14 29 12 2367.05 -33.91 44.25 257.97 94.38 15 8 40 1367.0 -28.60 16.82

DIFFERENTIAL CORRECTIONS

TDE -.3494 TRA -.6965 TC3 .3924 BAU .2763
RDE -.7268 RRA .1476 RC3 -.3429 FAU .22572
FDE -.1292 FRA -2.5806 FC3 -4.9285 BSP .895
BDE .8064 BRA .7120 BC3 .5212 FSP .887

MID-COURSE EXECUTION ACCURACY

SGT 872.1 SGR 801.6 SG3 574.7
RRR -.1304 RRF .4562 RTF -.2572
SGB 1184.5 R23 -.2780 R13 .4130
SG1 900.1 SG2 770.0 THA 151.46

ORBIT DETERMINATION ACCURACY

ST 18.6 SR 33.1 S8 12.7
CRT .8191 CRS -.1024 CST -.6203
LSA 36.9 MSA 15.4 SSA 2.7
EL1 36.8 EL2 9.6 ALF 63.31

LAUNCH DATE SEP 7 1973

FLIGHT TIME 140.00

ARRIVAL DATE JAN 25 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.079 GAL 8.62 AZL 89.00 HCA 97.39 SMA 199.12 ECC .28313 INC .9962 V1 29.557
RP 231.95 LAP .99 LOP 81.63 VP 21.859 GAP 13.49 AZP 90.13 TAL 40.59 TAP 137.99 RCA 142.74 APO 255.50 V2 23.708
RC 159.785 GL 5.20 GP -9.48 ZAL 30.65 ZAP 140.13 ETS 193.39 ZAE 168.87 ETE 271.94 ZAC 73.98 ETC 283.01 LVI -7.77

PLANETOCENTRIC CONIC

C3 39.361 VHL 6.274 DLA 10.50 RAL 11.28 RAD 6650.4 VEL 12.619 PTH 7.47 VHP 3.813 DPA 6.51 RAP 43.52 ECC 1.6478
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 20 51 3511.79 -46.42 129.20 255.35 101.87 9 19 22 2511.8 -36.63 99.43
60.00 8 48 58 3436.93 -39.70 124.03 256.92 97.56 9 46 15 2436.9 -32.43 95.53
70.00 9 28 19 3321.15 -33.91 115.41 257.68 94.34 10 23 40 2321.2 -28.62 87.97
80.00 10 24 43 3144.49 -29.78 102.29 257.96 92.23 11 17 7 2144.5 -25.84 75.56
90.00 11 40 54 2898.61 -28.24 84.27 258.01 91.48 12 29 13 1898.6 -24.79 57.79
100.00 13 7 35 2618.98 -29.78 63.65 257.96 92.23 13 51 14 1619.0 -25.84 36.92
110.00 14 27 46 2367.97 -33.91 44.32 257.68 94.34 15 7 14 1368.0 -28.62 16.88

DIFFERENTIAL CORRECTIONS

TDE -.3586 TRA -.7101 TC3 .3721 BAU .2730
RDE -.7245 RRA .1378 RC3 -.3814 FAU .23614
FDE -.1247 FRA -2.7243 FC3 -5.1937 BSP .910
BDE .8075 BRA .7233 BC3 .5187 FSP .943

MID-COURSE EXECUTION ACCURACY

SGT 871.2 SGR 812.3 SG3 604.1
RRR -.1141 RRF .4766 RTF -.2.95
SGB 1191.1 R23 -.3119 R13 .3968
SG1 896.7 SG2 784.0 THA 180.78

ORBIT DETERMINATION ACCURACY

ST 19.1 SR 33.1 S8 13.0
CRT .8216 CRS -.0930 CST -.6110
LSA 37.1 MSA 15.8 SSA 2.7
EL1 37.0 EL2 9.7 ALF 62.88

LAUNCH DATE SEP 7 1973

FLIGHT TIME 142.00

ARRIVAL DATE JAN 27 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.084 GAL 8.60 AZL 88.97 HCA 98.40 SMA 198.62 ECC .28138 INC 1.0263 V1 29.557
RP 232.33 LAP 1.02 LOP 82.63 VP 21.778 GAP 13.16 AZP 90.15 TAL 40.73 TAP 139.13 RCA 142.73 APO 254.51 V2 23.670
RC 162.693 GL 5.37 GP -9.71 ZAL 30.55 ZAP 138.72 ETS 193.11 ZAE 168.57 ETE 265.05 ZAC 73.82 ETC 283.07 LVI -7.86

PLANETOCENTRIC CONIC

C3 39.088 VHL 6.252 DLA 10.61 RAL 11.09 RAD 6650.3 VEL 12.608 PTH 7.47 VHP 3.722 DPA 6.15 RAP 43.22 ECC 1.6433
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 19 41 3512.20 -46.43 129.24 255.10 101.84 9 18 13 2512.2 -36.64 99.46
60.00 8 47 41 3437.68 -39.71 124.10 256.67 97.52 9 44 58 2437.7 -32.45 95.58
70.00 9 26 53 3322.33 -33.92 115.50 257.41 94.29 10 22 15 2322.3 -28.65 88.05
80.00 10 23 8 3146.10 -29.79 102.41 257.69 92.17 11 15 35 2146.1 -25.87 75.67
90.00 11 39 16 2900.41 -28.25 84.40 257.74 91.41 12 27 36 1900.4 -24.82 57.92
100.00 13 6 0 2620.57 -29.79 63.77 257.69 92.17 13 49 41 1620.6 -25.87 37.04
110.00 14 26 19 2369.14 -33.92 44.42 257.41 94.29 15 5 49 1369.1 -28.65 16.97

DIFFERENTIAL CORRECTIONS

TDE -.3632 TRA -.7243 TC3 .3501 BAU .2702
RDE -.7820 RRA .1278 RC3 -.3803 FAU .24681
FDE -.1187 FRA -2.8719 FC3 -5.4667 BSP .918
BDE .8082 BRA .7355 BC3 .5171 FSP .999

MID-COURSE EXECUTION ACCURACY

SGT 870.9 SGR 823.8 SG3 634.3
RRR -.0955 RRF .4970 RTF -.1795
SGB 1198.7 R23 -.3468 R13 .3799
SG1 893.2 SG2 799.4 THA 150.16

ORBIT DETERMINATION ACCURACY

ST 19.5 SR 33.1 S8 13.4
CRT .8236 CRS -.0833 CST -.6019
LSA 37.3 MSA 16.2 SSA 2.7
EL1 37.2 EL2 9.9 ALF 62.01

LAUNCH DATE SEP 7 1973

FLIGHT TIME 144.00

ARRIVAL DATE JAN 29 1974

HELIOCENTRIC CONIC DISTANCE 326.245 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 33.030 GAL 8.59 AZL 86.94 HCA 99.40 SMA 198.16 ECC .27975 INC 1.0564 V1 29.557  
 RP 232.70 LAP 1.04 LOP 83.64 VP 21.701 GAP 12.84 AZP 90.17 TAL 40.85 TAP 140.25 RCA 142.72 APO 253.59 V2 23.631  
 RC 165.610 GL 5.55 GP -9.95 ZAL 30.46 ZAP 137.29 ETS 192.82 ZAE 166.11 ETE 256.42 ZAC 73.67 ETC 263.13 LVI -7.55

PLANETOCENTRIC CONIC  
 C3 38.823 VHL 8.231 DLA 10.72 RAL 10.92 RAD 6650.3 VEL 12.598 PTH 7.46 VHP 3.635 DPA 5.79 RAP 42.89 ECC 1.6369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 18 32 3512.81 -46.44 129.29 254.87 101.80 9 17 5 2512.8 -36.67 99.50  
 60.00 8 46 24 3438.64 -39.72 124.18 256.43 97.46 9 43 43 2438.6 -32.48 95.65  
 70.00 9 25 27 3323.74 -33.92 115.61 257.17 94.22 10 20 51 2323.7 -28.68 88.15  
 80.00 10 21 34 3147.97 -29.79 102.54 257.44 92.10 11 14 2 2148.0 -25.90 75.80  
 90.00 11 37 38 2902.50 -28.25 84.56 257.49 91.33 12 26 0 1902.5 -24.85 58.06  
 100.00 13 4 26 2622.44 -29.79 63.91 257.44 92.10 13 48 8 1622.4 -25.90 37.16  
 110.00 14 24 54 2370.56 -33.92 44.53 257.17 94.22 15 4 24 1370.6 -28.68 17.07

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3692 TRA -.7392 TC3 .3262 BAU .2681 SGT 871.2 SGR 835.8 SG3 665.6 ST 19.9 SR 33.1 S8 13.9  
 RDE -.7194 RRA .1171 RC3 -.4005 FAU .25779 RRT -.0743 RRF .5177 RTF -.1368 CRT .8250 CRS -.0755 CST -.5950  
 FDE -.1132 FRA-3.0248 FC3-5.7487 BSP 921 SGB 1207.3 R23 -.3831 R13 .3619 LSA 37.5 MSA 16.6 S8A 2.7  
 BDE .8086 BRA .7484 BC3 .5165 FSP 1057 SGI 889.3 SG2 816.6 THA 149.59 EL1 37.3 EL2 10.0 ALF 61.40

LAUNCH DATE SEP 7 1973

FLIGHT TIME 146.00

ARRIVAL DATE JAN 31 1974

HELIOCENTRIC CONIC DISTANCE 330.011 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 33.008 GAL 8.57 AZL 88.91 HCA 100.40 SMA 197.73 ECC .27822 INC 1.0866 V1 29.557  
 RP 233.07 LAP 1.07 LOP 84.64 VP 21.625 GAP 12.52 AZP 90.20 TAL 40.95 TAP 141.35 RCA 142.72 APO 252.75 V2 23.593  
 RC 168.937 GL 5.72 GP -10.19 ZAL 30.39 ZAP 135.84 ETS 192.53 ZAE 167.49 ETE 252.21 ZAC 73.52 ETC 263.19 LVI -7.44

PLANETOCENTRIC CONIC  
 C3 38.570 VHL 8.211 DLA 10.84 RAL 10.75 RAD 6650.2 VEL 12.588 PTH 7.45 VHP 3.552 DPA 5.41 RAP 42.55 ECC 1.6348  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 17 25 3513.61 -46.45 129.37 254.67 101.74 9 15 59 2513.6 -36.70 99.55  
 60.00 8 45 9 3439.82 -39.73 124.27 256.22 97.40 9 42 29 2439.8 -32.51 95.73  
 70.00 9 24 2 3325.39 -33.93 115.74 256.95 94.15 10 19 28 2325.4 -28.72 88.26  
 80.00 10 20 0 3150.11 -29.80 102.70 257.22 92.01 11 12 30 2150.1 -25.94 75.94  
 90.00 11 35 59 2904.87 -28.25 84.73 257.27 91.25 12 24 24 1904.9 -24.89 58.22  
 100.00 13 2 52 2624.58 -29.80 64.07 257.22 92.01 13 46 36 1624.6 -25.94 37.31  
 110.00 14 23 29 2372.21 -33.93 44.65 256.95 94.15 15 3 1 1372.2 -28.72 17.18

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3751 TRA -.7554 TC3 .2999 BAU .2666 SGT 872.9 SGR 848.7 SG3 697.5 ST 20.3 SR 33.1 S8 14.3  
 RDE -.7165 RRA .1060 RC3 -.4211 FAU .26900 RRT -.0496 RRF .5384 RTF -.0908 CRT .8260 CRS -.0667 CST -.5877  
 FDE -.1054 FRA-3.1803 FC3-6.0380 BSP 925 SGB 1217.5 R23 -.4246 R13 .3372 LSA 37.6 MSA 17.0 S8A 2.7  
 BDE .8087 BRA .7628 BC3 .5169 FSP 1115 SGI 885.1 SG2 836.0 THA 149.79 EL1 37.5 EL2 10.1 ALF 60.77

LAUNCH DATE SEP 7 1973

FLIGHT TIME 148.00

ARRIVAL DATE FEB 2 1974

HELIOCENTRIC CONIC DISTANCE 333.781 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.988 GAL 8.55 AZL 88.88 HCA 101.40 SMA 197.34 ECC .27679 INC 1.1166 V1 29.557  
 RP 233.44 LAP 1.09 LOP 85.63 VP 21.553 GAP 12.20 AZP 90.22 TAL 41.04 TAP 142.44 RCA 142.72 APO 251.96 V2 23.554  
 RC 171.472 GL 5.90 GP -10.44 ZAL 30.34 ZAP 134.37 ETS 192.25 ZAE 166.73 ETE 246.49 ZAC 73.37 ETC 263.26 LVI -7.34

PLANETOCENTRIC CONIC  
 C3 38.328 VHL 8.191 DLA 10.97 RAL 10.60 RAD 6650.1 VEL 12.578 PTH 7.44 VHP 3.473 DPA 5.03 RAP 42.19 ECC 1.6308  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 16 20 3514.60 -46.46 129.46 254.49 101.67 9 14 55 2514.6 -36.73 99.62  
 60.00 8 43 55 3441.20 -39.74 124.39 256.03 97.32 9 41 16 2441.2 -32.55 95.82  
 70.00 9 22 38 3327.28 -33.94 115.88 256.75 94.06 10 18 5 2327.3 -28.76 88.39  
 80.00 10 18 25 3152.51 -29.80 102.88 257.01 91.92 11 10 58 2152.5 -25.99 76.11  
 90.00 11 34 20 2907.51 -28.26 84.92 257.06 91.15 12 22 48 1907.5 -24.94 58.40  
 100.00 13 1 17 2626.98 -29.80 64.25 257.01 91.92 13 45 4 1627.0 -25.99 37.48  
 110.00 14 22 4 2374.10 -33.94 44.80 256.75 94.06 15 1 38 1374.1 -28.76 17.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3810 TRA -.7731 TC3 .2711 BAU .2658 SGT 878.4 SGR 862.4 SG3 730.2 ST 20.8 SR 33.0 S8 14.7  
 RDE -.7133 RRA .0946 RC3 -.4424 FAU .28045 RRT -.0212 RRF .5590 RTF -.116 CRT .8268 CRS -.0575 CST -.5803  
 FDE -.0958 FRA-3.3380 FC3-6.3347 BSP 931 SGB 1229.6 R23 -.4845 R13 .2803 LSA 37.8 MSA 17.4 S8A 2.7  
 BDE .8087 BRA .7788 BC3 .5188 FSP 1175 SGI 881.0 SG2 857.8 THA 153.61 EL1 37.7 EL2 10.2 ALF 60.13

LAUNCH DATE SEP 7 1973

FLIGHT TIME 150.00

ARRIVAL DATE FEB 4 1974

HELIOCENTRIC CONIC DISTANCE 337.557 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.970 GAL 8.53 AZL 88.85 HCA 102.39 SMA 196.98 ECC .27545 INC 1.1472 V1 29.557  
 RP 233.80 LAP 1.12 LOP 86.63 VP 21.483 GAP 11.88 AZP 90.25 TAL 41.11 TAP 143.50 RCA 142.72 APO 251.24 V2 23.517  
 RC 174.413 GL 6.07 GP -10.69 ZAL 30.30 ZAP 132.88 ETS 191.96 ZAE 165.83 ETE 241.31 ZAC 73.22 ETC 263.32 LVI -7.23

PLANETOCENTRIC CONIC  
 C3 38.094 VHL 8.172 DLA 11.10 RAL 10.47 RAD 6650.0 VEL 12.569 PTH 7.44 VHP 3.398 DPA 4.63 RAP 41.81 ECC 1.6269  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 15 16 3515.76 -46.48 129.57 254.34 101.59 9 13 52 2515.8 -36.78 99.70  
 60.00 8 42 42 3442.77 -39.76 124.52 255.86 97.23 9 40 4 2442.8 -32.60 95.93  
 70.00 9 21 14 3329.39 -33.95 116.05 256.57 93.97 10 16 43 2329.4 -28.81 88.54  
 80.00 10 16 31 3155.16 -29.81 103.08 256.82 91.82 11 9 26 2155.2 -26.03 76.29  
 90.00 11 32 41 2910.42 -28.26 85.13 256.87 91.04 12 21 11 1910.4 -24.98 58.60  
 100.00 12 59 42 2629.63 -29.81 64.45 256.82 91.82 13 43 32 1629.6 -26.03 37.66  
 110.00 14 20 40 2376.21 -33.95 44.96 256.57 93.97 15 0 16 1376.2 -28.81 17.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3870 TRA -.7923 TC3 .2396 BAU .2662 SGT 882.2 SGR 877.0 SG3 763.6 ST 21.2 SR 33.0 S8 15.1  
 RDE -.7100 RRA .0827 RC3 -.4644 FAU .29211 RRT .0111 RRF .5794 RTF .0110 CRT .8273 CRS -.0487 CST -.5735  
 FDE -.0851 FRA-3.4993 FC3-6.6385 BSP 944 SGB 1244.0 R23 .4926 R13 .3050 LSA 38.0 MSA 17.8 S8A 2.7  
 BDE .8086 BRA .7966 BC3 .5226 FSP 1235 SGI 885.2 SG2 874.1 THA 31.00 EL1 37.8 EL2 10.4 ALF 59.45

LAUNCH DATE SEP 7 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 8 1974

DISTANCE 341.336 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.852 GAL 8.31 AZL 88.82 HCA 103.38 SMA 196.65 ECC .27419 INC 1.1777 V1 29.557  
 RP 234.17 LAP 1.15 LOP 87.62 VP 21.416 GAP 11.57 AZP 90.27 TAL 41.17 TAP 144.55 RCA 142.73 APO 290.57 V2 23.479  
 RC 177.360 GL 6.25 GP -10.95 ZAL 30.28 ZAP 131.38 ETS 191.67 ZAE 164.82 ETE 236.67 ZAC 73.07 ETC 283.39 LVI -7.13

PLANETOCENTRIC CONIC  
 C3 37.868 VHL 6.154 DLA 11.24 RAL 10.34 RAD 6649.9 VEL 12.560 PTH 7.43 VHP 3.326 DPA 4.22 RAP 41.41 ECC 1.6232  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 14 13 3517.09 -46.49 129.69 254.21 101.80 9 12 51 2517.1 -36.82 99.79  
 60.00 8 41 29 3444.54 -39.77 124.67 255.72 97.13 9 38 54 2444.5 -32.65 96.05  
 70.00 9 19 50 3331.72 -33.96 116.23 256.41 93.86 10 15 21 2331.7 -28.86 88.70  
 80.00 10 15 16 3158.06 -29.81 103.29 256.65 91.70 11 7 54 2158.1 -26.08 76.49  
 90.00 11 31 1 2913.59 -28.27 85.37 256.69 90.93 12 19 34 1913.6 -25.03 58.82  
 100.00 12 58 7 2632.54 -29.81 64.66 256.65 91.70 13 42 0 1632.5 -26.08 37.86  
 110.00 14 19 16 2378.54 -33.96 45.14 256.41 93.86 14 58 54 1378.5 -28.86 17.62

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 890.7 SGR 892.4 SG3 797.4 ST 21.7 SR 32.9 SS 15.9  
 RRT .0475 RRF .5995 RTF .0667 CRT .8275 CRS -.0395 CST -.5667  
 SGB 1260.8 R23 .3767 R13 .4678 LSA 38.1 MSA 18.2 SSA 2.7  
 SGI 912.5 SG2 870.1 THA 46.14 EL1 38.0 EL2 10.5 ALF 56.75

DIFFERENTIAL CORRECTIONS  
 TDE -.3931 TRA -.8130 TC3 .2052 BAV .2676  
 RDE -.7063 RRA .0704 RC3 -.4871 FAU .30363  
 FDE -.0723 FRA-3.6615 FC3-6.9461 BSP 963  
 BDE .8084 BRA .8160 BC3 .5285 F8P 1297

LAUNCH DATE SEP 7 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 8 1974

DISTANCE 345.120 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.937 GAL 8.49 AZL 88.79 HCA 104.37 SMA 196.38 ECC .27301 INC 1.2084 V1 29.557  
 RP 234.53 LAP 1.17 LOP 88.60 VP 21.350 GAP 11.27 AZP 90.30 TAL 41.21 TAP 145.58 RCA 142.74 APO 249.95 V2 23.442  
 RC 180.313 GL 6.43 GP -11.20 ZAL 30.26 ZAP 129.86 ETS 191.38 ZAE 163.71 ETE 232.53 ZAC 72.93 ETC 283.46 LVI -7.02

PLANETOCENTRIC CONIC  
 C3 37.650 VHL 6.136 DLA 11.39 RAL 10.22 RAD 6649.8 VEL 12.551 PTH 7.42 VHP 3.258 DPA 3.80 RAP 41.00 ECC 1.6196  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 13 12 3518.59 -46.51 129.83 254.09 101.39 9 11 50 2518.6 -36.88 99.89  
 60.00 8 40 17 3446.50 -39.79 124.83 255.59 97.02 9 37 44 2446.5 -32.70 96.19  
 70.00 9 18 26 3334.27 -33.97 116.43 256.27 93.74 10 14 0 2334.3 -28.92 88.88  
 80.00 10 13 40 3161.21 -29.82 103.53 256.50 91.58 11 6 21 2161.2 -26.14 76.71  
 90.00 11 29 20 2917.01 -28.27 85.62 256.54 90.80 12 17 57 1917.0 -25.09 59.06  
 100.00 12 56 32 2635.68 -29.82 64.90 256.50 91.58 13 40 28 1635.7 -26.14 38.08  
 110.00 14 17 52 2381.09 -33.97 45.34 256.27 93.74 14 57 33 1381.1 -28.92 17.79

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 902.7 SGR 908.6 SG3 831.6 ST 22.1 SR 32.8 SS 15.9  
 RRT .0873 RRF .6192 RTF .1245 CRT .8275 CRS -.0297 CST -.5597  
 SGB 1280.8 R23 .3470 R13 .5177 LSA 38.3 MSA 18.6 SSA 2.7  
 SGI 944.4 SG2 865.1 THA 47.16 EL1 38.1 EL2 10.7 ALF 58.01

DIFFERENTIAL CORRECTIONS  
 TDE -.3993 TRA -.8354 TC3 .1681 BAV .2705  
 RDE -.7024 RRA .0577 RC3 -.5104 FAU .31571  
 FDE -.0571 FRA-3.8250 FC3-7.2596 BSP 993  
 BDE .8080 BRA .8374 BC3 .5374 F8P 1359

LAUNCH DATE SEP 7 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 10 1974

DISTANCE 348.907 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.922 GAL 8.46 AZL 88.76 HCA 105.35 SMA 196.07 ECC .27191 INC 1.2392 V1 29.557  
 RP 234.89 LAP 1.20 LOP 89.59 VP 21.287 GAP 10.96 AZP 90.33 TAL 41.24 TAP 146.59 RCA 142.76 APO 249.38 V2 23.405  
 RC 183.270 GL 6.61 GP -11.46 ZAL 30.27 ZAP 126.32 ETS 191.08 ZAE 162.50 ETE 228.85 ZAC 72.78 ETC 283.53 LVI -6.92

PLANETOCENTRIC CONIC  
 C3 37.438 VHL 6.119 DLA 11.54 RAL 10.12 RAD 6649.8 VEL 12.543 PTH 7.42 VHP 3.194 DPA 3.37 RAP 40.57 ECC 1.6161  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 12 11 3520.26 -46.54 129.98 254.00 101.27 9 10 52 2520.3 -36.94 100.00  
 60.00 8 39 6 3448.65 -39.81 125.01 255.48 96.90 9 36 34 2448.6 -32.76 96.34  
 70.00 9 17 2 3337.03 -33.98 116.64 256.15 93.62 10 12 39 2337.0 -28.98 89.07  
 80.00 10 12 4 3164.60 -29.83 103.78 256.36 91.45 11 4 49 2164.6 -26.20 76.94  
 90.00 11 27 38 2920.70 -28.27 85.89 256.40 90.67 12 16 19 1920.7 -25.15 59.31  
 100.00 12 54 56 2639.07 -29.83 65.15 256.36 91.45 13 38 55 1639.1 -26.20 38.31  
 110.00 14 16 28 2383.85 -33.98 45.56 256.15 93.62 14 56 12 1383.8 -28.98 17.99

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 918.6 SGR 925.7 SG3 866.1 ST 22.6 SR 32.7 SS 16.2  
 RRT .1303 RRF .6384 RTF .1540 CRT .8273 CRS -.0194 CST -.5525  
 SGB 1304.1 R23 .3283 R13 .5568 LSA 38.4 MSA 19.0 SSA 2.7  
 SGI 980.5 SG2 859.8 THA 46.69 EL1 38.3 EL2 10.9 ALF 57.23

DIFFERENTIAL CORRECTIONS  
 TDE -.4056 TRA -.8596 TC3 .1279 BAV .2750  
 RDE -.6982 RRA .0448 RC3 -.5344 FAU .32761  
 FDE -.0395 FRA-3.9880 FC3-7.5760 BSP 1034  
 BDE .8075 BRA .8608 BC3 .5495 F8P 1423

LAUNCH DATE SEP 7 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 12 1974

DISTANCE 352.896 EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.909 GAL 8.44 AZL 88.73 HCA 106.33 SMA 195.82 ECC .27088 INC 1.2703 V1 29.557  
 RP 235.24 LAP 1.22 LOP 90.57 VP 21.227 GAP 10.66 AZP 90.36 TAL 41.25 TAP 147.59 RCA 142.77 APO 248.86 V2 23.369  
 RC 186.232 GL 6.79 GP -11.72 ZAL 30.28 ZAP 126.77 ETS 190.78 ZAE 161.22 ETE 225.59 ZAC 72.64 ETC 283.60 LVI -6.82

PLANETOCENTRIC CONIC  
 C3 37.232 VHL 6.102 DLA 11.70 RAL 10.02 RAD 6649.7 VEL 12.535 PTH 7.41 VHP 3.133 DPA 2.93 RAP 40.13 ECC 1.6127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 11 12 3522.08 -46.56 130.15 253.93 101.15 9 9 54 2522.1 -37.01 100.13  
 60.00 8 37 55 3450.98 -39.82 125.21 255.39 96.77 9 35 26 2451.0 -32.83 96.50  
 70.00 9 15 38 3340.00 -34.00 116.87 256.04 93.48 10 11 18 2340.0 -29.05 89.27  
 80.00 10 10 27 3168.23 -29.83 104.05 256.24 91.31 11 3 15 2168.2 -26.26 77.19  
 90.00 11 25 56 2924.84 -28.28 86.17 256.27 90.52 12 14 40 1924.6 -25.21 59.58  
 100.00 12 53 19 2642.70 -29.83 65.42 256.24 91.31 13 37 22 1642.7 -26.26 38.56  
 110.00 14 15 4 2386.82 -34.00 45.79 256.04 93.48 14 54 51 1386.8 -29.05 18.19

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 938.8 SGR 943.6 SG3 900.7 ST 23.2 SR 32.6 SS 16.6  
 RRT .1759 RRF .6570 RTF .2443 CRT .8269 CRS -.0082 CST -.5448  
 SGB 1331.0 R23 .3131 R13 .5922 LSA 38.6 MSA 19.5 SSA 2.7  
 SGI 1020.6 SG2 854.3 THA 45.83 EL1 36.4 EL2 11.0 ALF 56.41

DIFFERENTIAL CORRECTIONS  
 TDE -.4121 TRA -.8854 TC3 .0847 BAV .2814  
 RDE -.6936 RRA .0315 RC3 -.5589 FAU .33955  
 FDE -.0188 FRA-4.1515 FC3-7.8954 BSP 1087  
 BDE .8068 BRA .8860 BC3 .5653 F8P 1486

LAUNCH DATE SEP 7 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 14 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.897 GAL 8.42 AZL 88.70 HCA 107.31 SMA 195.59 ECC .26991 INC 1.3016 V1 29.557  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.168 GAP 10.36 AZP 90.39 TAL 41.26 TAP 148.57 RCA 142.80 APO 248.38 V2 23.332  
 RC 189.197 GL 8.98 GP -11.99 ZAL 30.31 ZAP 125.21 ETS 190.47 ZAE 159.87 ETE 222.67 ZAC 72.50 ETC 263.67 LVI -6.71

Distance 356.490

Planetocentric Conic: C3 37.032 VHL 6.085 DLA 11.87 RAL 9.94 RAD 6649.6 VEL 12.927 PTH 7.41 VHP 3.076 DPA 2.48 RAP 39.67 ECC 1.6098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 10 13 3524.06 -46.59 130.34 253.88 101.01 9 8 57 2524.1 -37.08 100.26  
 60.00 8 36 44 3453.48 -39.84 125.42 255.31 96.63 9 34 17 2453.5 -32.90 96.67  
 70.00 9 14 13 3343.17 -34.01 117.12 255.95 93.33 10 9 56 2343.2 -29.11 89.49  
 80.00 10 8 50 3172.09 -29.84 104.34 256.14 91.16 11 1 42 2172.1 -26.33 77.46  
 90.00 11 24 12 2928.82 -28.28 86.48 256.16 90.37 12 13 1 1928.8 -25.27 59.87  
 100.00 12 51 42 2646.56 -29.84 65.70 256.14 91.16 13 35 48 1646.6 -26.33 38.83  
 110.00 14 13 40 2389.99 -34.01 46.04 255.95 93.33 14 53 30 1390.0 -29.11 18.41

Differential Corrections: TDE -.4142 TRA -.9086 TC3 .0435 BAU .2904 RDE -.6896 RRA .0171 RC3 -.5850 FAU .35218 FDE -.0110 FRA -4.3283 FC3 -8.2333 BSP 1150 BDE .8044 BRA .9087 BC3 .5866 FSP 1534

Mid-Course Execution Accuracy: SGT 958.6 SGR 963.7 SG3 937.6 RRT .2177 RRF .6763 RTF .2993 SGB 1359.3 R23 .2939 R13 .6287 SG1 1060.7 SG2 850.1 THA 45.70

Orbit Determination Accuracy: ST 23.5 SR 32.5 SS 17.1 CRT .8250 CRS -.0083 CST -.5484 LSA 38.7 MSA 19.9 SSA 2.7 EL1 38.5 EL2 11.2 ALF 55.89

LAUNCH DATE SEP 7 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 16 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.886 GAL 8.39 AZL 88.67 HCA 108.28 SMA 195.38 ECC .26900 INC 1.3331 V1 29.557  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.112 GAP 10.07 AZP 90.42 TAL 41.24 TAP 149.53 RCA 142.82 APO 247.94 V2 23.297  
 RC 192.165 GL 7.16 GP -12.25 ZAL 30.35 ZAP 123.64 ETS 190.16 ZAE 158.46 ETE 220.07 ZAC 72.37 ETC 283.74 LVI -6.61

Distance 360.284

Planetocentric Conic: C3 36.836 VHL 6.069 DLA 12.04 RAL 9.86 RAD 6649.6 VEL 12.519 PTH 7.40 VHP 3.022 DPA 2.03 RAP 39.20 ECC 1.6062  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 15 3526.20 -46.61 130.54 253.84 100.85 9 8 1 2526.2 -37.16 100.41  
 60.00 8 35 34 3456.16 -39.86 125.64 255.25 96.48 9 33 10 2456.2 -32.98 96.86  
 70.00 9 12 48 3346.56 -34.02 117.38 255.87 93.18 10 8 35 2346.6 -29.19 89.73  
 80.00 10 7 11 3176.20 -29.84 104.64 256.05 91.00 11 0 7 2176.2 -26.40 77.75  
 90.00 11 22 27 2933.27 -28.28 86.81 256.07 90.21 12 11 21 1933.3 -25.34 60.18  
 100.00 12 50 3 2650.67 -29.84 66.01 256.05 91.00 13 34 14 1650.7 -26.40 39.11  
 110.00 14 12 15 2393.37 -34.02 46.30 255.87 93.18 14 52 8 1393.4 -29.19 18.65

Differential Corrections: TDE -.4242 TRA -.9413 TC3 -.0098 BAU .3004 RDE -.6837 RRA .0039 RC3 -.6099 FAU .36346 FDE .0259 FRA -4.4776 FC3 -8.5422 BSP 1230 BDE .8046 BRA .9413 BC3 .6099 FSP 1610

Mid-Course Execution Accuracy: SGT 993.0 SGR 982.2 SG3 970.6 RRT .2703 RRF .6928 RTF .3620 SGB 1396.7 R23 .2868 R13 .6562 SG1 1113.2 SG2 843.5 THA 43.83

Orbit Determination Accuracy: ST 24.2 SR 32.3 SS 17.4 CRT .8252 CRS .0120 CST -.5321 LSA 38.9 MSA 20.3 SSA 2.7 EL1 38.7 EL2 11.4 ALF 54.73

LAUNCH DATE SEP 7 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 18 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.878 GAL 8.36 AZL 88.64 HCA 109.26 SMA 195.19 ECC .26816 INC 1.3648 V1 29.557  
 RP 236.29 LAP 1.31 LOP 93.49 VP 21.057 GAP 9.78 AZP 90.45 TAL 41.22 TAP 150.48 RCA 142.85 APO 247.53 V2 23.261  
 RC 195.134 GL 7.35 GP -12.51 ZAL 30.40 ZAP 122.06 ETS 189.84 ZAE 157.00 ETE 217.73 ZAC 72.23 ETC 283.82 LVI -6.51

Distance 364.081

Planetocentric Conic: C3 36.645 VHL 6.053 DLA 12.22 RAL 9.79 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 2.971 DPA 1.57 RAP 38.72 ECC 1.6031  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 17 3528.49 -46.64 130.75 253.83 100.69 9 7 6 2528.5 -37.24 100.56  
 60.00 8 34 23 3459.02 -39.89 125.88 255.21 96.32 9 32 2 2459.0 -33.06 97.06  
 70.00 9 11 23 3350.14 -34.04 117.66 255.81 93.01 10 7 13 2350.1 -29.27 89.98  
 80.00 10 5 32 3180.54 -29.85 104.96 255.97 90.83 10 58 32 2180.5 -26.47 78.05  
 90.00 11 20 41 2937.96 -28.28 87.15 255.99 90.04 12 9 39 1938.0 -25.41 60.50  
 100.00 12 48 23 2655.01 -29.85 66.33 255.97 90.83 13 32 38 1655.0 -26.47 39.42  
 110.00 14 10 50 2396.96 -34.04 46.58 255.81 93.01 14 50 47 1397.0 -29.27 18.90

Differential Corrections: TDE -.4317 TRA -.9732 TC3 -.0628 BAU .3130 RDE -.6779 RRA -.0099 RC3 -.6358 FAU .37502 FDE .0579 FRA -4.6329 FC3 -8.8597 BSP 1320 BDE .8037 BRA .9733 BC3 .6389 FSP 1878

Mid-Course Execution Accuracy: SGT 1030.1 SGR 1002.1 SG3 1004.6 RRT .3194 RRF .7093 RTF .4.92 SGB 1437.1 R23 .2766 R13 .6840 SG1 1167.7 SG2 837.7 THA 42.54

Orbit Determination Accuracy: ST 24.8 SR 32.1 SS 17.8 CRT .8245 CRS .0268 CST -.5215 LSA 39.1 MSA 20.7 SSA 2.7 EL1 38.9 EL2 11.6 ALF 53.72

LAUNCH DATE SEP 7 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 20 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.867 GAL 8.34 AZL 88.60 HCA 110.23 SMA 195.02 ECC .26736 INC 1.3969 V1 29.557  
 RP 236.63 LAP 1.31 LOP 94.46 VP 21.004 GAP 9.49 AZP 90.48 TAL 41.18 TAP 151.41 RCA 142.88 APO 247.16 V2 23.226  
 RC 198.104 GL 7.54 GP -12.78 ZAL 30.46 ZAP 120.47 ETS 189.52 ZAE 155.49 ETE 215.63 ZAC 72.10 ETC 283.89 LVI -6.41

Distance 367.880

Planetocentric Conic: C3 36.458 VHL 6.038 DLA 12.40 RAL 9.74 RAD 6649.4 VEL 12.504 PTH 7.39 VHP 2.923 DPA 1.10 RAP 38.23 ECC 1.6000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 20 3530.93 -46.67 130.98 253.82 100.52 9 6 11 2530.9 -37.33 100.73  
 60.00 8 33 13 3462.04 -39.91 126.14 255.19 96.14 9 30 55 2462.0 -33.15 97.27  
 70.00 9 9 58 3353.93 -34.05 117.96 255.76 92.84 10 5 51 2353.9 -29.35 90.25  
 80.00 10 3 51 3185.11 -29.85 105.30 255.91 90.65 10 56 56 2185.1 -26.55 78.37  
 90.00 11 18 53 2942.90 -28.28 87.51 255.92 89.86 12 7 56 1942.9 -25.49 60.85  
 100.00 12 46 43 2659.58 -29.85 66.67 255.91 90.65 13 31 2 1659.6 -26.55 39.73  
 110.00 14 9 24 2400.75 -34.05 46.87 255.76 92.84 14 49 25 1400.7 -29.35 19.16

Differential Corrections: TDE -.4376 TRA -1.0051 TC3 -.1172 BAU .3279 RDE -.6722 RRA -.0244 RC3 -.6626 FAU .38671 FDE .0862 FRA -4.7914 FC3 -9.1828 BSP 1423 BDE .8020 BRA 1.0054 BC3 .6728 FSP 1736

Mid-Course Execution Accuracy: SGT 1070.5 SGR 1023.5 SG3 1039.1 RRT .3662 RRF .7255 RTF .4723 SGB 1481.0 R23 .2656 R13 .7107 SG1 1225.1 SG2 832.2 THA 41.50

Orbit Determination Accuracy: ST 25.4 SR 31.9 SS 18.2 CRT .8232 CRS .0373 CST -.5153 LSA 39.2 MSA 21.2 SSA 2.7 EL1 39.1 EL2 11.8 ALF 52.80

LAUNCH DATE SEP 7 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.859 GAL 8.31 AZL 88.97 HCA 111.19 SMA 194.87 ECC .26682 INC 1.4293 V1 29.557  
 RP 236.98 LAP 1.33 LOP 95.43 VP 20.953 GAP 9.21 AZP 90.52 TAL 41.14 TAP 152.33 RCA 142.92 APO 246.83 V2 23.191  
 RC 201.073 GL 7.74 GP -13.05 ZAL 30.93 ZAP 118.88 ETS 189.19 ZAE 153.95 ETE 213.72 ZAC 71.98 ETC 283.98 LVI -6.30

PLANETOCENTRIC CONIC  
 C3 36.275 VHL 6.023 DLA 12.59 RAL 9.69 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 2.878 DPA .63 RAP 37.74 ECC 1.8970  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 23 3533.52 -46.71 131.22 253.84 100.34 9 5 17 2533.5 -37.42 100.91  
 60.00 8 32 3 3465.24 -39.93 126.41 255.17 95.96 9 29 48 2465.2 -33.23 97.49  
 70.00 9 8 31 3357.92 -34.06 118.27 255.73 92.66 10 4 29 2357.9 -29.43 90.52  
 80.00 10 2 9 3189.91 -29.85 105.66 255.86 90.46 10 55 18 2189.9 -26.63 78.70  
 90.00 11 17 4 2948.10 -28.28 87.89 255.86 89.66 12 6 12 1948.1 -25.57 61.21  
 100.00 12 45 0 2664.38 -29.85 67.03 255.86 90.46 13 29 25 1864.4 -26.63 40.07  
 110.00 14 7 57 2404.74 -34.06 47.18 255.73 92.66 14 48 2 1404.7 -29.43 19.44

DIFFERENTIAL CORRECTIONS  
 TDE -.4450 TRA-1.0403 TC3 -.1763 BAU .3490  
 RDE -.8656 RRA -.0385 RC3 -.6892 FAU .39784  
 FDE .1249 FRA-4.9375 FC3-9.4949 BSP 1535  
 BDE .8006 BRA 1.0410 BC3 .7114 FSP 1803

MID-COURSE EXECUTION ACCURACY  
 SGT 1119.2 SGR 1044.8 SG3 1072.2  
 RRT .4125 RRF .7405 RTF .9226  
 SGB 1531.1 R23 .2570 R13 .7343  
 SG1 1288.8 SG2 826.5 THA 40.28

ORBIT DETERMINATION ACCURACY  
 ST 26.1 SR 31.7 SS 18.8  
 CRT .8221 CRS .0534 CST -.5039  
 LSA 39.4 SBA 21.6 SSA 2.7  
 EL1 39.2 EL2 12.0 ALF 51.72

LAUNCH DATE SEP 7 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.852 GAL 8.28 AZL 88.54 HCA 112.16 SMA 194.74 ECC .26592 INC 1.4620 V1 29.557  
 RP 237.31 LAP 1.35 LOP 96.39 VP 20.904 GAP 8.93 AZP 90.55 TAL 41.08 TAP 153.23 RCA 142.95 APO 246.52 V2 23.157  
 RC 204.040 GL 7.94 GP -13.31 ZAL 30.62 ZAP 117.28 ETS 188.85 ZAE 152.37 ETE 211.98 ZAC 71.85 ETC 284.03 LVI -6.20

PLANETOCENTRIC CONIC  
 C3 36.095 VHL 6.008 DLA 12.79 RAL 9.64 RAD 6649.3 VEL 12.490 PTH 7.38 VHP 2.836 DPA .16 RAP 37.23 ECC 1.5940  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 5 27 3536.26 -46.74 131.48 253.87 100.14 9 4 23 2536.3 -37.52 101.09  
 60.00 8 30 52 3468.61 -39.96 126.69 255.18 95.77 9 20 41 2468.6 -33.33 97.73  
 70.00 9 7 4 3362.11 -34.08 118.59 255.71 92.46 10 3 6 2362.1 -29.52 90.82  
 80.00 10 0 25 3194.95 -29.86 106.03 255.82 90.26 10 53 40 2195.0 -26.71 79.05  
 90.00 11 15 13 2953.54 -28.28 88.29 255.82 89.47 12 4 26 1953.5 -25.65 61.59  
 100.00 12 43 17 2669.42 -29.86 67.40 255.82 90.26 13 27 46 1669.4 -26.71 40.42  
 110.00 14 6 30 2408.93 -34.08 47.51 255.71 92.46 14 46 39 1408.9 -29.52 19.74

DIFFERENTIAL CORRECTIONS  
 TDE -.4508 TRA-1.0757 TC3 -.2368 BAU .3643  
 RDE -.6590 RRA -.0532 RC3 -.7168 FAU .40905  
 FDE .1597 FRA-5.0876 FC3-9.8108 BSP 1661  
 BDE .7985 BRA 1.0770 BC3 .7549 FSP 1861

MID-COURSE EXECUTION ACCURACY  
 SGT 1171.5 SGR 1067.5 SG3 1105.6  
 RRT .4558 RRF .7552 RTF .5685  
 SGB 1584.9 R23 .2477 R13 .7567  
 SG1 1355.6 SG2 821.1 THA 39.23

ORBIT DETERMINATION ACCURACY  
 ST 26.7 SR 31.5 SS 18.9  
 CRT .8205 CRS .0652 CST -.4969  
 LSA 39.8 SBA 22.0 SSA 2.7  
 EL1 39.4 EL2 12.2 ALF 50.72

LAUNCH DATE SEP 7 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.846 GAL 8.25 AZL 88.50 HCA 113.12 SMA 194.82 ECC .26527 INC 1.4950 V1 29.557  
 RP 237.65 LAP 1.38 LOP 97.36 VP 20.857 GAP 8.65 AZP 90.59 TAL 41.01 TAP 154.12 RCA 142.99 APO 246.25 V2 23.123  
 RC 207.005 GL 8.14 GP -13.58 ZAL 30.71 ZAP 115.68 ETS 188.51 ZAE 150.77 ETE 210.39 ZAC 71.73 ETC 284.10 LVI -6.10

PLANETOCENTRIC CONIC  
 C3 35.920 VHL 5.993 DLA 12.99 RAL 9.61 RAD 6649.2 VEL 12.483 PTH 7.37 VHP 2.797 DPA -.32 RAP 36.72 ECC 1.5911  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 4 31 3539.14 -46.77 131.75 253.92 99.94 9 3 30 2539.1 -37.62 101.29  
 60.00 8 29 41 3472.15 -39.98 126.99 255.19 95.57 9 27 33 2472.1 -33.43 97.98  
 70.00 9 5 35 3366.49 -34.09 118.93 255.70 92.26 10 1 42 2366.5 -29.61 91.13  
 80.00 9 58 39 3200.23 -29.86 106.43 255.80 90.06 10 52 0 2200.2 -26.80 79.42  
 90.00 11 13 19 2959.24 -28.27 88.70 255.79 89.26 12 2 39 1959.2 -25.73 61.98  
 100.00 12 41 31 2674.70 -29.86 67.79 255.80 90.06 13 26 6 1674.7 -26.80 40.79  
 110.00 14 5 2 2413.31 -34.09 47.85 255.70 92.26 14 45 15 1413.3 -29.61 20.04

DIFFERENTIAL CORRECTIONS  
 TDE -.4540 TRA-1.1101 TC3 -.2972 BAU .3834  
 RDE -.8530 RRA -.0689 RC3 -.7458 FAU .42058  
 FDE .1821 FRA-5.2488 FC-10.1363 BSP 1807  
 BDE .7934 BRA 1.1122 BC3 .8026 FSP 1901

MID-COURSE EXECUTION ACCURACY  
 SGT 1225.3 SGR 1082.2 SG3 1140.2  
 RRT .4934 RRF .7699 RTF .6597  
 SGB 1841.4 R23 .2378 R13 .7781  
 SG1 1424.0 SG2 816.4 THA 38.48

ORBIT DETERMINATION ACCURACY  
 ST 27.2 SR 31.3 SS 19.3  
 CRT .8180 CRS .0677 CST -.4991  
 LSA 39.7 SBA 22.4 SSA 2.7  
 EL1 39.5 EL2 12.4 ALF 48.88

LAUNCH DATE SEP 7 1973

FLIGHT TIME 174.00

ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.840 GAL 8.22 AZL 88.47 HCA 114.07 SMA 194.52 ECC .26466 INC 1.5284 V1 29.557  
 RP 237.98 LAP 1.40 LOP 98.31 VP 20.811 GAP 8.37 AZP 90.62 TAL 40.92 TAP 155.00 RCA 143.04 APO 246.00 V2 23.090  
 RC 208.964 GL 8.34 GP -13.84 ZAL 30.82 ZAP 114.08 ETS 188.16 ZAE 149.14 ETE 208.92 ZAC 71.61 ETC 284.16 LVI -5.99

PLANETOCENTRIC CONIC  
 C3 35.745 VHL 5.979 DLA 13.20 RAL 9.58 RAD 6649.2 VEL 12.476 PTH 7.37 VHP 2.761 DPA -.80 RAP 36.21 ECC 1.5883  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 35 3542.18 -46.81 132.03 253.98 99.72 9 2 37 2542.2 -37.73 101.50  
 60.00 8 28 30 3475.86 -40.00 127.30 255.22 95.38 9 26 26 2475.9 -33.53 98.24  
 70.00 9 4 6 3371.10 -34.10 119.29 255.70 92.05 10 0 17 2371.1 -29.71 91.45  
 80.00 9 56 52 3205.75 -29.86 106.84 255.78 89.84 10 50 18 2205.8 -26.89 79.81  
 90.00 11 11 24 2965.21 -28.26 89.14 255.77 89.04 12 0 49 1965.2 -25.81 62.40  
 100.00 12 39 44 2680.23 -29.86 68.21 255.78 89.84 13 24 24 1680.2 -26.89 41.18  
 110.00 14 3 32 2417.91 -34.10 48.21 255.70 92.05 14 43 50 1417.9 -29.71 20.37

DIFFERENTIAL CORRECTIONS  
 TDE -.4641 TRA-1.1531 TC3 -.3685 BAU .4087  
 RDE -.6441 RRA -.0822 RC3 -.7719 FAU .42990  
 FDE .2480 FRA-5.3590 FC-10.4119 BSP 1937  
 BDE .7939 BRA 1.1560 BC3 .8553 FSP 1984

MID-COURSE EXECUTION ACCURACY  
 SGT 1296.2 SGR 1113.3 SG3 1188.4  
 RRT .5357 RRF .7818 RTF .6485  
 SGB 1708.7 R23 .2326 R13 .7944  
 SG1 1504.5 SG2 809.9 THA 37.04

ORBIT DETERMINATION ACCURACY  
 ST 28.0 SR 30.9 SS 19.6  
 CRT .8173 CRS .0964 CST -.4758  
 LSA 40.0 SBA 22.8 SSA 2.7  
 EL1 39.8 EL2 12.5 ALF 48.44

LAUNCH DATE SEP 7 1973

FLIGHT TIME 176.00

ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC DISTANCE 386.895 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.835 GAL 8.19 AZL 88.44 HCA 118.03 SMA 194.43 ECC .26409 INC 1.5623 V1 29.557  
 RP 238.30 LAP 1.42 LOP 99.27 VP 20.767 GAP 8.10 AZP 90.66 TAL 40.83 TAP 155.86 RCA 143.08 APO 245.78 V2 23.056  
 RC 212.919 GL 8.54 GP -14.11 ZAL 30.93 ZAP 112.48 ETS 187.80 ZAE 147.49 ETE 207.57 ZAC 71.49 ETC 284.23 LVI -5.89

PLANETOCENTRIC CONIC

C3 35.574 VHL 5.964 DLA 13.41 RAL 9.56 RAD 6649.1 VEL 12.469 PTH 7.36 VHP 2.727 DPA -1.28 RAP 35.70 ECC 1.5855

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	8 2 39	3545.36	-46.85	132.33	254.06	99.49	9 1 44	2545.4	-37.84	101.72
60.00	8 27 18	3479.75	-40.03	127.63	255.27	95.14	9 25 18	2479.7	-33.64	98.51
70.00	9 2 35	3378.90	-34.11	119.67	255.72	91.83	9 58 51	2375.9	-29.81	91.79
80.00	9 55 3	3211.52	-29.86	107.27	255.78	89.62	10 48 35	2211.5	-26.98	80.21
90.00	11 9 26	2971.43	-26.26	89.60	255.76	88.81	11 58 58	1971.4	-25.90	62.83
100.00	12 37 55	2685.99	-29.86	68.63	255.78	89.62	13 22 41	1686.0	-26.98	41.58
110.00	14 2 2	2422.72	-34.11	48.59	255.72	91.83	14 42 24	1422.7	-29.81	20.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4702 TRA-1.1936 TC3 -.4384 BAU .4338 SGT 1366.4 SGR 1137.0 SG3 1198.5 ST 28.7 SR 30.6 SS 20.0  
 RDE -.6361 RRA -.0968 RC3 -.7998 FAU .43977 RRT .5714 RRF .7941 RTF .6824 CRT .8155 CRS .1119 CST -.4654  
 FDE .2958 FRA-5.4864 FC-10.7023 BSP 2089 SGB 1777.8 R23 .2257 R13 .8108 LSA 40.2 MSA 23.2 SSA 2.7  
 BDE .7910 BRA 1.1976 BC3 .9121 FSP 2040 SG1 1585.2 SG2 804.3 THA 36.04 EL1 40.0 EL2 12.7 ALF 47.28

LAUNCH DATE SEP 7 1973

FLIGHT TIME 178.00

ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC DISTANCE 390.700 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.831 GAL 8.16 AZL 88.40 HCA 115.98 SMA 194.38 ECC .26356 INC 1.5966 V1 29.557  
 RP 238.63 LAP 1.44 LOP 100.22 VP 20.724 GAP 7.83 AZP 90.70 TAL 40.73 TAP 156.71 RCA 143.13 APO 245.58 V2 23.024  
 RC 215.868 GL 8.75 GP -14.37 ZAL 31.06 ZAP 110.88 ETS 187.43 ZAE 145.82 ETE 206.32 ZAC 71.38 ETC 284.29 LVI -5.78

PLANETOCENTRIC CONIC

C3 35.406 VHL 5.950 DLA 13.63 RAL 9.54 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 2.698 DPA -1.77 RAP 35.19 ECC 1.5827

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	8 1 43	3548.68	-46.88	132.64	254.15	99.25	9 0 51	2548.7	-37.96	101.95
60.00	8 26 5	3483.80	-40.05	127.97	255.32	94.91	9 24 9	2483.8	-33.75	98.80
70.00	9 1 3	3380.91	-34.12	120.06	255.74	91.60	9 57 24	2380.9	-29.91	92.14
80.00	9 53 12	3217.53	-29.85	107.71	255.79	89.38	10 46 49	2217.5	-27.07	80.63
90.00	11 7 26	2977.92	-26.25	90.07	255.75	88.57	11 57 4	1977.9	-25.99	63.29
100.00	12 36 4	2692.00	-29.85	69.08	255.79	89.38	13 20 56	1692.0	-27.07	42.00
110.00	14 0 29	2427.72	-34.12	48.98	255.74	91.60	14 40 57	1427.7	-29.91	21.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4759 TRA-1.2357 TC3 -.5108 BAU .4605 SGT 1441.7 SGR 1161.1 SG3 1227.5 ST 29.4 SR 30.3 SS 20.3  
 RDE -.6276 RRA -.1114 RC3 -.8279 FAU .44922 RRT .6040 RRF .8057 RTF .7125 CRT .8135 CRS .1275 CST -.4551  
 FDE .3463 FRA-5.6061 FC-10.9840 BSP 2251 SGB 1851.1 R23 .2196 R13 .8254 LSA 40.4 MSA 23.6 SSA 2.7  
 BDE .7877 BRA 1.2407 BC3 .9728 FSP 2095 SG1 1669.8 SG2 799.0 THA 35.07 EL1 40.2 EL2 12.9 ALF 46.08

LAUNCH DATE SEP 7 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC DISTANCE 394.506 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.820 GAL 8.12 AZL 88.37 HCA 116.93 SMA 194.30 ECC .26306 INC 1.6313 V1 29.557  
 RP 238.95 LAP 1.45 LOP 101.18 VP 20.683 GAP 7.56 AZP 90.74 TAL 40.62 TAP 157.55 RCA 143.18 APO 245.41 V2 22.991  
 RC 218.810 GL 8.97 GP -14.63 ZAL 31.19 ZAP 109.29 ETS 187.06 ZAE 144.14 ETE 205.15 ZAC 71.26 ETC 284.35 LVI -5.67

PLANETOCENTRIC CONIC

C3 35.241 VHL 5.936 DLA 13.86 RAL 9.53 RAD 6649.0 VEL 12.456 PTH 7.35 VHP 2.667 DPA -2.25 RAP 34.67 ECC 1.5800

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	8 0 46	3552.16	-46.92	132.97	254.26	99.00	8 59 58	2552.2	-38.08	102.20
60.00	8 24 52	3488.03	-40.08	128.33	255.39	94.67	9 23 0	2488.0	-33.86	99.10
70.00	8 59 29	3386.12	-34.13	120.47	255.78	91.36	9 55 55	2386.1	-30.01	92.51
80.00	9 51 18	3223.79	-29.85	108.18	255.80	89.14	10 45 2	2223.8	-27.17	81.07
90.00	11 5 23	2984.68	-26.23	90.56	255.76	88.33	11 55 8	1984.7	-26.08	63.78
100.00	12 34 10	2698.26	-29.85	69.55	255.80	89.14	13 19 8	1698.3	-27.17	42.44
110.00	13 58 56	2432.94	-34.13	49.38	255.78	91.36	14 39 29	1432.9	-30.01	21.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4813 TRA-1.2789 TC3 -.5858 BAU .4888 SGT 1521.8 SGR 1185.7 SG3 1255.5 ST 30.1 SR 30.0 SS 20.7  
 RDE -.6189 RRA -.1261 RC3 -.8562 FAU .45827 RRT .6339 RRF .8167 RTF .7093 CRT .8115 CRS .1422 CST -.4455  
 FDE .3978 FRA-5.7207 FC-11.2580 BSP 2420 SGB 1929.2 R23 .2138 R13 .8387 LSA 40.6 MSA 24.0 SSA 2.7  
 BDE .7840 BRA 1.2851 BC3 1.0374 FSP 2145 SG1 1758.4 SG2 793.7 THA 34.16 EL1 40.4 EL2 13.0 ALF 44.87

LAUNCH DATE SEP 7 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 398.312 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.825 GAL 8.09 AZL 88.33 HCA 117.88 SMA 194.25 ECC .26260 INC 1.6665 V1 29.557  
 RP 239.28 LAP 1.47 LOP 102.12 VP 20.643 GAP 7.29 AZP 90.78 TAL 40.50 TAP 158.38 RCA 143.24 APO 245.25 V2 22.960  
 RC 221.744 GL 9.18 GP -14.89 ZAL 31.34 ZAP 107.70 ETS 186.68 ZAE 142.46 ETE 204.05 ZAC 71.15 ETC 284.41 LVI -5.56

PLANETOCENTRIC CONIC

C3 35.077 VHL 5.923 DLA 14.10 RAL 9.53 RAD 6648.9 VEL 12.449 PTH 7.35 VHP 2.641 DPA -2.73 RAP 34.16 ECC 1.5773

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
50.00	7 59 49	3555.79	-46.96	133.31	254.38	98.74	8 59 5	2555.8	-38.21	102.45
60.00	8 23 37	3492.44	-40.10	128.70	255.47	94.41	9 21 50	2492.4	-33.98	99.41
70.00	8 57 54	3391.56	-34.14	120.89	255.83	91.11	9 54 26	2391.6	-30.12	92.90
80.00	9 49 22	3230.30	-29.84	108.66	255.83	88.68	10 43 12	2230.3	-27.26	81.53
90.00	11 3 17	2991.72	-26.22	91.08	255.78	88.07	11 53 9	1991.7	-25.77	64.26
100.00	12 32 14	2704.78	-29.84	70.03	255.83	88.88	13 17 19	1704.8	-27.26	42.90
110.00	13 57 20	2438.38	-34.14	49.81	255.83	91.11	14 37 59	1438.4	-30.12	21.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4862 TRA-1.3232 TC3 -.6630 BAU .5184 SGT 1606.3 SGR 1210.5 SG3 1282.0 ST 30.8 SR 29.6 SS 21.0  
 RDE -.6097 RRA -.1408 RC3 -.8845 FAU .46674 RRT .6612 RRF .8270 RTF .7629 CRT .8093 CRS .1571 CST -.4358  
 FDE .4520 FRA-5.8279 FC-11.5198 BSP 2595 SGB 2011.4 R23 .2086 R13 .8505 LSA 40.8 MSA 24.4 SSA 2.7  
 BDE .7799 BRA 1.3307 BC3 1.1054 FSP 2192 SG1 1850.4 SG2 788.3 THA 33.28 EL1 40.6 EL2 13.2 ALF 43.65

LAUNCH DATE SEP 7 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC

DISTANCE 402.118

EARTH TO MARS

RL 130.75 LAL .00 LOL 344.23 VL 32.823 GAL 8.06 AZL 88.30 HCA 118.83 SMA 194.21 ECC .26217 INC 1.7023 V1 29.557
RP 239.57 LAP 1.49 LOP 103.07 VP 20.805 GAP 7.03 AZP 90.82 TAL 40.37 TAP 159.20 RCA 143.29 APO 245.12 V2 22.928
RC 224.872 GL 9.40 GP -15.14 ZAL 31.49 ZAP 106.12 ETS 186.30 ZAE 140.76 ETE 203.02 ZAC 71.04 ETC 284.47 LVI -9.43

PLANETOCENTRIC CONIC

C3 34.916 VHL 5.909 DLA 14.34 RAL 9.53 RAD 6648.9 VEL 12.443 PTH 7.34 VHP 2.617 DPA -3.21 RAP 33.66 ECC 1.5748
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 58 52 3559.56 -47.00 133.67 254.51 98.47 8 58 12 2559.6 -36.34 102.72
60.00 8 22 22 3497.02 -40.12 129.09 255.56 94.15 9 20 39 2497.0 -34.10 99.74
70.00 8 56 17 3397.21 -34.14 121.33 255.89 90.85 9 52 54 2397.2 -30.23 93.30
80.00 9 47 23 3237.08 -29.83 109.17 255.86 88.62 10 41 20 2237.1 -27.36 82.01
90.00 11 1 8 2999.05 -28.20 91.61 255.81 87.80 11 51 7 1999.1 -26.27 64.77
100.00 12 30 15 2711.56 -29.83 70.53 255.86 88.62 13 15 26 1711.6 -27.36 43.38
110.00 13 55 43 2444.03 -34.14 50.25 255.89 90.85 14 36 27 1444.0 -30.23 22.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4905 TRA-1.3685 TC3 -.7424 BAU .5493 SGT 1894.6 SGR 1235.7 SG3 1307.3 ST 31.5 SR 29.2 SS 21.4
RDE -.6002 RRA -.1554 RC3 -.9130 FAU .47474 RRT .8659 RRF .8367 RTF .7837 CRT .8069 CRS .1718 CST -.4285
FDE .5080 FRA-5.9261 FC-11.7712 BSP 2780 SGB 2097.3 R23 .2040 R13 .8612 LSA 41.0 MSA 24.7 SSA 2.7
BDE .7751 BRA 1.3773 BC3 1.1767 FSP 2235 SG1 1945.6 SG2 783.2 THA 32.46 EL1 40.8 EL2 13.3 ALF 42.41

LAUNCH DATE SEP 7 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC

DISTANCE 405.925

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.822 GAL 8.02 AZL 88.26 HCA 119.77 SMA 194.18 ECC .26176 INC 1.7386 V1 29.557
RP 239.88 LAP 1.51 LOP 104.01 VP 20.568 GAP 6.77 AZP 90.86 TAL 40.23 TAP 160.00 RCA 143.35 APO 245.01 V2 22.897
RC 227.591 GL 9.63 GP -15.40 ZAL 31.65 ZAP 104.56 ETS 185.91 ZAE 139.07 ETE 202.05 ZAC 70.93 ETC 284.52 LVI -5.34

PLANETOCENTRIC CONIC

C3 34.757 VHL 5.895 DLA 14.59 RAL 9.54 RAD 6648.8 VEL 12.436 PTH 7.34 VHP 2.595 DPA -3.69 RAP 33.16 ECC 1.5720
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 57 54 3563.49 -47.03 134.04 254.66 98.19 8 57 18 2563.5 -36.48 102.99
60.00 8 21 5 3501.79 -40.15 129.49 255.66 93.88 9 19 27 2501.8 -34.23 100.08
70.00 8 54 37 3403.08 -34.15 121.79 255.96 90.58 9 51 21 2403.1 -30.35 93.72
80.00 9 45 21 3244.13 -29.82 109.69 255.91 88.34 10 39 25 2244.1 -27.47 82.51
90.00 10 58 55 3006.67 -28.18 92.17 255.84 87.52 11 49 2 2006.7 -26.37 65.31
100.00 12 28 13 2718.60 -29.82 71.06 255.91 88.34 13 13 32 1718.6 -27.47 43.88
110.00 13 54 4 2449.90 -34.15 50.71 255.96 90.58 14 34 54 1449.9 -30.35 22.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4938 TRA-1.4144 TC3 -.8234 BAU .5814 SGT 1786.1 SGR 1262.1 SG3 1332.2 ST 32.1 SR 28.9 SS 21.8
RDE -.5908 RRA -.1705 RC3 -.9420 FAU .48256 RRT .7085 RRF .8462 RTF .8022 CRT .8044 CRS .1819 CST -.4214
FDE .5579 FRA-6.0247 FC-12.0198 BSP 2972 SGB 2187.0 R23 .1995 R13 .8710 LSA 41.3 MSA 25.1 SSA 2.7
BDE .7700 BRA 1.4246 BC3 1.2512 FSP 2266 SG1 2043.8 SG2 778.4 THA 31.72 EL1 41.1 EL2 13.4 ALF 41.22

LAUNCH DATE SEP 7 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC

DISTANCE 409.731

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.821 GAL 7.99 AZL 88.22 HCA 120.71 SMA 194.16 ECC .26139 INC 1.7756 V1 29.557
RP 240.18 LAP 1.53 LOP 104.95 VP 20.532 GAP 6.51 AZP 90.91 TAL 40.09 TAP 160.80 RCA 143.41 APO 244.91 V2 22.868
RC 230.502 GL 9.86 GP -15.65 ZAL 31.82 ZAP 103.00 ETS 185.91 ZAE 137.37 ETE 201.13 ZAC 70.83 ETC 284.57 LVI -5.22

PLANETOCENTRIC CONIC

C3 34.600 VHL 5.882 DLA 14.84 RAL 9.55 RAD 6648.7 VEL 12.430 PTH 7.33 VHP 2.575 DPA -4.16 RAP 32.66 ECC 1.5694
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 56 56 3567.58 -47.07 134.43 254.82 97.89 8 56 23 2567.6 -36.62 103.28
60.00 8 19 47 3506.74 -40.17 129.91 255.78 93.60 9 18 14 2506.7 -34.36 100.44
70.00 8 52 56 3409.18 -34.15 122.27 256.03 90.29 9 49 45 2409.2 -30.46 94.16
80.00 9 43 16 3251.45 -29.80 110.23 255.96 88.06 10 37 27 2251.5 -27.57 83.03
90.00 10 56 39 3014.59 -28.16 92.75 255.88 87.24 11 46 54 2014.6 -26.46 65.87
100.00 12 26 8 2725.93 -29.80 71.60 255.96 88.06 13 11 34 1725.9 -27.57 44.40
110.00 13 52 22 2455.99 -34.15 51.18 256.03 90.29 14 33 18 1456.0 -30.46 23.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4955 TRA-1.4599 TC3 -.9051 BAU .6144 SGT 1879.1 SGR 1290.2 SG3 1357.5 ST 32.7 SR 28.5 SS 22.1
RDE -.5821 RRA -.1864 RC3 -.9721 FAU .49041 RRT .7291 RRF .8554 RTF .5.89 CRT .8016 CRS .1843 CST -.4238
FDE .5983 FRA-6.1283 FC-12.2706 BSP 3174 SGB 2279.4 R23 .1947 R13 .8804 LSA 41.8 MSA 25.4 SSA 2.7
BDE .7644 BRA 1.4718 BC3 1.3283 FSP 2277 SG1 2144.0 SG2 773.9 THA 31.08 EL1 41.3 EL2 13.5 ALF 40.13

LAUNCH DATE SEP 7 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC

DISTANCE 413.536

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.821 GAL 7.95 AZL 88.19 HCA 121.85 SMA 194.15 ECC .26104 INC 1.8131 V1 29.557
RP 240.48 LAP 1.54 LOP 105.89 VP 20.498 GAP 6.26 AZP 90.95 TAL 39.93 TAP 161.98 RCA 143.47 APO 244.84 V2 22.836
RC 233.405 GL 10.09 GP -15.91 ZAL 32.00 ZAP 101.47 ETS 185.11 ZAE 135.68 ETE 200.26 ZAC 70.72 ETC 284.62 LVI -5.10

PLANETOCENTRIC CONIC

C3 34.444 VHL 5.869 DLA 15.11 RAL 9.57 RAD 6648.7 VEL 12.424 PTH 7.33 VHP 2.558 DPA -4.83 RAP 32.18 ECC 1.5669
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 56 3571.84 -47.11 134.83 254.99 97.58 8 55 28 2571.8 -38.76 103.59
60.00 8 18 27 3511.89 -40.19 130.35 255.90 93.30 9 16 59 2511.9 -34.49 100.81
70.00 8 51 12 3415.82 -34.15 122.76 256.12 90.00 9 48 7 2415.5 -30.58 94.61
80.00 9 41 7 3259.08 -29.78 110.60 256.02 87.76 10 35 27 2259.1 -27.68 83.57
90.00 10 54 19 3022.85 -28.13 93.35 255.93 86.94 11 44 42 2022.8 -26.56 66.45
100.00 12 23 59 2733.35 -29.78 72.17 256.02 87.76 13 9 33 1733.6 -27.68 44.94
110.00 13 50 38 2462.34 -34.15 51.68 256.12 90.00 14 31 41 1462.3 -30.58 23.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5024 TRA-1.5125 TC3 -.9961 BAU .6488 SGT 1986.7 SGR 1309.8 SG3 1371.3 ST 33.6 SR 27.9 SS 22.5
RDE -.5679 RRA -.1974 RC3 -.9965 FAU .49436 RRT .7474 RRF .8620 RTF .8319 CRT .8000 CRS .2242 CST -.3894
FDE .7063 FRA-6.1520 FC-12.4255 BSP 3362 SGB 2379.6 R23 .1938 R13 .8862 LSA 41.8 MSA 25.8 SSA 2.7
BDE .7582 BRA 1.5254 BC3 1.4090 FSP 2363 SG1 2252.4 SG2 767.5 THA 30.08 EL1 41.6 EL2 13.6 ALF 38.44



LAUNCH DATE SEP 7 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 18 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.821 GAL 7.91 AZL 88.15 HCA 122.58 SMA 194.16 ECC .26072 INC 1.8514 V1 29.557  
 RP 240.78 LAP 1.56 LOP 106.83 VP 20.465 GAP 6.00 AZP 91.00 TAL 39.77 TAP 162.35 RCA 143.54 APO 244.78 V2 22.807  
 RC 236.297 GL 10.33 GP -16.16 ZAL 32.19 ZAP 99.94 ETS 184.70 ZAE 133.98 ETE 199.42 ZAC 70.61 ETC 284.67 LVI -4.98

Planetocentric Conic: C3 34.291 VHL 5.856 DLA 15.38 RAL 9.59 RAD 6648.6 VEL 12.418 PTH 7.33 VHP 2.543 DPA -5.10 RAP 31.71 ECC 1.5643  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 56 3576.25 -47.15 135.25 255.18 97.26 8 54 32 2576.3 -38.91 103.90  
 60.00 8 17 6 3517.24 -40.21 130.80 256.04 92.99 9 15 43 2517.2 -34.63 101.20  
 70.00 8 49 25 3422.10 -34.15 123.27 256.22 89.70 9 46 27 2422.1 -30.71 95.09  
 80.00 9 38 55 3267.00 -29.76 111.39 256.09 87.45 10 33 22 2267.0 -27.78 84.13  
 90.00 10 51 54 3031.42 -28.09 93.97 255.99 86.62 11 42 26 2031.4 -26.66 67.06  
 100.00 12 21 47 2741.47 -29.76 72.75 256.09 87.45 13 7 29 1741.5 -27.78 45.50  
 110.00 13 48 52 2468.92 -34.15 52.19 256.22 89.70 14 30 1 1468.9 -30.71 24.00

Differential Corrections: YDE -.5050 TRA-1.5621 TC3-1.0844 BAU .6839 SGT 2090.4 SGR 1334.9 SG3 1389.7 ST 34.3 SR 27.5 SS 22.9  
 RDE -.5566 RRA -.2113 RC3-1.0244 FAU .49981 RRT .7643 RRF .8696 RTF .8443 CRT .7976 CRS .2392 CST -.3792  
 FDE .7724 FRA-6.2123 FC-12.6186 BSP 3564 SGB 2480.3 R23 .1911 R13 .8929 LSA 42.0 MSA 26.2 SSA 2.7  
 BDE .7515 BRA 1.5763 BC3 1.4918 FSP 2394 SG1 2360.2 SG2 762.5 THA 29.38 EL1 41.8 EL2 13.6 ALF 37.13

LAUNCH DATE SEP 7 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 20 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.821 GAL 7.87 AZL 88.11 HCA 123.52 SMA 194.17 ECC .26042 INC 1.8903 V1 29.557  
 RP 241.07 LAP 1.58 LOP 107.76 VP 20.433 GAP 5.75 AZP 91.04 TAL 39.60 TAP 163.12 RCA 143.60 APO 244.73 V2 22.777  
 RC 239.179 GL 10.58 GP -16.40 ZAL 32.39 ZAP 98.44 ETS 184.29 ZAE 132.30 ETE 198.63 ZAC 70.50 ETC 284.72 LVI -4.85

Planetocentric Conic: C3 34.140 VHL 5.843 DLA 15.65 RAL 9.61 RAD 6648.6 VEL 12.412 PTH 7.32 VHP 2.529 DPA -5.56 RAP 31.25 ECC 1.5619  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 54 3580.84 -47.19 135.69 255.38 96.93 8 53 35 2580.8 -39.07 104.23  
 60.00 8 15 43 3522.78 -40.23 131.27 256.19 92.67 9 14 26 2522.8 -34.77 101.60  
 70.00 8 47 36 3428.93 -34.15 123.81 256.32 89.38 9 44 45 2428.9 -30.83 95.58  
 80.00 9 36 39 3275.22 -29.73 111.99 256.16 87.13 10 31 14 2275.2 -27.89 84.72  
 90.00 10 49 25 3040.33 -28.06 94.62 256.05 86.30 11 40 6 2040.3 -26.77 67.69  
 100.00 12 19 31 2749.69 -29.73 73.36 256.16 87.13 13 5 21 1749.7 -27.89 46.09  
 110.00 13 47 2 2475.75 -34.15 52.73 256.32 89.38 14 28 18 1475.7 -30.83 24.50

Differential Corrections: YDE -.5069 TRA-1.6123 TC3-1.1745 BAU .7196 SGT 2197.0 SGR 1359.7 SG3 1406.1 ST 35.1 SR 27.0 SS 23.3  
 RDE -.5446 RRA -.2249 RC3-1.0519 FAU .50490 RRT .7796 RRF .8766 RTF .8552 CRT .7951 CRS .2550 CST -.3681  
 FDE .8425 FRA-6.2604 FC-12.7934 BSP 3773 SGB 2583.7 R23 .1889 R13 .8989 LSA 42.3 MSA 26.5 SSA 2.6  
 BDE .7441 BRA 1.6280 BC3 1.5767 FSP 2424 SG1 2470.2 SG2 757.5 THA 28.70 EL1 42.1 EL2 13.6 ALF 35.80

LAUNCH DATE SEP 7 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 22 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.822 GAL 7.83 AZL 88.07 HCA 124.45 SMA 194.18 ECC .26014 INC 1.9300 V1 29.557  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.403 GAP 5.30 AZP 91.09 TAL 39.42 TAP 163.87 RCA 143.67 APO 244.70 V2 22.749  
 RC 242.049 GL 10.83 GP -16.65 ZAL 32.60 ZAP 96.95 ETS 183.87 ZAE 130.63 ETE 197.86 ZAC 70.39 ETC 284.76 LVI -4.72

Planetocentric Conic: C3 33.991 VHL 5.830 DLA 15.94 RAL 9.64 RAD 6648.5 VEL 12.406 PTH 7.32 VHP 2.517 DPA -6.01 RAP 30.81 ECC 1.5594  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 52 3583.59 -47.23 136.14 255.59 96.58 8 52 37 2583.6 -39.23 104.58  
 60.00 8 14 18 3526.53 -40.24 131.76 256.34 92.34 9 13 6 2528.5 -34.91 102.02  
 70.00 8 45 44 3436.01 -34.14 124.36 256.44 89.05 9 43 0 2436.0 -30.96 96.09  
 80.00 9 34 19 3283.78 -29.70 112.63 256.25 86.80 10 29 2 2283.8 -28.00 85.33  
 90.00 10 46 52 3049.59 -28.01 93.30 256.12 85.97 11 37 41 2049.6 -26.87 68.35  
 100.00 12 17 10 2758.23 -29.70 74.00 256.25 86.80 13 3 9 1758.2 -28.00 46.70  
 110.00 13 45 10 2482.83 -34.14 53.28 256.44 89.05 14 26 33 1482.8 -30.96 25.01

Differential Corrections: YDE -.5082 TRA-1.6633 TC3-1.2661 BAU .7560 SGT 2306.3 SGR 1384.3 SG3 1420.6 ST 35.8 SR 26.5 SS 23.7  
 RDE -.5322 RRA -.2384 RC3-1.0792 FAU .50852 RRT .7934 RRF .8832 RTF .8548 CRT .7927 CRS .2706 CST -.3569  
 FDE .9151 FRA-6.3000 FC-12.9520 BSP 3966 SGB 2689.9 R23 .1872 R13 .9042 LSA 42.6 MSA 26.8 SSA 2.6  
 BDE .7358 BRA 1.6803 BC3 1.6637 FSP 2450 SG1 2582.5 SG2 752.5 THA 28.06 EL1 42.4 EL2 13.6 ALF 34.47

LAUNCH DATE SEP 7 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 24 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.823 GAL 7.79 AZL 88.03 HCA 125.38 SMA 194.21 ECC .25989 INC 1.9705 V1 29.557  
 RP 241.64 LAP 1.61 LOP 109.83 VP 20.374 GAP 5.26 AZP 91.14 TAL 39.24 TAP 164.62 RCA 143.74 APO 244.68 V2 22.720  
 RC 244.907 GL 11.08 GP -16.90 ZAL 32.81 ZAP 95.48 ETS 183.44 ZAE 128.96 ETE 197.13 ZAC 70.28 ETC 284.80 LVI -4.58

Planetocentric Conic: C3 33.843 VHL 5.818 DLA 16.23 RAL 9.68 RAD 6648.5 VEL 12.400 PTH 7.31 VHP 2.507 DPA -6.46 RAP 30.37 ECC 1.5570  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 51 47 3590.53 -47.27 136.61 255.81 96.22 8 51 38 2590.5 -39.39 104.93  
 60.00 8 12 50 3534.49 -40.26 132.27 256.51 92.00 9 11 45 2534.5 -35.06 102.46  
 70.00 8 43 48 3443.37 -34.13 124.93 256.56 88.72 9 41 11 2443.4 -31.09 96.62  
 80.00 9 31 54 3292.64 -29.67 113.29 256.33 86.46 10 26 46 2292.6 -28.12 85.97  
 90.00 10 44 12 3059.23 -27.97 96.00 256.20 85.62 11 35 12 2059.2 -26.97 69.04  
 100.00 12 14 45 2767.11 -29.67 74.65 256.33 86.46 13 0 53 1767.1 -28.12 47.34  
 110.00 13 43 14 2490.19 -34.13 53.85 256.56 88.72 14 24 44 1490.2 -31.09 25.54

Differential Corrections: YDE -.5088 TRA-1.7148 TC3-1.3594 BAU .7930 SGT 2418.0 SGR 1409.1 SG3 1433.6 ST 36.5 SR 25.9 SS 24.1  
 RDE -.5196 RRA -.2518 RC3-1.1064 FAU .51196 RRT .8061 RRF .8894 RTF .8733 CRT .7904 CRS .2845 CST -.3471  
 FDE .9862 FRA-6.3315 FC-13.0963 BSP 4201 SGB 2798.6 R23 .1857 R13 .9091 LSA 42.9 MSA 27.2 SSA 2.6  
 BDE .7272 BRA 1.7332 BC3 1.7527 FSP 2470 SG1 2696.9 SG2 747.6 THA 27.45 EL1 42.6 EL2 13.6 ALF 33.16

LAUNCH DATE SEP 7 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.825 GAL 7.75 AZL 87.99 HCA 126.30 SMA 194.24 ECC .25965 INC 2.0118 V1 29.557  
 RP 241.92 LAP 1.62 LOP 110.55 VP 20.345 GAP 9.01 AZP 91.19 TAL 39.05 TAP 165.36 RCA 143.81 APO 244.68 V2 22.692  
 RC 247.751 GL 11.34 GP -17.14 ZAL 33.04 ZAP 94.04 ETS 183.02 ZAE 127.31 ETE 196.42 ZAC 70.17 ETC 284.84 LVI -4.44

PLANETOCENTRIC CONIC  
 C3 33.699 VHL 5.805 DLA 16.53 RAL 9.71 RAD 6648.4 VEL 12.394 PTH 7.31 VHP 2.499 DPA -6.90 RAP 29.96 ECC 1.9546  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 50 42 3595.64 -47.30 137.10 256.05 95.84 8 50 37 2595.6 -39.56 105.31  
 60.00 8 11 21 3540.67 -40.27 132.79 256.68 91.64 9 10 21 2540.7 -35.21 102.91  
 70.00 8 41 48 3451.00 -34.12 125.53 256.68 88.36 9 39 19 2451.0 -31.22 97.18  
 80.00 9 29 24 3301.86 -29.63 113.97 256.43 86.10 10 24 26 2301.9 -28.23 86.63  
 90.00 10 41 28 3069.26 -27.91 96.73 256.28 85.26 11 32 37 2069.3 -27.07 69.75  
 100.00 12 12 16 2776.34 -29.63 75.34 256.43 86.10 12 58 32 1776.3 -28.23 48.00  
 110.00 13 41 15 2497.81 -34.12 54.45 256.68 88.36 14 22 53 1497.8 -31.22 26.10

DIFFERENTIAL CORRECTIONS  
 TDE -.5082 TRA-1.7664 TC3-1.4536 BAW .8306 SGT 2531.2 SGR 1434.9 SG3 1445.9 ST 37.1 SR 25.4 SS 24.5  
 RDE -.5070 RRA -.2656 RC3-1.1341 FAU .51515 RRT .8178 RRF .8955 RTF .8810 CRT .7880 CR8 .2944 CST -.3411  
 FDE 1.0512 FRA-6.3617 FC-13.2345 BSP 4420 SGB 2909.6 R23 .1843 R13 .9136 LSA 43.2 MSA 27.5 SSA 2.6  
 BDE .7179 BRA 1.7863 BC3 1.8436 F8P 2480 SG1 2813.2 SG2 743.0 THA 26.90 EL1 42.9 EL2 13.5 ALF 31.90

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 7 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.827 GAL 7.71 AZL 87.95 HCA 127.23 SMA 194.28 ECC .25943 INC 2.0540 V1 29.557  
 RP 242.19 LAP 1.64 LOP 111.48 VP 20.318 GAP 4.77 AZP 91.24 TAL 38.86 TAP 166.09 RCA 143.88 APO 244.68 V2 22.665  
 RC 250.580 GL 11.61 GP -17.39 ZAL 33.27 ZAP 92.61 ETS 182.58 ZAE 125.66 ETE 195.73 ZAC 70.05 ETC 284.88 LVI -4.30

PLANETOCENTRIC CONIC  
 C3 33.557 VHL 5.793 DLA 16.84 RAL 9.75 RAD 6648.4 VEL 12.388 PTH 7.30 VHP 2.493 DPA -7.33 RAP 29.56 ECC 1.9523  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 49 34 3600.95 -47.34 137.61 256.30 95.45 8 49 35 2600.9 -39.74 105.70  
 60.00 8 9 48 3547.08 -40.28 133.34 256.87 91.27 9 8 55 2547.1 -35.37 103.38  
 70.00 8 39 45 3458.91 -34.10 126.15 256.82 88.00 9 37 24 2458.9 -31.36 97.76  
 80.00 9 26 49 3311.45 -29.58 114.68 256.53 85.73 10 22 0 2311.4 -28.34 87.32  
 90.00 10 38 37 3079.68 -27.85 97.48 256.37 84.88 11 29 56 2079.7 -27.18 70.50  
 100.00 12 9 40 2785.92 -29.58 76.04 256.53 85.73 12 56 6 1785.9 -28.34 48.69  
 110.00 13 39 12 2505.73 -34.10 55.06 256.82 88.00 14 20 57 1505.7 -31.36 26.67

DIFFERENTIAL CORRECTIONS  
 TDE -.5055 TRA-1.8171 TC3-1.5471 BAW .8688 SGT 2643.6 SGR 1465.3 SG3 1461.3 ST 37.8 SR 25.0 SS 24.8  
 RDE -.4968 RRA -.2820 RC3-1.1647 FAU .51930 RRT .8290 RRF .9019 RTF .8888 CRT .7857 CR8 .2883 CST -.3508  
 FDE 1.0819 FRA-6.4193 FC-13.3973 BSP 4635 SGB 3022.6 R23 .1819 R13 .9187 LSA 43.6 MSA 27.6 SSA 2.6  
 BDE .7087 BRA 1.8389 BC3 1.9365 F8P 2443 SG1 2930.8 SG2 739.1 THA 26.50 EL1 43.2 EL2 13.5 ALF 30.87

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 7 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.830 GAL 7.67 AZL 87.90 HCA 128.15 SMA 194.33 ECC .25923 INC 2.0972 V1 29.557  
 RP 242.46 LAP 1.65 LOP 112.40 VP 20.292 GAP 4.53 AZP 91.30 TAL 38.65 TAP 166.80 RCA 143.95 APO 244.70 V2 22.638  
 RC 253.394 GL 11.89 GP -17.63 ZAL 33.51 ZAP 91.22 ETS 182.15 ZAE 124.05 ETE 195.08 ZAC 69.93 ETC 284.91 LVI -4.15

PLANETOCENTRIC CONIC  
 C3 33.415 VHL 5.781 DLA 17.15 RAL 9.79 RAD 6648.3 VEL 12.382 PTH 7.30 VHP 2.488 DPA -7.76 RAP 29.18 ECC 1.9499  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 25 3606.46 -47.37 138.14 256.56 95.05 8 48 32 2606.5 -39.92 106.10  
 60.00 8 8 13 3553.74 -40.29 133.90 257.07 90.89 9 7 27 2553.7 -35.53 103.88  
 70.00 8 37 38 3467.14 -34.08 126.79 256.97 87.62 9 35 25 2467.1 -31.49 98.36  
 80.00 9 24 7 3321.45 -29.53 115.41 256.64 85.35 10 19 29 2321.4 -28.46 88.04  
 90.00 10 35 39 3090.58 -27.78 98.27 256.46 84.49 11 27 9 2090.6 -27.28 71.28  
 100.00 12 6 59 2795.92 -29.53 76.78 256.64 85.35 12 53 35 1795.9 -28.46 49.41  
 110.00 13 37 4 2513.96 -34.08 55.71 256.97 87.62 14 18 58 1514.0 -31.49 27.28

DIFFERENTIAL CORRECTIONS  
 TDE -.5057 TRA-1.8721 TC3-1.6472 BAW .9068 SGT 2765.7 SGR 1481.2 SG3 1480.3 ST 38.5 SR 24.2 SS 23.4  
 RDE -.4780 RRA -.2900 RC3-1.1857 FAU .51794 RRT .8378 RRF .9058 RTF .8731 CRT .7838 CR8 .3277 CST -.3146  
 FDE 1.2202 FRA-6.3595 FC-13.4190 BSP 4867 SGB 3137.4 R23 .1838 R13 .9204 LSA 43.8 MSA 28.2 SSA 2.6  
 BDE .8958 BRA 1.8943 BC3 2.0295 F8P 2522 SG1 3050.5 SG2 733.2 THA 25.78 EL1 43.9 EL2 13.3 ALF 29.21

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 7 1973

FLIGHT TIME 206.00

ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC  
 RL 150.75 LAL .00 LOL 344.23 VL 32.833 GAL 7.63 AZL 87.86 HCA 129.07 SMA 194.38 ECC .25905 INC 2.1414 V1 29.557  
 RP 242.73 LAP 1.66 LOP 113.32 VP 20.267 GAP 4.29 AZP 91.35 TAL 38.44 TAP 167.52 RCA 144.03 APO 244.74 V2 22.618  
 RC 256.191 GL 12.17 GP -17.87 ZAL 33.78 ZAP 89.85 ETS 181.70 ZAE 122.44 ETE 194.44 ZAC 69.80 ETC 284.95 LVI -3.99

PLANETOCENTRIC CONIC  
 C3 33.277 VHL 5.769 DLA 17.48 RAL 9.83 RAD 6648.3 VEL 12.377 PTH 7.29 VHP 2.484 DPA -8.18 RAP 28.82 ECC 1.9477  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 14 3612.17 -47.40 138.69 256.83 94.63 8 47 26 2612.2 -40.10 106.52  
 60.00 8 6 35 3560.64 -40.30 134.49 257.27 90.49 9 5 55 2560.6 -35.69 104.39  
 70.00 8 35 26 3475.68 -34.05 127.45 257.12 87.23 9 33 22 2475.7 -31.83 98.99  
 80.00 9 21 20 3331.85 -29.47 116.18 256.75 84.95 10 16 52 2331.8 -28.57 88.79  
 90.00 10 32 34 3101.91 -27.71 99.09 256.55 84.09 11 24 16 2101.9 -27.38 72.09  
 100.00 12 4 12 2806.31 -29.47 77.55 256.75 84.95 12 50 58 1806.3 -28.57 50.16  
 110.00 13 34 53 2522.50 -34.05 56.37 257.12 87.23 14 16 55 1522.5 -31.63 27.90

DIFFERENTIAL CORRECTIONS  
 TDE -.5028 TRA-1.9252 TC3-1.7450 BAW .9452 SGT 2884.7 SGR 1505.4 SG3 1466.1 ST 39.2 SR 23.6 SS 25.9  
 RDE -.4637 RRA -.3028 RC3-1.2118 FAU .51879 RRT .8467 RRF .9108 RTF .8984 CRT .7820 CR8 .3381 CST -.3068  
 FDE 1.2948 FRA-6.3557 FC-13.4968 BSP 5092 SGB 3253.9 R23 .1836 R13 .9236 LSA 44.1 MSA 28.5 SSA 2.5  
 BDE .6840 BRA 1.9488 BC3 2.1246 F8P 2528 SG1 3171.3 SG2 728.6 THA 25.27 EL1 43.8 EL2 13.2 ALF 27.95

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 7 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC

DISTANCE 447.769

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.836 GAL 7.58 AZL 87.81 HCA 129.99 SMA 194.44 ECC .25089 INC 2.1866 V1 29.557  
 RP 242.99 LAP 1.68 LOP 114.24 VP 20.244 GAP 4.05 AZP 91.41 TAL 38.23 TAP 168.22 RCA 144.10 APO 244.78 V2 22.586  
 RC 258.972 GL 12.46 GP -18.12 ZAL 34.02 ZAP 88.50 ETS 181.26 ZAE 120.85 ETE 193.81 ZAC 69.67 ETC 264.98 LVI -3.83

PLANETOCENTRIC CONIC

C3 33.142 VHL 5.757 DLA 17.81 RAL 9.87 RAD 8648.2 VEL 12.372 PTH 7.29 VHP 2.482 DPA -8.59 RAP 28.48 ECC 1.5454  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 46 0 3618.09 -47.44 139.26 257.12 94.19 8 46 18 2618.1 -40.29 106.97  
 60.00 8 4 53 3587.80 -40.30 135.10 257.49 90.08 9 4 21 2567.8 -35.86 104.92  
 70.00 8 33 10 3484.55 -34.02 128.15 257.27 86.82 9 31 14 2484.6 -31.77 99.64  
 80.00 9 18 26 3342.65 -29.40 116.98 256.86 84.53 10 14 9 2342.6 -28.68 89.58  
 90.00 10 29 22 3113.73 -27.82 99.95 256.65 83.67 11 21 15 2113.7 -27.48 72.94  
 100.00 12 1 18 2817.12 -29.40 78.35 256.86 84.53 12 48 15 1817.1 -28.68 50.94  
 110.00 13 32 36 2531.37 -34.02 57.06 257.27 86.82 14 14 48 1531.4 -31.77 28.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4988 TRA-1.9779 TC3-1.8433 BAU .9840 SGT 3004.4 SGR 1530.7 SG3 1471.3 ST 39.9 SR 23.0 SS 26.3  
 RDE -.4495 RRA -.3160 RC3-1.2386 FAU .51944 RRT .8550 RRF .9156 RTF .9033 CRT .7804 CRS .3445 CST -.3028  
 FDE 1.3622 FRA-6.3512 FC-13.5689 BSP 5310 SGB 3371.8 R23 .1835 R13 .9266 LSA 44.5 MSA 28.7 SSA 2.5  
 BDE .6714 BRA 2.0030 BC3 2.2208 FSP 2520 SG1 3293.1 SG2 724.3 THA 24.82 EL1 44.1 EL2 13.0 ALF 26.78

LAUNCH DATE SEP 7 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC

DISTANCE 451.569

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.839 GAL 7.54 AZL 87.77 HCA 130.91 SMA 194.50 ECC .25874 INC 2.2331 V1 29.557  
 RP 243.24 LAP 1.69 LOP 115.16 VP 20.221 GAP 3.81 AZP 91.46 TAL 38.01 TAP 168.92 RCA 144.18 APO 244.83 V2 22.560  
 RC 261.736 GL 12.76 GP -18.37 ZAL 34.28 ZAP 87.18 ETS 180.81 ZAE 119.28 ETE 193.21 ZAC 69.54 ETC 285.01 LVI -3.66

PLANETOCENTRIC CONIC

C3 33.008 VHL 5.745 DLA 18.16 RAL 9.92 RAD 8648.2 VEL 12.366 PTH 7.29 VHP 2.481 DPA -9.00 RAP 28.16 ECC 1.5432  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 44 44 3624.24 -47.46 139.85 257.42 93.73 8 45 8 2624.2 -40.48 107.43  
 60.00 8 3 8 3575.23 -40.30 135.73 257.71 89.65 9 2 43 2575.2 -36.03 105.48  
 70.00 8 30 48 3493.78 -33.99 128.86 257.44 86.40 9 29 2 2493.8 -31.91 100.32  
 80.00 9 15 25 3353.93 -29.32 117.81 256.98 84.10 10 11 19 2353.9 -28.80 90.39  
 90.00 10 26 1 3126.07 -27.52 100.84 256.76 83.23 11 18 7 2126.1 -27.58 73.83  
 100.00 11 58 17 2828.40 -29.32 79.18 256.98 84.10 12 45 26 1828.4 -28.80 51.76  
 110.00 13 30 14 2540.60 -33.99 57.78 257.44 86.40 14 12 35 1540.6 -31.91 29.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4941 TRA-2.0315 TC3-1.9433 BAU 1.0228 SGT 3126.5 SGR 1552.6 SG3 1471.7 ST 40.5 SR 22.3 SS 26.9  
 RDE -.4329 RRA -.3271 RC3-1.2830 FAU .51844 RRT .8622 RRF .9198 RTF .9070 CRT .7792 CRS .3590 CST -.2898  
 FDE 1.4548 FRA-6.3148 FC-13.5976 BSP 5553 SGB 3490.8 R23 .1846 R13 .9287 LSA 44.8 MSA 29.1 SSA 2.5  
 BDE .6569 BRA 2.0577 BC3 2.3177 FSP 2536 SG1 3415.7 SG2 719.8 THA 24.33 EL1 44.5 EL2 12.7 ALF 25.45

LAUNCH DATE SEP 7 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

DISTANCE 455.368

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.843 GAL 7.49 AZL 87.72 HCA 131.82 SMA 194.57 ECC .25860 INC 2.2806 V1 29.557  
 RP 243.50 LAP 1.70 LOP 116.08 VP 20.199 GAP 3.58 AZP 91.52 TAL 37.78 TAP 169.61 RCA 144.26 APO 244.89 V2 22.535  
 RC 264.483 GL 13.06 GP -18.61 ZAL 34.56 ZAP 85.89 ETS 180.35 ZAE 117.73 ETE 192.62 ZAC 69.39 ETC 285.04 LVI -3.49

PLANETOCENTRIC CONIC

C3 32.878 VHL 5.734 DLA 18.51 RAL 9.97 RAD 8648.1 VEL 12.361 PTH 7.28 VHP 2.482 DPA -9.40 RAP 27.86 ECC 1.5411  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 25 3630.61 -47.49 140.46 257.73 93.26 8 43 56 2630.6 -40.68 107.91  
 60.00 8 1 19 3582.95 -40.29 136.39 257.94 89.20 9 1 2 2582.9 -36.20 106.06  
 70.00 8 28 21 3503.37 -33.94 129.61 257.61 85.96 9 26 44 2503.4 -32.06 101.03  
 80.00 9 12 16 3365.69 -29.24 118.67 257.11 83.66 10 8 22 2365.7 -28.91 91.25  
 90.00 10 22 30 3138.97 -27.42 101.77 256.86 82.78 11 14 49 2139.0 -27.68 74.76  
 100.00 11 55 8 2840.18 -29.24 80.04 257.11 83.66 12 42 28 1840.2 -28.91 52.62  
 110.00 13 27 47 2550.19 -33.94 58.53 257.61 85.96 14 10 17 1550.2 -32.06 29.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4883 TRA-2.0849 TC3-2.0437 BAU 1.0619 SGT 3249.2 SGR 1578.1 SG3 1472.1 ST 41.2 SR 21.8 SS 27.4  
 RDE -.4189 RRA -.3391 RC3-1.2883 FAU .51741 RRT .8692 RRF .9239 RTF .5107 CRT .7784 CRS .3671 CST -.2825  
 FDE 1.5350 FRA-6.2827 FC-13.6241 BSP 5782 SGB 3611.3 R23 .1855 R13 .9309 LSA 45.1 MSA 28.4 SSA 2.5  
 BDE .6421 BRA 2.1123 BC3 2.4159 FSP 2534 SG1 3539.7 SG2 715.5 THA 23.90 EL1 44.8 EL2 12.5 ALF 24.24

LAUNCH DATE SEP 7 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

DISTANCE 459.167

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.847 GAL 7.45 AZL 87.67 HCA 132.74 SMA 194.65 ECC .25848 INC 2.3295 V1 29.557  
 RP 243.74 LAP 1.71 LOP 116.99 VP 20.178 GAP 3.35 AZP 91.58 TAL 37.55 TAP 170.29 RCA 144.33 APO 244.96 V2 22.511  
 RC 267.212 GL 13.38 GP -18.87 ZAL 34.84 ZAP 84.62 ETS 179.89 ZAE 116.20 ETE 192.03 ZAC 69.24 ETC 285.07 LVI -3.31

PLANETOCENTRIC CONIC

C3 32.751 VHL 5.723 DLA 18.87 RAL 10.01 RAD 8648.1 VEL 12.356 PTH 7.28 VHP 2.484 DPA -9.79 RAP 27.58 ECC 1.5390  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 3 3637.23 -47.51 141.10 258.05 92.77 8 42 41 2637.2 -40.89 108.41  
 60.00 7 59 26 3590.96 -40.28 137.07 258.19 88.74 8 59 17 2591.0 -36.38 106.67  
 70.00 8 25 48 3513.35 -33.89 130.38 257.78 85.50 9 24 21 2513.4 -32.20 101.78  
 80.00 9 8 59 3377.97 -29.14 119.57 257.23 83.19 10 5 17 2378.0 -29.02 92.15  
 90.00 10 18 50 3152.47 -27.30 102.74 256.97 82.31 11 11 23 2152.5 -27.77 75.74  
 100.00 11 51 51 2852.44 -29.14 80.94 257.23 83.19 12 39 23 1852.4 -29.02 53.51  
 110.00 13 25 14 2560.17 -33.89 59.30 257.78 85.50 14 7 54 1560.2 -32.20 30.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4814 TRA-2.1383 TC3-2.1443 BAU 1.1010 SGT 3372.6 SGR 1599.4 SG3 1470.7 ST 41.8 SR 20.9 SS 27.9  
 RDE -.4004 RRA -.3510 RC3-1.3133 FAU .51576 RRT .8755 RRF .9278 RTF .9139 CRT .7782 CRS .3734 CST -.2761  
 FDE 1.6154 FRA-6.2438 FC-13.6333 BSP 6018 SGB 3732.6 R23 .1866 R13 .9329 LSA 45.5 MSA 29.8 SSA 2.4  
 BDE .6262 BRA 2.1669 BC3 2.5145 FSP 2533 SG1 3664.2 SG2 711.3 THA 23.49 EL1 45.1 EL2 12.2 ALF 23.07

LAUNCH DATE SEP 7 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.891 GAL 7.40 AZL 87.62 HCA 133.65 SMA 194.73 ECC .25838 INC 2.3798 V1 29.557
RP 243.98 LAP 1.72 LOP 117.90 VP 20.158 GAP 3.12 AZP 91.64 TAL 37.32 TAP 170.96 RCA 144.41 APO 245.04 V2 22.487
RC 269.924 GL 13.70 GP -19.12 ZAL 35.13 ZAP 83.39 ETS 179.43 ZAE 114.69 ETE 191.48 ZAC 69.09 ETC 285.10 LVI -3.12

DISTANCE 462.964

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.628 VHL 5.712 DLA 19.25 RAL 10.06 RAD 6648.0 VEL 12.351 PTH 7.27 VHP 2.487 DPA -10.18 RAP 27.33 ECC 1.5370
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 40 39 3644.10 -47.54 141.76 258.39 92.26 8 41 23 2644.1 -41.10 108.94
60.00 7 57 28 3599.29 -40.27 137.78 258.44 88.26 8 57 28 2599.3 -36.56 107.30
70.00 8 23 8 3523.74 -33.83 131.19 257.97 85.03 9 21 51 2523.7 -32.35 102.55
80.00 9 5 32 3390.81 -29.03 120.51 257.36 82.71 10 2 3 2390.8 -29.13 93.08
90.00 10 14 59 3166.61 -27.16 103.75 257.07 81.82 11 7 46 2166.6 -27.86 76.76
100.00 11 48 24 2865.28 -29.03 81.88 257.36 82.71 12 36 9 1865.3 -29.13 54.45
110.00 13 22 34 2570.56 -33.83 60.11 257.97 85.03 14 5 25 1570.6 -32.35 31.47

DIFFERENTIAL CORRECTIONS

TDE -.4731 TRA-2.1914 TC3-2.2453 BAU 1.1401
RDE -.3833 RRA -.3627 RC3-1.3379 FAU .51352
FDE 1.6980 FRA-6.1966 FC-13.6256 BSP 6253
BDE .6089 BRA 2.2212 BC3 2.6137 FSP 2527

MID-COURSE EXECUTION ACCURACY

SGT 3496.5 SGR 1622.5 SG3 1467.6
RRT .8814 RRF .9316 RTF .9167
SGB 3854.6 R23 .1880 R13 .9346
SG1 3789.2 S62 707.2 THA 23.10

ORBIT DETERMINATION ACCURACY

ST 42.4 SR 20.2 SS 28.5
CRT .7785 CRS .3783 CST -.2703
LSA 45.9 MSA 30.1 SSA 2.4
EL1 45.5 EL2 11.8 ALF 21.91

LAUNCH DATE SEP 7 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.856 GAL 7.36 AZL 87.57 HCA 134.56 SMA 194.81 ECC .25828 INC 2.4314 V1 29.557
RP 244.22 LAP 1.73 LOP 118.81 VP 20.139 GAP 2.89 AZP 91.71 TAL 37.08 TAP 171.63 RCA 144.49 APO 245.12 V2 22.464
RC 272.618 GL 14.03 GP -19.38 ZAL 35.43 ZAP 82.18 ETS 178.96 ZAE 113.21 ETE 190.93 ZAC 68.92 ETC 285.12 LVI -2.92

DISTANCE 466.761

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.508 VHL 5.702 DLA 19.63 RAL 10.11 RAD 6648.0 VEL 12.346 PTH 7.27 VHP 2.492 DPA -10.56 RAP 27.10 ECC 1.5350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 39 10 3651.25 -47.55 142.45 258.74 91.73 8 40 1 2651.2 -41.31 109.49
60.00 7 55 26 3607.95 -40.25 138.51 258.70 87.76 8 55 34 2607.9 -36.74 107.97
70.00 8 20 21 3534.57 -33.77 132.03 258.15 84.54 9 19 15 2534.6 -32.49 103.36
80.00 9 1 55 3404.24 -28.91 121.49 257.49 82.21 9 58 40 2404.2 -29.23 94.07
90.00 10 10 56 3181.45 -27.02 104.81 257.18 81.31 11 3 58 2181.5 -27.94 77.84
100.00 11 44 47 2878.71 -28.91 82.86 257.49 82.21 12 32 46 1878.7 -29.23 55.44
110.00 13 19 47 2581.39 -33.77 60.95 258.15 84.54 14 2 49 1581.4 -32.49 32.28

DIFFERENTIAL CORRECTIONS

TDE -.4638 TRA-2.2446 TC3-2.3467 BAU 1.1793
RDE -.3656 RRA -.3743 RC3-1.3625 FAU .51082
FDE 1.7815 FRA-6.1417 FC-13.6040 BSP 6488
BDE .5906 BRA 2.2756 BC3 2.7135 FSP 2520

MID-COURSE EXECUTION ACCURACY

SGT 3621.2 SGR 1645.7 SG3 1483.2
RRT .8869 RRF .9351 RTF .9192
SGB 3977.6 R23 .1898 R13 .9361
SG1 3914.9 S62 703.3 THA 22.73

ORBIT DETERMINATION ACCURACY

ST 43.0 SR 19.5 SS 29.1
CRT .7797 CRS .3812 CST -.2650
LSA 46.3 MSA 30.4 SSA 2.4
EL1 45.8 EL2 11.4 ALF 20.79

LAUNCH DATE SEP 7 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.860 GAL 7.31 AZL 87.52 HCA 135.46 SMA 194.90 ECC .25820 INC 2.4846 V1 29.557
RP 244.45 LAP 1.74 LOP 119.72 VP 20.121 GAP 2.66 AZP 91.77 TAL 36.83 TAP 172.30 RCA 144.57 APO 245.22 V2 22.441
RC 275.292 GL 14.38 GP -19.64 ZAL 35.74 ZAP 81.00 ETS 178.49 ZAE 111.75 ETE 190.40 ZAC 68.74 ETC 285.12 LVI -2.71

DISTANCE 470.556

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.391 VHL 5.691 DLA 20.03 RAL 10.16 RAD 6647.9 VEL 12.341 PTH 7.27 VHP 2.497 DPA -10.94 RAP 26.90 ECC 1.5351
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 37 38 3658.67 -47.56 143.17 259.11 91.18 8 38 37 2658.7 -41.53 110.06
60.00 7 53 18 3618.95 -40.22 139.28 258.97 87.24 8 53 35 2617.0 -36.93 108.66
70.00 8 17 26 3545.87 -33.69 132.90 258.34 84.03 9 16 32 2545.9 -32.64 104.21
80.00 8 58 8 3418.31 -28.78 122.51 257.62 81.69 9 55 6 2418.3 -29.33 95.10
90.00 10 6 40 3197.05 -26.85 105.92 257.29 80.77 10 59 57 2197.1 -28.02 78.87
100.00 11 40 59 2892.78 -28.78 83.88 257.62 81.69 12 29 12 1892.8 -29.33 56.47
110.00 13 16 53 2592.69 -33.69 61.82 258.34 84.03 14 0 5 1592.7 -32.64 33.13

DIFFERENTIAL CORRECTIONS

TDE -.4533 TRA-2.2979 TC3-2.4482 BAU 1.2185
RDE -.3478 RRA -.3861 RC3-1.3871 FAU .50769
FDE 1.8615 FRA-6.0845 FC-13.5693 BSP 6722
BDE .5713 BRA 2.3301 BC3 2.8139 FSP 2506

MID-COURSE EXECUTION ACCURACY

SGT 3746.6 SGR 1669.3 SG3 1457.5
RRT .8920 RRF .9385 RTF .9215
SGB 4101.6 R23 .1917 R13 .9375
SG1 4041.5 S62 699.7 THA 22.38

ORBIT DETERMINATION ACCURACY

ST 43.6 SR 18.7 SS 29.6
CRT .7821 CRS .3802 CST -.2620
LSA 46.7 MSA 30.8 SSA 2.3
EL1 46.2 EL2 11.0 ALF 19.72

LAUNCH DATE SEP 7 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.868 GAL 7.28 AZL 87.46 HCA 136.37 SMA 194.88 ECC .25813 INC 2.5395 V1 29.587
RP 244.68 LAP 1.75 LOP 120.63 VP 20.104 GAP 2.44 AZP 91.84 TAL 36.58 TAP 172.95 RCA 144.66 APO 245.32 V2 22.418
RC 277.948 GL 14.73 GP -19.91 ZAL 36.08 ZAP 79.85 ETS 178.01 ZAE 110.31 ETE 189.87 ZAC 68.56 ETC 285.18 LVI -2.49

DISTANCE 474.351

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 32.279 VHL 5.681 DLA 20.43 RAL 10.20 RAD 6647.9 VEL 12.337 PTH 7.26 VHP 2.504 DPA -11.31 RAP 26.71 ECC 1.5312
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 36 2 3666.38 -47.57 143.92 259.48 90.60 8 37 8 2666.4 -41.76 110.66
60.00 7 51 4 3626.33 -40.19 140.07 259.24 86.71 8 51 31 2626.3 -37.11 109.38
70.00 8 14 23 3557.67 -33.60 133.81 258.54 83.50 9 13 41 2557.7 -32.78 105.10
80.00 8 54 8 3433.08 -28.63 123.59 257.75 81.14 9 51 21 2433.1 -29.43 96.19
90.00 10 2 9 3213.48 -26.67 107.09 257.39 80.22 10 55 43 2213.5 -28.09 80.17
100.00 11 36 59 2907.55 -28.63 84.95 257.75 81.14 12 25 27 1907.6 -29.43 57.56
110.00 13 13 50 2604.48 -33.60 62.73 258.54 83.50 13 57 14 1604.5 -32.78 34.02

DIFFERENTIAL CORRECTIONS

TDE -.4416 TRA-2.3507 TC3-2.5497 BAU 1.2577
RDE -.3292 RRA -.3978 RC3-1.4116 FAU .50408
FDE 1.9416 FRA-6.0201 FC-13.5195 BSP 6956
BDE .5508 BRA 2.3841 BC3 2.9144 FSP 2491

MID-COURSE EXECUTION ACCURACY

SGT 3872.0 SGR 1693.0 SG3 1450.4
RRT .8967 RRF .9417 RTF .9235
SGB 4225.9 R23 .1938 R13 .9387
SG1 4168.2 S62 696.1 THA 22.06

ORBIT DETERMINATION ACCURACY

ST 44.2 SR 18.0 SS 30.3
CRT .7856 CRS .3764 CST -.2601
LSA 47.1 MSA 31.1 SSA 2.3
EL1 46.5 EL2 10.6 ALF 18.70

LAUNCH DATE SEP 7 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 19 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.870 GAL 7.21 AZL 87.40 HCA 137.27 SMA 195.08 ECC .25807 INC 2.5961 V1 29.557  
 RP 244.90 LAP 1.76 LOP 121.53 VP 20.088 GAP 2.21 AZP 91.91 TAL 36.33 TAP 173.60 RCA 144.74 APO 245.43 V2 22.357  
 RC 280.584 GL 15.09 GP -20.18 ZAL 36.38 ZAP 78.74 ETS 177.52 ZAE 108.89 ETE 189.34 ZAC 68.36 ETC 285.21 LVI -2.27

Distance 478.144 Earth to Mars

Planetary Conic: C3 32.171 VHL 5.672 DLA 20.85 RAL 10.25 RAD 6647.8 VEL 12.333 PTH 7.26 VHP 2.512 DPA -11.67 RAP 26.56 ECC 1.5295  
 LNCN AZMTH LNCN TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 21 3674.41 -47.58 144.69 259.87 90.00 8 35 36 2674.4 -41.99 111.29  
 60.00 7 48 45 3636.10 -40.15 140.90 259.53 86.15 8 49 21 2636.1 -37.31 110.14  
 70.00 8 11 11 3569.99 -33.50 134.76 258.73 82.94 9 10 41 2570.0 -32.93 106.03  
 80.00 8 49 54 3448.61 -28.46 124.71 257.88 80.98 9 47 23 2448.6 -29.52 97.33  
 90.00 9 57 22 3230.81 -26.46 108.31 257.49 79.64 10 51 13 2230.8 -28.16 81.43  
 100.00 11 32 46 2923.08 -28.46 86.08 257.88 80.58 12 21 29 1923.1 -29.52 58.70  
 110.00 13 10 38 2616.81 -33.50 63.68 258.73 82.94 13 54 15 1616.8 -32.93 34.95

Differential Corrections: TDE -.4285 TRA-2.4033 TC3-2.6513 BAU 1.2968 SGT 3997.7 SGR 1716.8 SG3 1441.9 ST 44.8 SR 17.2 SS 30.9  
 RDE -.3101 RRA -.4095 RC3-1.4359 FAU .50000 RRT .9011 RRF .9448 RTF .9253 CRT .7905 CRS .3691 CST -.2592  
 FDE 2.0218 FRA-5.9499 FC-13.4552 BSP 7193 SGB 4350.8 R23 .1962 R13 .9398 LSA 47.6 MSA 31.4 SSA 2.3  
 BDE .5289 BRA 2.4380 BC3 3.0151 FSP 2475 SG1 4295.3 SG2 692.8 TMA 21.75 EL1 46.9 EL2 10.1 ALF 17.71

LAUNCH DATE SEP 7 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 21 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.875 GAL 7.17 AZL 87.35 HCA 138.17 SMA 195.18 ECC .25802 INC 2.6545 V1 29.557  
 RP 245.11 LAP 1.77 LOP 122.44 VP 20.073 GAP 1.99 AZP 91.98 TAL 36.07 TAP 174.25 RCA 144.82 APO 245.54 V2 22.375  
 RC 283.198 GL 15.47 GP -20.46 ZAL 36.72 ZAP 77.65 ETS 177.03 ZAE 107.50 ETE 188.83 ZAC 68.15 ETC 285.24 LVI -2.03

Distance 481.937 Earth to Mars

Planetary Conic: C3 32.068 VHL 5.663 DLA 21.28 RAL 10.29 RAD 6647.8 VEL 12.328 PTH 7.26 VHP 2.521 DPA -12.04 RAP 26.43 ECC 1.5278  
 LNCN AZMTH LNCN TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 32 36 3682.77 -47.57 145.50 260.28 89.38 8 33 59 2682.8 -42.23 111.96  
 60.00 7 46 18 3646.28 -40.10 141.76 259.82 85.56 8 47 4 2646.3 -37.50 110.94  
 70.00 8 7 50 3582.89 -33.39 135.75 258.94 82.37 9 7 32 2582.9 -33.07 107.01  
 80.00 8 45 26 3464.96 -28.27 125.89 258.01 79.98 9 43 11 2465.0 -29.61 98.54  
 90.00 9 52 17 3249.16 -26.23 109.61 257.58 79.03 10 46 26 2249.2 -28.21 82.77  
 100.00 11 28 18 2939.43 -28.27 87.26 258.01 79.98 12 17 17 1939.4 -29.61 59.91  
 110.00 13 7 16 2629.71 -33.39 64.67 258.94 82.37 13 51 6 1629.7 -33.07 35.93

Differential Corrections: TDE -.4139 TRA-2.4557 TC3-2.7524 BAU 1.3356 SGT 4123.5 SGR 1740.7 SG3 1432.0 ST 45.4 SR 16.4 SS 31.5  
 RDE -.2904 RRA -.4211 RC3-1.4601 FAU .49546 RRT .9052 RRF .9478 RTF .9268 CRT .7973 CRS .3577 CST -.2594  
 FDE 2.1024 FRA-5.8739 FC-13.3758 BSP 7429 SGB 4475.8 R23 .1988 R13 .9407 LSA 48.1 MSA 31.8 SSA 2.2  
 BDE .5057 BRA 2.4915 BC3 3.1157 FSP 2456 SG1 4422.4 SG2 689.7 TMA 21.46 EL1 47.3 EL2 9.5 ALF 16.77

LAUNCH DATE SEP 7 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 23 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.881 GAL 7.12 AZL 87.28 HCA 139.08 SMA 195.28 ECC .25798 INC 2.7149 V1 29.557  
 RP 245.32 LAP 1.78 LOP 123.34 VP 20.059 GAP 1.77 AZP 92.05 TAL 35.81 TAP 174.89 RCA 144.90 APO 245.66 V2 22.354  
 RC 285.791 GL 15.86 GP -20.75 ZAL 37.07 ZAP 76.59 ETS 176.54 ZAE 106.13 ETE 188.32 ZAC 67.93 ETC 285.27 LVI -1.78

Distance 485.728 Earth to Mars

Planetary Conic: C3 31.970 VHL 5.654 DLA 21.73 RAL 10.33 RAD 6647.8 VEL 12.324 PTH 7.25 VHP 2.531 DPA -12.40 RAP 26.32 ECC 1.5262  
 LNCN AZMTH LNCN TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 48 3691.48 -47.56 146.35 260.69 88.73 8 32 17 2691.5 -42.47 112.65  
 60.00 7 43 44 3656.91 -40.04 142.66 260.12 84.96 8 44 41 2656.9 -37.70 111.77  
 70.00 8 4 17 3596.41 -33.26 136.78 259.14 81.77 9 4 13 2596.4 -33.21 108.04  
 80.00 8 40 42 3482.22 -28.06 127.13 258.13 79.36 9 38 44 2482.2 -29.68 99.82  
 90.00 9 46 51 3268.63 -25.97 110.97 257.67 78.39 10 41 20 2268.6 -28.25 84.19  
 100.00 11 23 34 2956.70 -28.06 88.50 258.13 79.36 12 12 50 1956.7 -29.68 61.19  
 110.00 13 3 43 2643.23 -33.26 65.70 259.14 81.77 13 47 47 1643.2 -33.21 38.96

Differential Corrections: TDE -.3979 TRA-2.5080 TC3-2.8536 BAU 1.3748 SGT 4249.7 SGR 1765.3 SG3 1421.1 ST 46.0 SR 15.6 SS 32.2  
 RDE -.2702 RRA -.4331 RC3-1.4843 FAU .49059 RRT .9091 RRF .9506 RTF .9282 CRT .8062 CRS .3409 CST -.2615  
 FDE 2.1821 FRA-5.7953 FC-13.2847 BSP 7664 SGB 4601.8 R23 .2016 R13 .9416 LSA 48.6 MSA 32.1 SSA 2.2  
 BDE .4809 BRA 2.5451 BC3 3.2166 FSP 2434 SG1 4350.2 SG2 686.9 TMA 21.19 EL1 47.7 EL2 8.9 ALF 15.88

LAUNCH DATE SEP 7 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 25 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 32.888 GAL 7.07 AZL 87.22 HCA 139.97 SMA 195.38 ECC .25795 INC 2.7776 V1 29.557  
 RP 245.53 LAP 1.79 LOP 124.24 VP 20.045 GAP 1.55 AZP 92.13 TAL 35.55 TAP 175.52 RCA 144.99 APO 245.79 V2 22.334  
 RC 288.361 GL 16.27 GP -21.04 ZAL 37.42 ZAP 75.56 ETS 176.03 ZAE 104.78 ETE 187.82 ZAC 67.69 ETC 285.30 LVI -1.52

Distance 489.519 Earth to Mars

Planetary Conic: C3 31.878 VHL 5.646 DLA 22.18 RAL 10.37 RAD 6647.7 VEL 12.321 PTH 7.25 VHP 2.542 DPA -12.76 RAP 26.24 ECC 1.5246  
 LNCN AZMTH LNCN TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 50 3700.57 -47.55 147.22 261.12 88.06 8 30 30 2700.6 -42.72 113.39  
 60.00 7 41 3 3668.02 -39.97 143.60 260.43 84.32 8 42 11 2668.0 -37.89 112.65  
 70.00 8 0 33 3610.59 -33.12 137.86 259.34 81.14 9 0 43 2610.6 -33.35 109.13  
 80.00 8 35 39 3500.49 -27.83 128.43 258.25 78.72 9 33 59 2500.5 -29.75 101.17  
 90.00 9 41 3 3289.36 -25.68 112.42 257.75 77.72 10 35 52 2289.4 -28.27 85.71  
 100.00 11 18 31 2974.96 -27.83 89.80 258.25 78.72 12 8 6 1975.0 -29.75 62.54  
 110.00 12 59 59 2657.41 -33.12 66.78 259.34 81.14 13 44 16 1657.4 -33.35 38.04

Differential Corrections: TDE -.3803 TRA-2.5595 TC3-2.9536 BAU 1.4135 SGT 4375.0 SGR 1789.9 SG3 1408.8 ST 46.6 SR 14.8 SS 32.9  
 RDE -.2493 RRA -.4449 RC3-1.5086 FAU .48526 RRT .9127 RRF .9533 RTF .9294 CRT .8175 CRS .3181 CST -.2648  
 FDE 2.2608 FRA-5.7100 FC-13.1783 BSP 7906 SGB 4727.0 R23 .2046 R13 .9423 LSA 49.1 MSA 32.4 SSA 2.1  
 BDE .4547 BRA 2.5978 BC3 3.3166 FSP 2412 SG1 4677.2 SG2 684.3 TMA 20.94 EL1 48.2 EL2 8.3 ALF 15.05

LAUNCH DATE SEP 7 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.892 GAL 7.02 AZL 87.16 HCA 140.87 SMA 195.90 ECC .25793 INC 2.8423 V1 29.557
RP 245.73 LAP 1.79 LOP 125.14 VP 20.033 GAP 1.34 AZP 92.21 TAL 35.28 TAP 176.15 RCA 145.07 APO 245.92 V2 22.314
RC 290.907 GL 18.69 GP -21.35 ZAL 37.79 ZAP 74.56 ETS 175.52 ZAE 103.46 ETE 187.32 ZAC 67.44 ETC 285.33 LVI -1.24

DISTANCE 493.308

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.793 VHL 5.638 DLA 22.66 RAL 10.41 RAD 6647.7 VEL 12.317 PTH 7.25 VHP 2.554 DPA -13.12 RAP 26.19 ECC 1.5232
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 26 47 3710.05 -47.52 148.14 261.57 87.35 8 28 37 2710.0 -42.97 114.16
60.00 7 38 12 3679.62 -39.88 144.57 260.74 83.67 8 39 32 2679.6 -38.09 113.57
70.00 7 56 35 3625.49 -32.96 139.00 259.54 80.49 8 57 1 2625.5 -33.48 110.27
80.00 8 30 16 3519.88 -27.56 129.81 258.36 78.04 9 28 55 2519.9 -29.80 102.61
90.00 9 34 47 3311.52 -25.35 113.96 257.81 77.02 10 29 59 2311.5 -28.28 87.33
100.00 11 13 7 2994.35 -27.56 91.18 258.36 78.04 12 3 2 1994.3 -29.80 63.98
110.00 12 56 1 2672.31 -32.96 67.91 259.54 80.49 13 40 34 1672.3 -33.48 39.19

DIFFERENTIAL CORRECTIONS

TDE -.3613 TRA-2.6114 TC3-3.0538 BAU 1.4524
RDE -.2278 RRA -.4571 RC3-1.5329 FAU .47960
FDE 2.3394 FRA-5.6244 FC-13.0599 BSP 8137
BDE .4271 BRA 2.6511 BC3 3.4170 FSP 2386

MID-COURSE EXECUTION ACCURACY

SGT 4301.5 SGR 1815.3 SG3 1395.6
RRR .9161 RRF .9598 RTF .9305
SGB 4853.7 R23 .2078 R13 .9430
SG1 4805.6 SG2 681.9 THA 20.71

ORBIT DETERMINATION ACCURACY

ST 47.2 SR 14.1 SS 33.6
CRT .8318 CRS .2877 CST -.2697
LSA 49.7 MSA 32.8 S8A 2.1
EL1 48.6 EL2 7.6 ALF 14.28

LAUNCH DATE SEP 7 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.898 GAL 6.96 AZL 87.09 HCA 141.77 SMA 195.81 ECC .25792 INC 2.9096 V1 29.557
RP 245.93 LAP 1.80 LOP 126.04 VP 20.021 GAP 1.12 AZP 92.29 TAL 35.01 TAP 176.78 RCA 145.16 APO 246.06 V2 22.295
RC 293.430 GL 17.12 GP -21.66 ZAL 38.16 ZAP 73.60 ETS 175.00 ZAE 102.16 ETE 186.83 ZAC 67.17 ETC 285.37 LVI -.95

DISTANCE 497.097

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.713 VHL 5.631 DLA 23.15 RAL 10.44 RAD 6647.7 VEL 12.314 PTH 7.25 VHP 2.567 DPA -13.48 RAP 26.16 ECC 1.5219
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 24 38 3719.94 -47.48 149.09 262.03 86.62 8 28 38 2719.9 -43.23 114.97
60.00 7 35 13 3691.78 -39.79 145.59 261.06 82.98 8 36 45 2691.8 -38.29 114.54
70.00 7 52 23 3641.18 -32.78 140.18 259.74 79.81 8 53 4 2641.2 -33.61 111.47
80.00 8 24 29 3540.51 -27.26 131.27 258.46 77.33 9 23 29 2540.5 -29.84 104.14
90.00 9 28 2 3335.33 -24.97 115.60 257.86 76.28 10 23 37 2335.3 -28.26 89.07
100.00 11 7 21 3014.99 -27.26 92.64 258.46 77.33 11 57 36 2015.0 -29.84 65.51
110.00 12 51 50 2688.00 -32.78 69.10 259.74 79.81 13 36 38 1688.0 -33.61 40.39

DIFFERENTIAL CORRECTIONS

TDE -.3405 TRA-2.6626 TC3-3.1528 BAU 1.4909
RDE -.2056 RRA -.4695 RC3-1.5573 FAU .47382
FDE 2.4164 FRA-5.5345 FC-12.9292 BSP 8375
BDE .3978 BRA 2.7037 BC3 3.3164 FSP 2359

MID-COURSE EXECUTION ACCURACY

SGT 4627.0 SGR 1841.3 SG3 1381.3
RRR .9192 RRF .9583 RTF .9314
SGB 4979.9 R23 .2111 R13 .9435
SG1 4933.2 SG2 679.9 THA 20.50

ORBIT DETERMINATION ACCURACY

ST 47.8 SR 13.3 SS 34.4
CRT .8490 CRS .2485 CST -.2764
LSA 50.4 MSA 33.1 S8A 2.0
EL1 49.1 EL2 6.8 ALF 13.57

LAUNCH DATE SEP 7 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.904 GAL 6.91 AZL 87.02 HCA 142.66 SMA 195.72 ECC .25792 INC 2.9795 V1 29.557
RP 246.12 LAP 1.81 LOP 126.93 VP 20.010 GAP .90 AZP 92.37 TAL 34.73 TAP 177.39 RCA 145.24 APO 246.20 V2 22.276
RC 293.928 GL 17.57 GP -21.99 ZAL 38.55 ZAP 72.66 ETS 174.48 ZAE 100.89 ETE 186.34 ZAC 66.89 ETC 285.40 LVI -.65

DISTANCE 500.865

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.642 VHL 5.625 DLA 23.65 RAL 10.46 RAD 6647.6 VEL 12.311 PTH 7.24 VHP 2.580 DPA -13.84 RAP 26.16 ECC 1.5207
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 22 22 3730.29 -47.44 150.09 262.50 85.85 8 24 32 2730.3 -43.49 115.82
60.00 7 32 3 3704.52 -39.68 146.66 261.38 82.27 8 33 47 2704.5 -38.49 115.56
70.00 7 47 55 3657.73 -32.57 141.43 259.94 79.10 8 48 53 2657.7 -33.73 112.75
80.00 8 18 16 3562.57 -26.92 132.82 258.54 76.58 9 17 38 2562.6 -29.86 105.78
90.00 9 20 40 3361.06 -24.55 117.36 257.88 75.50 10 16 41 2361.1 -28.21 90.95
100.00 11 1 7 3037.05 -26.92 94.19 258.54 76.58 11 51 44 2037.0 -29.86 67.15
110.00 12 47 22 2704.55 -32.57 70.35 259.94 79.10 13 32 26 1704.5 -33.73 41.67

DIFFERENTIAL CORRECTIONS

TDE -.3185 TRA-2.7138 TC3-3.2516 BAU 1.5297
RDE -.1829 RRA -.4823 RC3-1.5822 FAU .46743
FDE 2.4904 FRA-5.4432 FC-12.7891 BSP 8609
BDE .3673 BRA 2.7563 BC3 3.6161 FSP 2329

MID-COURSE EXECUTION ACCURACY

SGT 4753.2 SGR 1868.4 SG3 1366.3
RRR .9223 RRF .9807 RTF .9322
SGB 5107.2 R23 .2145 R13 .9440
SG1 5062.0 SG2 678.2 THA 20.31

ORBIT DETERMINATION ACCURACY

ST 48.4 SR 12.6 SS 35.1
CRT .8693 CRS .1985 CST -.2848
LSA 51.1 MSA 33.4 S8A 2.0
EL1 49.6 EL2 6.1 ALF 12.85

LAUNCH DATE SEP 7 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.910 GAL 6.86 AZL 86.95 HCA 143.58 SMA 195.84 ECC .25793 INC 3.0522 V1 29.557
RP 246.30 LAP 1.81 LOP 127.83 VP 20.000 GAP .69 AZP 92.46 TAL 34.45 TAP 178.01 RCA 145.33 APO 246.35 V2 22.258
RC 298.401 GL 18.04 GP -22.33 ZAL 38.98 ZAP 71.76 ETS 173.94 ZAE 99.64 ETE 185.85 ZAC 66.59 ETC 285.44 LVI -.33

DISTANCE 504.671

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 31.578 VHL 5.619 DLA 24.17 RAL 10.48 RAD 6647.6 VEL 12.309 PTH 7.24 VHP 2.595 DPA -14.20 RAP 26.16 ECC 1.5197
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 19 58 3741.12 -47.38 151.13 262.98 85.05 8 22 19 2741.1 -43.78 116.73
60.00 7 28 41 3717.88 -39.55 147.77 261.71 81.52 8 30 39 2717.9 -36.69 116.65
70.00 7 43 10 3675.23 -32.34 142.74 260.13 78.36 8 44 25 2675.2 -33.84 114.11
80.00 8 11 31 3586.28 -26.54 134.48 258.61 75.79 9 11 18 2586.3 -29.85 107.54
90.00 9 12 35 3389.07 -24.06 119.27 257.88 74.67 10 9 4 2389.1 -28.13 93.00
100.00 10 54 23 3060.73 -26.54 95.85 258.61 75.79 11 45 24 2060.7 -29.85 68.91
110.00 12 42 36 2722.05 -32.34 71.66 260.13 78.36 13 27 58 1722.0 -33.84 43.02

DIFFERENTIAL CORRECTIONS

TDE -.2943 TRA-2.7642 TC3-3.3485 BAU 1.5679
RDE -.1592 RRA -.4951 RC3-1.6067 FAU .46075
FDE 2.5662 FRA-5.3459 FC-12.6318 BSP 8845
BDE .3346 BRA 2.8082 BC3 3.7140 FSP 2298

MID-COURSE EXECUTION ACCURACY

SGT 4878.1 SGR 1895.6 SG3 1349.9
RRR .9250 RRF .9629 RTF .9329
SGB 5233.5 R23 .2182 R13 .9444
SG1 5189.5 SG2 676.9 THA 20.13

ORBIT DETERMINATION ACCURACY

ST 49.0 SR 11.9 SS 35.9
CRT .8925 CRS .1365 CST -.2945
LSA 51.9 MSA 33.7 S8A 1.9
EL1 50.2 EL2 5.3 ALF 12.38

LAUNCH DATE SEP 7 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC DISTANCE 508.487 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.916 GAL 6.81 AZL 86.87 HCA 144.45 SMA 195.86 ECC .25794 INC 3.1279 V1 29.557  
 RP 246.48 LAP 1.82 LOP 128.72 VP 19.981 GAP .48 AZP 92.55 TAL 34.17 TAP 178.62 RCA 145.41 APO 246.50 V2 22.241  
 RC 300.850 GL 18.52 GP -22.68 ZAL 39.38 ZAP 70.89 ETS 173.40 ZAE 98.42 ETE 185.36 ZAC 66.28 ETC 285.48 LVI .00

PLANETOCENTRIC CONIC

C3 31.524 VHL 5.615 DLA 24.71 RAL 10.50 RAD 6647.6 VEL 12.308 PTH 7.24 VHP 2.611 DPA -14.56 RAP 26.23 ECC 1.5188  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 25 3752.47 -47.31 152.22 263.48 84.22 8 19 58 2752.5 -44.03 117.68  
 60.00 7 25 8 3731.94 -39.40 148.94 262.04 80.74 8 27 20 2731.9 -38.89 117.79  
 70.00 7 38 5 3693.77 -32.07 144.12 260.32 77.58 8 39 38 2693.8 -33.94 115.54  
 80.00 8 4 11 3611.84 -26.10 136.25 258.65 74.95 9 4 23 2611.8 -29.82 109.44  
 90.00 9 3 38 3419.85 -23.49 121.34 257.84 73.78 10 0 38 2419.8 -28.00 95.24  
 100.00 10 47 3 3086.31 -26.10 97.62 258.65 74.95 11 38 29 2086.3 -29.82 70.81  
 110.00 12 37 31 2740.99 -32.07 73.04 260.32 77.58 13 23 12 1740.6 -33.94 44.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2685 TRA-2.8190 TC3-3.4450 BAU 1.6085 SGT 5003.9 SGR 1924.2 SG3 1332.8 ST 49.7 SR 11.3 SS 36.7  
 RDE -.1348 RRA -.5086 RC3-1.6317 FAU .45389 RRT .9277 RRF .9651 RTF .9335 CRT .9176 CRS .0601 CST -.3061  
 FDE 2.6397 FRA-5.2498 FC-12.4651 B8P 9078 SGB 5361.1 R23 .2220 R13 .9448 LSA 52.8 MSA 34.0 S8A 1.9  
 BDE .3004 BRA 2.6606 BC3 3.8118 F8P 2285 SG1 5318.3 SG2 875.8 THA 19.97 EL1 50.8 EL2 4.4 ALF 11.80

LAUNCH DATE SEP 7 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC DISTANCE 512.241 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.923 GAL 6.76 AZL 86.79 HCA 145.34 SMA 196.08 ECC .25796 INC 3.2069 V1 29.557  
 RP 246.65 LAP 1.82 LOP 129.61 VP 19.982 GAP .27 AZP 92.64 TAL 33.89 TAP 179.23 RCA 145.50 APO 246.66 V2 22.224  
 RC 303.274 GL 19.03 GP -23.05 ZAL 39.78 ZAP 70.05 ETS 172.84 ZAE 97.22 ETE 184.87 ZAC 65.94 ETC 285.52 LVI .35

PLANETOCENTRIC CONIC

C3 31.479 VHL 5.611 DLA 25.27 RAL 10.51 RAD 6647.6 VEL 12.305 PTH 7.24 VHP 2.628 DPA -14.93 RAP 26.31 ECC 1.5181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 14 43 3764.37 -47.22 153.35 263.99 83.34 8 17 27 2764.4 -44.30 118.69  
 60.00 7 21 20 3746.73 -39.23 150.16 262.38 79.93 8 23 47 2746.7 -39.08 119.00  
 70.00 7 32 37 3713.48 -31.78 145.58 260.49 76.77 8 34 30 2713.5 -34.02 117.08  
 80.00 7 56 8 3639.66 -25.59 138.16 258.66 74.07 8 56 48 2639.7 -29.74 111.51  
 90.00 8 53 35 3454.10 -22.82 123.63 257.75 72.82 9 51 9 2454.1 -27.81 97.78  
 100.00 10 39 0 3114.13 -25.59 99.53 258.66 74.07 11 30 54 2114.1 -29.74 72.88  
 110.00 12 32 3 2760.30 -31.78 74.50 260.49 76.77 13 18 4 1760.3 -34.02 45.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2404 TRA-2.8646 TC3-3.5396 BAU 1.6447 SGT 5128.4 SGR 1953.4 SG3 1314.6 ST 50.4 SR 10.8 SS 37.5  
 RDE -.1093 RRA -.5221 RC3-1.6567 FAU .44670 RRT .9302 RRF .9671 RTF .9340 CRT .9426 CRS -.0310 CST -.3191  
 FDE 2.7135 FRA-5.1476 FC-12.2852 B8P 9316 SGB 5487.8 R23 .2260 R13 .9450 LSA 53.7 MSA 34.3 S8A 1.8  
 BDE .2640 BRA 2.9118 BC3 3.9081 F8P 2231 SG1 5446.1 SG2 675.4 THA 19.83 EL1 51.4 EL2 3.5 ALF 11.50

LAUNCH DATE SEP 7 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC DISTANCE 516.025 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.929 GAL 6.70 AZL 86.71 HCA 146.23 SMA 196.20 ECC .25799 INC 3.2894 V1 29.557  
 RP 246.82 LAP 1.83 LOP 130.50 VP 19.974 GAP .06 AZP 92.74 TAL 33.60 TAP 179.83 RCA 145.58 APO 246.82 V2 22.207  
 RC 305.673 GL 19.55 GP -23.43 ZAL 40.22 ZAP 69.24 ETS 172.27 ZAE 96.05 ETE 184.39 ZAC 65.58 ETC 285.57 LVI .73

PLANETOCENTRIC CONIC

C3 31.445 VHL 5.608 DLA 25.84 RAL 10.50 RAD 6647.6 VEL 12.303 PTH 7.24 VHP 2.647 DPA -15.31 RAP 26.42 ECC 1.5179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 11 50 3776.87 -47.11 154.54 264.31 82.43 8 14 47 2776.9 -44.58 119.77  
 60.00 7 17 18 3762.33 -39.04 151.44 262.71 79.08 8 20 0 2762.3 -39.27 120.28  
 70.00 7 28 44 3734.50 -31.44 147.13 260.65 75.91 8 28 59 2734.5 -34.09 118.71  
 80.00 7 47 13 3670.18 -25.00 140.24 258.63 73.13 8 48 24 2670.2 -29.62 113.77  
 90.00 8 42 8 3492.92 -22.01 126.19 257.59 71.78 9 40 19 2492.9 -27.53 100.53  
 100.00 10 30 5 3144.63 -25.00 101.61 258.63 73.13 11 22 30 2144.7 -29.62 75.14  
 110.00 12 26 10 2781.32 -31.44 76.05 260.65 75.91 13 12 32 1781.3 -34.09 47.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.2107 TRA-2.9143 TC3-3.6327 BAU 1.6828 SGT 5252.8 SGR 1983.6 SG3 1295.3 ST 51.1 SR 10.5 SS 38.3  
 RDE -.0831 RRA -.5361 RC3-1.6816 FAU .43916 RRT .9325 RRF .9691 RTF .9343 CRT .9648 CRS -.1360 CST -.3333  
 FDE 2.7847 FRA-5.0438 FC-12.0909 B8P 9554 SGB 5614.9 R23 .2300 R13 .9452 LSA 54.7 MSA 34.5 S8A 1.8  
 BDE .2265 BRA 2.9832 BC3 4.0031 F8P 2196 SG1 5574.1 SG2 675.2 THA 19.70 EL1 52.1 EL2 2.7 ALF 11.19

LAUNCH DATE SEP 7 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC DISTANCE 519.807 EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 32.936 GAL 6.65 AZL 86.62 HCA 147.12 SMA 196.33 ECC .25803 INC 3.3757 V1 29.557  
 RP 246.98 LAP 1.83 LOP 131.39 VP 19.967 GAP -.15 AZP 92.84 TAL 33.31 TAP 180.42 RCA 145.67 APO 246.99 V2 22.191  
 RC 308.047 GL 20.10 GP -23.83 ZAL 40.67 ZAP 68.46 ETS 171.69 ZAE 94.90 ETE 183.89 ZAC 65.20 ETC 285.62 LVI 1.12

PLANETOCENTRIC CONIC

C3 31.423 VHL 5.606 DLA 26.44 RAL 10.49 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 2.666 DPA -15.69 RAP 26.56 ECC 1.5171  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 8 46 3790.01 -46.99 155.79 265.04 81.48 8 11 56 2790.0 -44.86 120.91  
 60.00 7 12 58 3778.81 -38.82 152.79 263.04 78.19 8 15 57 2778.8 -39.46 121.64  
 70.00 7 20 22 3757.00 -31.05 148.77 260.79 75.01 8 22 59 2757.0 -34.14 120.47  
 80.00 7 37 14 3704.06 -24.32 142.52 258.54 72.12 8 38 58 2704.1 -29.44 116.27  
 90.00 8 28 35 3538.14 -21.02 129.14 257.34 70.63 9 27 33 2538.1 -27.12 103.78  
 100.00 10 20 6 3178.53 -24.32 103.89 258.54 72.12 11 13 4 2178.5 -29.44 77.64  
 110.00 12 19 48 2803.82 -31.05 77.69 260.79 75.01 13 6 32 1803.8 -34.14 49.39

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.1790 TRA-2.9642 TC3-3.7246 BAU 1.7212 SGT 5377.7 SGR 2015.5 SG3 1275.6 ST 52.0 SR 10.3 SS 39.1  
 RDE -.0558 RRA -.5510 RC3-1.7072 FAU .43149 RRT .9347 RRF .9709 RTF .9347 CRT .9805 CRS -.2522 CST -.3498  
 FDE 2.8541 FRA-4.9414 FC-11.8882 B8P 9780 SGB 5743.0 R23 .2341 R13 .9454 LSA 55.9 MSA 34.8 S8A 1.7  
 BDE .1875 BRA 3.0149 BC3 4.0973 F8P 2156 SG1 5703.1 SG2 675.5 THA 19.59 EL1 52.9 EL2 2.0 ALF 10.98

LAUNCH DATE SEP 7 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 13 1974

MELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.942 GAL 6.59 AZL 86.53 HCA 148.00 SMA 196.46 ECC .25807 INC 3.4661 V1 29.557  
 RP 247.14 LAP 1.84 LOP 132.28 VP 18.981 GAP -.35 AZP 92.94 TAL 33.01 TAP 181.02 RCA 145.76 APO 247.16 V2 22.176  
 RC 310.395 GL 20.67 GP -24.25 ZAL 41.13 ZAP 67.72 ETS 171.10 ZAE 93.78 ETE 183.40 ZAC 64.60 ETC 285.67 LVI 1.53

PLANETOCENTRIC CONIC

C3 31.414 VHL 5.605 DLA 27.06 RAL 10.47 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 2.686 DPA -16.08 RAP 26.72 ECC 1.5170  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 5 29 3803.85 -46.84 157.09 265.58 80.49 8 8 53 2803.8 -45.15 122.12  
 60.00 7 8 20 3796.26 -38.56 154.20 263.36 77.26 8 11 36 2796.3 -39.63 123.09  
 70.00 7 13 27 3781.19 -30.61 150.52 260.90 74.06 8 16 28 2781.2 -34.15 122.36  
 80.00 7 25 50 3742.29 -23.49 145.06 258.39 71.02 8 28 12 2742.3 -29.16 119.08  
 90.00 8 11 54 3593.40 -19.73 132.67 256.93 69.32 9 11 48 2593.4 -26.52 107.70  
 100.00 10 8 42 3216.77 -23.49 106.43 258.39 71.02 11 2 18 2216.8 -29.16 80.45  
 110.00 12 12 53 2828.00 -30.61 79.43 260.90 74.06 13 0 1 1828.0 -34.15 51.28

DIFFERENTIAL CORRECTIONS

TDE -.1446 TRA-3.0132 TC3-3.8139 BAU 1.7593  
 RDE -.0272 RRA -.5660 RC3-1.7327 FAU .42345  
 FDE 2.9239 FRA-4.8340 FC-11.6700 BSP 10021  
 BDE .1472 BRA 3.0659 BC3 4.1890 FSP 2120

MID-COURSE EXECUTION ACCURACY

SGT 5501.2 SGR 2048.2 SG3 1254.6  
 RRT .9367 RRF .9727 RTF .9349  
 SGB 5870.2 R23 .2385 R13 .9454  
 SG1 5831.1 SG2 676.4 THA 19.50

ORBIT DETERMINATION ACCURACY

ST 52.8 SR 10.3 SS 40.0  
 CRT .9863 CR8 -.3736 CST -.3673  
 LSA 57.1 MSA 35.0 SSA 1.7  
 EL1 53.8 EL2 1.7 ALF 10.87

LAUNCH DATE SEP 7 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 15 1974

MELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.949 GAL 6.54 AZL 86.44 HCA 148.89 SMA 198.58 ECC .25812 INC 3.5610 V1 29.557  
 RP 247.29 LAP 1.84 LOP 133.17 VP 19.956 GAP -.56 AZP 93.05 TAL 32.72 TAP 181.61 RCA 145.84 APO 247.33 V2 22.161  
 RC 312.717 GL 21.27 GP -24.69 ZAL 41.61 ZAP 67.01 ETS 170.50 ZAE 92.68 ETE 182.90 ZAC 64.37 ETC 285.73 LVI 1.97

PLANETOCENTRIC CONIC

C3 31.419 VHL 5.605 DLA 27.71 RAL 10.44 RAD 6647.6 VEL 12.302 PTH 7.24 VHP 2.708 DPA -16.48 RAP 26.91 ECC 1.5171  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 1 59 3818.44 -46.67 158.46 266.12 79.45 8 5 37 2818.4 -45.43 123.42  
 60.00 7 3 21 3814.78 -38.28 155.69 263.68 76.29 8 6 56 2814.8 -39.60 124.64  
 70.00 7 5 52 3807.33 -30.11 152.38 260.98 73.06 8 9 20 2807.3 -34.14 124.40  
 80.00 7 12 30 3788.52 -22.48 147.96 258.13 69.82 8 15 36 2788.5 -28.77 122.30  
 90.00 7 48 58 3668.61 -17.85 137.39 256.21 67.70 8 50 6 2668.6 -25.50 112.98  
 100.00 9 55 22 3260.99 -22.48 109.33 258.13 69.82 10 49 43 2261.0 -28.77 83.67  
 110.00 12 5 19 2854.15 -30.11 81.30 260.98 73.06 12 52 53 1854.2 -34.14 53.32

DIFFERENTIAL CORRECTIONS

TDE -.1081 TRA-3.0623 TC3-3.9008 BAU 1.7973  
 RDE .0025 RRA -.5820 RC3-1.7583 FAU .41515  
 FDE 2.9913 FRA-4.7273 FC-11.4392 BSP 10259  
 BDE .1082 BRA 3.1171 BC3 4.2787 FSP 2080

MID-COURSE EXECUTION ACCURACY

SGT 5624.5 SGR 2082.5 SG3 1232.8  
 RRT .9387 RRF .9744 RTF .9350  
 SGB 5997.7 R23 .2428 R13 .9455  
 SG1 5959.3 SG2 677.6 THA 19.43

ORBIT DETERMINATION ACCURACY

ST 53.7 SR 10.5 SS 40.8  
 CRT .9803 CR8 -.4919 CST -.3865  
 LSA 58.5 MSA 35.1 SSA 1.8  
 EL1 54.7 EL2 2.0 ALF 10.87

LAUNCH DATE SEP 7 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 17 1974

MELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.956 GAL 6.48 AZL 86.34 HCA 149.77 SMA 198.72 ECC .25816 INC 3.6607 V1 29.557  
 RP 247.44 LAP 1.84 LOP 134.06 VP 19.951 GAP -.76 AZP 93.16 TAL 32.42 TAP 182.20 RCA 145.93 APO 247.50 V2 22.147  
 RC 313.013 GL 21.89 GP -25.15 ZAL 42.10 ZAP 66.33 ETS 169.88 ZAE 91.61 ETE 182.40 ZAC 63.92 ETC 285.79 LVI 2.42

PLANETOCENTRIC CONIC

C3 31.442 VHL 5.607 DLA 28.37 RAL 10.39 RAD 6647.6 VEL 12.303 PTH 7.24 VHP 2.731 DPA -16.89 RAP 27.13 ECC 1.5175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 12 3833.85 -46.47 159.89 266.68 78.36 8 2 6 2833.8 -45.71 124.80  
 60.00 6 57 58 3834.47 -37.95 157.26 263.98 75.27 8 1 53 2834.5 -39.95 126.29  
 70.00 6 57 32 3835.75 -29.53 154.39 261.02 72.00 8 1 28 2835.8 -34.08 126.62  
 80.00 6 56 15 3839.77 -21.19 151.38 257.70 68.46 8 0 15 2839.8 -28.18 126.15  
 87.59 6 38 31 3897.14 -13.42 152.07 254.19 64.77 7 43 29 2897.1 -22.68 128.85  
 100.00 9 39 7 3314.25 -21.19 112.75 257.70 68.46 10 34 22 2314.2 -28.18 87.52  
 110.00 11 56 59 2882.57 -29.53 83.31 261.02 72.00 12 45 1 1882.6 -34.08 55.53

DIFFERENTIAL CORRECTIONS

TDE -.0779 TRA-3.1188 TC3-3.9945 BAU 1.8408  
 RDE .0253 RRA -.6069 RC3-1.7946 FAU .40947  
 FDE 2.9966 FRA-4.6812 FC-11.2745 BSP 10359  
 BDE .0819 BRA 3.1773 BC3 4.3791 FSP 1974

MID-COURSE EXECUTION ACCURACY

SGT 5761.3 SGR 2132.5 SG3 1218.2  
 RRT .9414 RRF .9764 RTF .9387  
 SGB 6143.3 R23 .2434 R13 .9470  
 SG1 6105.7 SG2 678.7 THA 19.46

ORBIT DETERMINATION ACCURACY

ST 54.9 SR 11.1 SS 41.2  
 CRT .9702 CR8 -.5784 CST -.4122  
 LSA 60.1 MSA 34.8 SSA 1.8  
 EL1 55.9 EL2 2.6 ALF 11.10

LAUNCH DATE SEP 7 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 19 1974

MELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.963 GAL 6.43 AZL 86.23 HCA 150.66 SMA 198.85 ECC .25824 INC 3.7658 V1 29.557  
 RP 247.58 LAP 1.84 LOP 134.94 VP 19.947 GAP -.97 AZP 93.28 TAL 32.12 TAP 182.78 RCA 146.01 APO 247.68 V2 22.133  
 RC 317.282 GL 22.55 GP -25.64 ZAL 42.62 ZAP 65.89 ETS 169.24 ZAE 90.56 ETE 181.89 ZAC 63.44 ETC 285.85 LVI 2.91

PLANETOCENTRIC CONIC

C3 31.482 VHL 5.611 DLA 29.07 RAL 10.33 RAD 6647.6 VEL 12.305 PTH 7.24 VHP 2.755 DPA -17.31 RAP 27.38 ECC 1.5181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 54 9 3850.17 -46.23 161.40 267.23 77.22 7 58 19 2850.2 -45.98 126.27  
 60.00 6 52 9 3855.50 -37.57 158.92 264.27 74.20 7 56 24 2855.5 -40.08 128.07  
 70.00 6 48 15 3866.98 -28.85 156.57 261.00 70.88 7 52 42 2867.0 -33.96 129.05  
 80.00 6 34 38 3909.87 -19.38 155.80 256.99 66.83 7 39 48 2909.9 -27.23 131.14  
 82.97 6 0 22 4019.94 -13.72 161.24 254.30 64.12 7 7 22 3019.9 -23.22 138.05  
 100.00 9 17 30 3384.35 -19.38 117.17 256.99 66.83 10 13 54 2384.3 -27.23 92.51  
 110.00 11 47 42 2913.80 -28.85 85.49 261.00 70.88 12 36 15 1913.8 -33.96 57.96

DIFFERENTIAL CORRECTIONS

TDE -.0344 TRA-3.1655 TC3-4.0733 BAU 1.8773  
 RDE .0599 RRA -.6221 RC3-1.8176 FAU .39981  
 FDE 3.0775 FRA-4.5533 FC-10.9945 BSP 10635  
 BDE .0691 BRA 3.2261 BC3 4.4604 FSP 1951

MID-COURSE EXECUTION ACCURACY

SGT 5879.9 SGR 2166.1 SG3 1192.2  
 RRT .9429 RRF .9777 RTF .9362  
 SGB 6266.2 R23 .2488 R13 .9465  
 SG1 6229.0 SG2 681.2 THA 19.40

ORBIT DETERMINATION ACCURACY

ST 55.9 SR 11.7 SS 42.2  
 CRT .9458 CR8 -.6771 CST -.4317  
 LSA 61.7 MSA 35.1 SSA 1.9  
 EL1 57.0 EL2 3.7 ALF 11.27



LAUNCH DATE SEP 7 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC DISTANCE 538.707 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.970 GAL 6.37 AZL 86.12 HCA 151.54 SMA 196.98 ECC .25831 INC 3.6767 V1 29.557  
 RP 247.71 LAP 1.85 LOP 135.83 VP 19.944 GAP -1.17 AZP 93.41 TAL 31.82 TAP 183.36 RCA 146.10 APO 247.86 V2 22.120  
 RC 319.522 GL 23.23 GP -26.15 ZAL 43.15 ZAP 65.09 ETS 168.59 ZAE 89.55 ETE 181.38 ZAC 62.93 ETC 285.93 LVI 3.43

PLANETOCENTRIC CONIC  
 C3 31.542 VHL 5.616 DLA 29.79 RAL 10.25 RAD 6647.6 VEL 12.307 PTH 7.24 VHP 2.781 DPA -17.75 RAP 27.67 ECC 1.5191  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 46 3867.48 -45.96 162.98 267.79 76.03 7 54 13 2867.5 -46.25 127.85  
 60.00 6 45 49 3878.02 -37.14 160.67 264.53 73.08 7 50 27 2878.0 -40.18 129.97  
 70.00 6 37 49 3901.62 -28.06 158.95 260.91 69.68 7 42 51 2901.6 -33.77 131.73  
 80.00 5 53 1 4043.17 -15.61 163.90 255.22 64.22 7 0 24 3043.2 -24.89 140.35  
 80.21 5 38 23 4089.96 -14.02 166.57 254.41 63.44 6 46 32 3090.0 -23.76 143.43  
 100.00 8 35 53 3517.64 -15.61 125.27 255.22 64.22 9 34 31 2517.6 -24.89 101.72  
 110.00 11 37 15 2948.44 -28.06 87.87 260.91 69.68 12 26 24 1948.4 -33.77 60.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0103 TRA-3.2131 TC3-4.1502 BAU 1.9147 SGT 6000.0 SGR 2203.0 SG3 1166.1 ST 57.1 SR 12.7 SS 43.1  
 RDE .0952 RRA -.6390 RC3-1.8417 FAU .39020 RRT .9443 RRF .9790 RTF .9359 CRT .9171 CR8 -.7554 CST -.4524  
 FDE 3.1492 FRA-4.4304 FC-10.7097 B8P 10887 SGB 6391.6 R23 .2540 R13 .9461 LSA 63.5 MSA 35.3 S8A 1.4  
 BDE .0958 BRA 3.2760 BC3 4.5405 FSP 1919 SG1 6354.9 S2 684.3 THA 19.36 EL1 58.3 EL2 4.9 ALF 11.58

LAUNCH DATE SEP 7 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC DISTANCE 542.483 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.977 GAL 6.32 AZL 86.01 HCA 152.42 SMA 197.12 ECC .25838 INC 3.9939 V1 29.557  
 RP 247.84 LAP 1.85 LOP 136.71 VP 19.942 GAP -1.37 AZP 93.54 TAL 31.51 TAP 183.93 RCA 146.18 APO 248.05 V2 22.107  
 RC 321.734 GL 23.95 GP -26.69 ZAL 43.70 ZAP 64.52 ETS 167.92 ZAE 88.56 ETE 180.85 ZAC 62.39 ETC 286.00 LVI 3.97

PLANETOCENTRIC CONIC  
 C3 31.625 VHL 5.624 DLA 30.55 RAL 10.15 RAD 6647.6 VEL 12.311 PTH 7.24 VHP 2.808 DPA -18.21 RAP 27.98 ECC 1.5205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 45 1 3885.87 -45.64 164.64 268.34 74.78 7 49 47 2885.9 -46.52 129.55  
 60.00 6 38 53 3902.23 -36.64 162.54 264.76 71.90 7 43 55 2902.2 -40.26 132.03  
 70.00 6 25 53 3940.64 -27.11 161.59 260.71 68.38 7 31 34 2940.6 -33.47 134.74  
 77.93 5 20 58 4144.78 -14.33 170.82 254.52 62.73 6 30 3 3144.8 -24.33 147.72  
 77.93 5 20 58 4144.78 -14.33 170.82 254.52 62.73 6 30 3 3144.8 -24.33 147.72  
 77.93 5 20 58 4144.78 -14.33 170.82 254.52 62.73 6 30 3 3144.8 -24.33 147.72  
 110.00 11 25 19 2987.48 -27.11 90.50 260.71 68.38 12 15 7 1987.5 -33.47 63.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0580 TRA-3.2603 TC3-4.2250 BAU 1.9520 SGT 6118.9 SGR 2241.9 SG3 1139.2 ST 58.4 SR 13.8 SS 44.1  
 RDE .1323 RRA -.6569 RC3-1.8658 FAU .38035 RRT .9457 RRF .9803 RTF .9354 CRT .8880 CR8 -.8163 CST -.4743  
 FDE 3.2184 FRA-4.3076 FC-10.4119 B8P 11148 SGB 6516.7 R23 .2592 R13 .9457 LSA 65.4 MSA 35.5 S8A 1.4  
 BDE .1445 BRA 3.3258 BC3 4.6168 FSP 1884 SG1 6480.2 S2 688.0 THA 19.34 EL1 59.7 EL2 6.2 ALF 12.01

LAUNCH DATE SEP 7 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC DISTANCE 546.259 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.984 GAL 6.28 AZL 85.68 HCA 153.30 SMA 197.25 ECC .25846 INC 4.1161 V1 29.557  
 RP 247.97 LAP 1.85 LOP 137.59 VP 19.940 GAP -1.57 AZP 93.68 TAL 31.20 TAP 184.50 RCA 146.27 APO 248.23 V2 22.095  
 RC 323.917 GL 24.71 GP -27.26 ZAL 44.26 ZAP 63.99 ETS 167.23 ZAE 87.60 ETE 180.32 ZAC 61.81 ETC 286.09 LVI 4.55

PLANETOCENTRIC CONIC  
 C3 31.734 VHL 5.633 DLA 31.34 RAL 10.03 RAD 6647.7 VEL 12.315 PTH 7.25 VHP 2.837 DPA -18.68 RAP 28.33 ECC 1.5223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 39 52 3905.46 -45.28 166.39 268.87 73.48 7 44 57 2905.5 -46.76 131.38  
 60.00 6 31 17 3926.38 -36.07 164.52 264.95 70.65 7 36 45 2926.4 -40.30 134.25  
 70.00 6 11 56 3985.59 -25.94 164.56 260.38 66.97 7 18 21 2985.6 -33.04 138.17  
 75.90 5 5 56 4191.60 -14.64 174.51 254.64 61.98 6 15 48 3191.6 -24.91 151.47  
 75.90 5 5 56 4191.60 -14.64 174.51 254.64 61.98 6 15 48 3191.6 -24.91 151.47  
 75.90 5 5 56 4191.60 -14.64 174.51 254.64 61.98 6 15 48 3191.6 -24.91 151.47  
 110.00 11 11 22 3032.41 -25.94 93.48 260.38 66.97 12 1 54 2032.4 -33.04 67.09

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1076 TRA-3.3087 TC3-4.2924 BAU 1.9899 SGT 6238.8 SGR 2284.2 SG3 1112.1 ST 59.8 SR 15.2 SS 45.0  
 RDE .1706 RRA -.6769 RC3-1.8907 FAU .37044 RRT .9471 RRF .9815 RTF .9351 CRT .8627 CR8 -.8612 CST -.4973  
 FDE 3.2799 FRA-4.1900 FC-10.1060 B8P 11395 SGB 6643.8 R23 .2641 R13 .9454 LSA 67.6 MSA 35.6 S8A 1.3  
 BDE .2017 BRA 3.3773 BC3 4.6903 FSP 1844 SG1 6607.6 S2 692.3 THA 19.34 EL1 61.2 EL2 7.5 ALF 12.58

LAUNCH DATE SEP 7 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC DISTANCE 550.034 EARTH TO MARS  
 RL 150.75 LAL .00 LOL 344.23 VL 32.991 GAL 6.20 AZL 85.78 HCA 154.18 SMA 197.39 ECC .25855 INC 4.2499 V1 29.557  
 RP 248.09 LAP 1.85 LOP 138.48 VP 19.939 GAP -1.76 AZP 93.83 TAL 30.89 TAP 185.07 RCA 146.36 APO 248.42 V2 22.084  
 RC 326.069 GL 25.50 GP -27.86 ZAL 44.86 ZAP 63.50 ETS 166.53 ZAE 86.67 ETE 179.77 ZAC 61.20 ETC 286.18 LVI 5.16

PLANETOCENTRIC CONIC  
 C3 31.872 VHL 5.646 DLA 32.16 RAL 9.88 RAD 6647.7 VEL 12.320 PTH 7.25 VHP 2.868 DPA -19.17 RAP 28.71 ECC 1.5245  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 34 15 3926.38 -44.86 168.23 269.39 72.12 7 39 42 2926.4 -46.99 133.35  
 60.00 6 22 52 3956.76 -35.41 166.64 265.08 69.35 7 28 49 2956.8 -40.29 136.67  
 70.00 5 54 59 4039.30 -24.47 168.04 259.83 65.39 7 2 18 3039.3 -32.38 142.23  
 74.01 4 52 25 4233.16 -14.96 177.83 254.75 61.19 6 2 58 3233.2 -25.51 154.86  
 74.01 4 52 25 4233.16 -14.96 177.83 254.75 61.19 6 2 58 3233.2 -25.51 154.86  
 74.01 4 52 25 4233.16 -14.96 177.83 254.75 61.19 6 2 58 3233.2 -25.51 154.86  
 110.00 10 54 25 3086.12 -24.47 96.95 259.83 65.39 11 45 51 2086.1 -32.38 71.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1600 TRA-3.3571 TC3-4.3573 BAU 2.0281 SGT 6358.3 SGR 2329.1 SG3 1084.1 ST 61.4 SR 16.8 SS 45.9  
 RDE .2109 RRA -.6981 RC3-1.9157 FAU .36033 RRT .9484 RRF .9826 RTF .9346 CRT .8421 CR8 -.8943 CST -.5206  
 FDE 3.3371 FRA-4.0713 FC3-9.7877 B8P 11643 SGB 6771.5 R23 .2690 R13 .9451 LSA 69.9 MSA 35.6 S8A 1.2  
 BDE .2647 BRA 3.4289 BC3 4.7598 FSP 1800 SG1 6735.4 S2 697.4 THA 19.37 EL1 63.0 EL2 8.6 ALF 13.26

LAUNCH DATE SEP 7 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 32.998 GAL 6.14 AZL 85.61 HCA 155.06 SMA 197.53 ECC .25864 INC 4.3903 V1 29.557
RP 248.20 LAP 1.85 LOP 139.36 VP 19.939 GAP -1.98 AZP 93.98 TAL 30.58 TAP 185.64 RCA 146.44 APO 248.62 V2 22.073
RC 328.191 GL 26.34 GP -28.49 ZAL 48.47 ZAP 63.05 ETS 165.80 ZAE 85.77 ETE 179.22 ZAC 60.55 ETC 286.28 LVI 5.81

PLANETOCENTRIC CONIC

C3 32.043 VHL 5.661 DLA 33.02 RAL 9.70 RAD 6647.8 VEL 12.327 PTH 7.26 VHP 2.901 DPA -19.69 RAP 29.12 ECC 1.3273
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 28 7 3948.79 -44.37 170.17 269.89 70.69 7 33 56 2948.8 -47.20 135.48
60.00 6 13 30 3987.80 -34.64 168.91 265.13 67.97 7 19 58 2987.8 -40.21 139.30
70.00 5 32 50 4108.37 -22.44 172.37 258.90 63.55 6 41 18 3108.4 -31.33 147.33
72.20 4 39 57 4271.03 -15.28 180.92 254.87 60.37 5 51 8 3271.0 -26.13 158.02
72.20 4 39 57 4271.03 -15.28 180.92 254.87 60.37 5 51 8 3271.0 -26.13 158.02
72.20 4 39 57 4271.03 -15.28 180.92 254.87 60.37 5 51 8 3271.0 -26.13 158.02
110.00 10 32 16 3155.19 -22.44 101.29 258.90 63.55 11 24 51 2155.2 -31.33 76.25

DIFFERENTIAL CORRECTIONS

TDE .2148 TRA-3.4059 TC3-4.4163 BAV 2.0664
RDE .2533 RRA -.7209 RC3-1.9399 FAU .34984
FDE 3.3897 FRA-3.9528 FC3-9.4521 B8P 11891
BDE .3321 BRA 3.4814 BC3 4.8236 F8P 1756

MID-COURSE EXECUTION ACCURACY

SGT 6476.8 SGR 2376.2 SG3 1034.8
RRF .9496 RRF .9836 RTF .9342
SGB 6898.9 R23 .7039 R13 .9447
SG1 6863.0 SG2 723.1 THA 19.42

ORBIT DETERMINATION ACCURACY

ST 63.1 SR 18.6 SS 46.8
CRT .8266 CR8 -.9186 CST -.9438
LSA 72.3 MSA 35.7 SSA 1.2
EL1 65.0 EL2 10.2 ALF 14.04

LAUNCH DATE SEP 7 1973

FLIGHT TIME 266.00

ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.005 GAL 6.08 AZL 85.46 HCA 155.94 SMA 197.67 ECC .25873 INC 4.5402 V1 29.557
RP 248.30 LAP 1.85 LOP 140.24 VP 19.939 GAP -2.16 AZP 94.15 TAL 30.27 TAP 186.20 RCA 146.53 APO 248.81 V2 22.062
RC 330.283 GL 27.22 GP -29.17 ZAL 46.11 ZAP 62.65 ETS 165.05 ZAE 84.90 ETE 178.65 ZAC 59.86 ETC 286.40 LVI 6.50

PLANETOCENTRIC CONIC

C3 32.252 VHL 5.679 DLA 33.92 RAL 9.49 RAD 6647.9 VEL 12.336 PTH 7.26 VHP 2.937 DPA -20.24 RAP 29.57 ECC 1.5308
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 21 22 3972.86 -43.81 172.21 270.34 69.20 7 27 35 2972.9 -47.37 137.78
60.00 6 2 58 4022.02 -33.74 171.37 265.09 66.51 7 10 0 3022.0 -40.05 142.20
70.00 4 55 57 4221.45 -18.85 179.18 256.94 60.98 6 6 19 3221.5 -29.13 155.40
70.45 4 28 12 4306.20 -15.60 183.84 254.99 59.49 5 39 58 3306.2 -26.76 161.02
70.45 4 28 12 4306.20 -15.60 183.84 254.99 59.49 5 39 58 3306.2 -26.76 161.02
70.45 4 28 12 4306.20 -15.60 183.84 254.99 59.49 5 39 58 3306.2 -26.76 161.02
110.00 9 55 23 3268.27 -18.85 108.10 256.94 60.98 10 49 52 2268.3 -29.13 84.32

DIFFERENTIAL CORRECTIONS

TDE .2737 TRA-3.4544 TC3-4.4689 BAV 2.1048
RDE .2981 RRA -.7455 RC3-1.9641 FAU .33918
FDE 3.4374 FRA-3.8344 FC3-9.1045 B8P 12143
BDE .4047 BRA 3.5339 BC3 4.8815 F8P 1706

MID-COURSE EXECUTION ACCURACY

SGT 6593.7 SGR 2426.7 SG3 1024.8
RRF .9508 RRF .9845 RTF .9337
SGB 7026.1 R23 .2786 R13 .9443
SG1 6990.2 SG2 709.5 THA 19.49

ORBIT DETERMINATION ACCURACY

ST 64.9 SR 20.5 SS 47.6
CRT .8165 CR8 -.9366 CST -.5677
LSA 75.0 MSA 35.7 SSA 1.1
EL1 67.1 EL2 11.5 ALF 14.93

LAUNCH DATE SEP 7 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.012 GAL 6.03 AZL 85.30 HCA 156.81 SMA 197.81 ECC .25883 INC 4.7005 V1 29.557
RP 248.40 LAP 1.85 LOP 141.12 VP 19.940 GAP -2.35 AZP 94.32 TAL 29.95 TAP 186.77 RCA 146.61 APO 249.01 V2 22.052
RC 332.344 GL 28.16 GP -29.88 ZAL 46.78 ZAP 62.29 ETS 164.28 ZAE 84.07 ETE 178.07 ZAC 59.13 ETC 286.52 LVI 7.23

PLANETOCENTRIC CONIC

C3 32.504 VHL 5.701 DLA 34.86 RAL 9.25 RAD 6648.0 VEL 12.346 PTH 7.27 VHP 2.975 DPA -20.81 RAP 30.06 ECC 1.5349
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 13 56 3998.82 -43.16 174.36 270.74 67.64 7 20 34 2998.8 -47.49 140.27
60.00 5 50 58 4060.18 -32.67 174.04 264.91 64.96 6 58 38 3060.2 -39.78 145.41
68.72 4 16 57 4339.35 -15.91 186.63 255.10 58.57 5 29 16 3339.4 -27.41 163.92
68.72 4 16 57 4339.35 -15.91 186.63 255.10 58.57 5 29 16 3339.4 -27.41 163.92
68.72 4 16 57 4339.35 -15.91 186.63 255.10 58.57 5 29 16 3339.4 -27.41 163.92
68.72 4 16 57 4339.35 -15.91 186.63 255.10 58.57 5 29 16 3339.4 -27.41 163.92
68.72 4 16 57 4339.35 -15.91 186.63 255.10 58.57 5 29 16 3339.4 -27.41 163.92

DIFFERENTIAL CORRECTIONS

TDE .3329 TRA-3.9031 TC3-4.3188 BAV 2.1446
RDE .3448 RRA -.7726 RC3-1.9888 FAU .32834
FDE 3.4759 FRA-3.7184 FC3-8.7453 B8P 12370
BDE .4793 BRA 3.5893 BC3 4.9352 F8P 1652

MID-COURSE EXECUTION ACCURACY

SGT 6713.1 SGR 2481.3 SG3 994.1
RRF .9519 RRF .9853 RTF .9332
SGB 7157.0 R23 .2832 R13 .9439
SG1 7121.0 SG2 716.7 THA 19.59

ORBIT DETERMINATION ACCURACY

ST 67.0 SR 22.7 SS 48.4
CRT .8107 CR8 -.9494 CST -.5901
LSA 77.8 MSA 35.7 SSA 1.0
EL1 69.5 EL2 12.8 ALF 15.88

LAUNCH DATE SEP 7 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.020 GAL 5.97 AZL 85.13 HCA 157.68 SMA 197.95 ECC .25894 INC 4.8724 V1 29.557
RP 248.50 LAP 1.85 LOP 141.99 VP 19.942 GAP -2.54 AZP 94.51 TAL 29.63 TAP 187.32 RCA 146.69 APO 249.21 V2 22.043
RC 334.378 GL 29.15 GP -30.64 ZAL 47.48 ZAP 61.98 ETS 163.49 ZAE 83.27 ETE 177.47 ZAC 58.35 ETC 286.65 LVI 8.00

PLANETOCENTRIC CONIC

C3 32.808 VHL 5.728 DLA 35.84 RAL 8.98 RAD 6648.1 VEL 12.358 PTH 7.28 VHP 3.016 DPA -21.41 RAP 30.59 ECC 1.5399
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 5 40 4026.93 -42.41 176.84 271.06 66.01 7 12 47 3026.9 -47.57 142.99
60.00 5 37 4 4103.42 -31.39 176.98 264.55 63.30 6 45 28 3103.4 -39.35 149.01
67.00 4 6 4 4370.86 -16.23 189.33 255.21 57.59 5 18 55 3370.9 -28.08 166.73
67.00 4 6 4 4370.86 -16.23 189.33 255.21 57.59 5 18 55 3370.9 -28.08 166.73
67.00 4 6 4 4370.86 -16.23 189.33 255.21 57.59 5 18 55 3370.9 -28.08 166.73
67.00 4 6 4 4370.86 -16.23 189.33 255.21 57.59 5 18 55 3370.9 -28.08 166.73
67.00 4 6 4 4370.86 -16.23 189.33 255.21 57.59 5 18 55 3370.9 -28.08 166.73

DIFFERENTIAL CORRECTIONS

TDE .3951 TRA-3.5568 TC3-4.5569 BAV 2.1848
RDE .3945 RRA -.8024 RC3-2.0123 FAU .31718
FDE 3.5088 FRA-3.6031 FC3-8.3702 B8P 12604
BDE .5583 BRA 3.6462 BC3 4.9814 F8P 1596

MID-COURSE EXECUTION ACCURACY

SGT 6831.6 SGR 2539.6 SG3 982.2
RRF .9530 RRF .9861 RTF .9326
SGB 7288.4 R23 .2876 R13 .9435
SG1 7252.2 SG2 724.6 THA 19.71

ORBIT DETERMINATION ACCURACY

ST 69.2 SR 24.9 SS 49.1
CRT .8085 CR8 -.9590 CST -.6120
LSA 80.9 MSA 35.7 SSA 1.0
EL1 72.2 EL2 14.1 ALF 16.91

LAUNCH DATE SEP 7 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 6 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 33.027 GAL 5.91 AZL 84.94 HCA 158.56 SMA 198.09 ECC .25905 INC 5.0579 V1 29.557  
 RP 248.59 LAP 1.85 LOP 142.87 VP 19.945 GAP -2.74 AZP 94.71 TAL 29.32 TAP 187.88 RCA 146.78 APO 249.41 V2 22.034  
 RC 336.377 GL 30.19 GP -31.45 ZAL 48.21 ZAP 61.72 ETS 182.68 ZAE 82.51 ETE 176.85 ZAC 57.52 ETC 286.80 LVI 8.83

PLANETOCENTRIC CONIC: C3 33.166 VHL 5.759 DLA 36.88 RAL 8.61 RAD 6648.2 VEL 12.373 PTH 7.29 VHP 3.060 DPA -22.05 RAP 31.17 ECC 1.5458  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 56 26 4057.52 -41.53 179.06 271.29 64.31 7 4 4 3057.5 -47.56 145.95  
 60.00 5 20 33 4153.61 -29.80 180.29 263.93 61.51 6 29 47 3153.6 -38.71 153.12  
 65.28 3 55 27 4401.09 -16.54 191.97 255.31 56.56 5 8 48 3401.1 -28.77 169.50  
 65.28 3 55 27 4401.09 -16.54 191.97 255.31 56.56 5 8 48 3401.1 -28.77 169.50  
 65.28 3 55 27 4401.09 -16.54 191.97 255.31 56.56 5 8 48 3401.1 -28.77 169.50  
 65.28 3 55 27 4401.09 -16.54 191.97 255.31 56.56 5 8 48 3401.1 -28.77 169.50

Differential Corrections: TDE .4611 TRA-3.6085 TC3-4.5868 BAU 2.2248 SGT 6947.2 SGR 2600.7 SG3 928.7 ST 71.6 SR 27.4 SS 49.7  
 RDE .4477 RRA -.8342 RC3-2.0340 FAU .30552 RRT .9541 RRF .9867 RTF .9320 CRT .8092 CRS -.9662 CST -.6332  
 FDE 3.5364 FRA-3.4847 FC3-7.9749 BSP 12844 SGB 7418.0 R23 .2922 R13 .9430 LSA 84.1 MSA 35.7 S3A .9  
 BDE .6427 BRA 3.7037 BC3 5.0175 FSP 1538 SGI 7381.7 SG2 733.1 THA 19.86 EL1 75.1 EL2 15.3 ALF 17.99

LAUNCH DATE SEP 7 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 8 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 33.034 GAL 5.85 AZL 84.74 HCA 159.44 SMA 198.24 ECC .25916 INC 5.2579 V1 29.557  
 RP 248.67 LAP 1.84 LOP 143.75 VP 19.948 GAP -2.93 AZP 94.92 TAL 29.00 TAP 188.43 RCA 146.86 APO 249.61 V2 22.026  
 RC 338.347 GL 31.30 GP -32.30 ZAL 48.98 ZAP 61.51 ETS 161.85 ZAE 81.79 ETE 176.22 ZAC 56.63 ETC 286.97 LVI 9.71

PLANETOCENTRIC CONIC: C3 33.594 VHL 5.796 DLA 37.97 RAL 8.21 RAD 6648.4 VEL 12.390 PTH 7.30 VHP 3.109 DPA -22.73 RAP 31.79 ECC 1.5529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 48 3 4091.02 -40.51 181.62 271.39 62.54 6 54 14 3091.0 -47.47 149.18  
 60.00 5 0 4 4214.33 -27.77 184.14 262.90 59.53 6 10 19 3214.3 -37.72 157.98  
 63.54 3 44 57 4430.33 -16.84 194.57 255.40 55.46 4 58 48 3430.3 -29.47 172.25  
 63.54 3 44 57 4430.33 -16.84 194.57 255.40 55.46 4 58 48 3430.3 -29.47 172.25  
 63.54 3 44 57 4430.33 -16.84 194.57 255.40 55.46 4 58 48 3430.3 -29.47 172.25  
 63.54 3 44 57 4430.33 -16.84 194.57 255.40 55.46 4 58 48 3430.3 -29.47 172.25

Differential Corrections: TDE .5278 TRA-3.6623 TC3-4.6090 BAU 2.2664 SGT 7064.3 SGR 2666.3 SG3 893.9 ST 74.1 SR 30.0 SS 50.3  
 RDE .5041 RRA -.8690 RC3-2.0548 FAU .29354 RRT .9551 RRF .9873 RTF .9311 CRT .8115 CRS -.9716 CST -.6523  
 FDE 3.5552 FRA-3.3644 FC3-7.5648 BSP 13072 SGB 7550.7 R23 .2968 R13 .9424 LSA 87.4 MSA 35.8 S3A .9  
 BDE .7298 BRA 3.7640 BC3 5.0463 FSP 1478 SGI 7514.1 SG2 742.8 THA 20.03 EL1 78.2 EL2 16.6 ALF 19.09

LAUNCH DATE SEP 7 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 10 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 33.042 GAL 5.79 AZL 84.53 HCA 160.31 SMA 198.38 ECC .25928 INC 5.4748 V1 29.557  
 RP 248.75 LAP 1.84 LOP 144.63 VP 19.952 GAP -3.12 AZP 95.16 TAL 28.67 TAP 188.99 RCA 146.94 APO 249.82 V2 22.019  
 RC 340.287 GL 32.49 GP -33.22 ZAL 49.78 ZAP 61.37 ETS 160.99 ZAE 81.12 ETE 175.57 ZAC 55.69 ETC 287.15 LVI 10.65

PLANETOCENTRIC CONIC: C3 34.101 VHL 5.840 DLA 39.11 RAL 7.75 RAD 6648.6 VEL 12.410 PTH 7.32 VHP 3.161 DPA -23.45 RAP 32.45 ECC 1.5612  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 34 15 4127.97 -39.31 184.35 271.32 60.68 6 43 3 3128.0 -47.25 152.73  
 60.00 4 32 16 4294.65 -24.90 189.00 261.13 57.23 5 43 51 3294.7 -36.09 164.17  
 61.78 3 34 31 4458.81 -17.13 197.14 255.48 54.29 4 48 50 3458.8 -30.18 175.01  
 61.78 3 34 31 4458.81 -17.13 197.14 255.48 54.29 4 48 50 3458.8 -30.18 175.01  
 61.78 3 34 31 4458.81 -17.13 197.14 255.48 54.29 4 48 50 3458.8 -30.18 175.01  
 61.78 3 34 31 4458.81 -17.13 197.14 255.48 54.29 4 48 50 3458.8 -30.18 175.01

Differential Corrections: TDE .5952 TRA-3.7198 TC3-4.6219 BAU 2.3100 SGT 7183.3 SGR 2740.5 SG3 859.1 ST 76.8 SR 32.8 SS 50.7  
 RDE .5828 RRA -.9100 RC3-2.0768 FAU .28168 RRT .9583 RRF .9878 RTF .9307 CRT .8163 CRS -.9754 CST -.6706  
 FDE 3.5570 FRA-3.2547 FC3-7.1504 BSP 13270 SGB 7688.3 R23 .3003 R13 .9422 LSA 90.9 MSA 35.8 S3A .8  
 BDE .8190 BRA 3.8293 BC3 5.0670 FSP 1404 SGI 7651.4 SG2 752.3 THA 20.25 EL1 81.6 EL2 17.8 ALF 20.21

LAUNCH DATE SEP 7 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 12 1974

Heliocentric Conic: RL 150.75 LAL .00 LOL 344.23 VL 33.049 GAL 5.73 AZL 84.29 HCA 161.18 SMA 198.52 ECC .25941 INC 5.7109 V1 29.557  
 RP 248.82 LAP 1.84 LOP 145.50 VP 19.956 GAP -3.30 AZP 95.41 TAL 28.35 TAP 189.53 RCA 147.03 APO 250.02 V2 22.012  
 RC 342.198 GL 33.75 GP -34.19 ZAL 50.63 ZAP 61.28 ETS 160.12 ZAE 80.49 ETE 174.91 ZAC 54.68 ETC 287.36 LVI 11.63

PLANETOCENTRIC CONIC: C3 34.701 VHL 5.891 DLA 40.31 RAL 7.20 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 3.219 DPA -24.21 RAP 33.17 ECC 1.5711  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 20 41 4169.16 -37.90 187.28 271.02 58.75 6 30 10 3169.2 -46.86 156.63  
 59.99 3 24 2 4486.75 -17.41 199.71 255.53 53.05 4 38 49 3486.8 -30.90 177.78  
 59.99 3 24 2 4486.75 -17.41 199.71 255.53 53.05 4 38 49 3486.8 -30.90 177.78  
 59.99 3 24 2 4486.75 -17.41 199.71 255.53 53.05 4 38 49 3486.8 -30.90 177.78  
 59.99 3 24 2 4486.75 -17.41 199.71 255.53 53.05 4 38 49 3486.8 -30.90 177.78  
 59.99 3 24 2 4486.75 -17.41 199.71 255.53 53.05 4 38 49 3486.8 -30.90 177.78

Differential Corrections: TDE .6692 TRA-3.7731 TC3-4.6167 BAU 2.3500 SGT 7291.7 SGR 2810.3 SG3 819.6 ST 79.8 SR 35.8 SS 51.2  
 RDE .6305 RRA -.9489 RC3-2.0890 FAU .26813 RRT .9570 RRF .9880 RTF .9290 CRT .8200 CRS -.9787 CST -.6864  
 FDE 3.5709 FRA-3.1168 FC3-6.8893 BSP 13559 SGB 7814.6 R23 .3066 R13 .9409 LSA 94.6 MSA 36.0 S3A .7  
 BDE .9195 BRA 3.8906 BC3 5.0673 FSP 1354 SGI 7777.1 SG2 764.7 THA 20.45 EL1 85.2 EL2 19.2 ALF 21.39

LAUNCH DATE SEP 7 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC

RL 190.75 LAL .00 LOL 344.23 VL 33.056 GAL 5.67 AZL 84.03 HCA 162.06 SMA 198.67 ECC .25954 INC 5.9689 V1 29.557
RP 248.88 LAP 1.84 LOP 146.38 VP 19.961 GAP -3.49 AZP 95.68 TAL 26.02 TAP 190.08 RCA 147.11 APO 250.23 V2 22.008
RC 344.074 GL 35.09 GP -35.23 ZAL 51.53 ZAP 61.27 ETS 159.23 ZAE 79.92 ETE 174.23 ZAC 53.61 ETC 287.59 LVI 12.72

PLANETOCENTRIC CONIC

C3 35.413 VHL 5.951 DLA 41.58 RAL 6.56 RAD 6640.0 VEL 12.462 PTH 7.36 VHP 3.283 DPA -25.02 RAP 33.95 ECC 1.5828
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 4 50 4215.69 -36.21 190.44 270.40 56.73 6 15 6 3215.7 -46.26 160.96
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60
58.15 3 13 25 4514.34 -17.66 202.28 255.55 51.72 4 28 39 3514.3 -31.62 180.60

DIFFERENTIAL CORRECTIONS

TDE .7442 TRA-3.8278 TC3-4.5964 BAU 2.3921
RDE .7031 RRA-.9923 RC3-2.0980 FAU .25414
FDE 3.5711 FRA-2.9782 FC3-6.2129 B8P 13857
BDE 1.0239 BRA 3.9543 BC3 5.0526 F8P 1298

DISTANCE 583.969

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 7396.7 SGR 2885.2 SG3 778.5
RRT .9576 RRF .9881 RTF .9272
SGB 7939.5 R23 .7129 R13 .9395
SG1 7901.3 SG2 777.8 THA 20.69

ST 82.5 SR 39.1 SS 51.5
CRT .8246 CR8 -.9811 CST -.7004
LSA 98.4 MSA 36.2 SSA .7
EL1 89.0 EL2 20.5 ALF 22.59

LAUNCH DATE SEP 7 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC

RL 190.75 LAL .00 LOL 344.23 VL 33.064 GAL 5.60 AZL 83.75 HCA 162.93 SMA 198.81 ECC .25967 INC 6.2523 V1 29.557
RP 248.94 LAP 1.83 LOP 147.26 VP 19.967 GAP -3.68 AZP 95.98 TAL 27.70 TAP 190.63 RCA 147.19 APO 250.44 V2 22.000
RC 345.920 GL 36.52 GP -36.34 ZAL 52.47 ZAP 61.33 ETS 158.32 ZAE 79.40 ETE 173.53 ZAC 52.46 ETC 287.85 LVI 13.86

PLANETOCENTRIC CONIC

C3 36.260 VHL 6.022 DLA 42.91 RAL 5.81 RAD 6649.3 VEL 12.496 PTH 7.38 VHP 3.354 DPA -25.88 RAP 34.79 ECC 1.5967
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 45 55 4269.29 -34.15 193.90 269.34 54.60 5 57 4 3269.3 -45.34 165.81
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48
56.27 3 2 34 4541.75 -17.87 204.87 255.54 50.31 4 18 16 3541.7 -32.34 183.48

DIFFERENTIAL CORRECTIONS

TDE .8132 TRA-3.8898 TC3-4.5660 BAU 2.4381
RDE .7761 RRA-1.0459 RC3-2.1090 FAU .24052
FDE 3.5401 FRA-2.8550 FC3-5.7427 B8P 14078
BDE 1.1241 BRA 4.0279 BC3 5.0295 F8P 1221

DISTANCE 587.735

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 7508.1 SGR 2973.6 SG3 737.9
RRT .9587 RRF .9881 RTF .9261
SGB 8075.6 R23 .3174 R13 .9387
SG1 8036.8 SG2 790.3 THA 21.00

ST 85.5 SR 42.3 SS 51.5
CRT .8299 CR8 -.9825 CST -.7121
LSA 102.1 MSA 36.4 SSA .6
EL1 92.9 EL2 21.7 ALF 23.72

LAUNCH DATE SEP 7 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 18 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.071 GAL 5.34 AZL 83.43 HCA 163.80 SMA 198.98 ECC .25981 INC 6.5649 V1 29.557
RP 249.00 LAP 1.83 LOP 146.13 VP 19.974 GAP -3.86 AZP 96.31 TAL 27.37 TAP 191.17 RCA 147.27 APO 250.65 V2 21.995
RC 347.734 GL 38.06 GP -37.53 ZAL 53.48 ZAP 61.47 ETS 157.40 ZAE 78.94 ETE 172.81 ZAC 51.23 ETC 288.15 LVI 15.09

PLANETOCENTRIC CONIC

C3 37.269 VHL 6.105 DLA 44.32 RAL 4.93 RAD 6649.7 VEL 12.536 PTH 7.41 VHP 3.434 DPA -26.80 RAP 35.70 ECC 1.6133
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 4 22 27 4333.28 -31.55 197.80 267.63 52.34 5 34 40 3333.3 -43.97 171.33
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44
54.34 2 51 22 4569.17 -18.04 207.49 255.46 48.81 4 7 32 3569.2 -33.05 186.44

DIFFERENTIAL CORRECTIONS

TDE .6860 TRA-3.9479 TC3-4.5108 BAU 2.4809
RDE .8812 RRA-1.0984 RC3-2.1068 FAU .22512
FDE 3.5164 FRA-2.7026 FC3-5.2293 B8P 14418
BDE 1.2356 BRA 4.0978 BC3 4.9784 F8P 1165

DISTANCE 591.499

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 7605.1 SGR 3057.2 SG3 692.4
RRT .9591 RRF .9877 RTF .9232
SGB 8196.8 R23 .3256 R13 .9364
SG1 8158.8 SG2 806.5 THA 21.30

ST 88.5 SR 46.0 SS 51.5
CRT .8332 CR8 -.9836 CST -.7205
LSA 106.0 MSA 36.8 SSA .6
EL1 97.0 EL2 23.2 ALF 24.94

LAUNCH DATE SEP 7 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 20 1974

HELIOCENTRIC CONIC

RL 150.75 LAL .00 LOL 344.23 VL 33.079 GAL 5.48 AZL 83.09 HCA 164.67 SMA 199.11 ECC .25995 INC 6.9119 V1 29.557
RP 249.05 LAP 1.82 LOP 149.01 VP 19.981 GAP -4.05 AZP 96.67 TAL 27.04 TAP 191.71 RCA 147.35 APO 250.87 V2 21.990
RC 349.515 GL 39.70 GP -38.79 ZAL 54.54 ZAP 61.70 ETS 156.48 ZAE 78.56 ETE 172.09 ZAC 49.92 ETC 288.48 LVI 16.39

PLANETOCENTRIC CONIC

C3 38.478 VHL 6.203 DLA 45.79 RAL 3.90 RAD 6850.1 VEL 12.584 PTH 7.45 VHP 3.523 DPA -27.78 RAP 36.68 ECC 1.6333
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 3 51 8 4415.27 -28.05 202.47 264.78 49.85 5 4 44 3415.3 -41.81 178.04
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50
52.35 2 39 43 4596.78 -18.16 210.14 255.31 47.20 3 56 20 3596.8 -33.73 189.50

DIFFERENTIAL CORRECTIONS

TDE .9378 TRA-4.0232 TC3-4.4512 BAU 2.5353
RDE .9376 RRA-1.1733 RC3-2.1157 FAU .21142
FDE 3.4301 FRA-2.5927 FC3-4.7567 B8P 14532
BDE 1.3261 BRA 4.1908 BC3 4.9284 F8P 1060

DISTANCE 595.265

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 7723.4 SGR 3171.0 SG3 650.4
RRT .9607 RRF .9875 RTF .9226
SGB 8349.0 R23 .3280 R13 .9362
SG1 8308.8 SG2 818.1 THA 21.75

ST 91.3 SR 49.3 SS 50.8
CRT .8374 CR8 -.9836 CST -.7257
LSA 109.4 MSA 37.0 SSA .5
EL1 100.9 EL2 24.4 ALF 25.98

LAUNCH DATE SEP 7 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 22 1974

HELIOCENTRIC CONIC

DISTANCE 599.027

EARTH TO MARS

RL 150.75 LAL .00 LOL 344.23 VL 33.086 GAL 5.42 AZL 82.70 HCA 165.54 SMA 199.25 ECC .26010 INC 7.2993 V1 29.557  
 RP 249.09 LAP 1.82 LOP 149.88 VP 19.989 GAP -4.23 AZP 97.07 TAL 26.71 TAP 192.25 RCA 147.43 APO 251.08 V2 21.986  
 RC 351.261 GL 41.47 GP -40.15 ZAL 55.67 ZAP 82.03 ETS 155.56 ZAE 78.25 ETE 171.36 ZAC 48.51 ETC 288.87 LVI 17.79

PLANETOCENTRIC CONIC

C3 39.935 VHL 6.319 DLA 47.35 RAL 2.87 RAD 6850.6 VEL 12.641 PTH 7.49 VHP 3.625 DPA -28.83 RAP 37.75 ECC 1.6572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 2 55 11 4555.73 -21.66 209.73 258.61 46.54 4 11 7 3555.7 -37.21 188.33  
 50.30 2 27 27 4624.83 -18.20 212.84 255.05 45.50 3 44 32 3624.8 -34.36 192.68  
 50.30 2 27 27 4624.83 -18.20 212.84 255.05 45.50 3 44 32 3624.8 -34.36 192.68  
 50.30 2 27 27 4624.83 -18.20 212.84 255.05 45.50 3 44 32 3624.8 -34.36 192.68  
 50.30 2 27 27 4624.83 -18.20 212.84 255.05 45.50 3 44 32 3624.8 -34.36 192.68  
 50.30 2 27 27 4624.83 -18.20 212.84 255.05 45.50 3 44 32 3624.8 -34.36 192.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9858 TRA-4.0965 TC3-4.3630 BAU 2.5871 SGT 7826.7 SGR 3280.1 SG3 603.0 ST 94.0 SR 53.0 SS 50.1  
 RDE 1.0273 RRA-1.2488 RC3-2.1081 FAU .19568 RRT .9616 RRF .9868 RTF .9198 CRT .8379 CRS -.9834 CST -.7255  
 FDE 3.3501 FRA-2.4482 FC3-4.2421 BSP 14753 SGB 8486.2 R23 .3355 R13 .9340 LSA 112.8 HSA 37.7 SSA .5  
 BDE 1.4238 BRA 4.2626 BC3 4.8456 FSP 980 SGI 8445.1 SG2 834.7 THA 22.18 EL1 104.7 EL2 26.0 ALF 27.12

LAUNCH DATE SEP 8 1973

FLIGHT TIME 146.00

ARRIVAL DATE FEB 1 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.086 GAL 8.84 AZL 88.90 HCA 99.93 SMA 197.17 ECC .27902 INC 1.0982 V1 29.584
RP 233.25 LAP 1.08 LOP 85.13 VP 21.560 GAP 12.37 AZP 90.19 TAL 42.28 TAP 142.21 RCA 142.16 APO 252.19 V2 23.573
RC 170.003 GL 5.87 GP -10.14 ZAL 29.27 ZAP 134.80 ETS 192.09 ZAE 167.16 ETE 247.52 ZAC 73.69 ETC 263.25 LVI -7.66

PLANETOCENTRIC CONIC

C3 39.959 VHL 6.321 DLA 10.73 RAL 10.62 RAD 6650.6 VEL 12.642 PTH 7.49 VHP 3.529 DPA 5.28 RAP 41.98 ECC 1.6576
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 13 22 3520.35 -46.54 129.99 255.29 101.27 9 12 3 2520.4 -36.94 100.01
60.00 8 41 14 3446.22 -39.79 124.81 256.79 97.04 9 38 40 2446.2 -32.70 96.17
70.00 9 20 16 3331.37 -33.96 116.20 257.48 93.67 10 15 47 2331.4 -28.85 88.68
80.00 10 16 21 3155.65 -29.81 103.11 257.72 91.80 11 8 57 2155.7 -26.04 76.32
90.00 11 32 24 2910.21 -26.26 85.12 257.77 91.05 12 20 55 1910.2 -24.98 58.59
100.00 12 59 13 2630.12 -29.81 64.48 257.72 91.60 13 43 3 1630.1 -26.04 37.69
110.00 14 19 42 2378.19 -33.96 45.12 257.48 93.87 14 59 20 1378.2 -28.85 17.59

DIFFERENTIAL CORRECTIONS

TDE -.3848 TRA -.7852 TC3 .2633 BAU .2606
RDE -.7341 RRA .1062 RC3 -.4106 FAU .27433
FDE -.1451 FRA -3.3153 FC3 -5.9435 BSP 879
BDE .8286 BRA .7923 BC3 .4877 FSP 1123

MID-COURSE EXECUTION ACCURACY

SGT 870.1 SGR 849.6 SG3 701.0
RRT -.0160 RRF .5350 RTF -.0340
SGB 1216.1 R23 -.5030 R13 .1840
SG1 872.1 SG2 847.5 THA 163.09

ORBIT DETERMINATION ACCURACY

ST 20.5 SR 33.3 SS 14.5
CRT .8234 CRS -.1008 CST -.6199
LSA 38.0 MSA 17.2 SSA 2.7
EL1 37.8 EL2 10.3 ALF 60.69

LAUNCH DATE SEP 8 1973

FLIGHT TIME 148.00

ARRIVAL DATE FEB 3 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.967 GAL 8.82 AZL 88.87 HCA 100.92 SMA 196.80 ECC .27763 INC 1.1282 V1 29.584
RP 233.62 LAP 1.11 LOP 86.13 VP 21.489 GAP 12.05 AZP 90.21 TAL 42.36 TAP 143.26 RCA 142.16 APO 251.44 V2 23.536
RC 172.941 GL 5.84 GP -10.38 ZAL 29.23 ZAP 133.32 ETS 191.80 ZAE 166.29 ETE 242.13 ZAC 73.55 ETC 263.31 LVI -7.56

PLANETOCENTRIC CONIC

C3 39.707 VHL 6.301 DLA 10.86 RAL 10.48 RAD 6650.6 VEL 12.632 PTH 7.48 VHP 3.452 DPA 4.89 RAP 41.61 ECC 1.6935
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 12 20 3521.34 -46.55 130.08 255.13 101.20 9 11 2 2521.3 -36.98 100.07
60.00 8 40 3 3447.60 -39.80 124.93 256.61 96.96 9 37 30 2447.6 -32.73 96.26
70.00 9 18 54 3333.25 -33.97 116.35 257.29 93.79 10 14 28 2333.3 -28.90 88.81
80.00 10 14 50 3158.05 -29.81 103.29 257.53 91.71 11 7 28 2158.0 -26.06 76.49
90.00 11 30 49 2912.84 -28.27 85.31 257.57 90.96 12 19 22 1912.8 -25.02 56.77
100.00 12 57 42 2632.52 -29.81 64.66 257.53 91.71 13 41 34 1632.5 -26.08 37.86
110.00 14 18 21 2380.07 -33.97 45.26 257.29 93.79 14 58 1 1380.1 -28.90 17.72

DIFFERENTIAL CORRECTIONS

TDE -.3909 TRA -.8044 TC3 .2337 BAU .2603
RDE -.7311 RRA .0947 RC3 -.4310 FAU .28580
FDE -.1375 FRA -3.4760 FC3 -6.2314 BSP 890
BDE .8291 BRA .8100 BC3 .4903 FSP 1182

MID-COURSE EXECUTION ACCURACY

SGT 876.2 SGR 883.0 SG3 733.4
RRT .0148 RRF .5552 RTF .0173
SGB 1229.8 R23 .5101 R13 .2194
SG1 878.8 SG2 860.4 THA 21.91

ORBIT DETERMINATION ACCURACY

ST 21.0 SR 33.3 SS 14.9
CRT .8240 CRS -.0924 CST -.6136
LSA 38.1 MSA 17.6 SSA 2.7
EL1 37.9 EL2 10.4 ALF 60.03

LAUNCH DATE SEP 8 1973

FLIGHT TIME 150.00

ARRIVAL DATE FEB 5 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.949 GAL 8.80 AZL 88.84 HCA 101.92 SMA 196.46 ECC .27634 INC 1.1582 V1 29.564
RP 233.99 LAP 1.13 LOP 87.12 VP 21.421 GAP 11.74 AZP 90.24 TAL 42.42 TAP 144.33 RCA 142.17 APO 250.75 V2 23.498
RC 175.886 GL 6.01 GP -10.62 ZAL 29.20 ZAP 131.82 ETS 191.52 ZAE 165.31 ETE 237.31 ZAC 73.41 ETC 263.38 LVI -7.46

PLANETOCENTRIC CONIC

C3 39.465 VHL 6.282 DLA 11.00 RAL 10.36 RAD 6650.5 VEL 12.623 PTH 7.48 VHP 3.379 DPA 4.49 RAP 41.21 ECC 1.6495
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 11 19 3522.49 -46.57 130.19 254.99 101.12 9 10 2 2522.5 -37.02 100.15
60.00 8 38 52 3449.17 -39.81 125.06 256.45 96.87 9 36 22 2449.2 -32.78 96.37
70.00 9 17 33 3335.35 -33.98 116.51 257.13 93.69 10 13 9 2335.4 -28.94 88.95
80.00 10 13 19 3160.69 -29.82 103.49 257.35 91.60 11 5 59 2160.7 -26.13 76.67
90.00 11 29 13 2915.73 -28.27 85.52 257.39 90.85 12 17 48 1915.7 -25.07 58.97
100.00 12 56 11 2635.16 -29.82 64.86 257.35 91.60 13 40 6 1635.2 -26.13 38.04
110.00 14 17 0 2382.17 -33.98 45.43 257.13 93.69 14 56 42 1382.2 -28.94 17.87

DIFFERENTIAL CORRECTIONS

TDE -.3973 TRA -.8254 TC3 .2019 BAU .2612
RDE -.7278 RRA .0828 RC3 -.4522 FAU .29748
FDE -.1280 FRA -3.6381 FC3 -6.5258 BSP 909
BDE .8293 BRA .8296 BC3 .4951 FSP 1242

MID-COURSE EXECUTION ACCURACY

SGT 885.2 SGR 877.2 SG3 786.3
RRT .0488 RRF .5753 RTF .112
SGB 1246.2 R23 .4050 R13 .4109
SG1 902.7 SG2 859.1 THA 39.72

ORBIT DETERMINATION ACCURACY

ST 21.5 SR 33.2 SS 15.3
CRT .8242 CRS -.0836 CST -.6073
LSA 38.3 MSA 18.0 SSA 2.7
EL1 38.1 EL2 10.6 ALF 59.34

LAUNCH DATE SEP 8 1973

FLIGHT TIME 152.00

ARRIVAL DATE FEB 7 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.933 GAL 8.78 AZL 88.81 HCA 102.90 SMA 196.14 ECC .27512 INC 1.1882 V1 29.584
RP 234.35 LAP 1.18 LOP 88.11 VP 21.354 GAP 11.43 AZP 90.27 TAL 42.46 TAP 145.37 RCA 142.18 APO 250.11 V2 23.461
RC 178.836 GL 6.19 GP -10.87 ZAL 29.19 ZAP 130.30 ETS 191.23 ZAE 164.22 ETE 233.02 ZAC 73.27 ETC 263.45 LVI -7.37

PLANETOCENTRIC CONIC

C3 39.230 VHL 6.263 DLA 11.13 RAL 10.24 RAD 6650.4 VEL 12.614 PTH 7.47 VHP 3.309 DPA 4.08 RAP 40.80 ECC 1.6456
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 10 20 3523.81 -46.58 130.31 254.87 101.02 9 9 4 2523.8 -37.07 100.24
60.00 8 37 43 3450.93 -39.82 125.20 256.32 96.77 9 35 14 2450.9 -32.83 96.49
70.00 9 16 12 3337.67 -33.99 116.69 256.98 93.59 10 11 50 2337.7 -28.99 89.11
80.00 10 11 47 3163.57 -29.82 103.70 257.20 91.49 11 4 30 2163.6 -26.18 76.87
90.00 11 27 36 2918.88 -28.27 85.75 257.23 90.73 12 16 15 1918.9 -25.12 59.19
100.00 12 54 39 2638.04 -29.82 65.07 257.20 91.49 13 38 37 1638.0 -26.18 38.24
110.00 14 15 39 2384.49 -33.99 45.61 256.98 93.59 14 55 23 1384.5 -28.99 18.03

DIFFERENTIAL CORRECTIONS

TDE -.4040 TRA -.8481 TC3 .1663 BAU .2634
RDE -.7244 RRA .0705 RC3 -.4739 FAU .30920
FDE -.1160 FRA -3.8017 FC3 -6.8235 BSP 930
BDE .8294 BRA .8510 BC3 .5022 FSP 1303

MID-COURSE EXECUTION ACCURACY

SGT 897.3 SGR 892.1 SG3 799.5
RRT .0865 RRF .5950 RTF .1278
SGB 1265.3 R23 .3620 R13 .4783
SG1 932.7 SG2 855.0 THA 43.06

ORBIT DETERMINATION ACCURACY

ST 22.0 SR 33.2 SS 15.7
CRT .8244 CRS -.0740 CST -.6005
LSA 38.5 MSA 18.4 SSA 2.7
EL1 38.3 EL2 10.8 ALF 58.61

LAUNCH DATE SEP 8 1973

FLIGHT TIME 154.00

ARRIVAL DATE FEB 9 1974

Heliocentric Conic: RL 150.71 LAL -0.00 LOL 345.20 VL 32.918 GAL 8.75 AZL 88.78 HCA 103.89 SMA 195.86 ECC .27398 INC 1.2185 V1 29.564  
 RP 234.71 LAP 1.18 LOP 99.09 VP 21.291 GAP 11.12 AZP 90.29 TAL 42.50 TAP 146.38 RCA 142.20 APO 249.52 V2 23.424  
 RC 181.791 GL 6.36 GP -11.12 ZAL 29.19 ZAP 126.77 ETS 190.94 ZAE 163.03 ETE 229.21 ZAC 73.14 ETC 283.51 LVI -7.27

Distance 344.053 Earth to Mars

Planetocentric Conic: C3 39.002 VHL 6.245 DLA 11.28 RAL 10.14 RAD 6650.3 VEL 12.605 PTH 7.46 VHP 3.243 DPA 3.66 RAP 40.37 ECC 1.6419  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 9 21 3525.29 -46.60 130.45 254.77 100.92 9 8 6 2525.3 -37.12 100.34  
 60.00 8 36 34 3452.86 -39.84 125.37 256.20 96.66 9 34 7 2452.9 -32.89 96.63  
 70.00 9 14 52 3340.19 -34.00 116.89 256.85 93.47 10 10 32 2340.2 -29.05 89.29  
 80.00 10 10 15 3166.68 -29.83 103.93 257.06 91.37 11 3 1 2166.7 -26.24 77.09  
 90.00 11 25 58 2922.27 -28.27 86.00 257.09 90.61 12 14 41 1922.3 -25.17 59.42  
 100.00 12 53 7 2641.15 -29.83 65.30 257.06 91.37 13 37 8 1641.2 -26.24 38.45  
 110.00 14 14 18 2387.00 -34.00 45.80 256.85 93.47 14 54 5 1387.0 -29.05 18.20

Differential Corrections: TDE -.4107 TRA -.8724 TC3 .1285 BAU .2673 SGT 913.1 SGR 907.8 SG3 833.3 ST 22.5 SR 33.1 SS 16.1  
 RDE -.7206 RRA .0576 RC3 -.4962 FAU .32106 RRT .1272 RRF .6143 RTF .1856 CRT .8242 CRS -.0644 CST -.5941  
 FDE -.1023 FRA-3.9663 FC3-7.1267 BSP 976 SGB 1287.6 R23 .3365 R13 .5253 LSA 38.7 MSA 18.8 S8A 2.7  
 BDE .8294 BRA .8743 BC3 .5126 FSP 1364 SGI 966.7 SG2 850.5 THA 43.69 EL1 38.5 EL2 10.9 ALF 57.84

LAUNCH DATE SEP 8 1973

FLIGHT TIME 156.00

ARRIVAL DATE FEB 11 1974

Heliocentric Conic: RL 150.71 LAL -0.00 LOL 345.20 VL 32.904 GAL 8.73 AZL 88.75 HCA 104.87 SMA 195.60 ECC .27291 INC 1.2490 V1 29.564  
 RP 235.06 LAP 1.21 LOP 90.08 VP 21.229 GAP 10.81 AZP 90.32 TAL 42.51 TAP 147.38 RCA 142.22 APO 248.98 V2 23.387  
 RC 184.750 GL 6.54 GP -11.37 ZAL 29.20 ZAP 127.22 ETS 190.64 ZAE 161.77 ETE 225.83 ZAC 73.01 ETC 283.58 LVI -7.18

Distance 347.843 Earth to Mars

Planetocentric Conic: C3 38.781 VHL 6.227 DLA 11.43 RAL 10.05 RAD 6650.2 VEL 12.596 PTH 7.46 VHP 3.180 DPA 3.24 RAP 39.93 ECC 1.6382  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 8 24 3526.93 -46.62 130.60 254.69 100.80 9 7 10 2526.9 -37.18 100.45  
 60.00 8 35 26 3454.98 -39.86 125.54 256.10 96.54 9 33 1 2455.0 -32.95 96.78  
 70.00 9 13 31 3342.91 -34.01 117.10 256.73 93.35 10 9 14 2342.9 -29.11 89.48  
 80.00 10 8 42 3170.03 -29.83 104.18 256.93 91.24 11 1 32 2170.0 -26.29 77.32  
 90.00 11 24 20 2925.91 -28.28 86.27 256.96 90.48 12 13 6 1925.9 -25.23 59.67  
 100.00 12 51 34 2644.50 -29.83 65.55 256.93 91.24 13 35 38 1644.5 -26.29 38.69  
 110.00 14 12 57 2389.73 -34.01 46.02 256.73 93.35 14 52 47 1389.7 -29.11 18.39

Differential Corrections: TDE -.4176 TRA -.8984 TC3 .0878 BAU .2729 SGT 933.1 SGR 924.2 SG3 867.1 ST 23.0 SR 33.0 SS 16.5  
 RDE -.7184 RRA .0449 RC3 -.5191 FAU .33290 RRT .1704 RRF .6332 RTF .2442 CRT .8239 CRS -.0540 CST -.5871  
 FDE -.0857 FRA-4.1299 FC3-7.4316 BSP 1027 SGB 1313.4 R23 .3177 R13 .5649 LSA 38.9 MSA 19.2 S8A 2.7  
 BDE .8292 BRA .8995 BC3 .5265 FSP 1427 SGI 1004.8 SG2 845.7 THA 43.39 EL1 38.6 EL2 11.1 ALF 57.04

LAUNCH DATE SEP 8 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 13 1974

Heliocentric Conic: RL 150.71 LAL -0.00 LOL 345.20 VL 32.892 GAL 8.70 AZL 88.72 HCA 105.85 SMA 195.36 ECC .27191 INC 1.2796 V1 29.564  
 RP 235.42 LAP 1.23 LOP 91.06 VP 21.169 GAP 10.51 AZP 90.35 TAL 42.52 TAP 148.37 RCA 142.24 APO 248.48 V2 23.351  
 RC 187.714 GL 6.71 GP -11.62 ZAL 29.22 ZAP 125.66 ETS 190.34 ZAE 160.43 ETE 222.81 ZAC 72.88 ETC 283.65 LVI -7.09

Distance 351.637 Earth to Mars

Planetocentric Conic: C3 38.567 VHL 6.210 DLA 11.59 RAL 9.96 RAD 6650.2 VEL 12.587 PTH 7.45 VHP 3.121 DPA 2.80 RAP 39.47 ECC 1.6347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 7 27 3528.71 -46.63 130.77 254.62 100.68 9 6 15 2528.7 -37.25 100.58  
 60.00 8 34 18 3457.25 -39.87 123.74 256.02 96.42 9 31 55 2457.3 -33.01 96.93  
 70.00 9 12 10 3345.82 -34.02 117.32 256.63 93.21 10 7 56 2345.8 -29.17 89.68  
 80.00 10 7 9 3173.59 -29.84 104.45 256.82 91.10 11 0 2 2173.6 -26.35 77.57  
 90.00 11 22 41 2929.78 -28.28 86.55 256.84 90.34 12 11 31 1929.8 -25.29 59.94  
 100.00 12 50 0 2648.06 -29.84 65.81 256.82 91.10 13 34 8 1648.1 -26.35 38.93  
 110.00 14 11 38 2392.64 -34.02 46.24 256.63 93.21 14 51 29 1392.6 -29.17 18.60

Differential Corrections: TDE -.4146 TRA -.9163 TC3 .0546 BAU .2821 SGT 946.4 SGR 944.4 SG3 903.3 ST 23.1 SR 33.0 SS 17.0  
 RDE -.7140 RRA .0297 RC3 -.5444 FAU .34624 RRT .2036 RRF .6542 RTF .2222 CRT .8204 CRS -.0682 CST -.6038  
 FDE -.1004 FRA-4.3263 FC3-7.7722 BSP 1093 SGB 1337.0 R23 .2900 R13 .6085 LSA 38.9 MSA 19.7 S8A 2.7  
 BDE .8256 BRA .8168 BC3 .5471 FSP 1454 SGI 1037.2 SG2 843.7 THA 44.70 EL1 38.6 EL2 11.3 ALF 56.93

LAUNCH DATE SEP 8 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 15 1974

Heliocentric Conic: RL 150.71 LAL -0.00 LOL 345.20 VL 32.880 GAL 8.68 AZL 88.69 HCA 106.83 SMA 195.14 ECC .27097 INC 1.3104 V1 29.564  
 RP 235.77 LAP 1.25 LOP 92.03 VP 21.112 GAP 10.22 AZP 90.38 TAL 42.51 TAP 149.34 RCA 142.27 APO 248.02 V2 23.315  
 RC 190.880 GL 6.89 GP -11.87 ZAL 29.26 ZAP 124.10 ETS 190.03 ZAE 159.03 ETE 220.14 ZAC 72.75 ETC 283.72 LVI -6.99

Distance 355.431 Earth to Mars

Planetocentric Conic: C3 38.356 VHL 6.193 DLA 11.75 RAL 9.89 RAD 6650.1 VEL 12.579 PTH 7.44 VHP 3.065 DPA 2.36 RAP 39.00 ECC 1.6312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 6 31 3530.66 -46.67 130.95 254.58 100.54 9 5 22 2530.7 -37.32 100.71  
 60.00 8 33 10 3459.72 -39.89 125.94 255.95 96.28 9 30 50 2459.7 -33.08 97.11  
 70.00 9 10 49 3348.95 -34.03 117.57 256.55 93.07 10 6 38 2349.0 -29.24 89.90  
 80.00 10 5 34 3177.40 -29.84 104.73 256.73 90.95 10 58 32 2177.4 -26.42 77.63  
 90.00 11 21 1 2933.91 -28.28 86.85 256.74 90.18 12 9 55 1933.9 -25.35 60.22  
 100.00 12 48 26 2651.87 -29.84 66.10 256.73 90.95 13 32 38 1651.9 -26.42 39.20  
 110.00 14 10 15 2395.77 -34.03 46.49 256.55 93.07 14 50 11 1395.8 -29.24 18.82

Differential Corrections: TDE -.4287 TRA -.9527 TC3 .0008 BAU .2907 SGT 983.8 SGR 960.4 SG3 936.3 ST 24.0 SR 32.8 SS 17.2  
 RDE -.7078 RRA .0175 RC3 -.5670 FAU .35702 RRT .2584 RRF .6701 RTF .3574 CRT .8218 CRS -.0393 CST -.5800  
 FDE -.0356 FRA-4.4660 FC3-8.0583 BSP 1167 SGB 1374.8 R23 .2856 R13 .6355 LSA 39.2 MSA 20.1 S8A 2.7  
 BDE .8275 BRA .9529 BC3 .5670 FSP 1540 SGI 1091.0 SG2 836.6 THA 42.34 EL1 38.9 EL2 11.5 ALF 55.53

LAUNCH DATE SEP 8 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 17 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.870 GAL 8.65 AZL 88.66 HCA 107.80 SMA 194.95 ECC .27010 INC 1.3414 V1 29.564
RP 236.12 LAP 1.28 LOP 93.01 VP 21.057 GAP 9.92 AZP 90.41 TAL 42.49 TAP 150.29 RCA 142.30 APO 247.61 V2 23.279
RC 193.649 GL 7.08 GP -12.13 ZAL 29.31 ZAP 122.52 ETS 189.72 ZAE 157.59 ETE 217.75 ZAC 72.63 ETC 283.79 LVJ -6.90

PLANETOCENTRIC CONIC

C3 38.150 VHL 6.177 DLA 11.92 RAL 9.82 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 3.012 DPA 1.91 RAP 38.53 ECC 1.6279
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 5 36 3532.75 -46.70 131.15 254.55 100.39 9 4 28 2532.8 -37.39 100.85
60.00 8 32 3 3462.35 -39.91 126.16 255.90 96.13 9 29 45 2462.3 -33.15 97.29
70.00 9 9 27 3352.27 -34.04 117.83 256.48 92.92 10 5 20 2352.3 -29.31 90.13
80.00 10 3 59 3181.44 -29.85 105.03 256.64 90.79 10 57 1 2181.4 -26.49 78.11
90.00 11 19 20 2938.28 -28.28 87.17 256.66 90.02 12 8 18 1938.3 -25.42 60.53
100.00 12 46 51 2655.91 -29.85 66.40 256.64 90.79 13 31 7 1655.9 -26.49 39.48
110.00 14 8 54 2399.09 -34.04 46.74 256.48 92.92 14 48 53 1399.1 -29.31 19.05

DIFFERENTIAL CORRECTIONS

TDE -.4382 TRA -.9864 TC3 -.0513 BAU .3025 SGT 1021.7 SGR 978.3 SG3 988.9 ST 24.7 SR 32.6 SS 17.6
RDE -.7022 RRA .0043 RC3 -.5908 FAU .36832 RRT .3073 RRF .6865 RTF .4151 CRT .8216 CRS -.0214 CST -.5665
FDE -.0227 FRA -4.6171 FC3 -6.3581 B8P 1253 SGB 1414.3 R23 .2756 R13 .6643 LSA 39.4 MSA 20.5 S8A 2.7
BDE .8277 BRA 1.9864 BC3 .5931 FSP 1613 SG1 1144.8 SG2 830.8 THA 40.97 EL1 39.2 EL2 11.7 ALF 54.43

LAUNCH DATE SEP 8 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 19 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.861 GAL 8.62 AZL 88.63 HCA 108.77 SMA 194.78 ECC .26927 INC 1.3727 V1 29.564
RP 236.46 LAP 1.30 LOP 93.98 VP 21.003 GAP 9.63 AZP 90.44 TAL 42.45 TAP 151.22 RCA 142.33 APO 247.23 V2 23.244
RC 196.619 GL 7.28 GP -12.38 ZAL 29.37 ZAP 120.93 ETS 189.40 ZAE 156.09 ETE 215.59 ZAC 72.51 ETC 283.86 LVI -6.81

PLANETOCENTRIC CONIC

C3 37.950 VHL 6.160 DLA 12.10 RAL 9.76 RAD 6649.9 VEL 12.563 PTH 7.43 VHP 2.963 DPA 1.45 RAP 38.04 ECC 1.6246
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 4 41 3534.99 -46.72 131.36 254.54 100.23 9 3 36 2535.0 -37.47 101.01
60.00 8 30 56 3465.14 -39.93 126.40 255.87 95.97 9 28 41 2465.1 -33.23 97.49
70.00 9 8 5 3355.79 -34.06 118.10 256.43 92.78 10 4 1 2355.8 -29.39 90.38
80.00 10 2 23 3185.69 -29.85 105.35 256.58 90.63 10 55 29 2185.7 -26.56 78.41
90.00 11 17 37 2942.88 -28.28 87.51 256.58 89.86 12 6 40 1942.9 -25.49 60.85
100.00 12 45 15 2660.16 -29.85 66.71 256.58 90.63 13 29 35 1660.2 -26.56 39.77
110.00 14 7 32 2402.61 -34.06 47.02 256.43 92.76 14 47 34 1402.6 -29.39 19.29

DIFFERENTIAL CORRECTIONS

TDE -.4460 TRA -1.0199 TC3 -.1041 BAU .3167 SGT 1062.9 SGR 997.5 SG3 1002.3 ST 25.3 SR 32.4 SS 17.9
RDE -.6966 RRA -.0095 RC3 -.6156 FAU .37982 RRT .3533 RRF .7029 RTF .4680 CRT .8207 CRS -.0076 CST -.5572
FDE .0067 FRA -4.7719 FC3 -8.6648 B8P 1352 SGB 1457.6 R23 .2650 R13 .6920 LSA 39.6 MSA 20.9 S8A 2.7
BDE .8271 BRA 1.0199 BC3 .6243 FSP 1677 SG1 1201.3 SG2 825.8 THA 39.91 EL1 39.4 EL2 11.9 ALF 53.43

LAUNCH DATE SEP 8 1973

FLIGHT TIME 166.00

ARRIVAL DATE FEB 21 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.852 GAL 8.59 AZL 88.60 HCA 109.74 SMA 194.62 ECC .26850 INC 1.4043 V1 29.564
RP 236.81 LAP 1.32 LOP 94.93 VP 20.951 GAP 9.34 AZP 90.47 TAL 42.41 TAP 152.14 RCA 142.37 APO 246.88 V2 23.209
RC 199.589 GL 7.44 GP -12.64 ZAL 29.43 ZAP 119.34 ETS 189.00 ZAE 154.55 ETE 213.64 ZAC 72.39 ETC 283.93 LVI -6.71

PLANETOCENTRIC CONIC

C3 37.754 VHL 6.144 DLA 12.28 RAL 9.71 RAD 6649.9 VEL 12.555 PTH 7.43 VHP 2.916 DPA .99 RAP 37.54 ECC 1.6213
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 3 47 3537.36 -46.75 131.58 254.55 100.06 9 2 44 2537.4 -37.56 101.17
60.00 8 29 48 3468.09 -39.95 126.65 255.85 95.80 9 27 38 2468.1 -33.31 97.69
70.00 9 6 43 3359.49 -34.07 118.39 256.39 92.59 10 2 42 2359.5 -29.47 90.63
80.00 10 0 46 3190.16 -29.85 105.68 256.52 90.45 10 53 56 2190.2 -26.63 78.72
90.00 11 15 53 2947.72 -28.28 87.86 256.52 89.68 12 5 0 1947.7 -25.56 61.18
100.00 12 43 38 2664.63 -29.85 67.05 256.52 90.45 13 28 2 1664.6 -26.63 40.09
110.00 14 6 9 2406.31 -34.07 47.31 256.39 92.59 14 46 15 1406.3 -29.47 19.55

DIFFERENTIAL CORRECTIONS

TDE -.4486 TRA -1.0499 TC3 -.1544 BAU .3333 SGT 1102.2 SGR 1019.5 SG3 1038.1 ST 25.8 SR 32.3 SS 18.3
RDE -.6920 RRA -.0248 RC3 -.6420 FAU .39209 RRT .3945 RRF .7200 RTF .5150 CRT .8182 CRS -.0093 CST -.5627
FDE .0152 FRA -4.9459 FC3 -8.9911 B8P 1475 SGB 1501.4 R23 .2518 R13 .7198 LSA 39.8 MSA 21.3 S8A 2.7
BDE .8247 BRA 1.0502 BC3 .6603 FSP 1714 SG1 1256.6 SG2 821.7 THA 39.40 EL1 39.5 EL2 12.1 ALF 52.78

LAUNCH DATE SEP 8 1973

FLIGHT TIME 168.00

ARRIVAL DATE FEB 23 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.843 GAL 8.56 AZL 88.56 HCA 110.70 SMA 194.48 ECC .26778 INC 1.4361 V1 29.564
RP 237.14 LAP 1.34 LOP 95.91 VP 20.902 GAP 9.06 AZP 90.51 TAL 42.35 TAP 153.05 RCA 142.40 APO 246.56 V2 23.174
RC 202.357 GL 7.63 GP -12.89 ZAL 29.52 ZAP 117.74 ETS 188.75 ZAE 152.99 ETE 211.88 ZAC 72.27 ETC 284.00 LVI -6.62

PLANETOCENTRIC CONIC

C3 37.560 VHL 6.129 DLA 12.47 RAL 9.67 RAD 6649.8 VEL 12.548 PTH 7.42 VHP 2.873 DPA .53 RAP 37.03 ECC 1.6181
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 53 3539.88 -46.78 131.82 254.57 99.88 9 1 53 2539.9 -37.65 101.34
60.00 8 28 41 3471.22 -39.97 126.91 255.84 95.62 9 26 32 2471.2 -33.40 97.91
70.00 9 5 20 3363.39 -34.08 118.69 256.36 92.41 10 1 23 2363.4 -29.55 90.91
80.00 9 59 7 3194.87 -29.86 106.03 256.48 90.27 10 52 22 2194.9 -26.71 79.05
90.00 11 14 7 2952.81 -28.28 88.23 256.47 89.49 12 3 20 1952.8 -25.63 61.54
100.00 12 41 59 2669.34 -29.86 67.40 256.48 90.27 13 26 28 1669.3 -26.71 40.41
110.00 14 4 46 2410.21 -34.08 47.61 256.36 92.41 14 44 56 1410.2 -29.55 19.83

DIFFERENTIAL CORRECTIONS

TDE -.4603 TRA -1.0908 TC3 -.2173 BAU .3519 SGT 1160.6 SGR 1038.1 SG3 1067.8 ST 26.6 SR 32.0 SS 18.6
RDE -.6845 RRA -.0378 RC3 -.6662 FAU .40222 RRT .4405 RRF .7337 RTF .5629 CRT .8182 CRS .0180 CST -.5410
FDE .0693 FRA -5.0746 FC3 -9.2709 B8P 1582 SGB 1557.1 R23 .2454 R13 .7412 LSA 40.0 MSA 21.7 S8A 2.7
BDE .8249 BRA 1.0915 BC3 .7007 FSP 1798 SG1 1326.6 SG2 815.3 THA 37.68 EL1 39.8 EL2 12.3 ALF 51.40



LAUNCH DATE SEP 8 1973

FLIGHT TIME 170.00

ARRIVAL DATE FEB 25 1974

HELIOCENTRIC CONIC

DISTANCE 374.436

EARTH TO MARS

RL 150.71 LAL -.00 LOL 345.20 VL 32.039 GAL 8.33 AZL 88.33 MCA 111.67 SMA 194.36 ECC .26710 INC 1.4663 V1 29.564
RP 237.48 LAP 1.36 LOP 96.88 VP 20.854 GAP 8.78 AZP 90.54 TAL 42.20 TAP 153.94 RCA 142.45 APO 246.28 V2 23.140
RC 205.823 GL 7.82 GP -13.15 ZAL 29.61 ZAP 116.14 ETS 188.42 ZAE 131.39 ETE 210.26 ZAC 72.16 ETC 284.07 LVI -6.53

PLANETOCENTRIC CONIC

C3 37.370 VHL 6.113 DLA 12.66 RAL 9.64 RAD 6649.7 VEL 12.540 PTH 7.42 VHP 2.832 DPA .08 RAP 36.92 ECC 1.6190
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 2 0 3542.54 -46.81 132.06 254.61 99.69 9 1 2 2542.5 -37.74 101.53
60.00 8 27 34 3474.30 -39.99 127.19 255.85 95.44 9 25 28 2474.5 -33.49 98.14
70.00 9 3 56 3367.48 -34.09 119.01 256.35 92.22 10 0 3 2367.5 -29.63 91.20
80.00 9 57 27 3199.80 -29.86 106.39 256.45 90.07 10 50 47 2199.8 -26.79 79.39
90.00 11 12 20 2958.13 -28.27 88.62 256.44 89.30 12 1 38 1958.1 -25.71 61.91
100.00 12 40 19 2674.27 -29.86 67.76 256.45 90.07 13 24 53 1674.3 -26.79 40.78
110.00 14 3 22 2414.30 -34.09 47.93 256.35 92.22 14 43 36 1414.3 -29.63 20.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4662 TRA-1.1275 TC3 -.2769 BAU .3726 SGT 1216.0 SGR 1059.0 SG3 1100.4 ST 27.2 SR 31.8 SS 18.9
RDE -.6783 RRA -.0524 RC3 -.6924 FAU .41330 RRT .4802 RRF .7484 RTF .6042 CRT .8163 CRS .0280 CST -.5359
FDE .0994 FRA-5.2233 FC3-9.5747 BSP 1718 SGB 1613.0 R23 .2363 R13 .7630 LSA 40.2 MSA 22.1 SSA 2.7
BDE .8230 BRA 1.1287 BC3 .7457 FSP 1851 SG1 1394.6 SG2 810.6 THA 36.99 EL1 40.0 EL2 12.5 ALF 50.42

LAUNCH DATE SEP 8 1973

FLIGHT TIME 172.00

ARRIVAL DATE FEB 27 1974

HELIOCENTRIC CONIC

DISTANCE 378.241

EARTH TO MARS

RL 150.71 LAL -.00 LOL 345.20 VL 32.833 GAL 8.30 AZL 88.50 MCA 112.63 SMA 194.26 ECC .26647 INC 1.5008 V1 29.564
RP 237.81 LAP 1.39 LOP 97.84 VP 20.807 GAP 8.50 AZP 90.58 TAL 42.20 TAP 154.82 RCA 142.49 APO 246.02 V2 23.106
RC 208.485 GL 8.02 GP -13.40 ZAL 29.71 ZAP 114.34 ETS 188.07 ZAE 149.76 ETE 208.78 ZAC 72.05 ETC 284.13 LVI -6.43

PLANETOCENTRIC CONIC

C3 37.185 VHL 6.098 DLA 12.86 RAL 9.61 RAD 6649.7 VEL 12.533 PTH 7.41 VHP 2.795 DPA -.41 RAP 36.01 ECC 1.6120
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 1 6 3545.34 -46.84 132.33 254.66 99.49 9 0 12 2545.3 -37.84 101.72
60.00 8 26 26 3477.94 -40.02 127.48 255.87 95.24 9 24 24 2477.9 -33.59 98.39
70.00 9 2 31 3371.76 -34.10 119.34 256.34 92.02 9 58 42 2371.8 -29.72 91.50
80.00 9 55 45 3204.94 -29.86 106.78 256.43 89.87 10 49 10 2204.9 -26.87 79.75
90.00 11 10 30 2963.69 -28.27 89.03 256.41 89.09 11 59 54 1963.7 -25.79 62.29
100.00 12 38 37 2679.42 -29.86 68.15 256.43 89.87 13 23 17 1679.4 -26.87 41.12
110.00 14 1 57 2418.58 -34.10 48.26 256.34 92.02 14 42 16 1418.6 -29.72 20.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4690 TRA-1.1626 TC3 -.3359 BAU .3949 SGT 1271.8 SGR 1084.0 SG3 1134.8 ST 27.7 SR 31.7 SS 19.3
RDE -.6728 RRA -.0684 RC3 -.7199 FAU .42485 RRT .5165 RRF .7633 RTF .6413 CRT .8136 CRS .0264 CST -.5417
FDE .1130 FRA-5.3874 FC3-9.8913 BSP 1877 SGB 1671.1 R23 .2264 R13 .7840 LSA 40.4 MSA 22.4 SSA 2.7
BDE .8201 BRA 1.1646 BC3 .7944 FSP 1880 SG1 1463.5 SG2 806.6 THA 36.37 EL1 40.1 EL2 12.7 ALF 49.65

LAUNCH DATE SEP 8 1973

FLIGHT TIME 174.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC

DISTANCE 382.046

EARTH TO MARS

RL 150.71 LAL -.00 LOL 345.20 VL 32.828 GAL 8.47 AZL 88.47 MCA 113.58 SMA 194.17 ECC .26588 INC 1.5337 V1 29.564
RP 238.14 LAP 1.41 LOP 98.79 VP 20.762 GAP 8.22 AZP 90.61 TAL 42.10 TAP 155.69 RCA 142.54 APO 245.79 V2 23.073
RC 211.443 GL 8.21 GP -13.65 ZAL 29.82 ZAP 112.94 ETS 187.73 ZAE 148.12 ETE 207.41 ZAC 71.94 ETC 284.19 LVI -6.34

PLANETOCENTRIC CONIC

C3 37.000 VHL 6.083 DLA 13.07 RAL 9.60 RAD 6649.6 VEL 12.525 PTH 7.41 VHP 2.760 DPA -.88 RAP 35.50 ECC 1.6089
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 8 0 13 3546.29 -46.86 132.60 254.73 99.28 8 59 22 2548.3 -37.95 101.93
60.00 8 25 17 3481.56 -40.04 127.78 255.91 95.04 9 23 19 2481.6 -33.69 98.64
70.00 9 1 5 3376.25 -34.11 119.70 256.35 91.81 9 57 21 2376.2 -29.81 91.82
80.00 9 54 2 3210.34 -29.86 107.18 256.42 89.66 10 47 32 2210.3 -26.96 80.13
90.00 11 8 39 2989.52 -28.26 89.46 256.39 88.88 11 58 8 1969.5 -25.87 62.70
100.00 12 36 54 2684.81 -29.86 68.53 256.42 89.66 13 21 38 1684.8 -26.96 41.90
110.00 14 0 31 2423.07 -34.11 48.61 256.35 91.81 14 40 54 1423.1 -29.81 20.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4813 TRA-1.2092 TC3 -.4083 BAU .4198 SGT 1348.9 SGR 1102.7 SG3 1160.5 ST 28.7 SR 31.3 SS 19.6
RDE -.6634 RRA -.0808 RC3 -.7441 FAU .43346 RRT .5541 RRF .7746 RTF .5.62 CRT .8153 CRS .0615 CST -.5131
FDE .1879 FRA-5.4862 FC-10.1423 BSP 2002 SGB 1742.2 R23 .2221 R13 .7992 LSA 40.7 MSA 22.8 SSA 2.7
BDE .8196 BRA 1.2119 BC3 .8488 FSP 1971 SG1 1547.7 SG2 800.0 THA 34.95 EL1 40.4 EL2 12.9 ALF 48.08

LAUNCH DATE SEP 8 1973

FLIGHT TIME 176.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC

DISTANCE 385.852

EARTH TO MARS

RL 150.71 LAL -.00 LOL 345.20 VL 32.824 GAL 8.44 AZL 88.43 MCA 114.54 SMA 194.08 ECC .26532 INC 1.5669 V1 29.564
RP 238.47 LAP 1.43 LOP 99.75 VP 20.719 GAP 7.95 AZP 90.65 TAL 42.00 TAP 156.54 RCA 142.59 APO 245.58 V2 23.040
RC 214.394 GL 8.41 GP -13.91 ZAL 29.94 ZAP 111.34 ETS 187.37 ZAE 148.46 ETE 206.15 ZAC 71.84 ETC 284.26 LVI -6.24

PLANETOCENTRIC CONIC

C3 36.818 VHL 6.068 DLA 13.28 RAL 9.58 RAD 6649.5 VEL 12.518 PTH 7.40 VHP 2.727 DPA -1.35 RAP 34.98 ECC 1.6059
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 59 20 3551.37 -46.91 132.90 254.81 99.06 8 58 31 2551.4 -38.05 102.14
60.00 8 24 9 3485.33 -40.06 128.10 255.96 94.82 9 22 14 2485.3 -33.79 98.91
70.00 8 59 37 3380.93 -34.12 120.08 256.37 91.60 9 55 58 2380.9 -29.91 92.15
80.00 9 52 17 3215.96 -29.85 107.60 256.42 89.44 10 45 52 2216.0 -27.05 80.52
90.00 11 6 45 2975.59 -28.25 89.90 256.39 88.66 11 56 21 1975.6 -25.96 63.13
100.00 12 35 8 2690.43 -29.85 68.96 256.42 89.44 13 19 59 1690.4 -27.05 41.89
110.00 13 59 4 2427.74 -34.12 48.98 256.37 91.60 14 39 31 1427.7 -29.91 21.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4880 TRA-1.2516 TC3 -.4774 BAU .4461 SGT 1422.2 SGR 1125.0 SG3 1189.4 ST 29.4 SR 31.0 SS 19.9
RDE -.6555 RRA -.0951 RC3 -.7704 FAU .44305 RRT .5869 RRF .7868 RTF .7065 CRT .8115 CRS .0770 CST -.5029
FDE .2338 FRA-5.6101 FC-10.4177 BSP 2159 SGB 1813.4 R23 .2156 R13 .8148 LSA 40.9 MSA 23.2 SSA 2.7
BDE .8172 BRA 1.2552 BC3 .9063 FSP 2026 SG1 1629.9 SG2 794.9 THA 34.02 EL1 40.7 EL2 13.1 ALF 46.90

LAUNCH DATE SEP 8 1973

FLIGHT TIME 178.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.820 GAL 8.40 AZL 88.40 HCA 115.48 SMA 194.02 ECC .26480 INC 1.6008 V1 29.584
RP 238.79 LAP 1.44 LOP 100.70 VP 20.678 GAP 7.68 AZP 90.69 TAL 41.89 TAP 157.38 RCA 142.65 APO 245.40 V2 23.008
RC 217.340 GL 8.62 GP -14.16 ZAL 30.07 ZAP 109.75 ETS 187.01 ZAE 144.79 ETE 204.97 ZAC 71.73 ETC 284.32 LVI -6.14

DISTANCE 389.659

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.640 VHL 6.053 DLA 13.50 RAL 9.58 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 2.697 DPA -1.83 RAP 34.46 ECC 1.6030
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 58 27 3554.60 -46.95 133.20 254.90 98.83 8 57 41 2554.6 -38.17 102.37
60.00 8 22 59 3489.27 -40.08 129.43 256.02 94.60 9 21 8 2489.3 -33.89 99.19
70.00 8 58 9 3385.80 -34.13 120.44 256.40 91.37 9 54 35 2385.8 -30.01 92.49
80.00 9 30 29 3221.81 -29.85 108.03 256.43 89.21 10 44 11 2221.8 -27.14 80.93
90.00 11 4 49 2981.92 -26.24 90.36 256.39 88.43 11 54 31 1981.9 -26.04 63.57
100.00 12 33 21 2696.28 -29.85 69.40 256.43 89.21 13 18 17 1696.3 -27.14 42.30
110.00 13 57 35 2432.62 -34.13 49.36 256.40 91.37 14 38 8 1432.6 -30.01 21.41

DIFFERENTIAL CORRECTIONS

TDE -.4944 TRA-1.2953 TC3 -.5488 BAU .4739
RDE -.6473 RRA -.1094 RC3 -.7968 FAU .45221
FDE .2816 FRA-5.7267 FC-10.6848 BSP 2324
BDE .8145 BRA 1.2999 BC3 .9675 F8P 2077

MID-COURSE EXECUTION ACCURACY

SGT 1500.1 SGR 1147.7 S63 1217.2
RRT .8168 RRF .7984 RTF .7334
SGB 1888.8 R23 .2098 R13 .8289
SG1 1715.7 S62 789.8 THA 33.14

ORBIT DETERMINATION ACCURACY

ST 30.1 SR 30.7 S8 20.2
CRT .8096 CRS .0924 CST -.4929
LSA 41.2 MSA 23.6 S8A 2.7
EL1 40.9 EL2 13.3 ALF 45.71

LAUNCH DATE SEP 8 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.818 GAL 8.37 AZL 88.37 HCA 116.44 SMA 193.97 ECC .26432 INC 1.6347 V1 29.564
RP 239.10 LAP 1.46 LOP 101.65 VP 20.637 GAP 7.41 AZP 90.73 TAL 41.77 TAP 158.21 RCA 142.70 APO 245.24 V2 22.975
RC 220.278 GL 8.82 GP -14.40 ZAL 30.21 ZAP 108.16 ETS 186.64 ZAE 143.10 ETE 203.87 ZAC 71.63 ETC 284.37 LVI -6.04

DISTANCE 393.466

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.464 VHL 6.039 DLA 13.73 RAL 9.58 RAD 6649.4 VEL 12.504 PTH 7.39 VHP 2.670 DPA -2.30 RAP 33.95 ECC 1.6001
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 57 33 3557.96 -46.98 133.52 255.01 98.58 8 56 51 2558.0 -38.28 102.60
60.00 8 21 49 3493.38 -40.10 128.78 256.09 94.36 9 20 2 2493.4 -34.00 99.48
70.00 8 56 39 3390.87 -34.14 120.84 256.45 91.14 9 53 10 2390.9 -30.11 92.85
80.00 9 48 40 3227.91 -29.84 108.48 256.45 88.98 10 42 27 2227.9 -27.23 81.36
90.00 11 2 50 2988.50 -26.23 90.84 256.40 88.19 11 52 39 1988.5 -26.13 64.03
100.00 12 31 31 2702.38 -29.84 69.85 256.45 88.98 13 16 34 1702.4 -27.23 42.73
110.00 13 56 5 2437.69 -34.14 49.75 256.45 91.14 14 36 43 1437.7 -30.11 21.77

DIFFERENTIAL CORRECTIONS

TDE -.5003 TRA-1.3401 TC3 -.6226 BAU .5032
RDE -.6386 RRA -.1238 RC3 -.8233 FAU .46083
FDE .3317 FRA-5.8363 FC-10.9413 BSP 2497
BDE .8113 BRA 1.3458 BC3 1.0322 F8P 2125

MID-COURSE EXECUTION ACCURACY

SGT 1582.4 SGR 1170.6 S63 1243.7
RRT .6443 RRF .8093 RTF .7572
SGB 1968.4 R23 .2045 R13 .8415
SG1 1805.2 S62 784.8 THA 32.30

ORBIT DETERMINATION ACCURACY

ST 30.8 SR 30.4 S8 20.6
CRT .8075 CRS .1078 CST -.4830
LSA 41.4 MSA 23.9 S8A 2.7
EL1 41.2 EL2 13.4 ALF 44.50

LAUNCH DATE SEP 8 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 9 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.815 GAL 8.33 AZL 88.33 HCA 117.38 SMA 193.93 ECC .26387 INC 1.6694 V1 29.564
RP 239.42 LAP 1.48 LOP 102.80 VP 20.599 GAP 7.14 AZP 90.77 TAL 41.64 TAP 159.03 RCA 142.76 APO 245.10 V2 22.944
RC 223.209 GL 9.03 GP -14.65 ZAL 30.36 ZAP 106.58 ETS 186.27 ZAE 141.41 ETE 202.83 ZAC 71.53 ETC 284.43 LVI -5.94

DISTANCE 397.273

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.290 VHL 6.024 DLA 13.98 RAL 9.58 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 2.644 DPA -2.77 RAP 33.44 ECC 1.5972
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 56 39 3561.47 -47.01 133.85 255.13 98.33 8 56 1 2561.5 -38.41 102.85
60.00 8 20 38 3497.65 -40.13 129.14 256.17 94.12 9 18 55 2497.7 -34.12 99.79
70.00 8 55 7 3396.15 -34.14 121.25 256.50 90.90 9 51 43 2396.2 -30.21 93.23
80.00 9 46 48 3234.24 -29.83 108.95 256.48 88.73 10 40 42 2234.2 -27.32 81.81
90.00 11 0 49 2995.35 -26.21 91.34 256.43 87.94 11 50 44 1995.3 -26.22 64.51
100.00 12 29 39 2708.72 -29.83 70.32 256.48 88.73 13 14 48 1708.7 -27.32 43.18
110.00 13 54 33 2442.97 -34.14 50.17 256.50 90.90 14 35 16 1443.0 -30.21 22.15

DIFFERENTIAL CORRECTIONS

TDE -.5058 TRA-1.3861 TC3 -.6987 BAU .5338
RDE -.6296 RRA -.1380 RC3 -.8498 FAU .46898
FDE .3844 FRA-5.9370 FC-11.1882 BSP 2677
BDE .8078 BRA 1.3929 BC3 1.1002 F8P 2171

MID-COURSE EXECUTION ACCURACY

SGT 1668.9 SGR 1193.8 S63 1268.9
RRT .8694 RRF .8196 RTF .782
SGB 2052.0 R23 .1999 R13 .8528
SG1 1898.0 S62 779.9 THA 31.49

ORBIT DETERMINATION ACCURACY

ST 31.6 SR 30.0 S8 20.9
CRT .8053 CRS .1235 CST -.4729
LSA 41.7 MSA 24.3 S8A 2.7
EL1 41.4 EL2 13.6 ALF 43.27

LAUNCH DATE SEP 8 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 11 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.814 GAL 8.30 AZL 88.30 HCA 118.33 SMA 193.90 ECC .26344 INC 1.7045 V1 29.584
RP 239.73 LAP 1.50 LOP 103.54 VP 20.561 GAP 6.88 AZP 90.81 TAL 41.50 TAP 159.83 RCA 142.82 APO 244.98 V2 22.912
RC 226.132 GL 9.25 GP -14.89 ZAL 30.52 ZAP 105.01 ETS 185.89 ZAE 139.72 ETE 201.86 ZAC 71.44 ETC 284.48 LVI -5.84

DISTANCE 401.081

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.118 VHL 6.010 DLA 14.19 RAL 9.59 RAD 6649.3 VEL 12.490 PTH 7.38 VHP 2.621 DPA -3.23 RAP 32.94 ECC 1.5944
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 45 3885.13 -47.05 134.20 255.27 98.07 8 55 10 2565.1 -38.53 103.11
60.00 8 19 26 3502.10 -40.15 129.52 256.26 93.86 9 17 48 2502.1 -34.23 100.11
70.00 8 53 34 3401.84 -34.15 121.68 256.56 90.64 9 50 15 2401.6 -30.32 93.62
80.00 9 44 53 3240.83 -29.82 109.44 256.52 88.47 10 38 54 2240.8 -27.42 82.28
90.00 10 58 44 3002.47 -26.19 91.86 256.46 87.68 11 48 47 2002.5 -26.31 65.01
100.00 12 27 45 2715.30 -29.82 70.81 256.52 88.47 13 13 0 1715.3 -27.42 43.64
110.00 13 53 0 2448.46 -34.15 50.59 256.56 90.64 14 33 48 1448.5 -30.32 22.54

DIFFERENTIAL CORRECTIONS

TDE -.5107 TRA-1.4330 TC3 -.7767 BAU .5655
RDE -.6204 RRA -.1525 RC3 -.8786 FAU .47672
FDE .4359 FRA-6.0343 FC-11.4268 BSP 2863
BDE .8036 BRA 1.4411 BC3 1.1712 F8P 2209

MID-COURSE EXECUTION ACCURACY

SGT 1759.1 SGR 1217.6 S63 1293.2
RRT .6924 RRF .8294 RTF .7969
SGB 2139.4 R23 .1955 R13 .8631
SG1 1994.1 S62 775.0 THA 30.74

ORBIT DETERMINATION ACCURACY

ST 32.3 SR 29.7 S8 21.2
CRT .8031 CRS .1372 CST -.4645
LSA 42.0 MSA 24.6 S8A 2.7
EL1 41.7 EL2 13.7 ALF 42.05

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LAUNCH DATE SEP 8 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 13 1974

HELIOCENTRIC CONIC

DISTANCE 404.888

EARTH TO MARS

RL 130.71 LAL -.00 LOL 345.20 VL 32.813 GAL 8.26 AZL 88.26 HCA 119.27 SMA 193.88 ECC .26305 INC 1.7401 V1 29.564
RP 240.03 LAP 1.52 LOP 104.48 VP 20.525 GAP 6.62 AZP 90.85 TAL 41.36 TAP 160.63 RCA 142.88 APO 244.88 V2 22.882
RC 229.048 GL 9.47 GP -15.14 ZAL 30.68 ZAP 103.46 ETS 185.51 ZAE 138.02 ETE 200.94 ZAC 71.34 ETC 284.53 LVI -5.73

PLANETOCENTRIC CONIC

C3 35.948 VHL 5.996 DLA 14.44 RAL 9.60 RAD 6649.2 VEL 12.484 PTH 7.37 VHP 2.601 DPA -3.70 RAP 32.44 ECC 1.5916
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 54 50 3568.93 -47.09 134.56 255.41 97.79 8 54 19 2568.9 -38.66 103.38
60.00 8 18 12 3506.72 -40.17 129.91 256.37 93.60 9 16 39 2506.7 -34.36 100.44
70.00 8 51 58 3407.34 -34.15 122.12 256.63 90.38 9 48 46 2407.3 -30.43 94.03
80.00 9 42 56 3247.68 -29.81 109.95 256.56 88.21 10 37 3 2247.7 -27.52 82.76
90.00 10 58 36 3009.87 -28.17 92.40 256.49 87.41 11 46 46 2009.9 -26.41 65.53
100.00 12 25 47 2722.15 -29.81 71.32 256.56 88.21 13 11 10 1722.1 -27.52 44.13
110.00 13 51 25 2454.16 -34.15 51.04 256.63 90.38 14 32 19 1454.2 -30.43 22.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5146 TRA-1.4802 TC3 -.8561 BAU .5983	SGT 1851.8 SGR 1242.2 SG3 1316.9	ST 33.0 SR 29.4 SS 21.6
RDE -.6113 RRA -.1672 RC3 -.9038 FAU .48420	RRT .7133 RRF .8389 RTF .8135	CRT .8006 CR8 .1471 CST -.4597
FDE .4820 FRA-6.1288 FC-11.6609 BSP 3059	SG8 2229.8 R23 .1914 R13 .8726	LSA 42.2 HSA 24.9 SSA 2.7
BDE .7991 BRA 1.4896 BC3 1.2449 FSP 2236	SG1 2092.5 SG2 770.4 THA 30.06	EL1 41.9 EL2 15.8 ALF 40.87

LAUNCH DATE SEP 8 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 15 1974

HELIOCENTRIC CONIC

DISTANCE 408.696

EARTH TO MARS

RL 130.71 LAL -.00 LOL 345.20 VL 32.812 GAL 8.22 AZL 88.22 HCA 120.21 SMA 193.87 ECC .26268 INC 1.7763 V1 29.564
RP 240.34 LAP 1.54 LOP 105.42 VP 20.491 GAP 6.36 AZP 90.89 TAL 41.20 TAP 161.41 RCA 142.95 APO 244.80 V2 22.851
RC 231.955 GL 9.69 GP -15.38 ZAL 30.86 ZAP 101.91 ETS 185.12 ZAE 136.32 ETE 200.06 ZAC 71.24 ETC 284.58 LVI -5.63

PLANETOCENTRIC CONIC

C3 35.781 VHL 5.982 DLA 14.69 RAL 9.62 RAD 6649.2 VEL 12.477 PTH 7.37 VHP 2.582 DPA -4.16 RAP 31.95 ECC 1.5889
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 53 54 3572.88 -47.12 134.93 255.57 97.50 8 53 27 2572.9 -38.80 103.66
60.00 8 16 58 3511.51 -40.19 130.32 256.48 93.32 9 15 29 2511.5 -34.48 100.78
70.00 8 50 21 3413.25 -34.15 122.58 256.71 90.11 9 47 14 2413.2 -30.54 94.45
80.00 9 40 55 3254.78 -29.79 110.48 256.62 87.93 10 35 10 2254.8 -27.62 83.27
90.00 10 54 25 3017.55 -28.15 92.96 256.54 87.13 11 44 43 2017.6 -26.50 68.08
100.00 12 23 47 2729.25 -29.79 71.85 256.62 87.93 13 9 16 1729.3 -27.62 44.63
110.00 13 49 47 2460.07 -34.15 51.50 256.71 90.11 14 30 47 1460.1 -30.54 23.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5166 TRA-1.5269 TC3 -.9358 BAU .6319	SGT 1945.4 SGR 1269.1 SG3 1341.5	ST 33.6 SR 29.1 SS 21.9
RDE -.6031 RRA -.1831 RC3 -.9325 FAU .49193	RRT .7326 RRF .8484 RTF .8267	CRT .7978 CR8 .1474 CST -.4638
FDE .5116 FRA-6.2323 FC-11.9023 BSP 3283	SG8 2322.7 R23 .1870 R13 .8817	LSA 42.6 HSA 25.2 SSA 2.6
BDE .7941 BRA 1.5379 BC3 1.3210 FSP 2236	SG1 2192.7 SG2 766.4 THA 29.50	EL1 42.2 EL2 14.0 ALF 39.82

LAUNCH DATE SEP 8 1973

FLIGHT TIME 190.00

ARRIVAL DATE MAR 17 1974

HELIOCENTRIC CONIC

DISTANCE 412.502

EARTH TO MARS

RL 130.71 LAL -.00 LOL 345.20 VL 32.812 GAL 8.18 AZL 88.19 HCA 121.15 SMA 193.87 ECC .26234 INC 1.8131 V1 29.564
RP 240.63 LAP 1.55 LOP 106.36 VP 20.458 GAP 6.11 AZP 90.94 TAL 41.04 TAP 162.19 RCA 143.01 APO 244.74 V2 22.821
RC 234.852 GL 9.92 GP -15.81 ZAL 31.04 ZAP 100.39 ETS 184.72 ZAE 134.64 ETE 199.24 ZAC 71.15 ETC 284.63 LVI -5.51

PLANETOCENTRIC CONIC

C3 35.614 VHL 5.968 DLA 14.95 RAL 9.65 RAD 6649.1 VEL 12.470 PTH 7.36 VHP 2.566 DPA -4.61 RAP 31.47 ECC 1.5861
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 58 3576.99 -47.16 135.32 255.74 97.21 8 52 35 2577.0 -38.94 103.96
60.00 8 15 41 3516.50 -40.21 130.74 256.61 93.04 9 14 18 2516.5 -34.61 101.14
70.00 8 48 41 3419.40 -34.15 123.06 256.80 89.82 9 45 40 2419.4 -30.66 94.89
80.00 9 38 51 3262.18 -29.77 111.03 256.68 87.64 10 33 14 2262.2 -27.72 83.79
90.00 10 52 10 3025.56 -28.12 93.55 256.59 86.84 11 42 36 2025.6 -26.60 66.64
100.00 12 21 43 2736.65 -29.77 72.40 256.68 87.64 13 7 20 1736.7 -27.72 45.16
110.00 13 48 7 2466.22 -34.15 51.98 256.80 89.82 14 29 13 1466.2 -30.66 23.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5248 TRA-1.5817 TC3-1.0257 BAU .6671	SGT 2055.0 SGR 1286.1 SG3 1353.0	ST 34.6 SR 28.5 SS 22.2
RDE -.5887 RRA -.1932 RC3 -.9545 FAU .49516	RRT .7498 RRF .8548 RTF .8000	CRT .7963 CR8 .1919 CST -.4259
FDE .6276 FRA-6.2428 FC-12.0368 BSP 3446	SG8 2424.2 R23 .1864 R13 .8869	LSA 42.8 HSA 25.6 SSA 2.6
BDE .7887 BRA 1.5934 BC3 1.4011 FSP 2330	SG1 2302.1 SG2 759.9 THA 28.52	EL1 42.5 EL2 14.0 ALF 38.11

LAUNCH DATE SEP 8 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 19 1974

HELIOCENTRIC CONIC

DISTANCE 416.308

EARTH TO MARS

RL 130.71 LAL -.00 LOL 345.20 VL 32.813 GAL 8.14 AZL 88.15 HCA 122.08 SMA 193.88 ECC .26202 INC 1.8506 V1 29.564
RP 240.93 LAP 1.57 LOP 107.30 VP 20.425 GAP 5.85 AZP 90.98 TAL 40.87 TAP 162.95 RCA 143.08 APO 244.69 V2 22.792
RC 237.739 GL 10.15 GP -15.85 ZAL 31.24 ZAP 98.88 ETS 184.32 ZAE 132.95 ETE 198.44 ZAC 71.05 ETC 284.67 LVI -5.40

PLANETOCENTRIC CONIC

C3 35.450 VHL 5.954 DLA 15.21 RAL 9.68 RAD 6649.1 VEL 12.464 PTH 7.36 VHP 2.551 DPA -5.06 RAP 31.01 ECC 1.5834
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 52 1 3581.25 -47.19 135.73 255.93 96.89 8 51 42 2581.3 -39.08 104.26
60.00 8 14 24 3521.67 -40.22 131.18 256.74 92.74 9 13 5 2521.7 -34.74 101.52
70.00 8 48 59 3425.77 -34.15 123.56 256.89 89.53 9 44 4 2425.8 -30.77 93.35
80.00 9 36 44 3269.85 -29.75 111.60 256.75 87.34 10 31 14 2269.8 -27.82 84.34
90.00 10 49 51 3033.86 -28.08 94.15 256.65 86.54 11 40 25 2033.9 -26.69 67.23
100.00 12 19 38 2744.32 -29.75 72.96 256.75 87.34 13 5 20 1744.3 -27.82 45.71
110.00 13 46 25 2472.59 -34.15 52.48 256.89 89.53 14 27 38 1472.6 -30.77 24.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5282 TRA-1.6326 TC3-1.1120 BAU .7026	SGT 2159.3 SGR 1309.2 SG3 1370.0	ST 35.3 SR 28.0 SS 22.5
RDE -.5774 RRA -.2066 RC3 -.9803 FAU .50017	RRT .7654 RRF .8624 RTF .8512	CRT .7939 CR8 .2088 CST -.4140
FDE .6939 FRA-6.2968 FC-12.2149 BSP 3652	SG8 2525.1 R23 .1841 R13 .8933	LSA 43.1 HSA 25.9 SSA 2.6
BDE .7826 BRA 1.6456 BC3 1.4824 FSP 2361	SG1 2409.6 SG2 755.0 THA 27.87	EL1 42.8 EL2 14.0 ALF 36.81

LAUNCH DATE SEP 8 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 21 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.814 GAL 8.10 AZL 88.11 HCA 123.01 SMA 193.90 ECC .26173 INC 1.8888 V1 29.564
RP 241.22 LAP 1.58 LOP 108.23 VP 20.395 GAP 5.60 AZP 91.03 TAL 40.69 TAP 163.71 RCA 143.15 APO 244.65 V2 22.763
RC 240.615 GL 10.38 GP -16.08 ZAL 31.44 ZAP 97.39 ETS 183.92 ZAE 131.27 ETE 197.68 ZAC 70.95 ETC 284.71 LVI -5.28

DISTANCE 420.114

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.287 VHL 5.940 DLA 15.48 RAL 9.71 RAD 6649.0 VEL 12.457 PTH 7.35 VHP 2.538 DPA -5.50 RAP 30.56 ECC 1.5807
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 51 2 3585.67 -47.23 136.15 256.13 96.57 8 50 48 2585.7 -39.23 104.58
60.00 8 13 4 3527.02 -40.24 131.63 256.89 92.43 9 11 51 2527.0 -34.87 101.91
70.00 8 45 14 3432.38 -34.15 124.08 257.00 89.22 9 42 26 2432.4 -30.89 99.83
80.00 9 34 33 3277.81 -29.72 112.19 256.83 87.03 10 29 11 2277.8 -27.93 84.91
90.00 10 47 28 3042.49 -28.05 94.78 256.71 86.22 11 38 10 2042.5 -26.79 67.84
100.00 12 17 25 2752.28 -29.72 73.56 256.83 87.03 13 3 17 1752.3 -27.93 46.27
110.00 13 44 40 2479.20 -34.15 52.99 257.00 89.22 14 25 59 1479.2 -30.89 24.75

DIFFERENTIAL CORRECTIONS

TDE -.5308 TRA-1.6841 TC3-1.1999 BAU .7387
RDE -.5657 RRA -.2198 RC3-1.0060 FAU .50452
FDE .7622 FRA-6.3402 FC-12.3777 BSP 3862
BDE .7758 BRA 1.6984 BC3 1.5658 FSP 2388

MID-COURSE EXECUTION ACCURACY

SGT 2266.2 SGR 1332.1 SG3 1385.3
RRR .7798 RRF .8695 RTF .8610
SGB 2628.7 R23 .1823 R13 .8990
SG1 2519.4 SG2 750.1 THA 27.24

ORBIT DETERMINATION ACCURACY

ST 36.0 SR 27.5 SS 22.9
CRT .7915 CRS .2258 CST -.4020
LSA 43.4 MSA 26.2 SSA 2.6
EL1 43.1 EL2 14.1 ALF 35.51

LAUNCH DATE SEP 8 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 23 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.815 GAL 8.06 AZL 88.07 HCA 123.94 SMA 193.93 ECC .26146 INC 1.9276 V1 29.564
RP 241.50 LAP 1.60 LOP 109.18 VP 20.365 GAP 5.35 AZP 91.08 TAL 40.51 TAP 164.45 RCA 143.22 APO 244.63 V2 22.734
RC 243.479 GL 10.63 GP -16.32 ZAL 31.65 ZAP 95.91 ETS 183.51 ZAE 129.61 ETE 196.95 ZAC 70.85 ETC 284.75 LVI -5.16

DISTANCE 423.920

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.127 VHL 5.927 DLA 15.76 RAL 9.74 RAD 6648.9 VEL 12.451 PTH 7.35 VHP 2.527 DPA -5.94 RAP 30.12 ECC 1.5781
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 50 3 3590.26 -47.26 136.59 256.33 96.24 8 49 53 2590.3 -39.38 104.91
60.00 8 11 43 3532.58 -40.25 132.10 257.04 92.11 9 10 36 2532.6 -35.01 102.32
70.00 8 43 26 3439.23 -34.14 124.61 257.11 88.91 9 40 45 2439.2 -31.02 96.33
80.00 9 32 18 3286.08 -29.69 112.80 256.91 86.71 10 27 4 2286.1 -28.03 85.50
90.00 10 45 0 3051.46 -28.01 95.43 256.79 85.90 11 35 51 2051.5 -26.89 68.48
100.00 12 15 10 2760.55 -29.69 74.17 256.91 86.71 13 1 11 1760.5 -28.03 46.87
110.00 13 42 52 2486.05 -34.14 53.53 257.11 88.91 14 24 18 1486.1 -31.02 25.24

DIFFERENTIAL CORRECTIONS

TDE -.5331 TRA-1.7365 TC3-1.2896 BAU .7755
RDE -.5537 RRA -.2330 RC3-1.0314 FAU .50824
FDE .8297 FRA-6.3759 FC-12.5260 BSP 4071
BDE .7686 BRA 1.7520 BC3 1.6513 FSP 2411

MID-COURSE EXECUTION ACCURACY

SGT 2375.9 SGR 1355.0 SG3 1398.8
RRR .7930 RRF .8762 RTF .8697
SGB 2735.1 R23 .1808 R13 .9041
SG1 2631.6 SG2 745.3 THA 26.64

ORBIT DETERMINATION ACCURACY

ST 36.8 SR 27.1 SS 23.2
CRT .7892 CRS .2414 CST -.3909
LSA 43.8 MSA 26.5 SSA 2.6
EL1 43.4 EL2 14.1 ALF 34.21

LAUNCH DATE SEP 8 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.817 GAL 8.02 AZL 88.03 HCA 124.87 SMA 193.98 ECC .26120 INC 1.9672 V1 29.564
RP 241.78 LAP 1.61 LOP 110.09 VP 20.338 GAP 5.10 AZP 91.13 TAL 40.32 TAP 165.19 RCA 143.30 APO 244.62 V2 22.706
RC 246.330 GL 10.87 GP -16.55 ZAL 31.86 ZAP 94.46 ETS 183.09 ZAE 127.95 ETE 196.25 ZAC 70.75 ETC 284.79 LVI -5.03

DISTANCE 427.725

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.969 VHL 5.913 DLA 16.05 RAL 9.78 RAD 6648.9 VEL 12.445 PTH 7.35 VHP 2.518 DPA -6.37 RAP 29.69 ECC 1.5755
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 49 2 3595.02 -47.30 137.04 256.55 95.89 8 48 57 2595.0 -39.54 105.26
60.00 8 10 20 3538.34 -40.27 132.59 257.21 91.78 9 9 18 2538.3 -35.16 102.74
70.00 8 41 35 3446.34 -34.13 125.17 257.23 88.58 9 39 1 2446.3 -31.14 96.84
80.00 9 29 59 3294.66 -29.66 113.43 257.00 86.38 10 24 84 2294.7 -28.14 86.11
90.00 10 42 27 3060.77 -27.96 96.11 256.86 85.56 11 33 27 2060.8 -26.99 69.15
100.00 12 12 51 2769.13 -29.66 74.80 257.00 86.38 12 59 0 1769.1 -28.14 47.48
110.00 13 41 1 2493.16 -34.13 54.08 257.23 88.58 14 22 34 1493.2 -31.14 25.76

DIFFERENTIAL CORRECTIONS

TDE -.5342 TRA-1.7890 TC3-1.3803 BAU .8127
RDE -.5413 RRA -.2459 RC3-1.0568 FAU .51139
FDE .8990 FRA-6.4017 FC-12.6805 BSP 4288
BDE .7803 BRA 1.8058 BC3 1.7384 FSP 2429

MID-COURSE EXECUTION ACCURACY

SGT 2467.2 SGR 1377.9 SG3 1410.8
RRR .8050 RRF .8826 RTF .8774
SGB 2845.4 R23 .1797 R13 .9088
SG1 2745.2 SG2 740.6 THA 26.08

ORBIT DETERMINATION ACCURACY

ST 37.5 SR 26.8 SS 23.6
CRT .7868 CRS .2568 CST -.3600
LSA 44.1 MSA 26.8 SSA 2.6
EL1 43.8 EL2 14.0 ALF 32.93

LAUNCH DATE SEP 8 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.819 GAL 7.98 AZL 87.99 HCA 125.80 SMA 194.00 ECC .26097 INC 2.0077 V1 29.564
RP 242.06 LAP 1.63 LOP 111.02 VP 20.309 GAP 4.86 AZP 91.17 TAL 40.12 TAP 165.92 RCA 143.37 APO 244.63 V2 22.679
RC 249.167 GL 11.13 GP -16.78 ZAL 32.09 ZAP 93.03 ETS 182.67 ZAE 126.31 ETE 195.57 ZAC 70.63 ETC 284.82 LVI -4.90

DISTANCE 431.530

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.813 VHL 5.900 DLA 16.34 RAL 9.82 RAD 6648.8 VEL 12.438 PTH 7.34 VHP 2.511 DPA -6.79 RAP 29.29 ECC 1.5729
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 48 0 3599.95 -47.33 137.51 256.79 95.53 8 48 0 2599.9 -39.70 105.62
60.00 8 8 54 3544.30 -40.28 133.10 257.30 91.43 9 7 58 2544.3 -35.30 103.18
70.00 8 39 40 3453.71 -34.11 125.74 257.36 88.24 9 37 14 2453.7 -31.27 97.38
80.00 9 27 35 3303.57 -29.62 114.09 257.09 86.04 10 22 39 2303.6 -28.25 86.75
90.00 10 39 48 3070.48 -27.91 96.81 256.94 85.21 11 30 59 2070.5 -27.09 69.84
100.00 12 10 27 2778.04 -29.62 75.48 257.09 86.04 12 56 45 1778.0 -28.25 48.12
110.00 13 39 7 2500.53 -34.11 54.66 257.36 88.24 14 20 47 1500.5 -31.27 26.30

DIFFERENTIAL CORRECTIONS

TDE -.5343 TRA-1.8416 TC3-1.4720 BAU .8506
RDE -.5294 RRA -.2596 RC3-1.0830 FAU .51448
FDE .9577 FRA-6.4314 FC-12.7942 BSP 4504
BDE .7522 BRA 1.8599 BC3 1.8275 FSP 2431

MID-COURSE EXECUTION ACCURACY

SGT 2600.0 SGR 1402.3 SG3 1422.8
RRR .8163 RRF .8889 RTF .8846
SGB 2954.1 R23 .1785 R13 .9132
SG1 2860.9 SG2 736.2 THA 25.58

ORBIT DETERMINATION ACCURACY

ST 38.2 SR 26.1 SS 24.0
CRT .7845 CRS .2663 CST -.3745
LSA 44.5 MSA 27.1 SSA 2.6
EL1 44.1 EL2 14.0 ALF 31.73

LAUNCH DATE SEP 8 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.022 GAL 7.94 AZL 87.95 HCA 126.72 SMA 194.08 ECC .26075 INC 2.0490 V1 29.564  
 RP 242.33 LAP 1.64 LOP 111.94 VP 20.203 GAP 4.62 AZP 91.23 TAL 39.91 TAP 166.64 RCA 143.45 APO 244.64 V2 22.652  
 RC 251.989 GL 11.39 GP -17.01 ZAL 32.32 ZAP 91.63 ETS 182.23 ZAE 124.68 ETE 194.92 ZAC 70.54 ETC 284.86 LVI -4.76

DISTANCE 435.333 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.659 VHL 5.887 DLA 16.64 RAL 9.87 RAD 6648.8 VEL 12.432 PTH 7.34 VHP 2.505 DPA -7.21 RAP 28.90 ECC 1.5704  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 46 56 3605.06 -47.36 138.00 257.03 95.15 8 47 1 2605.1 -39.87 106.00  
 60.00 8 7 26 3550.49 -40.29 133.63 257.56 91.08 9 6 36 2550.5 -35.45 103.64  
 70.00 8 37 42 3461.36 -34.10 126.34 257.49 87.89 9 35 24 2461.4 -31.40 97.94  
 80.00 9 25 6 3312.84 -29.57 114.78 257.19 85.68 10 20 19 2312.8 -28.36 87.42  
 90.00 10 37 4 3080.54 -27.85 97.55 257.03 84.85 11 28 25 2080.5 -27.18 70.56  
 100.00 12 7 58 2787.31 -29.57 76.15 257.19 85.68 12 54 25 1787.3 -28.36 48.79  
 110.00 13 37 9 2508.18 -34.10 55.26 257.49 87.89 14 18 57 1508.2 -31.40 26.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5349 TRA-1.8960 TC3-1.5665 BAU .8885 SGT 2717.0 SGR 1422.2 SG3 1428.3 ST 39.0 SR 25.5 SS 24.4  
 RDE -.5146 RRA -.2707 RC3-1.1061 FAU .51535 RRT .8262 RRF .8941 RTF .8901 CRT .7824 CRS .2899 CST -.3549  
 FDE 1.0498 FRA-6.4191 FC-12.8728 BSP 4728 SGB 3066.7 R23 .1786 R13 .9164 LSA 44.8 MSA 27.4 SSA 2.6  
 BDE .7423 BRA 1.9153 BC3 1.9176 FSP 2465 SG1 2978.3 SG2 731.0 THA 24.99 EL1 44.4 EL2 13.9 ALF 30.34

LAUNCH DATE SEP 8 1973

FLIGHT TIME 204.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.825 GAL 7.89 AZL 87.91 HCA 127.64 SMA 194.10 ECC .26056 INC 2.0912 V1 29.564  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.258 GAP 4.38 AZP 91.28 TAL 39.70 TAP 167.35 RCA 143.53 APO 244.67 V2 22.625  
 RC 254.795 GL 11.65 GP -17.24 ZAL 32.56 ZAP 90.25 ETS 181.82 ZAE 123.07 ETE 194.29 ZAC 70.43 ETC 284.89 LVI -4.62

DISTANCE 439.136 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.507 VHL 5.874 DLA 16.95 RAL 9.91 RAD 6648.7 VEL 12.426 PTH 7.33 VHP 2.500 DPA -7.61 RAP 28.53 ECC 1.5679  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 45 50 3610.36 -47.39 136.51 257.29 94.76 8 46 1 2610.4 -40.04 106.39  
 60.00 8 5 55 3556.91 -40.30 134.17 257.76 90.71 9 5 12 2556.9 -35.60 104.11  
 70.00 8 35 40 3469.30 -34.07 126.96 257.64 87.52 9 33 30 2469.3 -31.53 98.52  
 80.00 9 22 32 3322.47 -29.52 115.49 257.30 85.31 10 17 54 2322.5 -28.47 88.11  
 90.00 10 34 14 3091.02 -27.78 98.31 257.12 84.48 11 25 45 2091.0 -27.28 71.31  
 100.00 12 5 23 2796.94 -29.52 76.86 257.30 85.31 12 52 0 1796.9 -28.47 49.48  
 110.00 13 35 7 2516.12 -34.07 55.88 257.64 87.52 14 17 3 1516.1 -31.53 27.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5339 TRA-1.9499 TC3-1.6609 BAU .9269 SGT 2834.1 SGR 1444.2 SG3 1434.7 ST 39.7 SR 24.9 SS 24.8  
 RDE -.5007 RRA -.2829 RC3-1.1305 FAU .51644 RRT .8355 RRF .8994 RTF .8954 CRT .7803 CRS .3050 CST -.3433  
 FDE 1.1261 FRA-6.4162 FC-12.9568 BSP 4950 SGB 3180.9 R23 .1786 R13 .9196 LSA 45.1 MSA 27.7 SSA 2.5  
 BDE .7319 BRA 1.9703 BC3 2.0092 FSP 2477 SG1 3096.8 SG2 726.3 THA 24.50 EL1 44.8 EL2 13.8 ALF 29.08

LAUNCH DATE SEP 8 1973

FLIGHT TIME 206.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.828 GAL 7.85 AZL 87.87 HCA 128.56 SMA 194.16 ECC .26038 INC 2.1344 V1 29.564  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.234 GAP 4.14 AZP 91.33 TAL 39.49 TAP 168.05 RCA 143.60 APO 244.71 V2 22.599  
 RC 257.584 GL 11.92 GP -17.47 ZAL 32.81 ZAP 88.89 ETS 181.39 ZAE 121.48 ETE 193.67 ZAC 70.31 ETC 284.92 LVI -4.47

DISTANCE 442.938 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.357 VHL 5.862 DLA 17.27 RAL 9.96 RAD 6648.7 VEL 12.420 PTH 7.33 VHP 2.497 DPA -8.02 RAP 28.18 ECC 1.5654  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 44 43 3615.86 -47.42 139.04 257.56 94.35 8 44 58 2615.9 -40.22 106.80  
 60.00 8 4 21 3563.96 -40.30 134.74 257.96 90.32 9 3 45 2563.6 -35.76 104.61  
 70.00 8 33 34 3477.53 -34.05 127.60 257.79 87.14 9 31 32 2477.5 -31.66 99.12  
 80.00 9 19 51 3332.48 -29.46 116.23 257.41 84.92 10 15 24 2332.5 -28.58 88.84  
 90.00 10 31 17 3101.94 -27.71 99.10 257.22 84.09 11 22 59 2101.9 -27.38 72.09  
 100.00 12 2 43 2806.95 -29.46 77.60 257.41 84.92 12 49 30 1807.0 -28.58 50.21  
 110.00 13 33 1 2524.35 -34.05 56.52 257.79 87.14 14 15 5 1524.4 -31.66 28.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5317 TRA-2.0036 TC3-1.7560 BAU .9655 SGT 2952.0 SGR 1466.9 SG3 1440.1 ST 40.4 SR 24.3 SS 25.2  
 RDE -.4888 RRA -.2894 RC3-1.1591 FAU .51719 RRT .8441 RRF .9046 RTF .9003 CRT .7783 CRS .3167 CST -.3347  
 FDE 1.1968 FRA-6.4096 FC-13.0322 BSP 5175 SGB 3286.3 R23 .1786 R13 .9227 LSA 45.5 MSA 28.0 SSA 2.5  
 BDE .7209 BRA 2.0252 BC3 2.1019 FSP 2478 SG1 3216.3 SG2 721.8 THA 24.04 EL1 45.1 EL2 13.7 ALF 27.88

LAUNCH DATE SEP 8 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.831 GAL 7.81 AZL 87.82 HCA 129.48 SMA 194.22 ECC .26021 INC 2.1785 V1 29.564  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.210 GAP 3.90 AZP 91.39 TAL 39.27 TAP 168.75 RCA 143.68 APO 244.76 V2 22.573  
 RC 260.356 GL 12.20 GP -17.71 ZAL 33.07 ZAP 87.56 ETS 180.96 ZAE 119.91 ETE 193.08 ZAC 70.19 ETC 284.95 LVI -4.32

DISTANCE 446.740 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.210 VHL 5.849 DLA 17.60 RAL 10.01 RAD 6648.6 VEL 12.414 PTH 7.32 VHP 2.496 DPA -8.41 RAP 27.85 ECC 1.5630  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 43 33 3621.55 -47.45 139.59 257.84 93.93 8 43 54 2621.6 -40.40 107.23  
 60.00 8 2 44 3570.45 -40.30 135.32 258.17 89.93 9 2 15 2570.5 -35.92 105.12  
 70.00 8 31 24 3486.08 -34.02 128.26 257.94 86.75 9 29 30 2486.1 -31.60 99.75  
 80.00 9 17 5 3342.90 -29.40 117.00 257.53 84.52 10 12 48 2342.9 -28.69 89.59  
 90.00 10 28 12 3113.32 -27.62 99.92 257.32 83.68 11 20 6 2113.3 -27.48 72.91  
 100.00 11 59 57 2817.37 -29.40 78.36 257.53 84.52 12 46 54 1817.4 -28.69 50.96  
 110.00 13 30 50 2532.90 -34.02 57.18 257.94 86.75 14 13 3 1532.9 -31.80 28.67

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5290 TRA-2.0379 TC3-1.8523 BAU 1.0042 SGT 3071.8 SGR 1488.4 SG3 1442.9 ST 41.1 SR 23.7 SS 25.6  
 RDE -.4719 RRA -.3071 RC3-1.1790 FAU .51701 RRT .8520 RRF .9093 RTF .9044 CRT .7766 CRS .3307 CST -.3233  
 FDE 1.2760 FRA-6.3869 FC-13.0837 BSP 5402 SGB 3413.4 R23 .1793 R13 .9252 LSA 45.8 MSA 28.3 SSA 2.5  
 BDE .7089 BRA 2.0806 BC3 2.1957 FSP 2486 SG1 3337.2 SG2 717.3 THA 23.59 EL1 45.5 EL2 13.5 ALF 26.64

LAUNCH DATE SEP 8 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 6 1974

**Heliocentric Conic**  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.035 GAL 7.76 AZL 87.78 HCA 130.40 SMA 194.29 ECC .26006 INC 2.2238 V1 29.584  
 RP 243.37 LAP 1.69 LOP 115.62 VP 20.188 GAP 3.67 AZP 91.44 TAL 39.04 TAP 169.44 RCA 143.76 APO 244.82 V2 22.548  
 RC 263.112 GL 12.49 GP -17.94 ZAL 33.34 ZAP 86.26 ETS 180.52 ZAE 118.35 ETE 192.50 ZAC 70.06 ETC 284.98 LVI -4.16

**Distance 490.540**

**Planeto-centric Conic**  
 C3 34.066 VHL 5.837 DLA 17.93 RAL 10.07 RAD 6648.5 VEL 12.409 PTH 7.32 VHP 2.495 DPA -8.80 RAP 27.54 ECC 1.9608  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 42 21 3627.46 -47.48 140.16 258.13 93.49 8 42 48 2627.5 -40.58 107.67  
 60.00 8 1 4 3577.61 -40.30 135.93 258.39 89.51 9 0 42 2577.6 -36.08 105.66  
 70.00 8 29 8 3494.97 -33.98 128.96 258.10 86.34 9 27 23 2495.0 -31.93 100.41  
 80.00 9 14 12 3353.75 -29.32 117.79 257.65 84.11 10 10 5 2353.8 -28.79 90.38  
 90.00 10 25 0 3125.19 -27.53 100.77 257.42 83.27 11 17 5 2125.2 -27.57 73.77  
 100.00 11 57 3 2828.23 -29.32 79.16 257.65 84.11 12 44 12 1828.2 -28.79 51.75  
 110.00 13 28 35 2541.78 -33.98 57.87 258.10 86.34 14 10 56 1541.8 -31.93 29.33

**Differential Corrections**  
 TDE -.5251 TRA-2.1122 TC3-1.9494 BAU 1.0432  
 RDE -.4567 RRA -.3188 RC3-1.2026 FAU .51631  
 FDE 1.3544 FRA-6.3587 FC-13.1214 BSP 5632  
 BDE .6959 BRA 2.1361 BC3 2.2905 FSP 2488

**Mid-Course Execution Accuracy**  
 SGT 3192.6 SGR 1510.0 SCS 1444.2  
 RRT .8593 RRF .9138 RTF .9082  
 SGB 3531.7 R23 .1801 R13 .9276  
 SGI 3459.0 SGI 712.9 THA 23.16

**Orbit Determination Accuracy**  
 ST 41.8 SR 23.0 SS 26.1  
 CRT .7752 CRS .3430 CST -.3131  
 LSA 46.2 MSA 28.6 SSA 2.5  
 EL1 45.8 EL2 13.3 ALF 25.44

LAUNCH DATE SEP 8 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 8 1974

**Heliocentric Conic**  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.839 GAL 7.71 AZL 87.73 HCA 131.31 SMA 194.37 ECC .25992 INC 2.2703 V1 29.584  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.167 GAP 3.43 AZP 91.50 TAL 38.81 TAP 170.12 RCA 143.85 APO 244.89 V2 22.523  
 RC 265.850 GL 12.79 GP -18.17 ZAL 33.61 ZAP 84.98 ETS 180.08 ZAE 116.82 ETE 191.93 ZAC 69.93 ETC 285.00 LVI -4.00

**Distance 454.340**

**Planeto-centric Conic**  
 C3 33.924 VHL 5.824 DLA 18.28 RAL 10.12 RAD 6648.5 VEL 12.403 PTH 7.31 VHP 2.496 DPA -9.18 RAP 27.25 ECC 1.5583  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 41 6 3633.59 -47.50 140.75 258.43 93.04 8 41 40 2633.6 -40.77 108.13  
 60.00 7 59 20 3585.03 -40.29 136.57 258.62 89.08 8 59 5 2585.0 -36.25 106.22  
 70.00 8 26 48 3504.19 -33.94 129.67 258.27 85.92 9 25 12 2504.2 -32.07 101.09  
 80.00 9 11 11 3365.06 -29.24 118.62 257.77 83.68 10 7 16 2365.1 -28.90 91.20  
 90.00 10 21 39 3137.58 -27.43 101.67 257.53 82.83 11 13 57 2137.6 -27.67 74.66  
 100.00 11 54 3 2839.53 -29.24 79.99 257.77 83.68 12 41 22 1839.5 -28.90 52.57  
 110.00 13 26 14 2551.01 -33.94 58.59 258.27 85.92 14 8 45 1551.0 -32.07 30.01

**Differential Corrections**  
 TDE -.5203 TRA-2.1663 TC3-2.0468 BAU 1.0821  
 RDE -.4411 RRA -.3304 RC3-1.2263 FAU .51511  
 FDE 1.4315 FRA-6.3234 FC-13.1457 BSP 5860  
 BDE .6822 BRA 2.1914 BC3 2.3860 FSP 2486

**Mid-Course Execution Accuracy**  
 SGT 3314.1 SGR 1531.7 SCS 1444.2  
 RRT .8661 RRF .9181 RTF .9115  
 SGB 3650.9 R23 .1812 R13 .9297  
 SGI 3581.5 SGI 708.6 THA 22.75

**Orbit Determination Accuracy**  
 ST 42.4 SR 22.4 SS 26.5  
 CRT .7741 CRS .3534 CST -.3041  
 LSA 46.6 MSA 28.8 SSA 2.5  
 EL1 46.2 EL2 13.0 ALF 24.28

LAUNCH DATE SEP 8 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 10 1974

**Heliocentric Conic**  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.843 GAL 7.87 AZL 87.68 HCA 132.22 SMA 194.45 ECC .25980 INC 2.3179 V1 29.584  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.147 GAP 3.20 AZP 91.56 TAL 38.57 TAP 170.79 RCA 143.93 APO 244.97 V2 22.499  
 RC 268.570 GL 13.09 GP -18.41 ZAL 33.89 ZAP 83.74 ETS 179.63 ZAE 115.30 ETE 191.38 ZAC 69.79 ETC 285.03 LVI -3.82

**Distance 458.138**

**Planeto-centric Conic**  
 C3 33.785 VHL 5.812 DLA 18.63 RAL 10.17 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 2.499 DPA -9.55 RAP 26.99 ECC 1.5560  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 49 3639.94 -47.52 141.36 258.75 92.57 8 40 29 2639.9 -40.97 108.62  
 60.00 7 57 32 3592.73 -40.28 137.22 258.86 88.64 8 57 25 2592.7 -36.41 106.80  
 70.00 8 24 21 3513.79 -33.89 130.42 258.44 85.48 9 22 55 2513.8 -32.21 101.81  
 80.00 9 8 2 3376.86 -29.15 119.49 257.90 83.24 10 4 19 2376.9 -29.01 92.06  
 90.00 10 18 9 3150.53 -27.32 102.60 257.63 82.38 11 10 40 2150.5 -27.76 75.60  
 100.00 11 50 54 2851.33 -29.15 80.86 257.90 83.24 12 38 26 1851.3 -29.01 53.43  
 110.00 13 23 47 2560.61 -33.89 59.34 258.44 85.48 14 6 28 1560.6 -32.21 30.73

**Differential Corrections**  
 TDE -.5145 TRA-2.2207 TC3-2.1448 BAU 1.1212  
 RDE -.4250 RRA -.3420 RC3-1.2495 FAU .51327  
 FDE 1.5112 FRA-6.2810 FC-13.1524 BSP 6090  
 BDE .6673 BRA 2.2489 BC3 2.4822 FSP 2483

**Mid-Course Execution Accuracy**  
 SGT 3436.7 SGR 1553.0 SCS 1442.3  
 RRT .8724 RRF .9222 RTF .9144  
 SGB 3771.3 R23 .1826 R13 .9315  
 SGI 3704.9 SGI 704.2 THA 22.37

**Orbit Determination Accuracy**  
 ST 43.1 SR 21.7 SS 27.0  
 CRT .7734 CRS .3629 CST -.2852  
 LSA 47.0 MSA 29.1 SSA 2.4  
 EL1 46.6 EL2 12.7 ALF 23.13

LAUNCH DATE SEP 8 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 12 1974

**Heliocentric Conic**  
 RL 150.71 LAL -.00 LOL 348.20 VL 32.848 GAL 7.82 AZL 87.63 HCA 133.13 SMA 194.53 ECC .25969 INC 2.3869 V1 29.584  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.128 GAP 2.97 AZP 91.62 TAL 38.33 TAP 171.48 RCA 144.01 APO 245.05 V2 22.473  
 RC 271.273 GL 13.40 GP -18.85 ZAL 34.18 ZAP 82.52 ETS 179.18 ZAE 113.81 ETE 190.84 ZAC 69.64 ETC 285.05 LVI -3.64

**Distance 461.836**

**Planeto-centric Conic**  
 C3 33.649 VHL 5.801 DLA 18.99 RAL 10.23 RAD 6648.4 VEL 12.392 PTH 7.31 VHP 2.502 DPA -9.92 RAP 26.75 ECC 1.5538  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 28 3646.54 -47.54 142.00 259.08 92.08 8 39 15 2646.5 -41.17 109.12  
 60.00 7 55 40 3600.74 -40.27 137.90 259.10 88.18 8 55 41 2600.7 -36.59 107.41  
 70.00 8 21 49 3523.78 -33.83 131.19 258.62 85.03 9 20 32 2523.8 -32.35 102.55  
 80.00 9 4 45 3389.17 -29.05 120.39 258.02 82.77 10 1 14 2389.2 -29.11 92.97  
 90.00 10 14 29 3164.08 -27.19 103.57 257.74 81.91 11 7 13 2164.1 -27.84 76.58  
 100.00 11 47 37 2863.64 -29.05 81.76 258.02 82.77 12 35 21 1863.6 -29.11 54.33  
 110.00 13 21 15 2570.60 -33.83 60.11 258.62 85.03 14 4 5 1570.6 -32.35 31.47

**Differential Corrections**  
 TDE -.5075 TRA-2.2747 TC3-2.2431 BAU 1.1802  
 RDE -.4084 RRA -.3533 RC3-1.2727 FAU .51097  
 FDE 1.5902 FRA-6.2300 FC-13.1464 BSP 6321  
 BDE .6514 BRA 2.3019 BC3 2.5790 FSP 2476

**Mid-Course Execution Accuracy**  
 SGT 3559.4 SGR 1574.5 SCS 1439.1  
 RRT .8782 RRF .9261 RTF .9170  
 SGB 3892.1 R23 .1843 R13 .9331  
 SGI 3828.6 SGI 700.2 THA 22.00

**Orbit Determination Accuracy**  
 ST 43.7 SR 21.0 SS 27.5  
 CRT .7733 CRS .3707 CST -.2872  
 LSA 47.3 MSA 29.4 SSA 2.4  
 EL1 46.9 EL2 12.4 ALF 22.02

LAUNCH DATE SEP 8 1973 FLIGHT TIME 218.00 ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC DISTANCE 465.733 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.092 GAL 7.57 AZL 87.58 HCA 134.04 SMA 194.62 ECC .25960 INC 2.4172 V1 29.564  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.110 GAP 2.74 AZP 91.68 TAL 38.08 TAP 172.12 RCA 144.10 APO 245.14 V2 22.452  
 RC 273.957 GL 13.72 GP -18.90 ZAL 34.48 ZAP 81.33 ETS 178.72 ZAE 112.34 ETE 190.31 ZAC 69.48 ETC 285.08 LVI -3.45

PLANETOCENTRIC CONIC  
 C3 33.817 VHL 5.789 DLA 19.37 RAL 10.28 RAD 6648.3 VEL 12.387 PTH 7.30 VHP 2.507 DPA -10.28 RAP 26.53 ECC 1.5516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 5 3653.40 -47.56 142.66 259.42 91.57 8 37 58 2653.4 -41.38 109.65  
 60.00 7 53 44 3609.05 -40.25 138.61 259.36 87.70 8 53 53 2609.1 -36.76 108.05  
 70.00 8 19 9 3534.18 -33.77 132.00 258.81 84.56 9 18 4 2534.2 -32.49 103.33  
 80.00 9 1 19 3402.04 -28.93 121.33 258.15 82.29 9 58 1 2402.0 -29.22 93.91  
 90.00 10 10 37 3176.28 -27.05 104.58 257.65 81.42 11 3 36 2178.3 -27.93 77.61  
 100.00 11 44 10 2876.51 -28.93 82.70 258.15 82.29 12 32 7 1876.5 -29.22 55.26  
 110.00 13 18 36 2581.00 -33.77 60.91 258.81 84.56 14 1 37 1581.0 -32.49 32.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4992 TRA-2.3286 TC3-2.3419 BAU 1.1993 SGT 3682.9 SGR 1596.0 SG3 1434.6 ST 44.4 SR 20.3 SS 28.1  
 RDE -.3912 RRA -.3646 RC3-1.2958 FAU .50822 RRT .8836 RRF .9298 RTF .9193 CRT .7738 CR8 .3767 CST -.2800  
 FDE 1.6709 FRA-6.1744 FC-13.1272 BSP 6556 SGB 4013.9 R23 .1862 R13 .9346 LSA 47.7 MSA 29.8 S8A 2.4  
 BDE .6343 BRA 2.3570 BC3 2.6764 F8P 2468 SG1 3953.0 S62 696.2 THA 21.66 EL1 47.3 EL2 12.1 ALF 20.94

LAUNCH DATE SEP 8 1973 FLIGHT TIME 220.00 ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC DISTANCE 469.529 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.857 GAL 7.52 AZL 87.53 HCA 134.95 SMA 194.71 ECC .25951 INC 2.4690 V1 29.564  
 RP 244.56 LAP 1.75 LOP 120.18 VP 20.093 GAP 2.52 AZP 91.74 TAL 37.83 TAP 172.78 RCA 144.18 APO 245.24 V2 22.430  
 RC 276.623 GL 14.08 GP -19.14 ZAL 34.79 ZAP 80.17 ETS 178.26 ZAE 110.90 ETE 189.79 ZAC 69.31 ETC 285.10 LVI -3.25

PLANETOCENTRIC CONIC  
 C3 33.368 VHL 5.778 DLA 19.75 RAL 10.34 RAD 6648.3 VEL 12.381 PTH 7.30 VHP 2.513 DPA -10.64 RAP 26.34 ECC 1.5493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 37 3660.51 -47.57 143.35 259.77 91.04 8 36 38 2660.5 -41.59 110.20  
 60.00 7 51 42 3617.70 -40.22 139.34 259.62 87.20 8 52 0 2617.7 -36.94 108.72  
 70.00 8 16 23 3545.01 -33.70 132.83 258.99 84.07 9 15 28 2545.0 -32.63 104.15  
 80.00 8 57 42 3415.51 -28.81 122.31 258.29 81.79 9 54 37 2415.5 -29.31 94.90  
 90.00 10 6 34 3193.18 -26.89 105.64 257.96 80.91 10 59 47 2193.2 -28.00 78.69  
 100.00 11 40 34 2889.98 -28.81 83.68 258.29 81.79 12 28 44 1890.0 -29.31 56.26  
 110.00 13 15 49 2591.83 -33.70 61.75 258.99 84.07 13 59 1 1591.8 -32.63 33.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4902 TRA-2.3826 TC3-2.4408 BAU 1.2384 SGT 3807.1 SGR 1618.0 SG3 1429.0 ST 45.0 SR 19.6 SS 28.6  
 RDE -.3739 RRA -.3761 RC3-1.3190 FAU .50507 RRT .8887 RRF .9334 RTF .9214 CRT .7752 CR8 .3794 CST -.2748  
 FDE 1.7475 FRA-6.1146 FC-13.0961 BSP 6783 SGB 4136.7 R23 .1883 R13 .9359 LSA 48.2 MSA 30.0 S8A 2.3  
 BDE .6166 BRA 2.4121 BC3 2.7744 F8P 2453 SG1 4078.3 S62 692.4 THA 21.34 EL1 47.7 EL2 11.7 ALF 19.90

LAUNCH DATE SEP 8 1973 FLIGHT TIME 222.00 ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC DISTANCE 473.323 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.862 GAL 7.48 AZL 87.48 HCA 135.85 SMA 194.81 ECC .25944 INC 2.5224 V1 29.564  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.077 GAP 2.29 AZP 91.81 TAL 37.58 TAP 173.43 RCA 144.27 APO 245.35 V2 22.407  
 RC 279.268 GL 14.40 GP -19.40 ZAL 35.10 ZAP 79.03 ETS 177.80 ZAE 109.47 ETE 189.28 ZAC 69.13 ETC 285.13 LVI -3.08

PLANETOCENTRIC CONIC  
 C3 33.263 VHL 5.767 DLA 20.15 RAL 10.39 RAD 6648.2 VEL 12.376 PTH 7.29 VHP 2.519 DPA -10.99 RAP 26.17 ECC 1.5474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 6 3687.91 -47.57 144.06 260.14 90.49 8 35 14 2687.9 -41.80 110.78  
 60.00 7 49 35 3626.60 -40.19 140.10 259.89 86.68 8 50 2 2626.7 -37.12 109.41  
 70.00 8 13 29 3556.32 -33.61 133.71 259.19 83.56 9 12 45 2556.3 -32.77 105.00  
 80.00 8 53 54 3429.63 -28.67 123.34 258.42 81.27 9 51 3 2429.6 -29.41 95.94  
 90.00 10 2 17 3208.85 -26.72 106.76 258.06 80.37 10 55 46 2208.8 -28.07 79.83  
 100.00 11 36 45 2904.10 -28.67 84.70 258.42 81.27 12 25 10 1904.1 -29.41 57.30  
 110.00 13 12 55 2603.14 -33.61 62.62 259.19 83.56 13 56 18 1603.1 -32.77 33.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4792 TRA-2.4358 TC3-2.5393 BAU 1.2772 SGT 3930.6 SGR 1639.6 SG3 1421.7 ST 45.6 SR 18.9 SS 29.2  
 RDE -.3559 RRA -.3873 RC3-1.3418 FAU .50133 RRT .8935 RRF .9368 RTF .9232 CRT .7773 CR8 .3805 CST -.2699  
 FDE 1.8268 FRA-6.0483 FC-13.0480 BSP 7022 SGB 4258.9 R23 .1907 R13 .9371 LSA 48.6 MSA 30.4 S8A 2.3  
 BDE .5989 BRA 2.4664 BC3 2.8720 F8P 2441 SG1 4202.8 S62 688.7 THA 21.03 EL1 48.1 EL2 11.3 ALF 18.88

LAUNCH DATE SEP 8 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC DISTANCE 477.117 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 32.868 GAL 7.43 AZL 87.42 HCA 136.75 SMA 194.91 ECC .25937 INC 2.5774 V1 29.564  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.061 GAP 2.07 AZP 91.88 TAL 37.32 TAP 174.07 RCA 144.36 APO 245.47 V2 22.386  
 RC 281.893 GL 14.75 GP -19.66 ZAL 35.43 ZAP 77.93 ETS 177.33 ZAE 108.07 ETE 188.78 ZAC 68.94 ETC 285.16 LVI -2.63

PLANETOCENTRIC CONIC  
 C3 33.143 VHL 5.757 DLA 20.55 RAL 10.44 RAD 6648.2 VEL 12.372 PTH 7.29 VHP 2.527 DPA -11.34 RAP 26.02 ECC 1.5454  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 32 31 3675.60 -47.58 144.81 260.52 89.91 8 33 47 2675.6 -42.02 111.39  
 60.00 7 47 22 3636.05 -40.15 140.90 260.17 86.15 8 47 58 2636.1 -37.30 110.14  
 70.00 8 10 26 3568.12 -33.52 134.61 259.38 83.03 9 9 55 2568.1 -32.91 105.89  
 80.00 8 49 53 3444.45 -28.51 124.41 258.55 80.73 9 47 18 2444.4 -29.50 97.03  
 90.00 9 57 45 3225.36 -26.53 107.93 258.16 79.82 10 51 31 2225.4 -28.14 81.04  
 100.00 11 32 45 2918.92 -28.51 85.78 258.55 80.73 12 21 24 1918.9 -29.50 58.40  
 110.00 13 9 53 2614.94 -33.52 63.53 259.38 83.03 13 53 28 1614.9 -32.91 34.81

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4674 TRA-2.4891 TC3-2.6383 BAU 1.3161 SGT 4055.0 SGR 1661.6 SG3 1413.2 ST 46.2 SR 18.1 SS 29.8  
 RDE -.3378 RRA -.3988 RC3-1.3847 FAU .49722 RRT .8979 RRF .9401 RTF .9248 CRT .7808 CR8 .3787 CST -.2660  
 FDE 1.9063 FRA-5.9735 FC-12.9882 BSP 7255 SGB 4382.3 R23 .1933 R13 .9381 LSA 49.0 MSA 30.7 S8A 2.3  
 BDE .5764 BRA 2.5208 BC3 2.9703 F8P 2425 SG1 4328.4 S62 685.3 THA 20.74 EL1 48.5 EL2 10.8 ALF 17.92

LAUNCH DATE SEP 8 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 348.20 VL 32.873 GAL 7.36 AZL 87.37 HCA 137.88 SMA 195.01 ECC .25932 INC 2.6342 V1 29.564
RP 245.22 LAP 1.77 LOP 122.89 VP 20.047 GAP 1.85 AZP 91.95 TAL 37.05 TAP 174.71 RCA 144.44 APO 245.59 V2 22.365
RC 284.497 GL 15.11 GP -19.92 ZAL 35.76 ZAP 78.86 ETS 176.85 ZAE 106.69 ETE 188.28 ZAC 68.74 ETC 285.16 LVI -2.60

PLANETOCENTRIC CONIC

C3 33.027 VHL 5.747 DLA 20.97 RAL 10.49 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 2.536 DPA -11.68 RAP 25.90 ECC 1.5433
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 30 52 3683.61 -47.57 145.58 260.91 89.32 8 32 15 2683.6 -42.25 112.02
60.00 7 45 3 3645.81 -40.10 141.72 260.45 85.59 8 45 49 2645.8 -37.49 110.90
70.00 8 7 15 3580.46 -33.41 135.56 259.58 82.48 9 6 55 2580.5 -33.04 108.83
80.00 8 45 39 3480.03 -28.33 125.53 258.68 80.16 9 43 19 2460.0 -29.58 98.18
90.00 9 52 57 3242.79 -26.31 109.16 258.26 79.24 10 47 0 2242.8 -28.19 82.31
100.00 11 28 31 2934.51 -26.33 86.90 258.68 80.16 12 17 26 1934.5 -29.58 59.55
110.00 13 6 41 2627.28 -33.41 64.48 259.58 82.48 13 50 28 1627.3 -33.04 35.74

DIFFERENTIAL CORRECTIONS

TDE -.4938 TRA-2.5420 TC3-2.7368 BAU 1.3548
RDE -.3182 RRA -.4100 RC3-1.3875 FAU .49270
FDE 1.9856 FRA-5.8970 FC-12.9153 BSP 7491
BDE .5542 BRA 2.5748 BC3 3.0664 FSP 2407

MID-COURSE EXECUTION ACCURACY

SGT 4179.3 SGR 1683.9 SG3 1403.8
RRR .9021 RRF .9432 RTF .9263
SGB 4505.7 R23 .1991 R13 .9390
SG1 4453.8 SG2 681.9 THA 20.48

ORBIT DETERMINATION ACCURACY

ST 46.8 SR 17.3 SS 30.4
CRT .7857 CR8 .3731 CST -.2636
LSA 49.5 MSA 31.0 SSA 2.2
EL1 48.9 EL2 10.3 ALF 16.99

LAUNCH DATE SEP 8 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.879 GAL 7.33 AZL 87.31 HCA 138.56 SMA 195.12 ECC .25928 INC 2.6929 V1 29.564
RP 245.43 LAP 1.78 LOP 123.79 VP 20.033 GAP 1.63 AZP 92.02 TAL 36.79 TAP 175.34 RCA 144.53 APO 245.71 V2 22.344
RC 287.079 GL 15.49 GP -20.20 ZAL 36.10 ZAP 75.82 ETS 176.37 ZAE 105.34 ETE 187.79 ZAC 68.53 ETC 285.21 LVI -2.36

PLANETOCENTRIC CONIC

C3 32.916 VHL 5.737 DLA 21.40 RAL 10.54 RAD 6648.1 VEL 12.362 PTH 7.28 VHP 2.546 DPA -12.03 RAP 25.81 ECC 1.5417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 29 7 3691.95 -47.56 146.39 261.32 88.70 8 30 39 2691.9 -42.48 112.69
60.00 7 42 38 3655.98 -40.04 142.58 260.74 85.01 8 43 34 2656.0 -37.68 111.70
70.00 8 3 53 3593.37 -33.29 136.55 259.78 81.90 9 3 46 2593.4 -33.18 107.81
80.00 8 41 10 3476.45 -28.14 126.71 258.80 79.57 9 39 7 2476.5 -29.66 99.39
90.00 9 47 50 3261.24 -26.07 110.45 258.35 78.63 10 42 11 2261.2 -28.24 83.66
100.00 11 24 2 2950.93 -26.14 88.08 258.80 79.57 12 13 13 1950.9 -29.66 60.76
110.00 13 3 19 2640.19 -33.29 65.47 259.78 81.90 13 47 20 1640.2 -33.18 36.73

DIFFERENTIAL CORRECTIONS

TDE -.4395 TRA-2.5949 TC3-2.8354 BAU 1.3936
RDE -.2987 RRA -.4217 RC3-1.4106 FAU .48789
FDE 2.0816 FRA-5.8176 FC-12.8323 BSP 7722
BDE .5314 BRA 2.6289 BC3 3.1668 FSP 2385

MID-COURSE EXECUTION ACCURACY

SGT 4304.0 SGR 1708.8 SG3 1393.1
RRR .9060 RRF .9462 RTF .9275
SGB 4630.1 R23 .1991 R13 .9398
SG1 4580.1 SG2 678.9 THA 20.23

ORBIT DETERMINATION ACCURACY

ST 47.4 SR 16.6 SS 31.0
CRT .7924 CR8 .3829 CST -.2630
LSA 50.0 MSA 31.3 SSA 2.2
EL1 49.3 EL2 9.7 ALF 16.12

LAUNCH DATE SEP 8 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.885 GAL 7.28 AZL 87.25 HCA 139.45 SMA 195.23 ECC .25924 INC 2.7536 V1 29.564
RP 245.63 LAP 1.79 LOP 124.69 VP 20.021 GAP 1.41 AZP 92.09 TAL 36.52 TAP 175.97 RCA 144.62 APO 245.84 V2 22.324
RC 289.637 GL 15.88 GP -20.48 ZAL 36.45 ZAP 74.80 ETS 175.88 ZAE 104.01 ETE 187.31 ZAC 68.30 ETC 285.24 LVI -2.11

PLANETOCENTRIC CONIC

C3 32.810 VHL 5.728 DLA 21.85 RAL 10.59 RAD 6648.1 VEL 12.358 PTH 7.28 VHP 2.557 DPA -12.37 RAP 25.74 ECC 1.5400
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 27 18 3700.64 -47.55 147.23 261.73 88.05 8 28 58 2700.6 -42.72 113.39
60.00 7 40 4 3686.60 -39.98 143.48 261.04 84.40 8 41 11 2666.6 -37.87 112.54
70.00 8 0 20 3606.81 -33.16 137.58 259.98 81.30 9 0 27 2606.9 -33.31 108.84
80.00 8 38 25 3493.80 -27.92 127.95 258.92 78.95 9 34 38 2493.0 -29.73 100.88
90.00 9 42 22 3280.84 -25.80 111.83 258.44 78.00 10 37 3 2280.8 -28.27 85.08
100.00 11 19 16 2986.27 -27.92 89.32 258.92 78.95 12 8 45 1988.3 -29.73 62.04
110.00 12 59 47 2653.73 -33.16 66.50 259.98 81.30 13 44 0 1653.7 -33.31 37.78

DIFFERENTIAL CORRECTIONS

TDE -.4237 TRA-2.6474 TC3-2.9337 BAU 1.4323
RDE -.2787 RRA -.4333 RC3-1.4337 FAU .48271
FDE 2.1375 FRA-5.7327 FC-12.7388 BSP 7954
BDE .8071 BRA 2.6826 BC3 3.2652 FSP 2382

MID-COURSE EXECUTION ACCURACY

SGT 4428.8 SGR 1730.1 SG3 1381.4
RRR .9097 RRF .9491 RTF .9288
SGB 4754.8 R23 .2023 R13 .9405
SG1 4706.4 SG2 676.2 THA 19.99

ORBIT DETERMINATION ACCURACY

ST 48.0 SR 15.8 SS 31.8
CRT .8011 CR8 .3481 CST -.2634
LSA 50.5 MSA 31.7 SSA 2.2
EL1 49.7 EL2 9.1 ALF 15.28

LAUNCH DATE SEP 8 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 348.20 VL 32.891 GAL 7.22 AZL 87.18 HCA 140.35 SMA 195.34 ECC .25922 INC 2.8189 V1 29.564
RP 245.83 LAP 1.80 LOP 125.59 VP 20.009 GAP 1.19 AZP 92.17 TAL 36.24 TAP 176.58 RCA 144.71 APO 245.98 V2 22.305
RC 292.172 GL 16.28 GP -20.77 ZAL 36.82 ZAP 73.82 ETS 175.39 ZAE 102.70 ETE 188.83 ZAC 68.06 ETC 285.27 LVI -1.85

PLANETOCENTRIC CONIC

C3 32.710 VHL 5.719 DLA 22.31 RAL 10.63 RAD 6648.0 VEL 12.354 PTH 7.28 VHP 2.569 DPA -12.70 RAP 25.69 ECC 1.5383
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 25 22 3709.70 -47.52 148.10 262.16 87.38 8 27 12 2709.7 -42.98 114.13
60.00 7 37 23 3677.69 -39.90 144.41 261.35 83.78 8 38 41 2677.7 -38.06 113.42
70.00 7 56 36 3621.11 -33.01 138.66 260.18 80.68 8 56 57 2621.1 -33.44 109.93
80.00 8 31 20 3512.16 -27.87 129.26 259.03 78.31 9 29 52 2512.2 -29.78 102.04
90.00 9 36 31 3301.72 -25.50 113.28 258.51 77.33 10 31 33 2301.7 -28.28 86.61
100.00 11 14 12 2986.63 -27.67 90.63 259.03 78.31 12 3 59 1986.6 -29.78 63.41
110.00 12 96 2 2667.93 -33.01 67.58 260.18 80.68 13 40 30 1667.9 -33.44 38.85

DIFFERENTIAL CORRECTIONS

TDE -.4063 TRA-2.6998 TC3-3.0317 BAU 1.4709
RDE -.2581 RRA -.4454 RC3-1.4569 FAU .47720
FDE 2.2130 FRA-5.6470 FC-12.6300 BSP 8184
BDE .4813 BRA 2.7363 BC3 3.3636 FSP 2336

MID-COURSE EXECUTION ACCURACY

SGT 4553.9 SGR 1754.0 SG3 1368.9
RRR .9132 RRF .9518 RTF .9296
SGB 4880.1 R23 .2057 R13 .9411
SG1 4833.4 SG2 673.5 THA 19.78

ORBIT DETERMINATION ACCURACY

ST 48.6 SR 15.0 SS 32.3
CRT .8122 CR8 .3272 CST -.2656
LSA 51.0 MSA 32.0 SSA 2.1
EL1 50.2 EL2 8.5 ALF 14.51



LAUNCH DATE SEP 8 1973

FLIGHT TIME 234.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC										DISTANCE 496.071										EARTH TO MARS																																													
RL	150.71	LAL	-0.00	LOL	345.20	VL	32.897	GAL	7.17	AZL	87.12	HCA	141.25	SMA	195.46	ECC	.25920	INC	2.8017	V1	29.564	RP	246.02	LAP	1.80	LOP	126.49	VP	19.998	GAP	.97	AZP	92.25	TAL	35.97	TAP	177.21	RCA	144.80	APO	246.12	V2	22.266	RC	294.682	GL	16.70	GP	-21.07	ZAL	37.19	ZAP	72.87	ETS	174.88	ZAE	101.42	ETE	186.35	ZAC	67.81	ETC	285.30	LVI	-1.57
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.617	VHL	5.711	DLA	22.78	RAL	10.87	RAD	6648.0	VEL	12.350	PTH	7.27	VHP	2.581	DPA	-13.04	RAP	25.67	ECC	1.5368	SGT	4677.8	SGR	1778.2	SG3	1335.1	ST	49.2	SR	14.2	SS	33.0																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8259	CRS	.3001	CST	-2.687	LSA	51.6	MSA	32.4	SSA	2.1																												
50.00	7	23	21	3719.15	-47.49	149.02	262.61	86.88	8	25	20	2719.2	-43.21	114.90	SGB	5004.4	R23	.2093	R13	.9416	EL1	50.6	EL2	7.8	ALF	13.78																																							
60.00	7	34	33	3689.30	-39.81	145.39	261.66	83.12	8	36	2	2689.3	-36.25	114.34	SG1	4959.1	SG2	671.3	THA	19.58																																													
70.00	7	52	38	3636.05	-32.84	139.80	260.38	80.03	8	53	14	2636.0	-33.57	111.08																																																			
80.00	8	25	55	3531.65	-27.39	130.65	259.14	77.63	9	24	46	2531.7	-29.83	103.49																																																			
90.00	9	30	12	3324.07	-25.15	114.83	258.57	76.63	10	25	38	2324.1	-28.27	88.25																																																			
100.00	11	8	47	3006.12	-27.39	92.01	259.14	77.63	11	58	53	2006.1	-29.83	64.85																																																			
110.00	12	52	4	2682.86	-32.84	68.71	260.38	80.03	13	36	47	1682.9	-33.57	40.00																																																			

LAUNCH DATE SEP 8 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC										DISTANCE 498.859										EARTH TO MARS																																													
RL	150.71	LAL	-0.00	LOL	345.20	VL	32.903	GAL	7.12	AZL	87.05	HCA	142.14	SMA	195.58	ECC	.25919	INC	2.9493	V1	29.564	RP	246.21	LAP	1.81	LOP	127.38	VP	19.987	GAP	.76	AZP	92.33	TAL	35.69	TAP	177.83	RCA	144.89	APO	246.27	V2	22.267	RC	297.167	GL	17.13	GP	-21.38	ZAL	37.57	ZAP	71.94	ETS	174.37	ZAE	100.16	ETE	185.87	ZAC	67.53	ETC	285.33	LVI	-1.28
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.531	VHL	5.704	DLA	23.27	RAL	10.71	RAD	6648.0	VEL	12.347	PTH	7.27	VHP	2.595	DPA	-13.38	RAP	25.68	ECC	1.5354	SGT	4802.3	SGR	1803.4	SG3	1340.6	ST	49.8	SR	13.5	SS	33.7																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8427	CRS	.2638	CST	-2.741	LSA	52.2	MSA	32.7	SSA	2.0																												
50.00	7	21	12	3729.03	-47.44	149.97	263.06	85.94	8	23	21	2729.0	-43.46	115.72	SGB	5129.7	R23	.2130	R13	.9420	EL1	51.1	EL2	7.1	ALF	13.11																																							
60.00	7	31	34	3701.45	-39.70	146.40	261.98	82.44	8	33	15	2701.4	-38.45	115.32	SG1	5085.9	SG2	669.3	THA	19.40																																													
70.00	7	48	25	3651.78	-32.65	140.98	260.58	79.36	8	49	17	2651.8	-33.69	112.29																																																			
80.00	8	20	6	3552.43	-27.08	132.11	259.23	76.92	9	19	18	2552.4	-29.85	105.03																																																			
90.00	9	23	22	3348.11	-24.76	116.48	258.61	75.89	10	19	10	2348.1	-28.24	90.01																																																			
100.00	11	2	57	3026.90	-27.08	93.48	259.23	76.92	11	53	24	2026.9	-29.85	66.40																																																			
110.00	12	47	51	2698.59	-32.65	69.90	260.58	79.36	13	32	50	1698.6	-33.69	41.21																																																			

LAUNCH DATE SEP 8 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC										DISTANCE 503.646										EARTH TO MARS																																													
RL	150.71	LAL	-0.00	LOL	345.20	VL	32.910	GAL	7.07	AZL	86.98	HCA	143.03	SMA	195.70	ECC	.25919	INC	3.0197	V1	29.564	RP	246.39	LAP	1.82	LOP	128.27	VP	19.978	GAP	.55	AZP	92.41	TAL	35.40	TAP	178.44	RCA	144.97	APO	246.42	V2	22.249	RC	299.628	GL	17.58	GP	-21.71	ZAL	37.97	ZAP	71.05	ETS	173.85	ZAE	98.92	ETE	185.40	ZAC	67.25	ETC	285.37	LVI	-0.98
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.452	VHL	5.697	DLA	23.77	RAL	10.74	RAD	6647.9	VEL	12.344	PTH	7.27	VHP	2.610	DPA	-13.72	RAP	25.72	ECC	1.5341	SGT	4925.9	SGR	1828.8	SG3	1324.8	ST	50.4	SR	12.8	SS	34.4																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8626	CRS	.2180	CST	-2.806	LSA	52.9	MSA	33.0	SSA	2.0																												
50.00	7	18	57	3739.37	-47.39	150.96	263.53	85.18	8	21	16	2739.4	-43.71	116.58	SGB	5254.4	R23	.2170	R13	.9424	EL1	51.6	EL2	6.3	ALF	12.50																																							
60.00	7	28	23	3714.19	-39.58	147.46	262.30	81.73	8	30	18	2714.2	-38.64	116.35	SG1	5211.8	SG2	667.7	THA	19.23																																													
70.00	7	43	56	3688.38	-32.43	142.23	260.77	78.65	8	45	5	2668.4	-33.80	113.58																																																			
80.00	8	13	49	3574.65	-26.73	133.67	259.31	76.17	9	13	24	2574.7	-29.86	106.88																																																			
90.00	9	15	55	3374.12	-24.32	118.25	258.62	75.11	10	12	9	2374.1	-28.18	91.91																																																			
100.00	10	56	41	3049.13	-26.73	95.04	259.31	76.17	11	47	30	2049.1	-29.86	68.05																																																			
110.00	12	43	23	2715.19	-32.43	71.15	260.77	78.65	13	28	38	1715.2	-33.80	42.49																																																			

LAUNCH DATE SEP 8 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC										DISTANCE 507.432										EARTH TO MARS																																													
RL	150.71	LAL	-0.00	LOL	345.20	VL	32.916	GAL	7.01	AZL	86.91	HCA	143.93	SMA	195.82	ECC	.25920	INC	3.0929	V1	29.564	RP	246.57	LAP	1.82	LOP	129.17	VP	19.989	GAP	.34	AZP	92.50	TAL	35.11	TAP	179.04	RCA	145.06	APO	246.58	V2	22.232	RC	302.085	GL	18.05	GP	-22.04	ZAL	38.37	ZAP	70.19	ETS	173.52	ZAE	97.71	ETE	184.93	ZAC	66.94	ETC	285.40	LVI	-0.86
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	32.382	VHL	5.690	DLA	24.30	RAL	10.76	RAD	6647.9	VEL	12.341	PTH	7.27	VHP	2.625	DPA	-14.07	RAP	25.78	ECC	1.5329	SGT	5050.0	SGR	1855.7	SG3	1308.5	ST	51.1	SR	12.1	SS	35.2																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	CR	.8853	CRS	.1603	CST	-2.889	LSA	53.6	MSA	33.4	SSA	1.9																												
50.00	7	16	33	3750.18	-47.32	152.00	264.02	84.38	8	19	3	2750.2	-43.97	117.49	SGB	5380.2	R23	.2210	R13	.9427	EL1	52.2	EL2	5.5	ALF	11.96																																							
60.00	7	25	2	3727.57	-39.45	148.58	262.63	80.98	8	27	10	2727.6	-38.83	117.43	SG1	5338.8	SG2	666.5	THA	19.08																																													
70.00	7	39	10	3685.94	-32.19	143.54	260.96	77.91	8	40	38	2685.9	-33.90	114.94																																																			
80.00	8	7	1	3598.55	-26.33	135.33	259.37	75.39	9	6	59	2598.5	-29.84	108.46																																																			
90.00	9	7	44	3402.49	-23.81	120.18	258.61	74.28	10	4	26	2402.5	-28.08	93.97																																																			
100.00	10	49	53	3073.02	-26.33	96.70	259.37	75.39	11	41	6	2073.0	-29.84	69.82																																																			
110.00	12	38	36	2732.76	-32.19	72.46	260.96	77.91	13	24	9	1732.8	-33.90	43.85																																																			

LAUNCH DATE SEP 8 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.923 GAL 6.96 AZL 86.83 HCA 144.82 SMA 195.95 ECC .25922 INC 3.1692 V1 29.584
RP 246.74 LAP 1.83 LOP 130.06 VP 19.961 GAP .13 AZP 92.39 TAL 34.82 TAP 179.64 RCA 145.15 APO 246.74 V2 22.215
RC 304.476 GL 18.53 GP -22.39 ZAL 38.79 ZAP 69.36 ETS 172.79 ZAE 96.53 ETE 184.46 ZAC 66.62 ETC 285.44 LVI -.32

PLANETOCENTRIC CONIC

C3 32.320 VHL 5.685 DLA 24.63 RAL 10.78 RAD 6647.9 VEL 12.339 PTH 7.26 VHP 2.642 DPA -14.42 RAP 25.86 ECC 1.5319
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 14 0 3761.52 -47.24 153.08 264.51 83.59 8 16 42 2761.5 -44.24 118.45
60.00 7 21 28 3741.63 -39.29 149.74 262.95 80.21 8 23 49 2741.6 -39.02 118.58
70.00 7 34 3 3704.56 -31.91 144.92 261.14 77.13 8 35 47 2704.6 -33.99 116.38
80.00 7 59 36 3624.39 -25.87 137.11 259.40 74.55 9 0 0 2624.4 -29.79 110.37
90.00 8 58 37 3433.74 -23.22 122.27 258.56 73.39 9 55 51 2433.7 -27.93 96.25
100.00 10 42 27 3098.86 -25.87 98.48 259.40 74.55 11 34 6 2098.9 -29.79 71.74
110.00 12 33 29 2751.38 -31.91 73.84 261.14 77.13 13 19 20 1751.4 -33.99 45.30

DIFFERENTIAL CORRECTIONS

TDE -.2933 TRA-2.9548 TC3-3.5078 BAU 1.6615
RDE -.1440 RRA -.5085 RC3-1.5750 FAU .44499
FDE 2.5822 FRA-5.1663 FC-11.9194 BSP 9351
BDE .3268 BRA 2.9982 BC3 3.8452 FSP 2187

MID-COURSE EXECUTION ACCURACY

SGT 5173.3 SGR 1883.4 SG3 1291.3
RRT .9277 RRF .9639 RTF .9327
SGB 5505.4 R23 .2252 R13 .9429
SG1 5465.0 SG2 665.6 THA 18.95

ORBIT DETERMINATION ACCURACY

ST 51.7 SR 11.5 SS 35.9
CRT .9101 CRS .0891 CST -.2990
LSA 54.4 MSA 33.7 SSA 1.9
EL1 52.8 EL2 4.7 ALF 11.50

LAUNCH DATE SEP 8 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.929 GAL 6.90 AZL 86.75 HCA 145.70 SMA 196.07 ECC .25924 INC 3.2488 V1 29.564
RP 246.90 LAP 1.83 LOP 130.95 VP 19.954 GAP -.08 AZP 92.68 TAL 34.53 TAP 180.24 RCA 145.24 APO 246.90 V2 22.199
RC 306.863 GL 19.03 GP -22.76 ZAL 39.22 ZAP 68.56 ETS 172.23 ZAE 95.36 ETE 183.98 ZAC 66.27 ETC 285.49 LVI .04

PLANETOCENTRIC CONIC

C3 32.269 VHL 5.681 DLA 25.39 RAL 10.79 RAD 6647.9 VEL 12.336 PTH 7.26 VHP 2.659 DPA -14.77 RAP 25.98 ECC 1.5311
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 11 18 3773.42 -47.14 154.22 265.01 82.68 8 14 11 2773.4 -44.51 119.47
60.00 7 17 40 3756.45 -39.11 150.96 263.28 79.40 8 20 16 2756.4 -39.20 119.80
70.00 7 28 33 3724.37 -31.60 146.38 261.30 76.32 8 30 37 2724.4 -34.06 117.92
80.00 7 51 26 3652.53 -25.35 139.04 259.40 73.67 8 52 19 2652.5 -29.70 112.46
90.00 8 48 22 3468.64 -22.52 124.59 258.45 72.43 9 46 11 2468.6 -27.71 98.78
100.00 10 34 18 3127.01 -25.35 100.41 259.40 73.67 11 26 25 2127.0 -29.70 73.83
110.00 12 27 59 2771.19 -31.60 75.30 261.30 76.32 13 14 10 1771.2 -34.06 46.84

DIFFERENTIAL CORRECTIONS

TDE -.2654 TRA-3.0049 TC3-3.6003 BAU 1.6995
RDE -.1188 RRA -.5221 RC3-1.5993 FAU .43771
FDE 2.6550 FRA-5.0625 FC-11.7430 BSP 9586
BDE .2907 BRA 3.0499 BC3 3.9395 FSP 2155

MID-COURSE EXECUTION ACCURACY

SGT 5297.0 SGR 1911.9 SG3 1273.1
RRT .9301 RRF .9681 RTF .9330
SGB 5631.5 R23 .2296 R13 .9430
SG1 5592.0 SG2 665.1 THA 18.83

ORBIT DETERMINATION ACCURACY

ST 52.4 SR 10.9 SS 36.7
CRT .9359 CRS .0029 CST -.3101
LSA 55.3 MSA 34.0 SSA 1.8
EL1 53.4 EL2 3.8 ALF 11.10

LAUNCH DATE SEP 8 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.936 GAL 6.85 AZL 86.67 HCA 146.59 SMA 196.20 ECC .25927 INC 3.3321 V1 29.564
RP 247.06 LAP 1.83 LOP 131.84 VP 19.948 GAP -.29 AZP 92.78 TAL 34.24 TAP 180.83 RCA 145.33 APO 247.07 V2 22.183
RC 309.224 GL 19.56 GP -23.14 ZAL 39.66 ZAP 67.79 ETS 171.67 ZAE 94.23 ETE 183.51 ZAC 65.91 ETC 285.53 LVI .42

PLANETOCENTRIC CONIC

C3 32.230 VHL 5.677 DLA 25.97 RAL 10.79 RAD 6647.9 VEL 12.335 PTH 7.26 VHP 2.678 DPA -15.13 RAP 26.12 ECC 1.5304
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 8 25 3785.92 -47.03 155.40 265.53 81.78 8 11 31 2785.9 -44.78 120.55
60.00 7 13 36 3772.08 -38.91 152.24 263.61 78.55 8 16 28 2772.1 -39.38 121.09
70.00 7 22 37 3745.51 -31.25 147.93 261.45 75.47 8 25 3 2745.5 -34.12 119.57
80.00 7 42 23 3683.48 -24.74 141.14 259.35 72.73 8 43 46 2683.5 -29.55 114.75
90.00 8 36 35 3508.37 -21.68 127.20 258.27 71.38 9 35 3 2508.4 -27.40 101.64
100.00 10 25 14 3157.95 -24.74 102.51 259.35 72.73 11 17 52 2158.0 -29.55 76.12
110.00 12 22 3 2792.33 -31.25 76.85 261.45 75.47 13 8 36 1792.3 -34.12 48.49

DIFFERENTIAL CORRECTIONS

TDE -.2352 TRA-3.0546 TC3-3.6903 BAU 1.7371
RDE -.0923 RRA -.5363 RC3-1.6235 FAU .43011
FDE 2.7259 FRA-4.9583 FC-11.5535 BSP 9824
BDE .2526 BRA 3.1013 BC3 4.0316 FSP 2121

MID-COURSE EXECUTION ACCURACY

SGT 5419.5 SGR 1941.4 SG3 1253.9
RRT .9324 RRF .9681 RTF .5332
SGB 5786.8 R23 .2341 R13 .9431
SG1 5716.2 SG2 665.0 THA 18.73

ORBIT DETERMINATION ACCURACY

ST 53.2 SR 10.5 SS 37.5
CRT .9596 CRS -.0983 CST -.5233
LSA 56.2 MSA 34.3 SSA 1.8
EL1 54.1 EL2 2.9 ALF 10.79

LAUNCH DATE SEP 8 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.943 GAL 6.79 AZL 86.58 HCA 147.48 SMA 196.33 ECC .25931 INC 3.4191 V1 29.584
RP 247.22 LAP 1.84 LOP 132.73 VP 19.942 GAP -.50 AZP 92.88 TAL 33.94 TAP 181.42 RCA 145.42 APO 247.24 V2 22.168
RC 311.559 GL 20.11 GP -23.55 ZAL 40.11 ZAP 67.06 ETS 171.10 ZAE 93.11 ETE 183.03 ZAC 65.52 ETC 285.58 LVI .81

PLANETOCENTRIC CONIC

C3 32.202 VHL 5.675 DLA 26.57 RAL 10.79 RAD 6647.9 VEL 12.334 PTH 7.26 VHP 2.698 DPA -15.49 RAP 26.28 ECC 1.5300
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 5 20 3799.07 -46.89 156.64 266.06 80.83 8 8 39 2799.1 -45.05 121.70
60.00 7 9 16 3788.61 -38.68 153.58 263.93 77.67 8 12 24 2788.6 -39.56 122.46
70.00 7 16 12 3768.16 -30.85 149.58 261.58 74.57 8 19 0 2768.2 -34.15 121.34
80.00 7 32 11 3717.94 -24.02 143.45 259.25 71.71 8 34 9 2717.9 -29.34 117.29
90.00 8 22 37 3555.01 -20.64 130.22 257.99 70.22 9 21 52 2555.0 -26.95 104.98
100.00 10 15 3 3192.41 -24.02 104.81 259.25 71.71 11 8 16 2192.4 -29.34 78.66
110.00 12 15 38 2814.98 -30.85 78.49 261.58 74.57 13 2 33 1815.0 -34.15 50.26

DIFFERENTIAL CORRECTIONS

TDE -.2033 TRA-3.1043 TC3-3.7796 BAU 1.7753
RDE -.0653 RRA -.5513 RC3-1.6488 FAU .42251
FDE 2.7926 FRA-4.8542 FC-11.3588 BSP 10051
BDE .2136 BRA 3.1529 BC3 4.1236 FSP 2083

MID-COURSE EXECUTION ACCURACY

SGT 5543.0 SGR 1973.1 SG3 1234.6
RRT .9346 RRF .9700 RTF .9334
SGB 5883.7 R23 .2385 R13 .9432
SG1 5845.9 SG2 665.6 THA 18.65

ORBIT DETERMINATION ACCURACY

ST 53.9 SR 10.3 SS 38.3
CRT .9775 CRS -.2110 CST -.3382
LSA 57.3 MSA 34.6 SSA 1.7
EL1 54.9 EL2 2.1 ALF 10.50

LAUNCH DATE SEP 8 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 16 1974

Heliocentric Conic: RL 150.71 LAL -.00 LOL 345.20 VL 32.950 GAL 6.74 AZL 86.49 HCA 148.36 SMA 196.47 ECC .25935 INC 3.5105 V1 29.564  
 RP 247.37 LAP 1.84 LOP 133.61 VP 19.938 GAP -.70 AZP 92.99 TAL 33.64 TAP 182.00 RCA 145.51 APO 247.42 V2 22.154  
 RC 313.869 GL 20.68 GP -23.97 ZAL 40.58 ZAP 66.35 ETS 170.51 ZAE 92.03 ETE 182.54 ZAC 65.11 ETC 285.63 LVI 1.23

PLANETOCENTRIC CONIC: C3 32.188 VHL 5.673 DLA 27.19 RAL 10.77 RAD 6647.8 VEL 12.333 PTH 7.26 VHP 2.718 DPA -15.87 RAP 26.48 ECC 1.5297  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 2 3 3812.92 -48.74 157.95 266.59 79.84 8 5 36 2812.9 -45.32 122.93  
 60.00 7 4 36 3806.12 -38.41 154.99 264.25 76.74 8 8 2 2806.1 -39.72 123.92  
 70.00 7 9 12 3792.54 -30.40 151.33 261.68 73.63 8 12 25 2792.5 -34.15 123.24  
 80.00 7 20 31 3756.99 -23.16 146.03 259.07 70.62 8 23 8 2757.0 -29.04 120.15  
 90.00 8 5 7 3612.83 -19.26 133.90 257.53 68.88 9 5 20 2612.8 -26.27 109.08  
 100.00 10 3 23 3231.46 -23.16 107.40 259.07 70.62 10 57 15 2231.5 -29.04 81.52  
 110.00 12 8 39 2839.36 -30.40 80.25 261.68 73.63 12 55 58 1839.4 -34.15 52.16

Differential Corrections: TDE -.1693 TRA-3.1532 TC3-3.8861 BAU 1.8129 SGT 5664.9 SGR 2005.2 SC3 1213.7 ST 54.8 SR 10.2 SS 39.1  
 RDE -.0370 RRA -.5665 RC3-1.6735 FAU .41443 RRT .9368 RRF .9718 RTF .9334 CRT .9864 CR8 -.3310 CST -.3541  
 FDE 2.8598 FRA-4.7460 FC-11.1465 BSP 10281 SGB 6009.3 R23 .2432 R13 .9432 LSA 58.5 MSA 34.9 SSA 1.6  
 BDE .1733 BRA 3.2037 BC3 4.2128 FSP 2045 SGI 5972.2 SGI 666.4 THA 18.58 EL1 55.7 EL2 1.7 ALF 10.45

LAUNCH DATE SEP 8 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 18 1974

Heliocentric Conic: RL 150.71 LAL -.00 LOL 345.20 VL 32.957 GAL 6.68 AZL 86.39 HCA 149.25 SMA 196.60 ECC .25940 INC 3.6084 V1 29.564  
 RP 247.51 LAP 1.84 LOP 134.50 VP 19.934 GAP -.90 AZP 93.10 TAL 33.34 TAP 182.58 RCA 145.60 APO 247.60 V2 22.140  
 RC 316.151 GL 21.28 GP -24.41 ZAL 41.07 ZAP 65.68 ETS 169.91 ZAE 90.96 ETE 182.05 ZAC 64.67 ETC 285.69 LVI 1.67

PLANETOCENTRIC CONIC: C3 32.191 VHL 5.674 DLA 27.84 RAL 10.73 RAD 6647.8 VEL 12.333 PTH 7.26 VHP 2.740 DPA -16.26 RAP 26.70 ECC 1.5298  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 31 3827.54 -48.55 159.31 267.13 78.80 8 2 19 2827.5 -45.59 124.23  
 60.00 6 59 35 3824.70 -38.11 156.48 264.56 75.77 8 3 20 2824.7 -39.87 125.47  
 70.00 7 1 33 3818.90 -29.88 153.21 261.75 72.63 8 5 12 2818.9 -34.12 125.30  
 80.00 7 6 48 3802.39 -22.11 148.99 258.78 69.40 8 10 10 2802.4 -28.61 123.46  
 90.00 7 40 6 3694.71 -17.17 139.01 256.69 67.18 8 41 40 2694.7 -25.10 114.78  
 100.00 9 49 40 3276.86 -22.11 110.35 258.78 69.40 10 44 17 2276.9 -28.61 84.82  
 110.00 12 0 59 2865.72 -29.88 82.12 261.75 72.63 12 48 45 1865.7 -34.12 54.22

Differential Corrections: TDE -.1407 TRA-3.2096 TC3-3.9893 BAU 1.8558 SGT 5800.1 SGR 2052.5 SC3 1200.1 ST 55.8 SR 10.5 SS 39.5  
 RDE -.0150 RRA -.5903 RC3-1.7084 FAU .40896 RRT .9394 RRF .9740 RTF .9350 CRT .9861 CR8 -.4313 CST -.3782  
 FDE 2.9684 FRA-4.8978 FC-10.9986 BSP 10393 SGB 6152.5 R23 .2445 R13 .9446 LSA 59.9 MSA 34.6 SSA 1.6  
 BDE .1418 BRA 3.2635 BC3 4.3122 FSP 1945 SGI 6116.2 SGI 667.5 THA 18.62 EL1 56.8 EL2 1.7 ALF 10.56

LAUNCH DATE SEP 8 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 20 1974

Heliocentric Conic: RL 150.71 LAL -.00 LOL 345.20 VL 32.964 GAL 6.63 AZL 86.29 HCA 150.13 SMA 196.74 ECC .25945 INC 3.7073 V1 29.564  
 RP 247.65 LAP 1.85 LOP 135.39 VP 19.930 GAP -1.11 AZP 93.22 TAL 33.03 TAP 183.16 RCA 145.69 APO 247.78 V2 22.126  
 RC 318.408 GL 21.90 GP -24.87 ZAL 41.57 ZAP 85.04 ETS 169.29 ZAE 89.93 ETE 181.56 ZAC 64.21 ETC 285.73 LVI 2.14

PLANETOCENTRIC CONIC: C3 32.208 VHL 5.675 DLA 28.51 RAL 10.69 RAD 6647.9 VEL 12.334 PTH 7.26 VHP 2.764 DPA -16.66 RAP 26.96 ECC 1.5301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 54 43 3843.00 -46.34 160.74 267.67 77.72 7 58 46 2843.0 -45.86 125.62  
 60.00 6 54 10 3844.51 -37.77 158.05 264.85 74.75 7 58 14 2844.5 -40.01 127.14  
 70.00 6 53 5 3847.67 -29.28 155.23 261.77 71.57 7 57 13 2847.7 -34.04 127.55  
 80.00 6 49 51 3837.86 -20.74 152.53 258.31 68.02 7 54 9 2857.9 -27.96 127.43  
 86.23 6 24 30 3939.73 -13.31 155.14 254.90 64.55 7 30 10 2939.7 -22.66 131.96  
 100.00 9 32 43 3332.33 -20.74 113.90 258.31 68.02 10 28 15 2332.3 -27.96 88.82  
 110.00 11 52 31 2894.49 -29.28 84.15 261.77 71.57 12 40 46 1894.5 -34.04 56.46

Differential Corrections: TDE -.1004 TRA-3.2573 TC3-4.0394 BAU 1.8925 SGT 5919.1 SGR 2085.1 SC3 1175.9 ST 56.8 SR 10.9 SS 40.4  
 RDE -.0175 RRA -.6055 RC3-1.7317 FAU .39977 RRT .9410 RRF .9785 RTF .9346 CRT .9738 CR8 -.5472 CST -.3990  
 FDE 2.9483 FRA-4.3747 FC-10.7455 BSP 10648 SGB 6275.6 R23 .2500 R13 .9442 LSA 61.2 MSA 35.0 SSA 1.6  
 BDE .1019 BRA 3.3131 BC3 4.3980 FSP 1919 SGI 6239.8 SGI 669.5 THA 18.56 EL1 57.8 EL2 2.4 ALF 10.59

LAUNCH DATE SEP 8 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 22 1974

Heliocentric Conic: RL 150.71 LAL -.00 LOL 345.20 VL 32.971 GAL 6.57 AZL 86.19 HCA 151.01 SMA 198.87 ECC .25951 INC 3.8136 V1 29.564  
 RP 247.78 LAP 1.85 LOP 136.27 VP 19.928 GAP -1.31 AZP 93.34 TAL 32.72 TAP 183.74 RCA 145.78 APO 247.96 V2 22.113  
 RC 320.632 GL 22.56 GP -25.36 ZAL 42.09 ZAP 84.44 ETS 168.65 ZAE 88.92 ETE 181.06 ZAC 63.71 ETC 285.82 LVI 2.64

PLANETOCENTRIC CONIC: C3 32.245 VHL 5.678 DLA 29.21 RAL 10.63 RAD 6647.9 VEL 12.335 PTH 7.26 VHP 2.788 DPA -17.07 RAP 27.24 ECC 1.5307  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 50 38 3859.37 -46.09 162.24 268.22 76.59 7 54 58 2859.4 -46.13 127.11  
 60.00 6 48 17 3865.66 -37.38 159.71 265.13 73.69 7 52 42 2865.7 -40.13 128.93  
 70.00 6 43 39 3879.31 -28.58 157.42 261.73 70.44 7 48 19 2879.3 -33.90 130.00  
 80.00 6 26 38 3932.91 -18.75 157.22 257.49 66.33 7 32 11 2932.9 -26.87 132.76  
 82.38 5 52 52 4041.27 -13.60 162.75 255.01 63.90 7 0 13 3041.3 -23.19 139.62  
 100.00 9 9 30 3407.38 -18.75 118.59 257.49 66.33 10 6 17 2407.4 -26.87 94.13  
 110.00 11 43 6 2926.13 -28.58 86.34 261.73 70.44 12 31 52 1926.1 -33.90 58.92

Differential Corrections: TDE -.0572 TRA-3.3042 TC3-4.1162 BAU 1.9291 SGT 6037.1 SGR 2119.8 SC3 1151.2 ST 57.8 SR 11.5 SS 41.4  
 RDE -.0514 RRA -.6217 RC3-1.7554 FAU .39045 RRT .9425 RRF .9769 RTF .9341 CRT .9509 CR8 -.6493 CST -.4138  
 FDE 3.0213 FRA-4.4521 FC-10.4831 BSP 10913 SGB 6398.4 R23 .2555 R13 .9438 LSA 62.7 MSA 35.3 SSA 1.5  
 BDE .0769 BRA 3.3622 BC3 4.4749 FSP 1892 SGI 6363.0 SGI 672.1 THA 18.53 EL1 58.8 EL2 3.5 ALF 10.74

LAUNCH DATE SEP 8 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

RL 130.71 LAL -.00 LOL 345.20 VL 32.978 GAL 6.51 AZL 86.07 HCA 181.89 SMA 197.01 ECC .25958 INC 3.9259 V1 29.564
RP 247.91 LAP 1.85 LOP 137.15 VP 19.926 GAP -1.51 AZP 93.46 TAL 32.41 TAP 184.31 RCA 145.87 APO 246.15 V2 22.101
RC 322.829 GL 23.25 GP -25.88 ZAL 42.62 ZAP 63.87 ETS 168.00 ZAE 87.93 ETE 180.55 ZAC 63.19 ETC 205.89 LVI 3.16

PLANETOCENTRIC CONIC

C3 32.303 VHL 5.684 DLA 29.93 RAL 10.55 RAD 6647.9 VEL 12.338 PTH 7.26 VHP 2.814 DPA -17.50 RAP 27.55 ECC 1.5316
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 46 13 3876.75 -45.80 163.82 268.78 75.40 7 50 50 2876.8 -46.39 128.71
60.00 6 41 53 3888.34 -36.93 161.47 265.37 72.57 7 46 41 2888.3 -40.22 130.85
70.00 6 33 1 3914.50 -27.75 159.83 261.62 69.24 7 38 16 2914.5 -33.68 132.73
79.75 5 32 9 4107.08 -13.90 167.78 255.11 63.22 6 40 36 3107.1 -23.74 144.69
79.75 5 32 9 4107.08 -13.90 167.78 255.11 63.22 6 40 36 3107.1 -23.74 144.69
79.75 5 32 9 4107.08 -13.90 167.78 255.11 63.22 6 40 36 3107.1 -23.74 144.69
110.00 11 32 27 2961.32 -27.75 88.74 261.62 69.24 12 21 49 1961.3 -33.68 61.65

DIFFERENTIAL CORRECTIONS

TDE -.0118 TRA-3.3514 TC3-4.1901 BAU 1.0659
RDE .0867 RRA -.6389 RC3-1.7793 FAU .38093
PDE 3.0920 FRA-4.3298 FC-10.2091 BSP 11172
BDE .0875 BRA 3.4117 BC3 4.5522 FSP 1861

DISTANCE 541.461

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 8155.1 SGR 2156.5 SG3 1125.7
RRT .9440 RRF .9763 RTF .9336
SGB 6521.9 R23 .2610 R13 .9433
SG1 6486.9 SGT 875.4 THA 18.51

ST 58.9 SR 12.4 SS 42.3
CRT .9220 CRS -.7330 CST -.4339
LSA 64.4 MSA 35.5 SSA 1.4
EL1 60.0 EL2 4.7 ALF 11.01

LAUNCH DATE SEP 8 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.985 GAL 6.45 AZL 85.96 HCA 152.77 SMA 197.15 ECC .25965 INC 4.0448 V1 29.564
RP 248.03 LAP 1.85 LOP 138.03 VP 19.925 GAP -1.70 AZP 93.60 TAL 32.10 TAP 184.87 RCA 145.96 APO 248.34 V2 22.089
RC 324.997 GL 23.97 GP -26.42 ZAL 43.18 ZAP 63.34 ETS 167.33 ZAE 86.98 ETE 180.03 ZAC 62.64 ETC 205.97 LVI 3.71

PLANETOCENTRIC CONIC

C3 32.384 VHL 5.691 DLA 30.69 RAL 10.45 RAD 6647.9 VEL 12.341 PTH 7.27 VHP 2.842 DPA -17.95 RAP 27.90 ECC 1.5330
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 41 26 3895.23 -45.47 165.48 269.30 74.16 7 46 21 2895.2 -46.64 130.42
60.00 6 34 52 3912.75 -36.42 163.34 265.59 71.39 7 40 5 2912.7 -40.28 132.92
70.00 6 20 49 3954.29 -26.76 162.50 261.39 67.94 7 26 43 2954.3 -33.35 135.79
77.54 5 15 23 4159.74 -14.21 171.87 255.23 62.50 6 24 43 3159.7 -24.30 146.84
77.54 5 15 23 4159.74 -14.21 171.87 255.23 62.50 6 24 43 3159.7 -24.30 146.84
77.54 5 15 23 4159.74 -14.21 171.87 255.23 62.50 6 24 43 3159.7 -24.30 146.84
110.00 11 20 15 3001.10 -26.76 91.41 261.39 67.94 12 10 16 2001.1 -33.35 64.70

DIFFERENTIAL CORRECTIONS

TDE .0352 TRA-3.3992 TC3-4.2607 BAU 2.0032
RDE .1227 RRA -.6581 RC3-1.8041 FAU .37139
PDE 3.1531 FRA-4.2132 FC3-9.9284 BSP 11415
BDE .1278 BRA 3.4623 BC3 4.6269 FSP 1821

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 6273.5 SGR 2196.6 SG3 1100.0
RRT .9454 RRF .9796 RTF .9333
SGB 6646.9 R23 .2662 R13 .9430
SG1 6612.1 SGT 679.2 THA 18.52

ST 60.2 SR 13.5 SS 43.2
CRT .8931 CRS -.7970 CST -.4555
LSA 66.3 MSA 35.7 SSA 1.3
EL1 61.4 EL2 5.9 ALF 11.41

LAUNCH DATE SEP 8 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 32.993 GAL 6.39 AZL 85.83 HCA 153.65 SMA 197.28 ECC .25973 INC 4.1708 V1 29.564
RP 248.14 LAP 1.85 LOP 138.92 VP 19.925 GAP -1.90 AZP 93.74 TAL 31.79 TAP 185.44 RCA 146.05 APO 248.53 V2 22.078
RC 327.134 GL 24.73 GP -27.00 ZAL 43.76 ZAP 62.85 ETS 166.64 ZAE 86.05 ETE 179.49 ZAC 62.05 ETC 206.03 LVI 4.30

PLANETOCENTRIC CONIC

C3 32.493 VHL 5.700 DLA 31.48 RAL 10.33 RAD 6648.0 VEL 12.345 PTH 7.27 VHP 2.872 DPA -18.42 RAP 28.27 ECC 1.5348
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 36 14 3914.94 -45.09 167.23 269.82 72.86 7 41 29 2914.9 -46.87 132.27
60.00 6 27 10 3939.14 -35.82 165.33 265.76 70.15 7 32 49 2939.1 -40.30 135.17
70.00 6 6 27 4000.37 -25.55 165.53 261.02 66.52 7 13 8 3000.4 -32.87 139.30
75.55 5 0 45 4205.18 -14.52 175.46 255.34 61.75 6 10 51 3205.2 -24.88 152.49
75.55 5 0 45 4205.18 -14.52 175.46 255.34 61.75 6 10 51 3205.2 -24.88 152.49
75.55 5 0 45 4205.18 -14.52 175.46 255.34 61.75 6 10 51 3205.2 -24.88 152.49
110.00 11 5 54 3047.19 -25.55 94.45 261.02 66.52 11 56 41 2047.2 -32.87 68.21

DIFFERENTIAL CORRECTIONS

TDE .0847 TRA-3.4478 TC3-4.3283 BAU 2.0413
RDE .1609 RRA -.6784 RC3-1.8294 FAU .36172
PDE 3.2135 FRA-4.0938 FC3-9.6375 BSP 11657
BDE .1818 BRA 3.5137 BC3 4.6991 FSP 1781

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 6392.9 SGR 2239.5 SG3 1073.8
RRT .9468 RRF .9808 RTF .9328
SGB 6773.8 R23 .2715 R13 .9423
SG1 6739.2 SGT 684.0 THA 18.55

ST 61.5 SR 14.8 SS 44.1
CRT .8658 CRS -.8461 CST -.4774
LSA 66.3 MSA 35.9 SSA 1.3
EL1 62.9 EL2 7.2 ALF 11.92

LAUNCH DATE SEP 8 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 33.000 GAL 6.34 AZL 85.70 HCA 154.53 SMA 197.43 ECC .25981 INC 4.3047 V1 29.564
RP 248.25 LAP 1.85 LOP 139.80 VP 19.925 GAP -2.10 AZP 93.89 TAL 31.47 TAP 186.00 RCA 146.14 APO 248.73 V2 22.067
RC 329.241 GL 25.93 GP -27.61 ZAL 44.36 ZAP 62.39 ETS 165.93 ZAE 85.15 ETE 178.95 ZAC 61.42 ETC 206.15 LVI 4.92

PLANETOCENTRIC CONIC

C3 32.632 VHL 5.712 DLA 32.31 RAL 10.18 RAD 6648.0 VEL 12.351 PTH 7.27 VHP 2.903 DPA -18.91 RAP 28.68 ECC 1.5370
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 30 33 3936.00 -44.65 169.06 270.33 71.50 7 36 9 2936.0 -47.08 134.26
60.00 6 18 38 3967.84 -35.14 167.46 265.86 68.85 7 24 46 2967.8 -40.27 137.61
70.00 5 48 51 4055.98 -23.99 169.10 260.41 64.93 6 36 27 3056.0 -32.15 143.47
73.68 4 47 30 4245.84 -14.83 178.73 255.45 60.96 5 58 16 3245.8 -25.48 155.82
73.68 4 47 30 4245.84 -14.83 178.73 255.45 60.96 5 58 16 3245.8 -25.48 155.82
73.68 4 47 30 4245.84 -14.83 178.73 255.45 60.96 5 58 16 3245.8 -25.48 155.82
110.00 10 48 17 3102.80 -23.99 98.01 260.41 64.93 11 40 0 2102.8 -32.15 72.39

DIFFERENTIAL CORRECTIONS

TDE .1363 TRA-3.4965 TC3-4.3910 BAU 2.0795
RDE .2006 RRA -.7005 RC3-1.8547 FAU .35180
PDE 3.2673 FRA-4.0980 FC3-9.3334 BSP 11897
BDE .2426 BRA 3.5659 BC3 4.7666 FSP 1737

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

SGT 6511.8 SGR 2285.1 SG3 1046.7
RRT .9481 RRF .9819 RTF .9323
SGB 6901.1 R23 .2767 R13 .9421
SG1 6866.6 SGT 689.3 THA 18.60

ST 63.1 SR 16.3 SS 45.0
CRT .8434 CRS -.8822 CST -.4999
LSA 70.5 MSA 36.0 SSA 1.2
EL1 64.6 EL2 8.6 ALF 12.55

LAUNCH DATE SEP 8 1973 FLIGHT TIME 266.00 ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC DISTANCE 556.561 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.007 GAL 6.28 AZL 85.55 HCA 155.41 SMA 197.58 ECC .25990 INC 4.4475 V1 29.564  
 RP 248.35 LAP 1.85 LOP 140.68 VP 19.926 GAP -2.29 AZP 94.05 TAL 31.15 TAP 186.56 RCA 146.23 APO 248.93 V2 22.057  
 RC 331.317 GL 26.37 GP -28.25 ZAL 44.98 ZAP 61.98 ETS 165.20 ZAE 84.29 ETE 178.39 ZAC 60.76 ETC 286.25 LVI 5.58

PLANETOCENTRIC CONIC  
 C3 32.805 VHL 5.728 DLA 33.17 RAL 10.00 RAD 6648.1 VEL 12.358 PTH 7.28 VHP 2.936 DPA -19.42 RAP 29.13 ECC 1.5399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 24 20 3958.58 -44.15 171.00 270.80 70.08 7 30 19 2958.6 -47.27 136.41  
 60.00 6 9 6 3999.27 -34.34 169.74 265.89 67.47 7 15 45 2999.3 -40.17 140.28  
 70.00 5 25 20 4129.06 -21.81 173.64 259.36 63.04 6 34 9 3129.1 -30.97 148.84  
 71.89 4 35 10 4283.15 -15.14 181.77 255.56 60.12 5 46 33 3283.1 -26.10 158.95  
 71.89 4 35 10 4283.15 -15.14 181.77 255.56 60.12 5 46 33 3283.1 -26.10 158.95  
 71.89 4 35 10 4283.15 -15.14 181.77 255.56 60.12 5 46 33 3283.1 -26.10 158.95  
 110.00 10 24 46 3175.88 -21.81 102.56 259.36 63.04 11 17 42 2175.9 -30.97 77.76

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1925 TRA-3.5443 TC3-4.4466 BAU 2.1172 SGT 6627.6 SGR 2332.9 SG3 1018.3 ST 64.7 SR 18.1 SS 45.8  
 RDE .2429 RRA -.7239 RC3-1.8794 FAU .34151 RRT .9493 RRF .9829 RTF .9317 CRT .8263 CRS -.9092 CST -.5236  
 FDE 3.3184 FRA-3.863D FC3-9.0126 BSP 12144 SGB 7026.2 R23 .2817 R13 .9417 LSA 72.8 HSA 36.1 SSA 1.1  
 BDE .3099 BRA 3.6174 BC3 4.8275 FSP 1690 SGI 6991.7 SG2 695.2 THA 18.67 EL1 66.5 EL2 9.9 ALF 13.29

LAUNCH DATE SEP 8 1973 FLIGHT TIME 266.00 ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC DISTANCE 560.334 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.015 GAL 6.22 AZL 85.40 HCA 156.28 SMA 197.72 ECC .25999 INC 4.6000 V1 29.564  
 RP 248.45 LAP 1.85 LOP 141.56 VP 19.928 GAP -2.49 AZP 94.21 TAL 30.83 TAP 187.12 RCA 146.32 APO 249.12 V2 22.048  
 RC 333.364 GL 27.26 GP -28.93 ZAL 45.63 ZAP 61.61 ETS 164.45 ZAE 83.45 ETE 177.82 ZAC 60.05 ETC 286.38 LVI 6.28

PLANETOCENTRIC CONIC  
 C3 33.018 VHL 5.746 DLA 34.08 RAL 9.78 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 2.972 DPA -19.96 RAP 29.61 ECC 1.5434  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 17 30 3982.87 -43.56 173.05 271.23 68.59 7 23 53 2982.9 -47.42 138.74  
 60.00 5 58 21 4034.02 -33.41 172.22 265.82 66.01 7 5 36 3034.0 -39.98 143.21  
 70.00 4 39 51 4268.12 -17.29 181.89 256.79 60.08 5 50 59 3268.1 -28.07 158.62  
 70.14 4 23 34 4317.75 -15.46 184.65 255.68 59.24 5 35 32 3317.8 -26.73 161.91  
 70.14 4 23 34 4317.75 -15.46 184.65 255.68 59.24 5 35 32 3317.8 -26.73 161.91  
 70.14 4 23 34 4317.75 -15.46 184.65 255.68 59.24 5 35 32 3317.8 -26.73 161.91  
 110.00 9 39 17 3314.94 -17.29 110.81 256.79 60.08 10 34 32 2314.9 -28.07 87.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .2487 TRA-3.5950 TC3-4.4991 BAU 2.1567 SGT 8747.3 SGR 2385.5 SG3 989.7 ST 66.5 SR 20.0 SS 46.6  
 RDE .2866 RRA -.7502 RC3-1.9051 FAU .33122 RRT .9503 RRF .9839 RTF .9312 CRT .8146 CRS -.9285 CST -.5463  
 FDE 3.3595 FRA-3.7509 FC3-8.6847 BSP 12368 SGB 7156.5 R23 .2865 R13 .9414 LSA 75.4 HSA 36.2 SSA 1.1  
 BDE .3794 BRA 3.6724 BC3 4.8858 FSP 1638 SGI 7122.0 SG2 701.9 THA 18.78 EL1 68.6 EL2 11.2 ALF 14.12

LAUNCH DATE SEP 8 1973 FLIGHT TIME 270.00 ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC DISTANCE 564.106 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.022 GAL 6.16 AZL 85.24 HCA 157.16 SMA 197.88 ECC .26008 INC 4.7634 V1 29.564  
 RP 248.54 LAP 1.85 LOP 142.43 VP 19.930 GAP -2.68 AZP 94.39 TAL 30.51 TAP 187.67 RCA 146.40 APO 249.33 V2 22.039  
 RC 335.380 GL 28.21 GP -29.66 ZAL 46.31 ZAP 61.29 ETS 163.68 ZAE 82.85 ETE 177.24 ZAC 59.30 ETC 286.48 LVI 7.03

PLANETOCENTRIC CONIC  
 C3 33.276 VHL 5.789 DLA 35.03 RAL 9.53 RAD 6648.3 VEL 12.377 PTH 7.29 VHP 3.011 DPA -20.54 RAP 30.13 ECC 1.5478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 9 56 4009.11 -42.89 175.21 271.81 67.04 7 16 45 3009.1 -47.53 141.27  
 60.00 5 46 5 4072.88 -32.30 174.91 265.60 64.46 6 53 58 3072.9 -39.67 146.47  
 68.42 4 12 25 4350.48 -15.77 187.42 255.79 58.31 5 24 56 3350.5 -27.39 164.78  
 68.42 4 12 25 4350.48 -15.77 187.42 255.79 58.31 5 24 56 3350.5 -27.39 164.78  
 68.42 4 12 25 4350.48 -15.77 187.42 255.79 58.31 5 24 56 3350.5 -27.39 164.78  
 68.42 4 12 25 4350.48 -15.77 187.42 255.79 58.31 5 24 56 3350.5 -27.39 164.78  
 68.42 4 12 25 4350.48 -15.77 187.42 255.79 58.31 5 24 56 3350.5 -27.39 164.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3106 TRA-3.6436 TC3-4.5412 BAU 2.1948 SGT 8881.2 SGR 2438.7 SG3 958.9 ST 68.5 SR 22.1 SS 47.4  
 RDE .3344 RRA -.7772 RC3-1.9281 FAU .32018 RRT .9516 RRF .9847 RTF .9305 CRT .8068 CRS -.9433 CST -.5893  
 FDE 3.4031 FRA-3.6311 FC3-8.3303 BSP 12828 SGB 7281.7 R23 .2916 R13 .9408 LSA 78.2 HSA 36.2 SSA 1.0  
 BDE .4984 BRA 3.7258 BC3 4.9336 FSP 1591 SGI 7247.0 SG2 709.4 THA 18.88 EL1 70.9 EL2 12.6 ALF 15.03

LAUNCH DATE SEP 8 1973 FLIGHT TIME 272.00 ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC DISTANCE 567.877 EARTH TO MARS  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.030 GAL 6.10 AZL 85.06 HCA 158.04 SMA 198.01 ECC .26019 INC 4.9389 V1 29.564  
 RP 248.63 LAP 1.85 LOP 143.31 VP 19.933 GAP -2.87 AZP 94.58 TAL 30.19 TAP 188.22 RCA 146.49 APO 249.53 V2 22.030  
 RC 337.366 GL 29.20 GP -30.43 ZAL 47.02 ZAP 61.02 ETS 162.88 ZAE 81.89 ETE 176.65 ZAC 58.50 ETC 286.62 LVI 7.82

PLANETOCENTRIC CONIC  
 C3 33.586 VHL 5.795 DLA 36.02 RAL 9.23 RAD 6648.4 VEL 12.389 PTH 7.30 VHP 3.053 DPA -21.14 RAP 30.69 ECC 1.5527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 1 32 4037.56 -42.11 177.49 271.90 65.41 7 8 49 3037.6 -47.58 144.02  
 60.00 5 31 48 4117.10 -30.96 177.90 265.19 62.80 6 40 25 3117.1 -39.19 150.14  
 66.70 4 1 36 4381.70 -16.08 190.10 255.89 57.33 5 14 37 3381.7 -28.05 167.58  
 66.70 4 1 36 4381.70 -16.08 190.10 255.89 57.33 5 14 37 3381.7 -28.05 167.58  
 66.70 4 1 36 4381.70 -16.08 190.10 255.89 57.33 5 14 37 3381.7 -28.05 167.58  
 66.70 4 1 36 4381.70 -16.08 190.10 255.89 57.33 5 14 37 3381.7 -28.05 167.58  
 66.70 4 1 36 4381.70 -16.08 190.10 255.89 57.33 5 14 37 3381.7 -28.05 167.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3722 TRA-3.6953 TC3-4.5792 BAU 2.2353 SGT 8979.2 SGR 2498.0 SG3 928.0 ST 70.7 SR 24.3 SS 48.0  
 RDE .3838 RRA -.8075 RC3-1.9526 FAU .30924 RRT .9527 RRF .9855 RTF .9298 CRT .8031 CRS -.9539 CST -.5907  
 FDE 3.4343 FRA-3.5154 FC3-7.9711 BSP 12846 SGB 7412.7 R23 .2965 R13 .9403 LSA 81.1 HSA 36.3 SSA 1.0  
 BDE .5346 BRA 3.7825 BC3 4.9781 FSP 1534 SGI 7377.9 SG2 717.9 THA 19.02 EL1 73.4 EL2 13.9 ALF 16.04

LAUNCH DATE SEP 8 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 9 1974

Heliocentric Conic  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.037 GAL 6.04 AZL 84.87 HCA 158.91 SMA 198.16 ECC .26029 INC 5.1281 V1 29.564  
 RP 248.71 LAP 1.84 LOP 144.19 VP 19.937 GAP -3.06 AZP 94.79 TAL 29.86 TAP 188.77 RCA 146.58 APO 249.73 V2 22.023  
 RC 339.321 GL 30.26 GP -31.25 ZAL 47.77 ZAP 60.80 ETS 162.06 ZAE 81.17 ETE 176.01 ZAC 57.65 ETC 286.77 LVI 8.67

Planetocentric Conic  
 C3 33.957 VHL 5.827 DLA 37.06 RAL 8.88 RAD 6648.5 VEL 12.404 PTH 7.31 VHP 3.098 DPA -21.78 RAP 31.29 ECC 1.5589  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 52 7 4068.57 -41.20 179.91 272.09 63.72 6 59 55 3088.6 -47.54 147.02  
 60.00 5 14 43 4168.74 -29.31 181.27 264.49 61.00 6 24 12 3168.7 -38.48 154.34  
 64.97 3 51 0 4411.68 -16.39 192.73 255.98 56.28 5 4 32 3411.7 -28.74 170.35  
 64.97 3 51 0 4411.68 -16.39 192.73 255.98 56.28 5 4 32 3411.7 -28.74 170.35  
 64.97 3 51 0 4411.68 -16.39 192.73 255.98 56.28 5 4 32 3411.7 -28.74 170.35  
 64.97 3 51 0 4411.68 -16.39 192.73 255.98 56.28 5 4 32 3411.7 -28.74 170.35  
 64.97 3 51 0 4411.68 -16.39 192.73 255.98 56.28 5 4 32 3411.7 -28.74 170.35

Differential Corrections  
 TDE .4368 TRA-3.7481 TC3-4.6077 BAU 2.2760 SGT 7095.8 SGR 2561.3 SG3 895.7 ST 73.0 SR 26.7 SS 48.7  
 RDE .4366 RRA -.8411 RC3-1.9757 FAU .29788 RRT .9538 RRF .9861 RTF .9291 CRT .8028 CRS -.9619 CST -.6117  
 FDE 3.4590 FRA-3.4015 FC3-7.5943 BSP 13076 SGB 7544.0 R23 .3011 R13 .9398 LSA 84.2 HSA 36.4 SSA .9  
 BDE .6176 BRA 3.6413 BC3 5.0134 FSP 1476 SG1 7508.9 SG2 726.9 THA 19.19 EL1 76.2 EL2 15.3 ALF 17.09

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 8 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 11 1974

Heliocentric Conic  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.045 GAL 5.98 AZL 84.67 HCA 159.78 SMA 198.30 ECC .26040 INC 5.3328 V1 29.564  
 RP 248.78 LAP 1.84 LOP 145.07 VP 19.941 GAP -3.25 AZP 95.01 TAL 29.54 TAP 189.32 RCA 146.66 APO 249.94 V2 22.015  
 RC 341.246 GL 31.39 GP -32.13 ZAL 48.55 ZAP 60.63 ETS 161.22 ZAE 80.48 ETE 175.37 ZAC 56.74 ETC 286.94 LVI 9.57

Planetocentric Conic  
 C3 34.400 VHL 5.865 DLA 38.16 RAL 8.47 RAD 6648.7 VEL 12.422 PTH 7.33 VHP 3.147 DPA -22.47 RAP 31.93 ECC 1.5661  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 41 30 4102.60 -40.14 182.49 272.15 61.94 6 49 52 3102.6 -47.41 150.30  
 60.00 4 53 17 4231.93 -27.15 185.23 263.35 59.00 6 3 49 3231.9 -37.40 159.36  
 63.23 3 40 32 4440.74 -16.69 195.31 256.06 55.17 4 54 32 3440.7 -29.44 173.09  
 63.23 3 40 32 4440.74 -16.69 195.31 256.06 55.17 4 54 32 3440.7 -29.44 173.09  
 63.23 3 40 32 4440.74 -16.69 195.31 256.06 55.17 4 54 32 3440.7 -29.44 173.09  
 63.23 3 40 32 4440.74 -16.69 195.31 256.06 55.17 4 54 32 3440.7 -29.44 173.09  
 63.23 3 40 32 4440.74 -16.69 195.31 256.06 55.17 4 54 32 3440.7 -29.44 173.09

Differential Corrections  
 TDE .5006 TRA-3.8045 TC3-4.6294 BAU 2.3193 SGT 7216.0 SGR 2632.4 SG3 863.2 ST 75.4 SR 29.2 SS 49.1  
 RDE .4905 RRA -.8798 RC3-2.0002 FAU .28661 RRT .9551 RRF .9867 RTF .9287 CRT .8054 CRS -.9674 CST -.6312  
 FDE 3.4659 FRA-3.2952 FC3-7.2131 BSP 13261 SGB 7681.2 R23 .3048 R13 .9396 LSA 87.4 HSA 36.3 SSA .8  
 BDE .7009 BRA 3.9049 BC3 5.0430 FSP 1405 SG1 7645.9 SG2 736.1 THA 19.40 EL1 79.2 EL2 16.5 ALF 18.16

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 8 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 13 1974

Heliocentric Conic  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.052 GAL 5.91 AZL 84.44 HCA 160.66 SMA 198.45 ECC .26052 INC 5.5550 V1 29.564  
 RP 248.85 LAP 1.84 LOP 145.94 VP 19.946 GAP -3.44 AZP 95.24 TAL 29.21 TAP 189.87 RCA 146.75 APO 250.15 V2 22.009  
 RC 343.139 GL 32.58 GP -33.06 ZAL 49.37 ZAP 60.52 ETS 160.36 ZAE 79.85 ETE 174.72 ZAC 55.77 ETC 287.13 LVI 10.53

Planetocentric Conic  
 C3 34.926 VHL 5.910 DLA 39.32 RAL 7.99 RAD 6648.9 VEL 12.443 PTH 7.34 VHP 3.201 DPA -23.19 RAP 32.63 ECC 1.5748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 29 24 4140.24 -38.90 185.24 272.02 60.10 6 38 24 3140.2 -47.15 153.90  
 60.00 4 23 19 4318.06 -24.03 190.37 261.34 56.62 5 35 18 3318.1 -35.55 165.92  
 61.46 3 30 4 4469.13 -16.97 197.88 256.13 53.99 4 44 33 3469.1 -30.15 175.85  
 61.46 3 30 4 4469.13 -16.97 197.88 256.13 53.99 4 44 33 3469.1 -30.15 175.85  
 61.46 3 30 4 4469.13 -16.97 197.88 256.13 53.99 4 44 33 3469.1 -30.15 175.85  
 61.46 3 30 4 4469.13 -16.97 197.88 256.13 53.99 4 44 33 3469.1 -30.15 175.85  
 61.46 3 30 4 4469.13 -16.97 197.88 256.13 53.99 4 44 33 3469.1 -30.15 175.85

Differential Corrections  
 TDE .5688 TRA-3.8598 TC3-4.6373 BAU 2.3619 SGT 7330.9 SGR 2705.1 SG3 828.1 ST 78.0 SR 32.0 SS 49.8  
 RDE .5504 RRA -.9201 RC3-2.0205 FAU .27447 RRT .9561 RRF .9871 RTF .9278 CRT .8088 CRS -.9719 CST -.6403  
 FDE 3.4733 FRA-3.1770 FC3-6.8035 BSP 13481 SGB 7814.1 R23 .3093 R13 .9390 LSA 90.6 HSA 36.4 SSA .8  
 BDE .7914 BRA 3.9680 BC3 5.0584 FSP 1339 SG1 7778.4 SG2 748.8 THA 19.62 EL1 82.5 EL2 17.8 ALF 18.28

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 8 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 15 1974

Heliocentric Conic  
 RL 150.71 LAL -.00 LOL 345.20 VL 33.060 GAL 5.85 AZL 84.20 HCA 161.83 SMA 198.60 ECC .26064 INC 5.7972 V1 29.864  
 RP 248.92 LAP 1.83 LOP 146.82 VP 19.952 GAP -3.62 AZP 95.50 TAL 28.88 TAP 190.41 RCA 146.83 APO 250.36 V2 22.003  
 RC 345.001 GL 33.86 GP -34.06 ZAL 50.24 ZAP 60.49 ETS 159.48 ZAE 79.28 ETE 174.04 ZAC 54.74 ETC 287.34 LVI 11.58

Planetocentric Conic  
 C3 35.550 VHL 5.962 DLA 40.53 RAL 7.43 RAD 6649.1 VEL 12.468 PTH 7.36 VHP 3.260 DPA -23.96 RAP 33.38 ECC 1.5851  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 15 26 4182.33 -37.43 188.19 271.65 58.16 6 25 8 3182.3 -46.71 157.87  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63  
 59.66 3 19 33 4496.97 -17.24 200.45 256.17 52.73 4 34 30 3497.0 -30.87 178.63

Differential Corrections  
 TDE .6516 TRA-3.9038 TC3-4.6177 BAU 2.3963 SGT 7421.3 SGR 2764.4 SG3 785.8 ST 80.8 SR 35.3 SS 50.3  
 RDE .6257 RRA -.9526 RC3-2.0247 FAU .25960 RRT .9562 RRF .9870 RTF .9246 CRT .8103 CRS -.9763 CST -.6655  
 FDE 3.5144 FRA-3.0090 FC3-6.3221 BSP 13915 SGB 7919.5 R23 .3193 R13 .9363 LSA 94.6 HSA 36.8 SSA .7  
 BDE .9034 BRA 4.0184 BC3 5.0421 FSP 1320 SG1 7882.7 SG2 761.8 THA 19.80 EL1 86.0 EL2 19.4 ALF 20.57

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 8 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 33.067 GAL 5.79 AZL 83.94 HCA 162.40 SMA 198.75 ECC .26076 INC 6.0624 V1 29.564  
 RP 248.97 LAP 1.83 LOP 147.69 VP 19.958 GAP -3.81 AZP 95.78 TAL 28.55 TAP 100.95 RCA 146.92 APO 250.57 V2 21.997  
 RC 346.831 GL 35.22 GP -35.12 ZAL 51.15 ZAP 80.51 ETS 156.57 ZAE 76.75 ETE 173.35 ZAC 53.63 ETC 287.57 LVI 12.66

DISTANCE 586.721

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.294 VHL 6.024 DLA 41.81 RAL 6.77 RAD 6649.4 VEL 12.487 PTH 7.38 VHP 3.326 DPA -24.79 RAP 34.19 ECC 1.5973  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 59 4 4230.03 -35.67 191.39 270.94 36.14 6 9 34 3230.0 -46.03 162.27  
 57.81 3 8 52 4524.52 -17.48 203.02 256.18 51.39 4 24 16 3524.5 -31.58 181.46  
 57.81 3 8 52 4524.52 -17.48 203.02 256.18 51.39 4 24 16 3524.5 -31.58 181.46  
 57.81 3 8 52 4524.52 -17.48 203.02 256.18 51.39 4 24 16 3524.5 -31.58 181.46  
 57.81 3 8 52 4524.52 -17.48 203.02 256.18 51.39 4 24 16 3524.5 -31.58 181.46  
 57.81 3 8 52 4524.52 -17.48 203.02 256.18 51.39 4 24 16 3524.5 -31.58 181.46

DIFFERENTIAL CORRECTIONS

TDE .7164 TRA-3.9671 TC3-4.6024 BAU 2.4432  
 RDE .6916 RRA-1.0050 RC3-2.0426 FAU .24701  
 FDE 3.4874 FRA-2.8995 FC3-5.8921 BSP 14077  
 BDE .9957 BRA 4.0924 BC3 5.0353 FSP 1237

MID-COURSE EXECUTION ACCURACY

SGT 7539.3 SGR 2852.0 SG3 748.7  
 RRT .9575 RRF .9872 RTF .9239  
 SGB 8060.7 R23 .3229 R13 .9358  
 SG1 8023.5 SG2 773.4 THA 20.11

ORBIT DETERMINATION ACCURACY

ST 83.6 SR 38.3 SS 50.3  
 CRT .8157 CRS -.9783 CST -.6791  
 LSA 98.1 MSA 36.9 SSA .7  
 EL1 89.6 EL2 20.7 ALF 21.68

LAUNCH DATE SEP 8 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 33.075 GAL 5.73 AZL 83.65 HCA 163.27 SMA 198.89 ECC .26089 INC 6.3542 V1 29.564  
 RP 249.02 LAP 1.83 LOP 148.57 VP 19.966 GAP -3.99 AZP 96.42 TAL 28.22 TAP 191.49 RCA 147.00 APO 250.78 V2 21.992  
 RC 348.628 GL 36.68 GP -36.26 ZAL 52.12 ZAP 60.62 ETS 157.66 ZAE 76.25 ETE 172.63 ZAC 52.45 ETC 287.84 LVI 13.83

DISTANCE 590.485

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 37.179 VHL 6.097 DLA 43.17 RAL 6.00 RAD 6649.7 VEL 12.533 PTH 7.41 VHP 3.598 DPA -25.67 RAP 35.07 ECC 1.6119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 39 22 4285.39 -33.51 194.91 269.78 34.01 5 30 47 3285.4 -48.03 167.23  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36  
 55.92 2 57 55 4551.96 -17.68 205.61 256.14 49.95 4 13 47 3552.0 -32.30 184.36

DIFFERENTIAL CORRECTIONS

TDE .7942 TRA-4.0185 TC3-4.5574 BAU 2.4825  
 RDE .7749 RRA-1.0497 RC3-2.0431 FAU .23180  
 FDE 3.4903 FRA-2.7365 FC3-5.3977 BSP 14471  
 BDE 1.1096 BRA 4.1533 BC3 4.9944 FSP 1199

MID-COURSE EXECUTION ACCURACY

SGT 7632.0 SGR 2926.9 SG3 704.7  
 RRT .9576 RRF .9868 RTF .9204  
 SGB 8174.0 R23 .3327 R13 .9330  
 SG1 8135.6 SG2 790.7 THA 20.37

ORBIT DETERMINATION ACCURACY

ST 86.6 SR 41.8 SS 50.7  
 CRT .8186 CRS -.9804 CST -.6902  
 LSA 102.0 MSA 37.4 SSA .6  
 EL1 93.5 EL2 22.2 ALF 22.96

LAUNCH DATE SEP 8 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 33.082 GAL 5.67 AZL 83.32 HCA 164.14 SMA 199.04 ECC .26103 INC 6.6769 V1 29.564  
 RP 249.07 LAP 1.82 LOP 149.44 VP 19.973 GAP -4.18 AZP 96.42 TAL 27.89 TAP 192.03 RCA 147.09 APO 251.00 V2 21.988  
 RC 350.392 GL 38.24 GP -37.47 ZAL 53.15 ZAP 60.81 ETS 156.73 ZAE 77.84 ETE 171.90 ZAC 51.19 ETC 288.14 LVI 15.09

DISTANCE 594.255

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.241 VHL 6.184 DLA 44.59 RAL 5.08 RAD 6650.1 VEL 12.575 PTH 7.44 VHP 3.480 DPA -26.61 RAP 36.01 ECC 1.6293  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 14 41 4352.09 -30.77 198.90 267.85 31.73 5 27 13 3352.1 -43.51 172.93  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34  
 53.97 2 46 36 4579.44 -17.84 208.24 256.04 48.43 4 2 55 3579.4 -33.00 187.34

DIFFERENTIAL CORRECTIONS

TDE .8485 TRA-4.0932 TC3-4.5130 BAU 2.5371  
 RDE .8447 RRA-1.1211 RC3-2.0599 FAU .21910  
 FDE 3.4140 FRA-2.6420 FC3-4.9601 BSP 14539  
 BDE 1.1939 BRA 4.2440 BC3 4.9827 FSP 1089

MID-COURSE EXECUTION ACCURACY

SGT 7756.1 SGR 3038.1 SG3 666.2  
 RRT .9594 RRF .9868 RTF .9204  
 SGB 8329.9 R23 .3341 R13 .9333  
 SG1 8291.2 SG2 801.6 THA 20.80

ORBIT DETERMINATION ACCURACY

ST 89.4 SR 45.0 SS 50.1  
 CRT .8241 CRS -.9808 CST -.6983  
 LSA 105.4 MSA 37.5 SSA .6  
 EL1 97.3 EL2 23.4 ALF 24.01

LAUNCH DATE SEP 8 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 23 1974

HELIOCENTRIC CONIC

RL 150.71 LAL -.00 LOL 345.20 VL 33.090 GAL 5.60 AZL 82.96 HCA 165.01 SMA 199.19 ECC .26117 INC 7.0358 V1 29.564  
 RP 249.11 LAP 1.82 LOP 150.32 VP 19.982 GAP -4.36 AZP 96.80 TAL 27.56 TAP 192.58 RCA 147.17 APO 251.21 V2 21.984  
 RC 352.122 GL 39.92 GP -38.77 ZAL 54.24 ZAP 61.09 ETS 155.80 ZAE 77.50 ETE 171.17 ZAC 49.84 ETC 288.48 LVI 16.43

DISTANCE 598.017

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 39.516 VHL 6.286 DLA 46.09 RAL 4.00 RAD 6650.5 VEL 12.625 PTH 7.48 VHP 3.573 DPA -27.61 RAP 37.03 ECC 1.6503  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 40 50 4439.93 -28.96 203.80 264.62 49.19 4 54 50 3439.9 -41.08 179.95  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43  
 51.96 2 34 46 4607.21 -17.94 210.90 255.86 46.80 3 51 33 3607.2 -33.67 190.43

DIFFERENTIAL CORRECTIONS

TDE .9005 TRA-4.1627 TC3-4.4431 BAU 2.5875  
 RDE .9282 RRA-1.1913 RC3-2.0610 FAU .20424  
 FDE 3.3493 FRA-2.5073 FC3-4.4747 BSP 14748  
 BDE 1.2933 BRA 4.3298 BC3 4.8979 FSP 1008

MID-COURSE EXECUTION ACCURACY

SGT 7861.6 SGR 3143.4 SG3 622.0  
 RRT .9604 RRF .9863 RTF .9180  
 SGB 8466.8 R23 .3406 R13 .9315  
 SG1 8427.2 SG2 817.1 THA 21.22

ORBIT DETERMINATION ACCURACY

ST 92.1 SR 48.5 SS 49.6  
 CRT .8264 CRS -.9810 CST -.7020  
 LSA 108.9 MSA 38.0 SSA .5  
 EL1 101.1 EL2 24.9 ALF 25.16

LAUNCH DATE SEP 9 1973

FLIGHT TIME 158.00

ARRIVAL DATE FEB 14 1974

Heliocentric Conic: RL 150.67 LAL -0.00 LOL 346.17 VL 32.874 GAL 8.97 AZL 88.71 HCA 105.37 SMA 194.90 ECC .27303 INC 1.2887 V1 29.572  
 RP 235.59 LAP 1.24 LOP 91.55 VP 21.112 GAP 10.36 AZP 90.34 TAL 43.78 TAP 149.15 RCA 141.69 APO 248.11 V2 23.332  
 RC 189.197 GL 6.64 GP -11.51 ZAL 28.19 ZAP 124.54 ETS 189.90 ZAE 159.99 ETE 220.21 ZAC 73.13 ETC 283.71 LVI -7.37

Distance 350.572 Earth to Mars

Planetocentric Conic: C3 39.951 VHL 6.321 DLA 11.49 RAL 9.92 RAD 6650.6 VEL 12.642 PTH 7.49 VHP 3.110 DPA 2.67 RAP 38.80 ECC 1.6575  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 3 45 3535.57 -46.73 131.41 255.35 100.19 9 2 41 2535.6 -37.49 101.05  
 60.00 8 30 44 3463.70 -39.92 126.28 256.69 96.05 9 28 27 2463.8 -33.19 97.39  
 70.00 9 8 44 3351.95 -34.04 117.80 257.26 92.93 10 4 36 2352.0 -29.30 90.11  
 80.00 10 3 51 3179.30 -29.85 104.87 257.43 90.88 10 56 50 2179.3 -26.45 77.96  
 90.00 11 19 27 2935.29 -28.28 86.95 257.44 90.13 12 8 22 1935.3 -25.37 60.32  
 100.00 12 46 43 2653.77 -29.85 66.24 257.43 90.88 13 30 56 1653.8 -26.45 39.33  
 110.00 14 8 10 2398.77 -34.04 46.72 257.26 92.93 14 48 9 1398.8 -29.30 19.03

Differential Corrections: TDE -.4310 TRA -.9625 TC3 .0117 BAU .2818 RDE -.7320 RRA .0310 RC3 -.5274 FAU .35090 FDE -.1387 FRA -4.4548 FC3 -7.6041 B8P 1112 BDE .8495 BRA .9630 BC3 .5276 F8P 1463

Mid-Course Execution Accuracy: SGT 972.4 SGR 941.1 SCS 903.7 RRT .2446 RRF .6476 RTF .3516 SGB 1353.2 R23 .2810 R13 .6165 SGI 1068.4 SGI 830.5 THA 41.20

Orbit Determination Accuracy: ST 23.7 SR 33.2 S8 17.1 CRT .8177 CR8 -.0928 C8T -.6201 L8A 39.4 M8A 19.8 S8A 2.6 EL1 39.1 EL2 11.6 ALF 56.44

LAUNCH DATE SEP 9 1973

FLIGHT TIME 160.00

ARRIVAL DATE FEB 16 1974

Heliocentric Conic: RL 150.67 LAL -0.00 LOL 346.17 VL 32.884 GAL 8.94 AZL 88.68 HCA 106.34 SMA 194.70 ECC .27212 INC 1.3191 V1 29.572  
 RP 235.94 LAP 1.27 LOP 92.52 VP 21.055 GAP 10.07 AZP 90.37 TAL 43.78 TAP 150.10 RCA 141.72 APO 247.68 V2 23.297  
 RC 192.163 GL 6.81 GP -11.75 ZAL 28.24 ZAP 122.96 ETS 189.60 ZAE 158.16 ETE 217.76 ZAC 73.01 ETC 283.77 LVI -7.28

Distance 354.370 Earth to Mars

Planetocentric Conic: C3 39.729 VHL 6.303 DLA 11.65 RAL 9.86 RAD 6650.6 VEL 12.633 PTH 7.48 VHP 3.056 DPA 2.23 RAP 38.32 ECC 1.6538  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 2 52 3537.47 -46.75 131.59 255.32 100.05 9 1 50 2537.5 -37.56 101.18  
 60.00 8 29 39 3466.21 -39.94 126.49 256.63 95.91 9 27 25 2466.2 -33.26 97.56  
 70.00 9 7 26 3355.03 -34.05 118.04 257.19 92.79 10 3 21 2355.0 -29.37 90.32  
 80.00 10 2 20 3183.05 -29.85 105.15 257.34 90.73 10 55 23 2183.0 -26.51 78.22  
 90.00 11 17 50 2939.36 -28.28 87.25 257.35 89.98 12 6 50 1939.4 -25.44 60.60  
 100.00 12 45 12 2657.52 -29.85 66.52 257.34 90.73 13 29 29 1657.5 -26.51 39.59  
 110.00 14 6 52 2401.84 -34.05 46.96 257.19 92.79 14 46 54 1401.8 -29.37 19.24

Differential Corrections: TDE -.4437 TRA -.9991 TC3 -.0402 BAU .2925 RDE -.7264 RRA .0186 RC3 -.5493 FAU .36182 FDE -.1018 FRA -4.5988 FC3 -7.8843 B8P 1191 BDE .8512 BRA .9992 BC3 .5507 F8P 1543

Mid-Course Execution Accuracy: SGT 1012.4 SGR 956.9 SCS 934.6 RRT .2946 RRF .6836 RTF .4108 SGB 1393.1 R23 .2723 R13 .6458 SGI 1122.9 SGI 824.5 THA 39.58

Orbit Determination Accuracy: ST 24.5 SR 33.0 S8 17.4 CRT .8184 CR8 -.0697 C8T -.6101 L8A 39.7 M8A 20.2 S8A 2.6 EL1 39.4 EL2 11.8 ALF 55.17

LAUNCH DATE SEP 9 1973

FLIGHT TIME 162.00

ARRIVAL DATE FEB 16 1974

Heliocentric Conic: RL 150.67 LAL -0.00 LOL 346.17 VL 32.854 GAL 8.91 AZL 88.65 HCA 107.32 SMA 194.52 ECC .27127 INC 1.3497 V1 29.572  
 RP 236.29 LAP 1.29 LOP 93.49 VP 21.001 GAP 9.77 AZP 90.40 TAL 43.73 TAP 151.04 RCA 141.75 APO 247.29 V2 23.261  
 RC 195.134 GL 6.99 GP -12.00 ZAL 28.29 ZAP 121.38 ETS 189.29 ZAE 156.67 ETE 215.55 ZAC 72.90 ETC 283.84 LVI -7.20

Distance 358.170 Earth to Mars

Planetocentric Conic: C3 39.514 VHL 6.286 DLA 11.82 RAL 9.80 RAD 6650.5 VEL 12.625 PTH 7.48 VHP 3.005 DPA 1.79 RAP 37.83 ECC 1.6503  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 2 0 3539.51 -46.78 131.78 255.30 99.91 9 1 0 2539.5 -37.63 101.32  
 60.00 8 28 35 3468.78 -39.96 126.70 256.59 95.76 9 26 23 2468.8 -33.33 97.74  
 70.00 9 6 8 3358.28 -34.06 118.29 257.13 92.64 10 2 6 2358.3 -29.44 90.59  
 80.00 10 0 48 3187.01 -29.85 103.44 257.27 90.57 10 53 55 2187.0 -26.58 78.53  
 90.00 11 16 12 2943.65 -28.28 87.56 257.28 89.83 12 5 16 1943.6 -25.50 60.90  
 100.00 12 43 40 2661.48 -29.85 66.81 257.27 90.57 13 28 1 1661.5 -26.58 39.87  
 110.00 14 5 34 2405.10 -34.06 47.21 257.13 92.64 14 45 39 1405.1 -29.44 19.47

Differential Corrections: TDE -.4531 TRA -1.0339 TC3 -.0915 BAU .3080 RDE -.7209 RRA .0054 RC3 -.5720 FAU .37301 FDE -.0718 FRA -4.7504 FC3 -8.1728 B8P 1285 BDE .8518 BRA 1.0339 BC3 .5792 F8P 1611

Mid-Course Execution Accuracy: SGT 1054.0 SGR 974.1 SCS 966.5 RRT .3402 RRF .6799 RTF .4338 SGB 1435.2 R23 .2817 R13 .6745 SGI 1178.3 SGI 819.3 THA 38.47

Orbit Determination Accuracy: ST 25.2 SR 32.9 S8 17.7 CRT .8179 CR8 -.0530 C8T -.5984 L8A 40.0 M8A 20.6 S8A 2.6 EL1 39.6 EL2 12.0 ALF 54.10

LAUNCH DATE SEP 9 1973

FLIGHT TIME 164.00

ARRIVAL DATE FEB 20 1974

Heliocentric Conic: RL 150.67 LAL -0.00 LOL 346.17 VL 32.845 GAL 8.88 AZL 88.62 HCA 108.28 SMA 194.38 ECC .27047 INC 1.3805 V1 29.572  
 RP 236.63 LAP 1.31 LOP 94.46 VP 20.949 GAP 9.48 AZP 90.43 TAL 43.68 TAP 151.97 RCA 141.79 APO 246.93 V2 23.228  
 RC 198.104 GL 7.18 GP -12.24 ZAL 28.36 ZAP 119.79 ETS 188.97 ZAE 155.15 ETE 213.57 ZAC 72.76 ETC 283.91 LVI -7.12

Distance 361.972 Earth to Mars

Planetocentric Conic: C3 39.302 VHL 6.269 DLA 11.99 RAL 9.76 RAD 6650.4 VEL 12.616 PTH 7.47 VHP 2.957 DPA 1.34 RAP 37.33 ECC 1.6469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 1 8 3541.69 -46.80 131.98 255.29 99.75 9 0 10 2541.7 -37.71 101.47  
 60.00 8 27 30 3471.51 -39.97 126.93 256.56 95.61 9 25 22 2471.5 -33.41 97.93  
 70.00 9 4 49 3361.73 -34.07 118.56 257.08 92.48 10 0 51 2361.7 -29.51 90.79  
 80.00 9 59 15 3191.18 -29.86 105.75 257.21 90.41 10 52 26 2191.2 -26.65 78.79  
 90.00 11 14 33 2948.17 -28.28 87.89 257.21 89.66 12 3 41 1948.2 -25.57 61.21  
 100.00 12 42 7 2665.85 -29.86 67.12 257.21 90.41 13 26 33 1665.7 -26.65 40.16  
 110.00 14 4 15 2408.54 -34.07 47.48 257.08 92.48 14 44 24 1408.5 -29.51 19.71

Differential Corrections: TDE -.4611 TRA -1.0691 TC3 -.1441 BAU .3219 RDE -.7158 RRA -.0084 RC3 -.5954 FAU .38433 FDE -.0455 FRA -4.9048 FC3 -8.4658 B8P 1391 BDE .8512 BRA 1.0691 BC3 .6126 F8P 1672

Mid-Course Execution Accuracy: SGT 1099.1 SGR 992.5 SCS 998.9 RRT .3838 RRF .6961 RTF .5126 SGB 1480.9 R23 .2511 R13 .7016 SGI 1236.7 SGI 814.6 THA 37.54

Orbit Determination Accuracy: ST 25.9 SR 32.7 S8 18.0 CRT .8169 CR8 -.0406 C8T -.5906 L8A 40.2 M8A 21.0 S8A 2.6 EL1 39.9 EL2 12.2 ALF 53.10



LAUNCH DATE SEP 9 1973 FLIGHT TIME 166.00 ARRIVAL DATE FEB 22 1974

HELIOCENTRIC CONIC DISTANCE 365.775 EARTH TO MARS  
 RL 130.67 LAL -.00 LOL 346.17 VL 32.836 GAL 8.85 AZL 88.59 HCA 109.25 SMA 194.22 ECC .26972 INC 1.4115 V1 29.572  
 RP 236.98 LAP 1.33 LOP 95.43 VP 20.898 GAP 9.19 AZP 90.47 TAL 43.63 TAP 152.88 RCA 141.83 APO 246.60 V2 23.191  
 RC 201.073 GL 7.34 GP -12.49 ZAL 28.44 ZAP 118.19 ETS 188.65 ZAE 153.58 ETE 211.77 ZAC 72.68 ETC 283.97 LVI -7.03

PLANETOCENTRIC CONIC  
 C3 39.095 VHL 6.253 DLA 12.17 RAL 9.72 RAD 6650.3 VEL 12.608 PTH 7.47 VHP 2.912 DPA .89 RAP 36.83 ECC 1.6434  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 8 0 17 3544.01 -46.83 132.20 255.31 99.59 8 59 21 2544.0 -37.79 101.63  
 60.00 8 26 26 3474.40 -39.99 127.18 256.55 95.44 9 24 20 2474.4 -33.49 98.14  
 70.00 9 3 30 3365.35 -34.08 118.85 257.05 92.32 9 59 35 2365.4 -29.59 91.05  
 80.00 9 57 41 3195.57 -29.86 106.08 257.16 90.24 10 50 57 2195.6 -26.72 79.09  
 90.00 11 12 52 2952.91 -28.28 88.24 257.16 89.49 12 2 5 1952.9 -25.64 61.54  
 100.00 12 40 33 2670.04 -29.86 67.45 257.16 90.24 13 25 3 1670.0 -26.72 40.46  
 110.00 14 2 56 2412.17 -34.08 47.76 257.05 92.32 14 43 8 1412.2 -29.59 19.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4689 TRA-1.1056 TC3 -.1991 BAU .3400 SGT 1149.3 SGR 1011.4 SG3 1031.0 ST 26.5 SR 32.5 SS 18.4  
 RDE -.7097 RRA -.0223 RC3 -.6192 FAU .39545 RRT .4249 RRF .7116 RTF .5575 CRT .8157 CRS -.0276 CST -.5825  
 FDE -.0163 FRA-5.0560 FC3-8.7570 BSP 1509 SGB 1930.9 R23 .2415 R13 .7263 LSA 40.4 MSA 21.4 S8A 2.8  
 BDE .8507 BRA 1.1058 BC3 .6504 FSP 1731 SG1 1299.2 SG2 809.9 THA 36.61 EL1 40.1 EL2 12.5 ALF 52.08

LAUNCH DATE SEP 9 1973 FLIGHT TIME 160.00 ARRIVAL DATE FEB 24 1974

HELIOCENTRIC CONIC DISTANCE 369.580 EARTH TO MARS  
 RL 130.67 LAL -.00 LOL 346.17 VL 32.831 GAL 8.82 AZL 88.56 HCA 110.21 SMA 194.09 ECC .26901 INC 1.4429 V1 29.572  
 RP 237.31 LAP 1.35 LOP 96.39 VP 20.850 GAP 8.91 AZP 90.50 TAL 43.56 TAP 153.77 RCA 141.88 APO 246.30 V2 23.157  
 RC 204.040 GL 7.53 GP -12.73 ZAL 28.53 ZAP 116.59 ETS 188.32 ZAE 151.99 ETE 210.13 ZAC 72.58 ETC 284.04 LVI -8.99

PLANETOCENTRIC CONIC  
 C3 38.891 VHL 6.236 DLA 12.36 RAL 9.69 RAD 6650.3 VEL 12.600 PTH 7.46 VHP 2.870 DPA .43 RAP 36.32 ECC 1.6401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 59 26 3546.46 -46.86 132.43 255.33 99.41 8 58 32 2546.5 -37.88 101.80  
 60.00 8 25 22 3477.44 -40.01 127.43 256.55 95.27 9 23 19 2477.4 -33.57 98.35  
 70.00 9 2 10 3369.16 -34.09 119.14 257.03 92.14 9 58 19 2369.2 -29.67 91.32  
 80.00 9 56 6 3200.17 -29.86 106.42 257.12 90.06 10 49 26 2200.2 -26.80 79.42  
 90.00 11 11 10 2957.89 -28.27 88.61 257.11 89.31 12 0 28 1957.9 -25.71 61.89  
 100.00 12 38 58 2674.64 -29.86 67.79 257.12 90.06 13 23 32 1674.6 -26.80 40.78  
 110.00 14 1 36 2415.98 -34.09 48.06 257.03 92.14 14 41 52 1416.0 -29.67 20.23

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4766 TRA-1.1436 TC3 -.2569 BAU .3602 SGT 1204.7 SGR 1031.0 SG3 1062.5 ST 27.2 SR 32.3 SS 18.7  
 RDE -.7036 RRA -.0363 RC3 -.6433 FAU .40633 RRT .4644 RRF .7265 RTF .5988 CRT .8143 CRS -.0145 CST -.5745  
 FDE .0131 FRA-5.2024 FC3-9.0450 BSP 1638 SGB 1585.6 R23 .2327 R13 .7489 LSA 40.7 MSA 21.8 S8A 2.6  
 BDE .8498 BRA 1.1442 BC3 .6927 FSP 1790 SG1 1365.9 SG2 805.3 THA 35.69 EL1 40.3 EL2 12.7 ALF 51.04

LAUNCH DATE SEP 9 1973 FLIGHT TIME 170.00 ARRIVAL DATE FEB 26 1974

HELIOCENTRIC CONIC DISTANCE 373.386 EARTH TO MARS  
 RL 130.67 LAL -.00 LOL 346.17 VL 32.825 GAL 8.79 AZL 88.53 HCA 111.18 SMA 193.98 ECC .26836 INC 1.4746 V1 29.572  
 RP 237.65 LAP 1.38 LOP 97.36 VP 20.803 GAP 8.62 AZP 90.53 TAL 43.48 TAP 154.65 RCA 141.93 APO 246.04 V2 23.123  
 RC 207.005 GL 7.71 GP -12.97 ZAL 28.62 ZAP 114.99 ETS 187.99 ZAE 150.37 ETE 208.62 ZAC 72.48 ETC 284.10 LVI -6.88

PLANETOCENTRIC CONIC  
 C3 38.691 VHL 6.220 DLA 12.55 RAL 9.66 RAD 6650.2 VEL 12.592 PTH 7.45 VHP 2.830 DPA -.03 RAP 35.80 ECC 1.6368  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 58 35 3549.04 -46.89 132.68 255.38 99.23 8 57 44 2549.0 -37.97 101.98  
 60.00 8 24 17 3480.64 -40.03 127.70 256.56 95.09 9 22 18 2480.6 -33.66 98.58  
 70.00 9 0 49 3373.16 -34.10 119.45 257.02 91.96 9 57 2 2373.2 -29.75 91.60  
 80.00 9 54 29 3204.99 -29.86 106.78 257.10 89.87 10 47 54 2205.0 -26.87 79.75  
 90.00 11 9 26 2963.09 -28.27 88.99 257.08 89.12 11 58 49 1963.1 -25.76 62.23  
 100.00 12 37 21 2679.46 -29.86 68.15 257.10 89.87 13 22 1 1679.5 -26.87 41.12  
 110.00 14 0 15 2419.97 -34.10 48.37 257.02 91.96 14 40 35 1420.0 -29.75 20.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4826 TRA-1.1816 TC3 -.3199 BAU .3822 SGT 1262.9 SGR 1051.8 SG3 1094.3 ST 27.8 SR 32.2 SS 19.0  
 RDE -.6977 RRA -.0509 RC3 -.6682 FAU .41728 RRT .5009 RRF .7412 RTF .6080 CRT .8123 CRS -.0086 CST -.5714  
 FDE .0403 FRA-5.3520 FC3-9.3368 BSP 1783 SGB 1643.6 R23 .2240 R13 .7899 LSA 40.9 MSA 22.1 S8A 2.6  
 BDE .8483 BRA 1.1827 BC3 .7389 FSP 1836 SG1 1435.1 SG2 801.1 THA 34.92 EL1 40.5 EL2 12.9 ALF 50.08

LAUNCH DATE SEP 9 1973 FLIGHT TIME 172.00 ARRIVAL DATE FEB 28 1974

HELIOCENTRIC CONIC DISTANCE 377.193 EARTH TO MARS  
 RL 130.67 LAL -.00 LOL 346.17 VL 32.820 GAL 8.75 AZL 88.49 HCA 112.13 SMA 193.89 ECC .26774 INC 1.5065 V1 29.572  
 RP 237.98 LAP 1.40 LOP 98.31 VP 20.757 GAP 8.34 AZP 90.57 TAL 43.39 TAP 155.52 RCA 141.98 APO 245.80 V2 23.090  
 RC 209.965 GL 7.90 GP -13.22 ZAL 28.73 ZAP 113.39 ETS 187.65 ZAE 148.73 ETE 207.24 ZAC 72.38 ETC 284.16 LVI -6.78

PLANETOCENTRIC CONIC  
 C3 38.495 VHL 6.204 DLA 12.75 RAL 9.64 RAD 6650.1 VEL 12.585 PTH 7.45 VHP 2.794 DPA -.50 RAP 35.28 ECC 1.6335  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 57 45 3551.76 -46.92 132.93 255.43 99.03 8 56 56 2551.8 -38.07 102.17  
 60.00 8 23 12 3483.99 -40.05 127.99 256.59 94.90 9 21 16 2484.0 -33.75 98.81  
 70.00 8 59 27 3377.33 -34.11 119.78 257.02 91.76 9 55 44 2377.3 -29.84 91.89  
 80.00 9 52 51 3210.01 -29.86 107.15 257.08 89.68 10 46 21 2210.0 -26.95 80.11  
 90.00 11 7 41 2968.52 -28.26 89.38 257.06 88.92 11 57 9 1968.5 -25.86 62.63  
 100.00 12 35 43 2684.48 -29.86 68.52 257.08 89.68 13 20 28 1684.5 -26.95 41.47  
 110.00 13 58 53 2424.15 -34.11 48.70 257.02 91.76 14 39 17 1424.1 -29.84 20.81

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4847 TRA-1.2174 TC3 -.3728 BAU .4058 SGT 1320.2 SGR 1075.6 SG3 1128.7 ST 28.3 SR 32.0 SS 19.4  
 RDE -.6929 RRA -.0671 RC3 -.6948 FAU .42901 RRT .5341 RRF .7565 RTF .6694 CRT .8093 CRS -.0133 CST -.5814  
 FDE .0431 FRA-5.5210 FC3-9.6483 BSP 1956 SGB 1702.9 R23 .2146 R13 .7904 LSA 41.1 MSA 22.5 S8A 2.6  
 BDE .8456 BRA 1.2192 BC3 .7885 FSP 1853 SG1 1504.3 SG2 798.0 THA 34.44 EL1 40.7 EL2 13.1 ALF 49.38

LAUNCH DATE SEP 9 1973 FLIGHT TIME 174.00 ARRIVAL DATE MAR 2 1974

HELIOCENTRIC CONIC DISTANCE 380.999 EARTH TO MARS
RL 150.67 LAL -.00 LOL 346.17 VL 32.816 GAL 8.72 AZL 88.46 MCA 113.09 SMA 193.81 ECC .26716 INC 1.5389 V1 29.572
RP 238.30 LAP 1.42 LOP 99.27 VP 20.714 GAP 8.07 AZP 90.60 TAL 43.29 TAP 156.37 RCA 142.03 APO 245.58 V2 23.056
RC 212.919 GL 8.09 GP -13.46 ZAL 28.85 ZAP 111.79 ETS 187.31 ZAE 147.08 ETE 205.97 ZAC 72.29 ETC 284.22 LVI -6.69

PLANETOCENTRIC CONIC
C3 38.299 VHL 6.189 DLA 12.95 RAL 9.63 RAD 6650.1 VEL 12.577 PTH 7.44 VHP 2.760 DPA -.96 RAP 34.76 ECC 1.6303
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 56 54 3554.62 -46.95 133.20 255.50 98.83 8 56 9 2554.6 -38.17 102.37
60.00 8 22 7 3487.51 -40.07 128.28 256.63 94.70 9 20 15 2487.5 -33.85 99.06
70.00 8 58 4 3381.71 -34.12 120.12 257.03 91.56 9 54 26 2381.7 -29.93 92.20
80.00 9 51 11 3215.28 -29.85 107.55 257.08 89.47 10 44 47 2215.3 -27.04 80.48
90.00 11 5 53 2974.22 -28.25 89.80 257.05 88.71 11 55 27 1974.2 -25.94 63.03
100.00 12 34 3 2689.75 -29.85 68.91 257.08 89.47 13 18 53 1689.8 -27.04 41.84
110.00 13 57 31 2428.52 -34.12 49.04 257.03 91.56 14 37 59 1428.5 -29.93 21.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.4995 TRA-1.2675 TC3 -.4464 BAW .4323 SGT 1403.3 SGR 1091.7 SG3 1151.3 ST 29.4 SR 31.7 SS 19.8
RDE -.6828 RRA -.0783 RC3 -.7166 FAU .43662 RRT .5692 RRF .7668 RTF .7007 CRT 8095 CR8 .0292 CST -.5469
FDE .1294 FRA-5.6018 FC3-9.8698 BSP 2073 SGB 1777.9 R23 .2109 R13 .8042 LSA 41.4 MSA 22.9 S8A 2.6
BDE .8460 BRA 1.2700 BC3 .8442 FSP 1957 SG1 1592.2 SG2 791.1 THA 32.99 EL1 41.1 EL2 13.3 ALF 47.66

LAUNCH DATE SEP 9 1973 FLIGHT TIME 176.00 ARRIVAL DATE MAR 4 1974

HELIOCENTRIC CONIC DISTANCE 384.807 EARTH TO MARS
RL 150.67 LAL -.00 LOL 346.17 VL 32.812 GAL 8.68 AZL 88.43 MCA 114.04 SMA 193.74 ECC .26662 INC 1.5716 V1 29.572
RP 238.83 LAP 1.44 LOP 100.22 VP 20.672 GAP 7.80 AZP 90.64 TAL 43.17 TAP 157.22 RCA 142.09 APO 245.39 V2 23.024
RC 215.868 GL 8.29 GP -13.70 ZAL 28.97 ZAP 110.20 ETS 186.36 ZAE 145.41 ETE 204.78 ZAC 72.19 ETC 284.28 LVI -6.80

PLANETOCENTRIC CONIC
C3 38.107 VHL 6.173 DLA 13.16 RAL 9.63 RAD 6650.0 VEL 12.569 PTH 7.44 VHP 2.729 DPA -1.42 RAP 34.24 ECC 1.6271
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 56 4 3557.61 -46.98 133.48 255.59 98.61 8 55 21 2557.6 -38.27 102.58
60.00 8 21 1 3491.18 -40.09 128.59 256.68 94.49 9 19 12 2491.2 -33.94 99.33
70.00 8 56 40 3386.26 -34.13 120.48 257.06 91.35 9 53 7 2386.3 -30.02 92.52
80.00 9 49 30 3220.76 -29.85 107.95 257.09 89.28 10 43 11 2220.8 -27.12 80.86
90.00 11 4 3 2980.14 -28.24 90.23 257.05 88.49 11 53 43 1980.1 -26.02 63.44
100.00 12 32 22 2695.23 -29.85 69.32 257.09 89.28 13 17 17 1695.2 -27.12 42.23
110.00 13 56 7 2433.08 -34.13 49.39 257.06 91.35 14 36 40 1433.1 -30.02 21.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5067 TRA-1.3117 TC3 -.5144 BAW .4597 SGT 1479.1 SGR 1112.6 SG3 1178.9 ST 30.1 SR 31.4 SS 19.9
RDE -.6750 RRA -.0923 RC3 -.7413 FAU .44589 RRT .5991 RRF .7789 RTF .7276 CRT .8076 CR8 .0449 CST -.5369
FDE .1738 FRA-5.7210 FC-10.1301 B8P 2235 SGB 1850.9 R23 .2051 R13 .8191 LSA 41.7 MSA 23.2 S8A 2.6
BDE .8440 BRA 1.3149 BC3 .9023 FSP 2009 SG1 1675.5 SG2 786.4 THA 32.14 EL1 41.3 EL2 13.5 ALF 46.49

LAUNCH DATE SEP 9 1973 FLIGHT TIME 178.00 ARRIVAL DATE MAR 6 1974

HELIOCENTRIC CONIC DISTANCE 388.615 EARTH TO MARS
RL 150.67 LAL -.00 LOL 346.17 VL 32.809 GAL 8.65 AZL 88.40 MCA 114.99 SMA 193.69 ECC .26611 INC 1.6046 V1 29.572
RP 238.95 LAP 1.45 LOP 101.18 VP 20.631 GAP 7.52 AZP 90.68 TAL 43.05 TAP 158.05 RCA 142.14 APO 245.23 V2 22.991
RC 218.810 GL 8.48 GP -13.93 ZAL 29.11 ZAP 108.61 ETS 186.60 ZAE 143.73 ETE 203.67 ZAC 72.10 ETC 284.34 LVI -6.51

PLANETOCENTRIC CONIC
C3 37.917 VHL 6.158 DLA 13.38 RAL 9.63 RAD 6649.9 VEL 12.562 PTH 7.43 VHP 2.700 DPA -1.88 RAP 33.73 ECC 1.6240
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 55 13 3580.74 -47.01 133.78 255.69 98.38 8 54 34 2560.7 -38.38 102.80
60.00 8 19 55 3495.01 -40.11 128.92 256.74 94.27 9 18 10 2495.0 -34.05 99.60
70.00 8 55 15 3391.00 -34.14 120.85 257.09 91.13 9 51 46 2391.0 -30.11 92.86
80.00 9 47 46 3226.46 -29.84 108.38 257.10 89.03 10 41 33 2226.5 -27.21 81.26
90.00 11 2 11 2986.30 -28.23 90.68 257.06 88.27 11 51 57 1986.3 -26.10 63.88
100.00 12 30 38 2700.93 -29.84 69.74 257.10 89.03 13 15 39 1700.9 -27.21 42.63
110.00 13 54 42 2437.82 -34.14 49.76 257.09 91.13 14 35 19 1437.8 -30.11 21.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5138 TRA-1.3571 TC3 -.5890 BAW .4887 SGT 1559.6 SGR 1133.9 SG3 1205.6 ST 30.8 SR 31.1 SS 20.2
RDE -.6689 RRA -.1065 RC3 -.7862 FAU .45478 RRT .6289 RRF .7905 RTF .7117 CRT .8057 CR8 .0601 CST -.5272
FDE .2194 FRA-5.8352 FC-10.3837 B8P 2403 SGB 1928.2 R23 .1997 R13 .8325 LSA 42.0 MSA 23.6 S8A 2.6
BDE .8419 BRA 1.3613 BC3 .9640 FSP 2057 SG1 1762.7 SG2 781.7 THA 31.33 EL1 41.6 EL2 13.7 ALF 48.29

LAUNCH DATE SEP 9 1973 FLIGHT TIME 180.00 ARRIVAL DATE MAR 8 1974

HELIOCENTRIC CONIC DISTANCE 392.423 EARTH TO MARS
RL 150.67 LAL -.00 LOL 346.17 VL 32.807 GAL 8.61 AZL 88.38 MCA 115.94 SMA 193.64 ECC .26584 INC 1.6381 V1 29.572
RP 239.26 LAP 1.47 LOP 102.12 VP 20.592 GAP 7.26 AZP 90.72 TAL 42.92 TAP 158.86 RCA 142.20 APO 245.08 V2 22.980
RC 221.744 GL 8.88 GP -14.17 ZAL 29.26 ZAP 107.05 ETS 186.24 ZAE 142.04 ETE 202.64 ZAC 72.01 ETC 284.39 LVI -6.42

PLANETOCENTRIC CONIC
C3 37.730 VHL 6.142 DLA 13.60 RAL 9.64 RAD 6649.9 VEL 12.554 PTH 7.43 VHP 2.674 DPA -2.34 RAP 33.22 ECC 1.6209
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 54 22 3584.00 -47.04 134.09 255.80 98.15 8 53 46 2564.0 -38.49 103.03
60.00 8 18 48 3498.99 -40.13 129.26 256.81 94.04 9 17 7 2499.0 -34.15 99.88
70.00 8 53 49 3395.94 -34.14 121.23 257.14 90.91 9 50 25 2395.9 -30.21 93.21
80.00 9 46 1 3232.39 -29.84 108.82 257.12 88.80 10 39 53 2232.4 -27.30 81.68
90.00 11 0 16 2992.71 -28.22 91.15 257.07 88.03 11 50 9 1992.7 -26.19 64.33
100.00 12 28 53 2706.86 -29.84 70.18 257.12 88.80 13 13 59 1706.9 -27.30 43.05
110.00 13 53 15 2442.76 -34.14 50.15 257.14 90.91 14 33 58 1442.8 -30.21 22.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5205 TRA-1.4037 TC3 -.6578 BAW .5189 SGT 1644.2 SGR 1155.3 SG3 1230.8 ST 31.6 SR 30.8 SS 20.5
RDE -.6584 RRA -.1204 RC3 -.7910 FAU .46306 RRT .6523 RRF .8013 RTF .7730 CRT .8037 CR8 .0762 CST -.5168
FDE .2686 FRA-5.9394 FC-10.6252 BSP 2577 SGB 2009.5 R23 .1949 R13 .8445 LSA 42.3 MSA 23.9 S8A 2.6
BDE .8393 BRA 1.4089 BC3 1.0288 FSP 2103 SG1 1853.3 SG2 776.9 THA 30.54 EL1 41.9 EL2 13.8 ALF 44.07

LAUNCH DATE SEP 9 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 10 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.805 GAL 8.37 AZL 88.33 HCA 116.89 SMA 193.61 ECC .26920 INC 1.6721 V1 29.572  
 RP 239.57 LAP 1.49 LOP 103.07 VP 20.554 GAP 6.99 AZP 90.76 TAL 42.79 TAP 159.67 RCA 142.27 APO 244.96 V2 22.920  
 RC 224.672 GL 8.89 GP -14.40 ZAL 29.41 ZAP 105.46 ETS 185.87 ZAE 140.35 ETE 201.66 ZAC 71.93 ETC 284.44 LVI -6.33

DISTANCE 390.251  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.545 VHL 6.127 DLA 13.83 RAL 9.65 RAD 6649.0 VEL 12.547 PTH 7.42 VHP 2.650 DPA -2.79 RAP 32.71 ECC 1.6179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 31 3567.39 -47.07 134.41 255.92 97.90 8 52 59 2567.4 -38.61 103.27  
 60.00 8 17 40 3503.14 -40.15 129.61 256.90 93.80 9 16 3 2503.1 -34.26 100.18  
 70.00 8 52 21 3401.07 -34.15 121.63 257.19 90.67 9 49 2 2401.1 -30.31 93.58  
 80.00 9 44 13 3238.56 -29.83 109.27 257.16 88.56 10 38 11 2238.6 -27.39 82.12  
 90.00 10 58 19 2999.37 -28.20 91.64 257.10 87.79 11 48 19 1999.4 -26.27 64.79  
 100.00 12 27 5 2713.03 -29.83 70.64 257.16 88.56 13 12 18 1713.0 -27.39 43.48  
 110.00 13 51 47 2447.89 -34.15 50.55 257.19 90.67 14 32 35 1447.9 -30.31 22.50

DIFFERENTIAL CORRECTIONS  
 TDE -.5266 TRA-1.4512 TC3 -.7325 BAU .5503 SGT 1732.4 SGR 1176.9 SG3 1254.8 ST 32.4 SR 30.5 SS 20.8  
 RDE -.6496 RRA -.1344 RC3 -.8158 FAU .47084 RRT .6755 RRF .8117 RTF .7918 CRT .8016 CRS .0915 CST -.5071  
 FDE .3183 FRA-6.0368 FC-10.8571 BSP 2759 SGB 2094.3 R23 .1907 R13 .8553 LSA 42.6 MSA 24.2 SSA 2.6  
 BDE .8362 BRA 1.4574 BC3 1.0964 FSP 2144 SG1 1946.8 SG2 772.2 THA 29.80 EL1 42.2 EL2 14.0 ALF 42.85

LAUNCH DATE SEP 9 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 12 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.804 GAL 8.54 AZL 88.29 HCA 117.83 SMA 193.59 ECC .26478 INC 1.7065 V1 29.572  
 RP 239.88 LAP 1.51 LOP 104.01 VP 20.518 GAP 6.73 AZP 90.80 TAL 42.64 TAP 160.47 RCA 142.33 APO 244.85 V2 22.897  
 RC 227.991 GL 9.09 GP -14.63 ZAL 29.57 ZAP 103.90 ETS 185.50 ZAE 138.65 ETE 200.74 ZAC 71.84 ETC 284.49 LVI -6.23

DISTANCE 400.040  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.362 VHL 6.112 DLA 14.06 RAL 9.67 RAD 6649.7 VEL 12.540 PTH 7.42 VHP 2.628 DPA -3.25 RAP 32.21 ECC 1.6149  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 40 3570.93 -47.10 134.75 256.05 97.65 8 52 11 2570.9 -38.73 103.52  
 60.00 8 16 31 3507.45 -40.17 129.97 256.99 93.56 9 14 58 2507.4 -34.37 100.49  
 70.00 8 50 51 3406.40 -34.15 122.05 257.25 90.42 9 47 37 2406.4 -30.41 93.96  
 80.00 9 42 22 3244.96 -29.81 109.75 257.20 88.31 10 36 27 2245.0 -27.48 82.57  
 90.00 10 56 19 3006.29 -28.18 92.14 257.13 87.54 11 46 25 2006.3 -26.36 65.28  
 100.00 12 25 14 2719.43 -29.81 71.12 257.20 88.31 13 10 34 1719.4 -27.48 43.94  
 110.00 13 50 17 2453.21 -34.15 50.97 257.25 90.42 14 31 10 1453.2 -30.41 22.88

DIFFERENTIAL CORRECTIONS  
 TDE -.5320 TRA-1.4995 TC3 -.8090 BAU .5828 SGT 1823.8 SGR 1199.0 SG3 1277.7 ST 33.1 SR 30.1 SS 21.1  
 RDE -.6406 RRA -.1484 RC3 -.8408 FAU .47823 RRT .6968 RRF .8215 RTF .8085 CRT .7993 CRS .1048 CST -.4992  
 FDE .3662 FRA-6.1279 FC-11.0813 BSP 2949 SGB 2182.6 R23 .1868 R13 .8651 LSA 42.9 MSA 24.5 SSA 2.6  
 BDE .8327 BRA 1.5068 BC3 1.1668 FSP 2179 SG1 2043.2 SG2 767.7 THA 29.11 EL1 42.5 EL2 14.1 ALF 41.64

LAUNCH DATE SEP 9 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.804 GAL 8.50 AZL 88.28 HCA 118.77 SMA 193.58 ECC .26440 INC 1.7415 V1 29.572  
 RP 240.18 LAP 1.53 LOP 104.95 VP 20.483 GAP 6.47 AZP 90.84 TAL 42.48 TAP 161.25 RCA 142.40 APO 244.76 V2 22.866  
 RC 230.502 GL 9.31 GP -14.86 ZAL 29.74 ZAP 102.35 ETS 185.12 ZAE 136.96 ETE 199.87 ZAC 71.75 ETC 284.54 LVI -6.14

DISTANCE 403.849  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.181 VHL 6.098 DLA 14.30 RAL 9.69 RAD 6649.7 VEL 12.533 PTH 7.41 VHP 2.608 DPA -3.70 RAP 31.71 ECC 1.6119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 51 48 3574.60 -47.14 135.09 256.20 97.38 8 51 22 2574.6 -38.86 103.79  
 60.00 8 15 21 3511.92 -40.19 130.35 257.10 93.30 9 13 53 2511.9 -34.49 100.81  
 70.00 8 49 19 3411.92 -34.15 122.48 257.33 90.17 9 46 11 2411.9 -30.52 94.36  
 80.00 9 40 29 3251.81 -29.80 110.24 257.25 88.05 10 34 41 2251.6 -27.57 83.04  
 90.00 10 54 16 3013.48 -28.16 92.67 257.17 87.28 11 44 29 2013.5 -26.45 65.79  
 100.00 12 23 21 2728.00 -29.80 71.61 257.25 88.05 13 8 47 1726.1 -27.57 44.41  
 110.00 13 48 48 2458.74 -34.15 51.40 257.33 90.17 14 29 44 1458.7 -30.52 23.27

DIFFERENTIAL CORRECTIONS  
 TDE -.5364 TRA-1.5480 TC3 -.8667 BAU .6163 SGT 1917.4 SGR 1222.5 SG3 1300.8 ST 33.8 SR 29.8 SS 21.4  
 RDE -.6319 RRA -.1630 RC3 -.8666 FAU .48557 RRT .7164 RRF .8312 RTF .8335 CRT .7969 CRS .1131 CST -.4958  
 FDE .4066 FRA-6.2221 FC-11.3061 BSP 3147 SGB 2274.0 R23 .1830 R13 .8742 LSA 43.2 MSA 24.8 SSA 2.6  
 BDE .8289 BRA 1.5566 BC3 1.2398 FSP 2199 SG1 2142.0 SG2 763.4 THA 28.50 EL1 42.8 EL2 14.2 ALF 40.49

LAUNCH DATE SEP 9 1973

FLIGHT TIME 188.00

ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.804 GAL 8.46 AZL 88.22 HCA 119.71 SMA 193.58 ECC .26404 INC 1.7770 V1 29.572  
 RP 240.48 LAP 1.54 LOP 105.89 VP 20.449 GAP 6.21 AZP 90.88 TAL 42.32 TAP 162.03 RCA 142.47 APO 244.69 V2 22.838  
 RC 233.403 GL 9.52 GP -15.09 ZAL 29.92 ZAP 100.82 ETS 184.73 ZAE 135.26 ETE 199.04 ZAC 71.87 ETC 284.58 LVI -6.04

DISTANCE 407.657  
 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.003 VHL 6.083 DLA 14.54 RAL 9.72 RAD 6649.6 VEL 12.526 PTH 7.41 VHP 2.590 DPA -4.14 RAP 31.23 ECC 1.6090  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 50 55 3578.42 -47.17 135.46 256.36 97.10 8 50 33 2578.4 -38.99 104.06  
 60.00 8 14 9 3516.96 -40.21 130.74 257.21 93.03 9 12 46 2516.6 -34.61 101.15  
 70.00 8 47 46 3417.66 -34.15 122.93 257.41 89.90 9 44 43 2417.7 -30.62 94.77  
 80.00 9 38 33 3258.50 -29.78 110.75 257.30 87.78 10 32 52 2258.5 -27.67 83.53  
 90.00 10 52 9 3020.94 -28.13 93.21 257.22 87.00 11 42 30 2020.9 -26.54 66.32  
 100.00 12 21 25 2732.97 -29.78 72.12 257.30 87.78 13 6 58 1733.0 -27.67 44.90  
 110.00 13 47 12 2464.47 -34.15 51.85 257.41 89.90 14 28 16 1464.5 -30.62 23.68

DIFFERENTIAL CORRECTIONS  
 TDE -.5388 TRA-1.5959 TC3 -.9644 BAU .6504 SGT 2011.4 SGR 1248.3 SG3 1324.9 ST 34.5 SR 29.6 SS 21.7  
 RDE -.6243 RRA -.1789 RC3 -.8937 FAU .49319 RRT .7346 RRF .8410 RTF .8374 CRT .7942 CRS .1107 CST -.5021  
 FDE .4277 FRA-6.3268 FC-11.5389 BSP 3354 SGB 2367.2 R23 .1791 R13 .8831 LSA 43.6 MSA 25.0 SSA 2.6  
 BDE .8247 BRA 1.6059 BC3 1.3148 FSP 2193 SG1 2242.0 SG2 759.9 THA 28.00 EL1 43.1 EL2 14.4 ALF 39.49

LAUNCH DATE SEP 9 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 18 1974

DISTANCE 411.484 EARTH TO MARS

Heliocentric Conic: RL 190.67 LAL -.00 LOL 346.17 VL 32.804 GAL 8.42 AZL 88.19 MCA 120.64 SMA 193.89 ECC .26370 INC 1.0131 V1 29.878  
 RP 240.78 LAP 1.36 LOP 106.93 VP 20.416 GAP 5.95 AZP 90.92 TAL 42.15 TAP 162.79 RCA 142.54 APO 244.64 V2 22.807  
 RC 236.297 GL 9.74 GP -18.31 ZAL 30.11 ZAP 99.31 ETS 184.35 ZAE 133.89 ETE 198.25 ZAC 71.58 ETC 284.63 LVI -5.93

Planetrocentric Conic: C3 36.824 VHL 6.068 DLA 14.80 RAL 9.73 RAD 6649.5 VEL 12.518 PTH 7.40 VHP 2.375 DPA -4.38 RAP 30.76 ECC 1.6080  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 50 2 3582.39 -47.20 135.84 256.93 98.81 8 49 44 2582.4 -39.12 104.34  
 60.00 8 12 57 3521.39 -40.22 131.15 257.34 92.75 9 11 38 2521.4 -34.73 101.50  
 70.00 8 46 10 3423.82 -34.15 123.39 257.50 89.63 9 43 13 2423.6 -30.74 99.20  
 80.00 9 36 34 3265.68 -29.76 111.29 257.37 87.50 10 31 0 2265.7 -27.77 84.04  
 90.00 10 49 59 3028.71 -28.10 93.78 257.27 86.72 11 40 28 2028.7 -26.63 66.87  
 100.00 12 19 26 2740.15 -29.76 72.66 257.37 87.50 13 5 6 1740.2 -27.77 45.41  
 110.00 13 45 36 2470.44 -34.15 52.31 257.50 89.63 14 26 47 1470.4 -30.74 24.11

Differential Corrections: TDE -.5484 TRA-1.6327 TC3-1.0529 BAU .6862 SGT 2122.8 SGR 1262.2 SG3 1333.5 ST 35.5 SR 28.9 SB 21.8  
 RDE -.6093 RRA -.1878 RC3 -.8133 FAU .49548 RRT .7503 RRF .8470 RTF .8471 CRT .7928 CR8 .1626 CST -.4589 CRT 7.928 CR8 .1626 CST -.4589  
 FDE .5550 FRA-6.3198 FC-11.6485 B8P 3536 SGB 2489.7 R23 .1789 R13 .8878 LBA 43.9 M8A 25.4 S8A 2.6  
 BDE .8198 BRA 1.6634 BC3 1.3938 F8P 2296 SG1 2352.1 S62 753.1 THA 27.04 EL1 43.5 EL2 14.4 ALF 37.73

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973 FLIGHT TIME 192.00 ARRIVAL DATE MAR 20 1974

DISTANCE 415.271 EARTH TO MARS

Heliocentric Conic: RL 190.67 LAL -.00 LOL 346.17 VL 32.805 GAL 8.38 AZL 88.15 MCA 121.58 SMA 193.61 ECC .26339 INC 1.0498 V1 29.572  
 RP 241.07 LAP 1.58 LOP 107.78 VP 20.385 GAP 5.70 AZP 90.97 TAL 41.97 TAP 163.55 RCA 142.61 APO 244.60 V2 22.777  
 RC 239.179 GL 9.97 GP -15.54 ZAL 30.30 ZAP 97.81 ETS 183.95 ZAE 131.91 ETE 197.50 ZAC 71.50 ETC 284.67 LVI -5.83

Planetrocentric Conic: C3 36.848 VHL 6.054 DLA 15.06 RAL 9.78 RAD 6649.5 VEL 12.512 PTH 7.40 VHP 2.561 DPA -5.01 RAP 30.30 ECC 1.6031  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 49 8 3586.50 -47.24 136.23 256.71 96.51 8 48 54 2586.5 -39.26 104.64  
 60.00 8 11 42 3526.39 -40.24 131.55 257.47 92.47 9 10 29 2526.4 -34.86 101.86  
 70.00 8 44 32 3429.79 -34.15 123.87 257.59 89.34 9 41 41 2429.8 -30.85 95.64  
 80.00 9 34 32 3273.11 -29.74 111.84 257.44 87.22 10 29 5 2273.1 -27.87 84.57  
 90.00 10 47 45 3036.76 -28.07 94.36 257.33 86.43 11 38 22 2036.8 -26.73 67.44  
 100.00 12 17 23 2747.58 -29.74 73.21 257.44 87.22 13 3 11 1747.6 -27.87 45.94  
 110.00 13 43 58 2476.61 -34.15 52.79 257.59 89.34 14 25 14 1476.6 -30.85 24.56

Differential Corrections: TDE -.5526 TRA-1.7051 TC3-1.1378 BAU .7222 SGT 2227.7 SGR 1283.5 SG3 1349.3 ST 36.3 SR 28.5 SB 22.2  
 RDE -.5963 RRA -.2008 RC3 -.9373 FAU .50010 RRT .7652 RRF .8546 RTF .8572 CRT .7905 CR8 .1800 CST -.4463 CRT 7.905 CR8 .1800 CST -.4463  
 FDE .6183 FRA-6.3678 FC-11.8138 B8P 3738 SGB 2571.0 R23 .1770 R13 .8937 LBA 44.2 M8A 25.7 S8A 2.6  
 BDE .8144 BRA 1.7168 BC3 1.4739 F8P 2323 SG1 2459.7 S62 748.3 THA 26.43 EL1 43.6 EL2 14.5 ALF 36.45

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973 FLIGHT TIME 194.00 ARRIVAL DATE MAR 22 1974

DISTANCE 419.077 EARTH TO MARS

Heliocentric Conic: RL 190.67 LAL -.00 LOL 346.17 VL 32.806 GAL 8.34 AZL 88.11 MCA 122.51 SMA 193.63 ECC .26310 INC 1.0872 V1 29.572  
 RP 241.36 LAP 1.59 LOP 108.70 VP 20.355 GAP 5.45 AZP 91.01 TAL 41.78 TAP 164.29 RCA 142.69 APO 244.58 V2 22.749  
 RC 242.049 GL 10.20 GP -15.76 ZAL 30.50 ZAP 96.33 ETS 183.56 ZAE 130.24 ETE 196.77 ZAC 71.41 ETC 284.70 LVI -5.72

Planetrocentric Conic: C3 36.475 VHL 6.039 DLA 15.32 RAL 9.82 RAD 6649.4 VEL 12.505 PTH 7.39 VHP 2.549 DPA -5.44 RAP 29.86 ECC 1.6003  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 12 3590.77 -47.27 136.64 256.91 96.20 8 48 3 2590.8 -39.40 104.95  
 60.00 8 10 27 3531.57 -40.25 132.02 257.62 92.17 9 9 18 2531.6 -34.99 102.24  
 70.00 8 42 51 3436.19 -34.14 124.37 257.70 89.05 9 40 7 2436.2 -30.96 96.10  
 80.00 9 32 26 3280.82 -29.71 112.41 257.52 86.92 10 27 6 2280.8 -27.97 85.12  
 90.00 10 45 27 3043.11 -28.04 94.97 257.40 86.13 11 36 12 2045.1 -26.82 68.03  
 100.00 12 15 18 2755.30 -29.71 73.78 257.52 86.92 13 1 13 1755.3 -27.97 48.49  
 110.00 13 42 17 2483.01 -34.14 53.29 257.70 89.05 14 23 40 1483.0 -30.96 25.02

Differential Corrections: TDE -.5561 TRA-1.7579 TC3-1.2238 BAU .7587 SGT 2355.1 SGR 1304.5 SG3 1363.2 ST 37.1 SR 28.1 SB 22.5  
 RDE -.5667 RRA -.2133 RC3 -.9611 FAU .50403 RRT .7789 RRF .8618 RTF .8601 CRT .7882 CR8 .1982 CST -.4333 CRT 7.882 CR8 .1982 CST -.4333  
 FDE .6849 FRA-6.4047 FC-11.9637 B8P 3948 SGB 2674.8 R23 .1795 R13 .8991 LBA 44.6 M8A 26.0 S8A 2.6  
 BDE .8064 BRA 1.7709 BC3 1.5359 F8P 2350 SG1 2569.4 S62 743.5 THA 25.84 EL1 44.2 EL2 14.5 ALF 35.16

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973 FLIGHT TIME 196.00 ARRIVAL DATE MAR 24 1974

DISTANCE 422.884 EARTH TO MARS

Heliocentric Conic: RL 190.67 LAL -.00 LOL 346.17 VL 32.808 GAL 8.30 AZL 88.07 MCA 123.44 SMA 193.67 ECC .26282 INC 1.9253 V1 29.878  
 RP 241.64 LAP 1.81 LOP 109.63 VP 20.327 GAP 5.20 AZP 91.06 TAL 41.59 TAP 165.03 RCA 142.77 APO 244.57 V2 22.720  
 RC 244.907 GL 10.43 GP -15.98 ZAL 30.72 ZAP 94.88 ETS 183.16 ZAE 128.58 ETE 196.06 ZAC 71.32 ETC 284.74 LVI -5.80

Planetrocentric Conic: C3 36.303 VHL 6.028 DLA 15.60 RAL 9.86 RAD 6649.4 VEL 12.498 PTH 7.38 VHP 2.539 DPA -5.86 RAP 29.43 ECC 1.5978  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 16 3598.19 -47.30 137.06 257.11 95.88 8 47 11 2595.2 -39.55 105.27  
 60.00 8 9 9 3536.93 -40.27 132.47 257.77 91.86 9 8 6 2536.9 -35.12 102.84  
 70.00 8 41 7 3442.82 -34.13 124.89 257.81 88.74 9 38 30 2442.8 -31.08 96.59  
 80.00 9 30 16 3288.82 -29.68 113.00 257.60 86.61 10 25 5 2288.8 -28.07 85.69  
 90.00 10 43 5 3053.79 -27.99 95.60 257.47 85.81 11 33 59 2053.8 -26.91 68.65  
 100.00 12 13 8 2763.30 -29.68 74.37 257.60 86.61 12 59 11 1763.3 -28.07 47.06  
 110.00 13 40 34 2489.64 -34.13 53.81 257.81 88.74 14 22 3 1489.6 -31.08 25.50

Differential Corrections: TDE -.5589 TRA-1.8113 TC3-1.3108 BAU .7957 SGT 2444.5 SGR 1325.5 SG3 1375.7 ST 37.8 SR 27.6 SB 22.8  
 RDE -.5748 RRA -.2261 RC3 -.9848 FAU .50746 RRT .7914 RRF .8687 RTF .8739 CRT .7858 CR8 .2155 CST -.4280 CRT 7.858 CR8 .2155 CST -.4280  
 FDE .7519 FRA-6.4339 FC-12.1016 B8P 4161 SGB 2780.7 R23 .1744 R13 .9040 LBA 44.9 M8A 26.3 S8A 2.6  
 BDE .8018 BRA 1.8254 BC3 1.6395 F8P 2372 SG1 2680.8 S62 738.9 THA 25.28 EL1 44.5 EL2 14.5 ALF 33.90

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY



LAUNCH DATE SEP 9 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 3 1974

Heliocentric Conic: RL 150.87 LAL -.00 LOL 346.17 VL 32.822 GAL 8.08 AZL 87.87 HCA 128.05 SMA 193.93 ECC .26175 INC 2.1274 V1 29.872 RP 242.99 LAP 1.88 LOP 114.24 VP 20.199 GAP 3.99 AZP 91.31 TAL 40.53 TAP 168.59 RCA 143.17 APO 244.69 V2 22.586 RC 250.972 GL 11.89 GP -17.07 ZAL 31.89 ZAP 87.94 ETS 181.09 ZAE 120.52 ETE 192.94 ZAC 70.82 ETC 264.89 LVI -4.96

Distance 441.905 Earth to Mars

Planetocentric Conic: C3 35.475 VHL 5.956 DLA 17.07 RAL 10.11 RAD 6649.1 VEL 12.465 PTH 7.36 VHP 2.512 DPA -7.85 RAP 27.54 ECC 1.5638

Differential Corrections: TDE -.5619 TRA-2.0837 TC3-1.7651 BAU .9887 RDE -.5105 RRA -.2876 RC3-1.1012 FAU .51568 FDE 1.0916 FRA-6.4593 FC-12.5847 BSP 5250 BDE .7592 BRA 2.1035 BC3 2.0804 FSP 2415

Mid-Course Execution Accuracy: SGT 3018.2 SGR 1430.2 SG3 1414.7 RRT .8410 RRF .8980 RTF .9021 SGB 3340.0 R23 .1732 R13 .9220 SG1 3262.3 SG2 716.0 THA 22.89

Orbit Determination Accuracy: ST 41.6 SR 25.0 SS 24.5 CRT .7752 CR8 .2907 CST -.3657 LSA 46.8 MSA 27.5 S8A 2.5 EL1 46.4 EL2 14.2 ALF 27.80

LAUNCH DATE SEP 9 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 5 1974

Heliocentric Conic: RL 150.87 LAL -.00 LOL 346.17 VL 32.826 GAL 8.03 AZL 87.83 HCA 128.97 SMA 194.00 ECC .26158 INC 2.1706 V1 29.572 RP 243.24 LAP 1.69 LOP 115.16 VP 20.177 GAP 3.75 AZP 91.37 TAL 40.31 TAP 169.27 RCA 143.26 APO 244.75 V2 22.560 RC 261.736 GL 11.96 GP -17.29 ZAL 32.14 ZAP 86.63 ETS 180.67 ZAE 118.96 ETE 192.37 ZAC 70.71 ETC 264.92 LVI -4.81

Distance 445.706 Earth to Mars

Planetocentric Conic: C3 35.316 VHL 5.943 DLA 17.39 RAL 10.17 RAD 6649.0 VEL 12.459 PTH 7.36 VHP 2.510 DPA -8.22 RAP 27.22 ECC 1.5812

Differential Corrections: TDE -.5600 TRA-2.1391 TC3-1.8589 BAU 1.0252 RDE -.4949 RRA -.2981 RC3-1.1222 FAU .51467 FDE 1.1620 FRA-6.4218 FC-12.6167 BSP 5479 BDE .7474 BRA 2.1598 BC3 2.1713 FSP 2434

Mid-Course Execution Accuracy: SGT 3137.4 SGR 1448.2 SG3 1415.1 RRT .8485 RRF .9027 RTF .9056 SGB 3455.5 R23 .1744 R13 .9242 SG1 3381.6 SG2 711.1 THA 22.43

Orbit Determination Accuracy: ST 42.3 SR 24.4 SS 24.0 CRT .7732 CR8 .3122 CST -.3475 LSA 47.2 MSA 27.8 S8A 2.5 EL1 46.8 EL2 14.0 ALF 26.55

LAUNCH DATE SEP 9 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 7 1974

Heliocentric Conic: RL 150.87 LAL -.00 LOL 346.17 VL 32.830 GAL 7.98 AZL 87.79 HCA 129.88 SMA 194.08 ECC .26143 INC 2.2140 V1 29.572 RP 243.50 LAP 1.70 LOP 116.08 VP 20.156 GAP 3.51 AZP 91.42 TAL 40.07 TAP 169.93 RCA 143.34 APO 244.82 V2 22.535 RC 264.483 GL 12.23 GP -17.51 ZAL 32.41 ZAP 85.34 ETS 180.25 ZAE 117.42 ETE 191.81 ZAC 70.59 ETC 264.94 LVI -4.66

Distance 449.507 Earth to Mars

Planetocentric Conic: C3 35.159 VHL 5.930 DLA 17.72 RAL 10.23 RAD 6648.9 VEL 12.452 PTH 7.35 VHP 2.511 DPA -8.59 RAP 26.93 ECC 1.5786

Differential Corrections: TDE -.5572 TRA-2.1942 TC3-1.9532 BAU 1.0841 RDE -.4802 RRA -.3095 RC3-1.1444 FAU .51383 FDE 1.2568 FRA-6.3911 FC-12.6521 BSP 5706 BDE .7355 BRA 2.2199 BC3 2.2638 FSP 2436

Mid-Course Execution Accuracy: SGT 3257.2 SGR 1468.2 SG3 1416.1 RRT .8557 RRF .9074 RTF .9091 SGB 3572.8 R23 .1754 R13 .9264 SG1 3502.3 SG2 706.6 THA 22.04

Orbit Determination Accuracy: ST 43.0 SR 23.8 SS 23.3 CRT .7716 CR8 .3259 CST -.3382 LSA 47.6 MSA 28.1 S8A 2.5 EL1 47.2 EL2 13.8 ALF 25.40

LAUNCH DATE SEP 9 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 9 1974

Heliocentric Conic: RL 150.87 LAL -.00 LOL 346.17 VL 32.835 GAL 7.94 AZL 87.74 HCA 130.80 SMA 194.16 ECC .26129 INC 2.2801 V1 29.572 RP 243.74 LAP 1.71 LOP 116.99 VP 20.136 GAP 3.28 AZP 91.48 TAL 39.83 TAP 170.63 RCA 143.43 APO 244.89 V2 22.511 RC 267.212 GL 12.82 GP -17.73 ZAL 32.68 ZAP 84.08 ETS 179.82 ZAE 115.90 ETE 191.27 ZAC 70.46 ETC 264.97 LVI -4.50

Distance 453.307 Earth to Mars

Planetocentric Conic: C3 35.005 VHL 5.917 DLA 18.05 RAL 10.29 RAD 6648.9 VEL 12.446 PTH 7.35 VHP 2.512 DPA -8.95 RAP 26.65 ECC 1.5761

Differential Corrections: TDE -.5534 TRA-2.2492 TC3-2.0481 BAU 1.1030 RDE -.4649 RRA -.3207 RC3-1.1664 FAU .51242 FDE 1.3331 FRA-6.3506 FC-12.6730 BSP 5934 BDE .7228 BRA 2.2719 BC3 2.3569 FSP 2434

Mid-Course Execution Accuracy: SGT 3377.7 SGR 1488.0 SG3 1415.4 RRT .8624 RRF .9118 RTF .9121 SGB 3690.9 R23 .1768 R13 .9284 SG1 3623.5 SG2 702.2 THA 21.66

Orbit Determination Accuracy: ST 43.7 SR 23.1 SS 25.8 CRT .7703 CR8 .3392 CST -.3249 LSA 48.0 MSA 28.3 S8A 2.4 EL1 47.6 EL2 13.6 ALF 24.26

LAUNCH DATE SEP 9 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.839 GAL 7.89 AZL 87.69 HCA 131.71 SMA 194.25 ECC .26117 INC 2.3065 V1 29.572  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.116 GAP 3.05 AZP 91.54 TAL 39.59 TAP 171.30 RCA 143.51 APO 244.98 V2 22.487  
 RC 269.924 GL 12.81 GP -17.96 ZAL 32.96 ZAP 82.85 ETS 179.38 ZAE 114.40 ETE 190.74 ZAC 70.33 ETC 284.99 LVI -4.34

PLANETOCENTRIC CONIC  
 C3 34.854 VHL 5.904 DLA 18.40 RAL 10.35 RAD 6648.8 VEL 12.440 PTH 7.34 VHP 2.515 DPA -9.31 RAP 26.40 ECC 1.5736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 34 3642.98 -47.53 141.66 259.48 92.34 8 38 17 2643.0 -41.06 108.65  
 60.00 7 55 38 3594.89 -40.28 137.40 259.55 88.51 8 55 33 2594.9 -36.46 106.97  
 70.00 8 22 52 3514.71 -33.88 130.49 259.13 85.44 9 21 26 2514.7 -32.22 101.88  
 80.00 9 7 1 3376.34 -29.15 119.45 258.98 83.26 10 3 17 2376.3 -29.00 92.03  
 90.00 10 17 21 3149.25 -27.33 102.50 258.32 82.42 11 9 51 2149.2 -27.75 75.50  
 100.00 11 49 52 2850.81 -29.15 80.82 258.58 83.26 12 37 23 1850.8 -29.00 53.40  
 110.00 13 22 18 2561.53 -33.88 59.41 259.13 85.44 14 5 0 1561.5 -32.22 30.79

DIFFERENTIAL CORRECTIONS  
 TDE -.5489 TRA-2.3042 TC3-2.1433 BAU 1.1419  
 RDE -.4491 RRA -.3318 RC3-1.1881 FAU .51045  
 FDE 1.4109 FRA-6.3044 FC-12.6790 BSP 6162  
 BDE .7089 BRA 2.3280 BC3 2.4508 FSP 2430

MID-COURSE EXECUTION ACCURACY  
 SGT 3498.9 SGR 1507.6 SG3 1413.3  
 RRT .8686 RRF .9161 RTF .9147  
 SGB 3809.9 R23 .1784 R13 .9301  
 SG1 3745.4 SG2 697.9 THA 21.29

ORBIT DETERMINATION ACCURACY  
 ST 44.4 SR 22.5 SS 26.2  
 CRT .7693 CR8 .3513 CST -.3140  
 LSA 48.4 MSA 28.8 SSA 2.4  
 EL1 48.0 EL2 13.3 ALF 23.15

LAUNCH DATE SEP 9 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.844 GAL 7.84 AZL 87.65 HCA 132.62 SMA 194.34 ECC .26106 INC 2.3542 V1 29.572  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.098 GAP 2.82 AZP 91.59 TAL 39.34 TAP 171.96 RCA 143.60 APO 245.07 V2 22.464  
 RC 272.618 GL 13.11 GP -18.18 ZAL 33.25 ZAP 81.65 ETS 178.94 ZAE 112.93 ETE 190.22 ZAC 70.19 ETC 285.01 LVI -4.17

PLANETOCENTRIC CONIC  
 C3 34.706 VHL 5.891 DLA 18.75 RAL 10.41 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 2.518 DPA -9.66 RAP 26.17 ECC 1.5712  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 18 3649.32 -47.53 142.27 259.80 91.87 8 37 7 2649.3 -41.25 109.34  
 60.00 7 53 51 3602.58 -40.26 138.06 259.79 88.07 8 53 54 2602.6 -36.63 107.56  
 70.00 8 20 26 3524.31 -33.83 131.23 259.31 85.00 9 19 10 2524.3 -32.35 102.59  
 80.00 9 3 52 3388.16 -29.06 120.32 258.71 82.81 10 0 20 2388.2 -29.10 92.89  
 90.00 10 13 51 3162.24 -27.21 103.44 258.43 81.97 11 6 34 2162.2 -27.83 76.45  
 100.00 11 46 44 2862.63 -29.06 81.68 258.71 82.81 12 34 27 1862.6 -29.10 54.26  
 110.00 13 19 52 2571.13 -33.83 60.15 259.31 85.00 14 2 43 1571.1 -32.35 31.51

DIFFERENTIAL CORRECTIONS  
 TDE -.5429 TRA-2.3592 TC3-2.2391 BAU 1.1809  
 RDE -.4331 RRA -.3429 RC3-1.2099 FAU .50810  
 FDE 1.4861 FRA-6.2523 FC-12.6745 BSP 6390  
 BDE .6945 BRA 2.3840 BC3 2.5451 FSP 2423

MID-COURSE EXECUTION ACCURACY  
 SGT 3620.8 SGR 1527.6 SG3 1410.0  
 RRT .8744 RRF .9202 RTF .9171  
 SGB 3929.9 R23 .1803 R13 .9317  
 SG1 3868.1 SG2 693.8 THA 20.96

ORBIT DETERMINATION ACCURACY  
 ST 45.1 SR 21.8 SS 26.7  
 CRT .7688 CR8 .3612 CST -.3045  
 LSA 48.8 MSA 28.8 SSA 2.4  
 EL1 48.4 EL2 13.0 ALF 22.08

LAUNCH DATE SEP 9 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.849 GAL 7.79 AZL 87.60 HCA 133.52 SMA 194.43 ECC .26096 INC 2.4033 V1 29.572  
 RP 244.45 LAP 1.74 LOP 119.72 VP 20.081 GAP 2.59 AZP 91.66 TAL 39.09 TAP 172.61 RCA 143.69 APO 245.17 V2 22.441  
 RC 275.292 GL 13.42 GP -18.42 ZAL 33.55 ZAP 80.48 ETS 178.50 ZAE 111.47 ETE 189.71 ZAC 70.04 ETC 285.03 LVI -3.99

PLANETOCENTRIC CONIC  
 C3 34.581 VHL 5.879 DLA 19.12 RAL 10.47 RAD 6648.7 VEL 12.428 PTH 7.33 VHP 2.523 DPA -10.00 RAP 25.97 ECC 1.5688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 59 3655.89 -47.56 142.90 260.13 91.38 8 35 55 2655.9 -41.45 109.85  
 60.00 7 52 0 3610.97 -40.24 138.74 260.04 87.61 8 52 11 2610.6 -36.79 108.17  
 70.00 8 17 54 3534.30 -33.77 132.01 259.49 84.55 9 16 49 2534.3 -32.49 103.34  
 80.00 9 0 35 3400.50 -28.95 121.22 258.84 82.35 9 57 16 2400.5 -29.20 93.79  
 90.00 10 10 11 3175.84 -27.07 104.41 258.54 81.90 11 3 7 2175.8 -27.91 77.43  
 100.00 11 43 27 2874.97 -28.95 82.59 258.84 82.35 12 31 22 1875.0 -29.20 55.16  
 110.00 13 17 21 2581.12 -33.77 60.92 259.49 84.55 14 0 22 1581.1 -32.49 32.26

DIFFERENTIAL CORRECTIONS  
 TDE -.5354 TRA-2.4136 TC3-2.3349 BAU 1.2197  
 RDE -.4164 RRA -.3538 RC3-1.2315 FAU .50525  
 FDE 1.5647 FRA-6.1931 FC-12.6562 BSP 6622  
 BDE .6783 BRA 2.4394 BC3 2.6398 FSP 2415

MID-COURSE EXECUTION ACCURACY  
 SGT 3742.6 SGR 1547.4 SG3 1405.4  
 RRT .8798 RRF .9241 RTF .9193  
 SGB 4049.9 R23 .1824 R13 .9331  
 SG1 3990.8 SG2 689.7 THA 20.63

ORBIT DETERMINATION ACCURACY  
 ST 45.7 SR 21.1 SS 27.1  
 CRT .7686 CR8 .3704 CST -.2952  
 LSA 49.2 MSA 29.1 SSA 2.4  
 EL1 48.8 EL2 12.7 ALF 21.03

LAUNCH DATE SEP 9 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.884 GAL 7.74 AZL 87.55 HCA 134.43 SMA 194.53 ECC .26087 INC 2.4537 V1 29.572  
 RP 244.68 LAP 1.75 LOP 120.83 VP 20.084 GAP 2.37 AZP 91.72 TAL 38.63 TAP 173.26 RCA 143.78 APO 245.27 V2 22.418  
 RC 277.948 GL 13.74 GP -18.85 ZAL 33.85 ZAP 79.34 ETS 178.06 ZAE 110.04 ETE 189.21 ZAC 69.88 ETC 285.06 LVI -3.80

PLANETOCENTRIC CONIC  
 C3 34.420 VHL 5.867 DLA 19.49 RAL 10.53 RAD 6648.7 VEL 12.423 PTH 7.33 VHP 2.529 DPA -10.34 RAP 25.79 ECC 1.5665  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 36 3662.72 -47.57 143.56 260.48 90.87 8 34 39 2662.7 -41.65 110.38  
 60.00 7 50 4 3618.86 -40.22 139.44 260.30 87.13 8 50 23 2618.9 -36.96 108.81  
 70.00 8 15 16 3544.70 -33.70 132.81 259.67 84.08 9 14 20 2544.7 -32.62 104.12  
 80.00 8 57 9 3413.40 -28.83 122.16 258.97 81.87 9 54 2 2413.4 -29.30 94.74  
 90.00 10 6 19 3190.10 -26.93 105.43 258.65 81.01 10 59 29 2190.1 -27.99 78.47  
 100.00 11 40 1 2887.87 -28.83 83.52 258.97 81.87 12 28 8 1887.9 -29.30 56.11  
 110.00 13 14 42 2591.51 -33.70 61.73 259.67 84.08 13 57 54 1591.5 -32.62 33.04

DIFFERENTIAL CORRECTIONS  
 TDE -.5274 TRA-2.4681 TC3-2.4312 BAU 1.2586  
 RDE -.3995 RRA -.3650 RC3-1.2532 FAU .50200  
 FDE 1.6399 FRA-6.1311 FC-12.6265 BSP 6852  
 BDE .6616 BRA 2.4949 BC3 2.7352 FSP 2401

MID-COURSE EXECUTION ACCURACY  
 SGT 3865.3 SGR 1567.6 SG3 1399.6  
 RRT .8850 RRF .9279 RTF .9212  
 SGB 4171.1 R23 .1847 R13 .9343  
 SG1 4114.3 SG2 685.7 THA 20.33

ORBIT DETERMINATION ACCURACY  
 ST 46.4 SR 20.4 SS 27.6  
 CRT .7693 CR8 .3765 CST -.2876  
 LSA 49.6 MSA 29.4 SSA 2.3  
 EL1 49.2 EL2 12.3 ALF 20.03

LAUNCH DATE SEP 9 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.060 GAL 7.69 AZL 87.49 HCA 135.33 SMA 194.63 ECC .26079 INC 2.5056 V1 29.872
RP 244.90 LAP 1.76 LOP 121.53 VP 20.049 GAP 2.14 AZP 91.78 TAL 38.57 TAP 173.90 RCA 143.87 APO 245.39 V2 22.397
RC 280.584 GL 14.07 GP -18.89 ZAL 34.17 ZAP 78.22 ETS 177.61 ZAE 108.63 ETE 188.72 ZAC 69.71 ETC 285.08 LVI -3.60

DISTANCE 472.292

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.282 VHL 5.855 DLA 19.08 RAL 10.59 RAD 6648.6 VEL 12.417 PTH 7.32 VHP 2.536 DPA -10.87 RAP 25.63 ECC 1.9642
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 32 10 3669.81 -47.58 144.25 260.83 90.35 8 33 20 2669.8 -41.86 110.93
60.00 7 48 4 3627.49 -40.18 140.17 260.56 86.64 8 48 31 2627.5 -37.14 109.47
70.00 8 12 30 3555.53 -33.62 133.65 259.86 83.59 9 11 45 2555.5 -32.76 104.94
80.00 8 53 32 3426.91 -28.69 123.14 259.10 81.37 9 50 39 2426.9 -29.39 95.73
90.00 10 2 13 3205.06 -26.76 106.49 258.75 80.50 10 55 40 2205.1 -28.06 79.56
100.00 11 36 24 2901.38 -28.69 84.51 259.10 81.37 12 24 45 1901.4 -29.39 57.10
110.00 13 11 56 2602.35 -33.62 62.56 259.86 83.59 13 55 19 1602.4 -32.76 33.86

DIFFERENTIAL CORRECTIONS

TDE -.5182 TRA-2.5225 TC3-2.5277 BAU 1.2975
RDE -.3821 RRA -.3761 RC3-1.2749 FAU .49836
FDE 1.7163 FRA-6.0635 FC-12.5653 BSP 7078
BDE .6438 BRA 2.5504 BC3 2.8310 FSP 2386

MID-COURSE EXECUTION ACCURACY

SGT 3988.5 SGR 1586.0 SG3 1392.7
RRT .8898 RRF .9315 RTF .9229
SGB 4293.0 R23 .1872 R13 .9354
SG1 4238.5 SG2 681.9 THA 20.05

ORBIT DETERMINATION ACCURACY

ST 47.0 SR 19.7 SS 28.1
CRT .7708 CRS .3808 CST -.2808
LSA 50.1 MSA 29.7 S8A 2.3
EL1 49.6 EL2 11.9 ALF 19.05

LAUNCH DATE SEP 9 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.065 GAL 7.64 AZL 87.44 HCA 136.24 SMA 194.73 ECC .26072 INC 2.5591 V1 29.572
RP 245.11 LAP 1.77 LOP 122.44 VP 20.034 GAP 1.92 AZP 91.85 TAL 38.30 TAP 174.54 RCA 143.96 APO 245.51 V2 22.375
RC 283.198 GL 14.41 GP -19.14 ZAL 34.49 ZAP 77.13 ETS 177.15 ZAE 107.25 ETE 188.24 ZAC 69.53 ETC 285.10 LVI -3.39

DISTANCE 476.086

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.148 VHL 5.844 DLA 20.27 RAL 10.65 RAD 6648.6 VEL 12.412 PTH 7.32 VHP 2.544 DPA -11.00 RAP 25.49 ECC 1.5620
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 30 40 3677.18 -47.58 144.96 261.20 89.80 8 31 58 2677.2 -42.07 111.51
60.00 7 45 58 3636.47 -40.15 140.93 260.83 86.12 8 46 34 2636.5 -37.31 110.17
70.00 8 9 36 3566.84 -33.53 134.52 260.05 83.08 9 9 3 2566.8 -32.89 105.79
80.00 8 49 43 3441.07 -28.55 124.16 259.23 80.85 9 47 4 2441.1 -29.48 96.78
90.00 9 57 57 3220.80 -26.58 107.61 258.86 79.97 10 51 38 2220.8 -28.12 80.70
100.00 11 32 35 2915.54 -28.55 85.53 259.23 80.85 12 21 11 1915.5 -29.48 58.15
110.00 13 9 3 2613.66 -33.53 63.43 260.05 83.08 13 52 36 1613.7 -32.89 34.71

DIFFERENTIAL CORRECTIONS

TDE -.5072 TRA-2.5763 TC3-2.6237 BAU 1.3380
RDE -.3639 RRA -.3871 RC3-1.2962 FAU .49414
FDE 1.7946 FRA-5.9884 FC-12.5276 BSP 7314
BDE .6243 BRA 2.6032 BC3 2.9264 FSP 2372

MID-COURSE EXECUTION ACCURACY

SGT 4111.1 SGR 1608.1 SG3 1384.1
RRT .8943 RRF .9349 RTF .9243
SGB 4414.4 R23 .1900 R13 .9364
SG1 4362.0 SG2 678.2 THA 19.78

ORBIT DETERMINATION ACCURACY

ST 47.7 SR 19.0 SS 28.7
CRT .7730 CRS .3834 CST -.2742
LSA 50.5 MSA 30.0 S8A 2.3
EL1 50.0 EL2 11.5 ALF 18.10

LAUNCH DATE SEP 9 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.871 GAL 7.59 AZL 87.39 HCA 137.14 SMA 194.84 ECC .26066 INC 2.6143 V1 29.572
RP 245.32 LAP 1.78 LOP 123.34 VP 20.020 GAP 1.70 AZP 91.92 TAL 38.04 TAP 175.17 RCA 144.06 APO 245.63 V2 22.354
RC 285.791 GL 14.76 GP -19.39 ZAL 34.82 ZAP 76.08 ETS 176.69 ZAE 105.89 ETE 187.76 ZAC 69.33 ETC 285.13 LVI -3.17

DISTANCE 479.879

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 34.019 VHL 5.833 DLA 20.68 RAL 10.71 RAD 6648.5 VEL 12.407 PTH 7.32 VHP 2.553 DPA -11.33 RAP 25.39 ECC 1.5599
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 29 6 3684.85 -47.57 145.70 261.58 89.23 8 30 31 2684.8 -42.28 112.12
60.00 7 43 46 3645.81 -40.10 141.72 261.11 85.59 8 44 31 2645.8 -37.49 110.90
70.00 8 6 34 3578.65 -33.43 135.42 260.25 82.56 9 6 13 2578.6 -33.02 106.69
80.00 8 45 42 3455.93 -28.38 125.24 259.36 80.31 9 43 18 2455.9 -29.56 97.87
90.00 9 53 24 3237.38 -26.38 108.78 258.96 79.42 10 47 22 2237.4 -28.18 81.91
100.00 11 28 34 2930.41 -28.38 86.61 259.36 80.31 12 17 25 1930.4 -29.56 59.24
110.00 13 6 0 2625.47 -33.43 64.34 260.25 82.56 13 49 46 1625.5 -33.02 35.61

DIFFERENTIAL CORRECTIONS

TDE -.4933 TRA-2.6297 TC3-2.7199 BAU 1.3748
RDE -.3456 RRA -.3982 RC3-1.3180 FAU .48976
FDE 1.8698 FRA-5.9107 FC-12.4638 BSP 7545
BDE .6040 BRA 2.6597 BC3 3.0224 FSP 2353

MID-COURSE EXECUTION ACCURACY

SGT 4234.1 SGR 1629.1 SG3 1375.0
RRT .8985 RRF .9382 RTF .9256
SGB 4536.7 R23 .1931 R13 .9372
SG1 4486.2 SG2 674.8 THA 19.53

ORBIT DETERMINATION ACCURACY

ST 48.3 SR 18.2 SS 29.2
CRT .7764 CRS .3824 CST -.2696
LSA 50.9 MSA 30.3 S8A 2.2
EL1 50.4 EL2 11.0 ALF 17.20

LAUNCH DATE SEP 9 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.877 GAL 7.54 AZL 87.33 HCA 138.04 SMA 194.96 ECC .26061 INC 2.6713 V1 29.572
RP 245.53 LAP 1.79 LOP 124.24 VP 20.008 GAP 1.48 AZP 91.99 TAL 37.76 TAP 175.80 RCA 144.15 APO 245.76 V2 22.334
RC 288.361 GL 15.12 GP -19.65 ZAL 35.16 ZAP 75.05 ETS 176.22 ZAE 104.55 ETE 187.28 ZAC 69.13 ETC 285.15 LVI -2.94

DISTANCE 483.671

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 33.894 VHL 5.822 DLA 21.10 RAL 10.77 RAD 6648.5 VEL 12.402 PTH 7.31 VHP 2.562 DPA -11.65 RAP 25.30 ECC 1.9578
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 27 28 3692.82 -47.56 146.47 261.97 88.63 8 29 1 2692.8 -42.51 112.76
60.00 7 41 27 3655.55 -40.05 142.55 261.40 85.03 8 42 23 2655.6 -37.67 111.66
70.00 8 3 23 3590.99 -33.32 136.37 260.45 82.01 9 3 14 2591.0 -33.15 107.63
80.00 8 41 28 3471.57 -28.20 126.36 259.49 79.74 9 39 19 2471.6 -29.64 99.03
90.00 9 48 35 3254.90 -26.15 110.01 259.05 78.84 10 42 49 2254.9 -28.22 83.19
100.00 11 24 20 2946.05 -28.20 87.73 259.49 79.74 12 13 26 1946.0 -29.64 60.40
110.00 13 2 49 2637.81 -33.32 65.29 260.45 82.01 13 46 47 1637.8 -33.15 36.55

DIFFERENTIAL CORRECTIONS

TDE -.4820 TRA-2.6833 TC3-2.8162 BAU 1.4132
RDE -.3266 RRA -.4095 RC3-1.3398 FAU .48496
FDE 1.9457 FRA-5.8293 FC-12.3870 BSP 7773
BDE .5823 BRA 2.7144 BC3 3.1186 FSP 2333

MID-COURSE EXECUTION ACCURACY

SGT 4357.7 SGR 1650.3 SG3 1364.8
RRT .9025 RRF .9414 RTF .9268
SGB 4659.7 R23 .1963 R13 .9380
SG1 4611.0 SG2 671.6 THA 19.30

ORBIT DETERMINATION ACCURACY

ST 48.9 SR 17.5 SS 29.8
CRT .7813 CRS .3781 CST -.2660
LSA 51.4 MSA 30.6 S8A 2.2
EL1 50.8 EL2 10.5 ALF 16.33



LAUNCH DATE SEP 9 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC										DISTANCE 487.462										EARTH TO MARS																																													
RL	150.67	LAL	-.00	LOL	346.17	VL	32.883	GAL	7.49	AZL	87.27	HCA	138.93	SMA	195.07	ECC	.26057	INC	2.7302	V1	29.572	RP	245.73	LAP	1.79	LOP	125.14	VP	19.995	GAP	1.26	AZP	92.06	TAL	37.49	TAP	176.42	RCA	144.24	APO	245.90	V2	22.314	RC	290.907	GL	15.50	GP	-19.92	ZAL	35.51	ZAP	74.05	ETS	175.75	ZAE	103.23	ETE	186.82	ZAC	68.91	ETC	285.18	LVI	-2.70
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.775	VHL	5.812	DLA	21.53	RAL	10.82	RAD	6648.4	VEL	12.397	PTH	7.31	VHP	2.573	DPA	-11.97	RAP	25.24	ECC	1.5559	S1	4480.4	SGR	1671.6	SG3	1353.2	ST	49.5	SR	16.7	SS	30.4	CR1	.7878	CR8	.3702	CST	-.2636																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RTT	.9083	RRF	.9445	RTF	.9277	CR2	.7963	CR3	.3970	CST	-.2630	LSA	51.9	MSA	31.9	SSA	2.2																						
50.00	7	25	44	3701.13	-47.54	147.28	262.38	88.01	8	27	25	2701.1	-42.73	113.43	SG8	4782.1	R23	.1998	R13	.9386	EL1	51.3	EL2	9.9	ALF	15.50																																							
60.00	7	39	2	3665.71	-39.98	143.40	261.69	84.46	8	40	8	2665.7	-37.85	112.47	SG1	4735.1	SG2	668.6	THA	19.08																																													
70.00	8	0	1	3803.92	-33.19	137.36	260.64	81.44	9	0	5	2603.9	-33.28	108.62																																																			
80.00	8	36	58	3488.08	-27.99	127.54	259.61	79.16	9	35	6	2488.1	-29.71	100.25																																																			
90.00	9	43	26	3273.47	-23.90	111.31	259.14	78.24	10	37	59	2273.5	-28.26	84.55																																																			
100.00	11	19	50	2962.53	-27.99	88.91	259.61	79.16	12	9	12	1962.5	-29.71	61.62																																																			
110.00	12	59	27	2650.74	-33.19	66.27	260.64	81.44	13	43	38	1650.7	-33.28	37.53																																																			

LAUNCH DATE SEP 9 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC										DISTANCE 491.252										EARTH TO MARS																																													
RL	150.67	LAL	-.00	LOL	346.17	VL	32.889	GAL	7.43	AZL	87.21	HCA	139.83	SMA	195.19	ECC	.26054	INC	2.7912	V1	29.572	RP	245.93	LAP	1.80	LOP	126.04	VP	19.984	GAP	1.04	AZP	92.13	TAL	37.21	TAP	177.04	RCA	144.33	APO	246.04	V2	22.295	RC	293.430	GL	15.89	GP	-20.20	ZAL	35.87	ZAP	73.08	ETS	175.27	ZAE	101.94	ETE	186.35	ZAC	68.68	ETC	285.21	LVI	-2.45
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.661	VHL	5.802	DLA	21.98	RAL	10.87	RAD	6648.4	VEL	12.392	PTH	7.31	VHP	2.585	DPA	-12.29	RAP	25.21	ECC	1.5540	S1	4603.9	SGR	1694.1	SG3	1341.2	ST	50.1	SR	16.0	SS	31.0	CR1	.7963	CR8	.3970	CST	-.2630																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RTT	.9099	RRF	.9474	RTF	.9286	CR2	.7963	CR3	.3970	CST	-.2630	LSA	52.4	MSA	31.2	SSA	2.1																						
50.00	7	23	55	3709.80	-47.52	148.11	262.80	87.37	8	25	45	2709.8	-42.96	114.13	SG8	4905.7	R23	.2033	R13	.9392	EL1	51.7	EL2	9.3	ALF	14.72																																							
60.00	7	36	29	3676.32	-39.91	144.30	261.99	83.85	8	37	43	2676.3	-38.04	113.31																																																			
70.00	7	56	28	3617.47	-33.05	138.39	260.84	80.84	8	56	46	2617.5	-33.41	109.65																																																			
80.00	8	32	11	3505.48	-27.76	128.79	259.73	78.54	9	30	36	2505.5	-29.76	101.54																																																			
90.00	9	37	56	3293.19	-25.62	112.69	259.22	77.60	10	32	49	2293.2	-28.28	85.99																																																			
100.00	11	15	3	2979.95	-27.76	90.16	259.73	78.54	12	4	43	1979.9	-29.76	62.91																																																			
110.00	12	55	54	2664.29	-33.05	67.31	260.84	80.84	13	40	19	1664.3	-33.41	38.57																																																			

LAUNCH DATE SEP 9 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC										DISTANCE 495.041										EARTH TO MARS																																													
RL	150.67	LAL	-.00	LOL	346.17	VL	32.896	GAL	7.38	AZL	87.15	HCA	140.72	SMA	195.31	ECC	.26052	INC	2.8544	V1	29.572	RP	246.12	LAP	1.81	LOP	126.93	VP	19.974	GAP	.83	AZP	92.21	TAL	36.92	TAP	177.65	RCA	144.43	APO	246.19	V2	22.276	RC	295.928	GL	16.29	GP	-20.48	ZAL	36.23	ZAP	72.14	ETS	174.78	ZAE	100.67	ETE	185.89	ZAC	68.43	ETC	285.24	LVI	-2.10
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.553	VHL	5.793	DLA	22.43	RAL	10.92	RAD	6648.4	VEL	12.388	PTH	7.30	VHP	2.597	DPA	-12.61	RAP	25.20	ECC	1.5522	S1	4727.1	SGR	1716.9	SG3	1328.2	ST	50.7	SR	15.2	SS	31.7	CR1	.8071	CR8	.3385	CST	-.2636																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RTT	.9132	RRF	.9503	RTF	.9294	CR2	.8071	CR3	.3385	CST	-.2636	LSA	52.9	MSA	31.6	SSA	2.1																						
50.00	7	22	0	3718.83	-47.49	148.99	263.23	86.70	8	23	59	2718.8	-43.20	114.88	SG8	5029.3	R23	.2071	R13	.9396	EL1	52.2	EL2	8.7	ALF	13.99																																							
60.00	7	33	48	3687.40	-39.82	145.23	262.29	83.23	8	35	16	2687.4	-38.22	114.19																																																			
70.00	7	52	43	3631.69	-32.89	139.47	261.04	80.22	8	53	15	2631.7	-33.53	110.74																																																			
80.00	8	27	5	3523.93	-27.50	130.10	259.84	77.90	9	25	49	2523.9	-29.81	102.91																																																			
90.00	9	32	2	3314.23	-25.31	114.15	259.29	76.94	10	27	16	2314.2	-28.28	87.33																																																			
100.00	11	9	57	2998.40	-27.50	91.47	259.84	77.90	11	59	55	1998.4	-29.81	64.28																																																			
110.00	12	52	9	2678.51	-32.89	68.38	261.04	80.22	13	36	48	1678.5	-33.53	39.86																																																			

LAUNCH DATE SEP 9 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC										DISTANCE 498.829										EARTH TO MARS																																													
RL	150.67	LAL	-.00	LOL	346.17	VL	32.902	GAL	7.33	AZL	87.08	HCA	141.62	SMA	195.43	ECC	.26051	INC	2.9199	V1	29.572	RP	246.30	LAP	1.81	LOP	127.83	VP	19.984	GAP	.81	AZP	92.29	TAL	36.64	TAP	178.26	RCA	144.52	APO	246.34	V2	22.258	RC	298.401	GL	16.70	GP	-20.78	ZAL	36.61	ZAP	71.23	ETS	174.29	ZAE	99.42	ETE	185.43	ZAC	68.17	ETC	285.27	LVI	-1.91
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	33.452	VHL	5.784	DLA	22.91	RAL	10.98	RAD	6648.3	VEL	12.384	PTH	7.30	VHP	2.611	DPA	-12.93	RAP	25.22	ECC	1.5505	S1	4849.9	SGR	1740.2	SG3	1314.0	ST	51.3	SR	14.4	SS	32.3	CR1	.8204	CR8	.3138	CST	-.2654																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RTT	.9164	RRF	.9529	RTF	.9300	CR2	.8204	CR3	.3138	CST	-.2654	LSA	53.5	MSA	31.9	SSA	2.0																						
50.00	7	19	59	3728.26	-47.45	149.89	263.67	86.00	8	22	8	2728.3	-43.44	115.65	SG8	5152.7	R23	.2111	R13	.9400	EL1	52.7	EL2	8.0	ALF	13.30																																							
60.00	7	30	59	3698.99	-39.73	146.20	262.60	82.58	8	32	38	2699.0	-38.41	113.12																																																			
70.00	7	48	43	3646.66	-32.71	140.60	261.24	79.58	8	49	31	2646.7	-33.65	111.90																																																			
80.00	8	21	37	3543.54	-27.22	131.48	259.94	77.22	9	20	41	2543.5	-29.84	104.37																																																			
90.00	9	25	39	3336.77	-24.95	115.70	259.34	76.24	10	21	16	2336.8	-28.26	89.18																																																			
100.00	11	4	29	3018.01	-27.22	92.85	259.94	77.22	11	54	47	2018.0	-29.84	65.74																																																			
110.00	12	48	11	2693.48	-32.71	69.52	261.24	79.58	13	33	4	1693.5	-33.65	40.81																																																			

LAUNCH DATE SEP 9 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 9 1974

**HELIOCENTRIC CONIC**  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.909 GAL 7.27 AZL 87.01 HCA 142.51 SMA 109.59 ECC .28080 INC 2.9880 V1 29.572  
 RP 246.48 LAP 1.82 LOP 129.72 VP 19.956 GAP .40 AZP 92.37 TAL 36.35 TAP 178.86 RCA 144.61 APO 246.50 V2 22.241  
 RC 300.850 GL 17.13 GP -21.09 ZAL 37.00 ZAP 70.35 ETS 173.78 ZAE 98.20 ETE 184.98 ZAC 67.69 ETC 285.30 LVI -1.61

**PLANETOCENTRIC CONIC**  
 C3 33.358 VHL 5.776 DLA 23.40 RAL 11.00 RAD 6648.3 VEL 12.380 PTH 7.30 VHP 2.625 DPA -13.25 RAP 25.26 ECC 1.5490  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 52 3738.12 -47.40 150.84 264.12 85.27 8 20 10 2738.1 -43.68 116.48  
 60.00 7 27 59 3711.14 -39.61 147.21 262.92 81.90 8 29 50 2711.1 -38.59 116.10  
 70.00 7 44 31 3682.42 -32.51 141.78 261.43 78.90 8 45 34 2662.4 -33.76 113.11  
 80.00 8 15 45 3564.45 -26.89 132.95 260.02 76.51 9 15 10 2564.5 -29.86 105.92  
 90.00 9 18 45 3361.04 -24.55 117.36 259.37 75.50 10 14 46 2361.0 -28.21 90.95  
 100.00 10 58 37 3038.93 -26.89 94.32 260.02 76.51 11 49 16 2038.9 -29.86 67.29  
 110.00 12 43 58 2709.24 -32.51 70.70 261.43 78.90 13 29 7 1709.2 -33.76 42.03

**MID-COURSE EXECUTION ACCURACY**  
 SGT 4972.7 SGR 1764.4 SG3 1299.2  
 RRT .9194 RRF .9556 RTF .9305  
 SGB 5276.4 R23 .2153 R13 .9403  
 SGI 5235.1 SG2 659.1 THA 18.37

**ORBIT DETERMINATION ACCURACY**  
 ST 51.9 SR 13.7 SS 33.0  
 CRT .8367 CRS .2807 CST -.2692  
 LSA 54.1 MSA 32.3 S8A 2.0  
 EL1 53.2 EL2 7.3 ALF 12.67

LAUNCH DATE SEP 9 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 7 1974

**HELIOCENTRIC CONIC**  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.916 GAL 7.22 AZL 86.94 HCA 143.40 SMA 195.68 ECC .26050 INC 3.0588 V1 29.572  
 RP 246.65 LAP 1.82 LOP 129.61 VP 19.948 GAP .19 AZP 92.46 TAL 36.06 TAP 179.46 RCA 144.71 APO 246.66 V2 22.224  
 RC 303.274 GL 17.58 GP -21.41 ZAL 37.40 ZAP 69.50 ETS 173.27 ZAE 97.00 ETE 184.52 ZAC 67.60 ETC 285.33 LVI -1.31

**PLANETOCENTRIC CONIC**  
 C3 33.272 VHL 5.768 DLA 23.90 RAL 11.04 RAD 6648.3 VEL 12.377 PTH 7.29 VHP 2.640 DPA -13.57 RAP 25.33 ECC 1.5476  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 15 36 3748.44 -47.33 151.83 264.59 84.51 8 18 5 2748.4 -43.93 117.34  
 60.00 7 24 49 3723.88 -39.49 148.27 263.24 81.19 8 26 53 2723.9 -38.78 117.13  
 70.00 7 40 1 3679.07 -32.28 143.03 261.62 78.20 8 41 21 2679.1 -33.86 114.40  
 80.00 8 9 25 3586.85 -26.53 134.52 260.09 75.77 9 9 12 2586.9 -29.85 107.59  
 90.00 9 11 12 3387.35 -24.09 119.15 259.38 74.72 10 7 39 2387.4 -28.14 92.87  
 100.00 10 52 17 3061.32 -26.53 95.89 260.09 75.77 11 43 19 2061.3 -29.85 68.96  
 110.00 12 39 28 2725.89 -32.28 71.95 261.62 78.20 13 24 54 1725.9 -33.86 43.32

**MID-COURSE EXECUTION ACCURACY**  
 SGT 5095.2 SGR 1789.3 SG3 1283.5  
 RRT .9223 RRF .9580 RTF .9309  
 SGB 5400.3 R23 .2196 R13 .9406  
 SGI 5360.1 SG2 657.5 THA 18.23

**ORBIT DETERMINATION ACCURACY**  
 ST 52.5 SR 12.9 SS 33.7  
 CRT .8562 CRS .2382 CST -.2743  
 LSA 54.7 MSA 32.6 S8A 1.9  
 EL1 53.7 EL2 6.5 ALF 12.09

LAUNCH DATE SEP 9 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 9 1974

**HELIOCENTRIC CONIC**  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.922 GAL 7.16 AZL 86.87 HCA 144.29 SMA 195.81 ECC .26051 INC 3.1325 V1 29.572  
 RP 246.82 LAP 1.83 LOP 130.50 VP 19.940 GAP -.02 AZP 92.54 TAL 35.76 TAP 180.05 RCA 144.80 APO 246.82 V2 22.207  
 RC 305.673 GL 18.05 GP -21.75 ZAL 37.81 ZAP 68.68 ETS 172.75 ZAE 95.83 ETE 184.06 ZAC 67.28 ETC 285.37 LVI -.98

**PLANETOCENTRIC CONIC**  
 C3 33.195 VHL 5.762 DLA 24.42 RAL 11.07 RAD 6648.2 VEL 12.374 PTH 7.29 VHP 2.656 DPA -13.90 RAP 25.42 ECC 1.5463  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 13 12 3759.24 -47.26 152.87 265.07 83.72 8 15 52 2759.2 -44.19 118.26  
 60.00 7 21 27 3737.26 -39.34 149.38 263.96 80.45 8 23 45 2737.3 -38.96 118.22  
 70.00 7 35 13 3696.89 -32.03 144.34 261.80 77.46 8 36 50 2696.7 -33.95 115.77  
 80.00 8 2 33 3610.96 -26.11 136.19 260.14 74.98 9 2 44 2611.0 -29.82 109.38  
 90.00 9 2 53 3416.11 -23.56 121.09 259.36 73.88 9 59 49 2416.1 -28.02 94.97  
 100.00 10 45 25 3085.43 -26.11 97.56 260.14 74.98 11 36 50 2085.4 -29.82 70.75  
 110.00 12 34 40 2743.51 -32.03 73.26 261.80 77.46 13 20 23 1743.5 -33.95 44.88

**MID-COURSE EXECUTION ACCURACY**  
 SGT 5217.2 SGR 1815.3 SG3 1267.1  
 RRT .9249 RRF .9804 RTF .5112  
 SGB 5524.0 R23 .2241 R13 .9407  
 SGI 5484.9 SG2 656.4 THA 18.11

**ORBIT DETERMINATION ACCURACY**  
 ST 53.1 SR 12.2 SS 34.4  
 CRT .8784 CRS .1848 CST -.2812  
 LSA 55.4 MSA 33.0 S8A 1.9  
 EL1 54.2 EL2 5.7 ALF 11.57

LAUNCH DATE SEP 9 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 11 1974

**HELIOCENTRIC CONIC**  
 RL 150.67 LAL -.00 LOL 346.17 VL 32.929 GAL 7.11 AZL 86.78 HCA 145.18 SMA 195.94 ECC .26053 INC 3.2094 V1 29.572  
 RP 246.98 LAP 1.83 LOP 131.39 VP 19.934 GAP -.23 AZP 92.64 TAL 35.47 TAP 180.64 RCA 144.89 APO 246.99 V2 22.191  
 RC 308.046 GL 18.53 GP -22.10 ZAL 38.23 ZAP 67.89 ETS 172.21 ZAE 94.68 ETE 183.60 ZAC 66.95 ETC 285.41 LVI -.64

**PLANETOCENTRIC CONIC**  
 C3 33.127 VHL 5.756 DLA 24.96 RAL 11.09 RAD 6648.2 VEL 12.371 PTH 7.29 VHP 2.673 DPA -14.23 RAP 25.54 ECC 1.5452  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 10 40 3770.56 -47.17 153.95 265.56 82.89 8 13 31 2770.6 -44.44 119.23  
 60.00 7 17 53 3751.34 -39.18 150.54 263.88 79.68 8 20 24 2751.3 -39.14 119.38  
 70.00 7 30 5 3715.40 -31.75 145.72 261.97 76.69 8 32 0 2715.4 -34.03 117.23  
 80.00 7 55 2 3637.06 -25.64 137.98 260.16 74.15 8 55 39 2637.1 -29.75 111.32  
 90.00 8 53 37 3447.86 -22.94 123.22 259.29 72.99 9 51 5 2447.9 -27.85 97.27  
 100.00 10 37 54 3111.54 -25.64 99.35 260.16 74.15 11 29 46 2111.5 -29.75 72.68  
 110.00 12 29 31 2762.21 -31.75 74.64 261.97 76.69 13 15 33 1762.2 -34.03 46.14

**MID-COURSE EXECUTION ACCURACY**  
 SGT 5339.4 SGR 1842.2 SG3 1249.8  
 RRT .9275 RRF .9627 RTF .9315  
 SGB 5648.3 R23 .2287 R13 .9408  
 SGI 5610.1 SG2 655.5 THA 18.00

**ORBIT DETERMINATION ACCURACY**  
 ST 53.8 SR 11.6 SS 35.2  
 CRT .9032 CRS .1179 CST -.2897  
 LSA 56.1 MSA 33.3 S8A 1.8  
 EL1 54.8 EL2 4.9 ALF 11.12

LAUNCH DATE SEP 9 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.936 GAL 7.05 AZL 86.71 HCA 146.07 SMA 196.07 ECC .26055 INC 3.2896 V1 29.572
RP 247.14 LAP 1.84 LOP 132.28 VP 19.928 GAP -.43 AZP 92.73 TAL 35.16 TAP 181.23 RCA 144.99 APO 247.16 V2 22.176
RC 310.395 GL 19.04 GP -22.47 ZAL 39.67 ZAP 67.13 ETS 171.67 ZAE 93.55 ETE 183.14 ZAC 86.60 ETC 285.45 LVI -.28

PLANETOCENTRIC CONIC

C3 33.070 VHL 5.751 DLA 25.52 RAL 11.10 RAD 6648.2 VEL 12.369 PTH 7.29 VHP 2.691 DPA -14.57 RAP 25.49 ECC 1.5442
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 7 58 3782.48 -47.06 155.07 266.06 82.03 8 11 0 2782.5 -44.70 120.25
80.00 7 14 4 3766.18 -38.99 151.76 264.20 78.87 8 16 50 2766.2 -39.32 120.60
70.00 7 24 33 3735.30 -31.42 147.19 262.13 75.88 8 26 48 2735.3 -34.09 118.78
80.00 7 46 46 3665.55 -25.10 139.93 260.15 73.27 8 47 51 2665.6 -29.64 113.43
90.00 8 43 9 3483.44 -22.21 125.57 259.17 72.03 9 41 12 2483.4 -27.60 99.85
100.00 10 29 38 3140.02 -25.10 101.29 260.15 73.27 11 21 58 2140.0 -29.64 74.79
110.00 12 23 59 2782.12 -31.42 76.10 262.13 75.88 13 10 21 1782.1 -34.09 47.69

DIFFERENTIAL CORRECTIONS

TDE -.2924 TRA-3.1465 TC3-3.6551 BAU 1.7541
RDE -.1280 RRA -.5214 RC3-1.5436 FAU .42863
FDE 2.5971 FRA-4.9695 FC-11.2213 BSP 9853
BDE .3191 BRA 3.1894 BC3 3.9677 FSP 2079

MID-COURSE EXECUTION ACCURACY

SGT 3461.3 SGR 1870.7 SG3 1232.1
RRT .9299 RRF .9649 RTF .9317
SGB 5772.8 R23 .2333 R13 .9409
SG1 5735.5 SG2 655.1 THA 17.91

ORBIT DETERMINATION ACCURACY

ST 54.5 SR 11.1 SS 35.9
CRT .9290 CR8 .0366 CST -.3001
LSA 56.9 MSA 33.7 SSA 1.8
EL1 55.4 EL2 4.0 ALF 10.74

LAUNCH DATE SEP 9 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.943 GAL 7.00 AZL 86.63 HCA 146.95 SMA 196.21 ECC .26058 INC 3.3736 V1 29.572
RP 247.29 LAP 1.84 LOP 133.17 VP 19.924 GAP -.64 AZP 92.83 TAL 34.86 TAP 181.81 RCA 145.08 APO 247.34 V2 22.161
RC 312.717 GL 19.56 GP -22.85 ZAL 39.11 ZAP 66.40 ETS 171.11 ZAE 92.45 ETE 182.67 ZAC 66.22 ETC 285.49 LVI .11

PLANETOCENTRIC CONIC

C3 33.024 VHL 5.747 DLA 26.10 RAL 11.11 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 2.710 DPA -14.92 RAP 25.86 ECC 1.5435
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 5 4 3794.95 -46.94 156.26 266.57 81.13 8 8 19 2795.0 -44.97 121.34
80.00 7 10 0 3781.84 -38.77 153.03 264.52 78.03 8 13 1 2781.8 -39.49 121.89
70.00 7 18 34 3756.57 -31.06 148.74 262.27 75.03 8 21 11 2756.6 -34.13 120.44
80.00 7 37 33 3696.95 -24.46 142.04 260.09 72.33 8 39 10 2697.0 -29.48 115.74
90.00 8 31 2 3524.17 -21.33 128.23 258.96 70.98 9 29 47 2524.2 -27.26 102.78
100.00 10 20 25 3171.42 -24.46 103.41 260.09 72.33 11 13 17 2171.4 -29.48 77.11
110.00 12 18 0 2803.39 -31.06 77.65 262.27 75.03 13 4 44 1803.4 -34.13 49.35

DIFFERENTIAL CORRECTIONS

TDE -.2624 TRA-3.1963 TC3-3.7431 BAU 1.7918
RDE -.1018 RRA -.5357 RC3-1.5675 FAU .42111
FDE 2.6660 FRA-4.8640 FC-11.0396 BSP 10082
BDE .2815 BRA 3.2409 BC3 4.0581 FSP 2045

MID-COURSE EXECUTION ACCURACY

SGT 5583.0 SGR 1899.9 SG3 1213.3
RRT .9322 RRF .9670 RTF .9318
SGB 5897.5 R23 .2382 R13 .9409
SG1 5860.9 SG2 655.2 THA 17.83

ORBIT DETERMINATION ACCURACY

ST 55.2 SR 10.6 SS 36.7
CRT .9538 CR8 -.0598 CST -.3115
LSA 57.8 MSA 34.0 SSA 1.7
EL1 56.1 EL2 3.1 ALF 10.43

LAUNCH DATE SEP 9 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.950 GAL 6.94 AZL 86.54 HCA 147.84 SMA 196.35 ECC .26061 INC 3.4615 V1 29.572
RP 247.44 LAP 1.84 LOP 134.06 VP 19.919 GAP -.84 AZP 92.93 TAL 34.58 TAP 182.39 RCA 145.18 APO 247.52 V2 22.147
RC 315.013 GL 20.11 GP -23.25 ZAL 39.57 ZAP 65.70 ETS 170.54 ZAE 91.37 ETE 182.21 ZAC 65.83 ETC 285.54 LVI .51

PLANETOCENTRIC CONIC

C3 32.991 VHL 5.744 DLA 26.70 RAL 11.10 RAD 6648.1 VEL 12.365 PTH 7.29 VHP 2.730 DPA -15.27 RAP 26.06 ECC 1.8429
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 1 59 3808.11 -46.79 157.49 267.09 80.18 8 5 27 2808.1 -45.23 122.50
80.00 7 5 38 3798.41 -38.53 154.37 264.84 77.15 8 8 56 2798.4 -39.65 123.27
70.00 7 12 5 3779.37 -30.65 150.38 262.39 74.13 8 15 4 2779.4 -34.15 122.22
80.00 7 27 10 3732.02 -23.72 144.38 259.97 71.31 8 29 22 2732.0 -29.24 118.32
90.00 8 16 34 3572.40 -20.23 131.34 258.64 69.81 9 16 6 2572.4 -26.76 106.22
100.00 10 10 2 3206.50 -23.72 105.75 259.97 71.31 11 3 28 2206.5 -29.24 79.69
110.00 12 11 31 2826.19 -30.65 79.30 262.39 74.13 12 58 38 1826.2 -34.15 51.13

DIFFERENTIAL CORRECTIONS

TDE -.2302 TRA-3.2457 TC3-3.8293 BAU 1.8290
RDE -.0747 RRA -.5506 RC3-1.5918 FAU .41337
FDE 2.7333 FRA-4.7575 FC-10.8477 BSP 10311
BDE .2420 BRA 3.2921 BC3 4.1469 FSP 2009

MID-COURSE EXECUTION ACCURACY

SGT 5704.2 SGR 1930.6 SG3 1193.9
RRT .9343 RRF .9890 RTF .5110
SGB 6022.0 R23 .2432 R13 .9409
SG1 5986.2 SG2 655.8 THA 17.77

ORBIT DETERMINATION ACCURACY

ST 56.0 SR 10.3 SS 37.5
CRT .9739 CR8 -.1698 CST -.3248
LSA 58.8 MSA 34.4 SSA 1.7
EL1 56.8 EL2 2.3 ALF 10.20

LAUNCH DATE SEP 9 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.958 GAL 6.88 AZL 86.45 HCA 148.72 SMA 196.48 ECC .26068 INC 3.5537 V1 29.572
RP 247.58 LAP 1.84 LOP 134.94 VP 19.918 GAP -1.05 AZP 93.04 TAL 34.25 TAP 182.97 RCA 145.27 APO 247.70 V2 22.133
RC 317.282 GL 20.68 GP -23.67 ZAL 40.05 ZAP 65.03 ETS 169.95 ZAE 90.32 ETE 181.73 ZAC 65.41 ETC 285.59 LVI .93

PLANETOCENTRIC CONIC

C3 32.973 VHL 5.742 DLA 27.32 RAL 11.08 RAD 6648.1 VEL 12.365 PTH 7.29 VHP 2.752 DPA -15.64 RAP 26.28 ECC 1.9427
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 58 41 3821.97 -46.82 158.79 267.62 79.20 8 2 23 2822.0 -45.49 125.75
60.00 7 0 56 3815.97 -38.26 155.78 265.15 76.23 8 4 32 2816.0 -39.81 124.74
70.00 7 5 1 3803.92 -30.18 152.14 262.48 73.19 8 8 25 2803.9 -34.14 124.13
80.00 7 15 13 3771.90 -22.82 147.01 259.77 70.21 8 18 5 2771.9 -28.91 121.24
90.00 7 58 9 3633.15 -18.76 135.18 258.12 68.44 8 58 42 2633.1 -26.01 110.50
100.00 9 58 5 3246.37 -22.82 108.37 259.77 70.21 10 52 11 2246.4 -28.91 82.61
110.00 12 4 28 2850.74 -30.18 81.06 262.48 73.19 12 51 59 1850.7 -34.14 53.05

DIFFERENTIAL CORRECTIONS

TDE -.2036 TRA-3.3019 TC3-3.9214 BAU 1.8711
RDE -.0537 RRA -.5734 RC3-1.6249 FAU .40802
FDE 2.7432 FRA-4.7078 FC-10.7129 BSP 10422
BDE .2105 BRA 3.3513 BC3 4.2447 FSP 1913

MID-COURSE EXECUTION ACCURACY

SGT 5837.3 SGR 1974.9 SG3 1180.9
RRT .9371 RRF .9713 RTF .9332
SGB 6182.3 R23 .2449 R13 .9422
SG1 6127.3 SG2 656.5 THA 17.80

ORBIT DETERMINATION ACCURACY

ST 56.9 SR 10.4 SS 37.9
CRT .9844 CR8 -.2723 CST -.3469
LSA 60.1 MSA 34.2 SSA 1.6
EL1 57.9 EL2 1.8 ALF 10.21

LAUNCH DATE SEP 9 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.965 GAL 6.82 AZL 86.35 MCA 149.60 SMA 196.62 ECC .26070 INC 3.6508 V1 29.572
RP 247.71 LAP 1.85 LOP 135.83 VP 19.913 GAP -1.25 AZP 93.15 TAL 33.94 TAP 183.54 RCA 145.36 APO 247.88 V2 22.120
RC 319.522 GL 21.28 GP -24.12 ZAL 40.54 ZAP 64.40 ETS 169.35 ZAE 89.29 ETE 181.25 ZAC 64.96 ETC 265.65 LVI 1.38

PLANETOCENTRIC CONIC

C3 32.969 VHL 5.742 DLA 27.97 RAL 11.05 RAD 6648.1 VEL 12.365 PTH 7.28 VHP 2.774 DPA -16.01 RAP 26.54 ECC 1.5428
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 55 9 3836.63 -46.43 160.15 268.15 78.17 7 59 5 2836.6 -45.76 125.05
60.00 6 55 53 3834.64 -37.94 157.27 265.45 75.26 7 59 48 2834.6 -39.95 126.31
70.00 6 57 16 3830.57 -29.64 154.03 262.53 72.20 8 1 7 2830.6 -34.09 126.21
80.00 7 1 2 3818.74 -21.71 150.04 259.44 68.99 8 4 41 2818.7 -28.43 124.64
90.00 7 30 8 3724.60 -16.37 140.83 257.14 66.62 8 32 12 2724.6 -24.61 116.63
100.00 9 43 54 3293.21 -21.71 111.41 259.44 68.99 10 38 47 2293.2 -28.43 86.01
110.00 11 56 42 2877.39 -29.64 82.95 262.53 72.20 12 44 40 1877.4 -34.09 55.13

DIFFERENTIAL CORRECTIONS

TDE -.1653 TRA-3.3493 TC3-4.0010 BAU 1.9076
RDE -.0225 RRA -.5880 RC3-1.6479 FAU .39917
FDE 2.8230 FRA-4.5838 FC-10.4817 BSP 10679
BDE .1669 BRA 3.4005 BC3 4.3279 FSP 1891

MID-COURSE EXECUTION ACCURACY

SGT 5955.5 SGR 2005.7 8G3 1150.0
RRT .9388 RRF .9729 RTF .9327
8GB 8284.2 R23 .2509 R13 .9417
SG1 8249.6 8G2 658.2 THA 17.75

ORBIT DETERMINATION ACCURACY

ST 57.8 SR 10.4 SS 38.8
CRT .9873 CR8 -.3958 CST -.3608
LSA 61.2 MSA 34.7 S8A 1.6
EL1 58.7 EL2 1.6 ALF 10.11

LAUNCH DATE SEP 9 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.972 GAL 6.77 AZL 86.25 MCA 150.48 SMA 196.78 ECC .26075 INC 3.7527 V1 29.572
RP 247.84 LAP 1.85 LOP 136.71 VP 19.911 GAP -1.45 AZP 93.27 TAL 33.63 TAP 184.11 RCA 145.46 APO 248.07 V2 22.107
RC 321.734 GL 21.91 GP -24.59 ZAL 41.05 ZAP 63.80 ETS 168.73 ZAE 88.29 ETE 180.76 ZAC 64.49 ETC 265.71 LVI 1.86

PLANETOCENTRIC CONIC

C3 32.983 VHL 5.743 DLA 28.65 RAL 11.01 RAD 6648.1 VEL 12.365 PTH 7.29 VHP 2.798 DPA -16.40 RAP 26.82 ECC 1.5428
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 51 20 3852.12 -46.20 161.58 268.69 77.09 7 55 32 2852.1 -46.02 126.45
60.00 6 50 25 3854.55 -37.59 158.84 265.73 74.25 7 54 40 2854.5 -40.07 127.99
70.00 6 48 41 3859.67 -29.02 156.06 262.54 71.14 7 53 1 2859.7 -33.99 128.48
80.00 6 43 17 3876.65 -20.25 153.72 258.91 67.58 7 47 54 2876.6 -27.71 128.79
85.23 6 13 35 3972.42 -13.19 157.48 255.63 64.34 7 19 48 2972.4 -22.64 134.35
100.00 9 26 9 3351.12 -20.25 115.09 258.91 67.58 10 22 0 2351.1 -27.71 90.16
110.00 11 48 7 2906.49 -29.02 84.98 262.54 71.14 12 36 34 1906.5 -33.99 57.40

DIFFERENTIAL CORRECTIONS

TDE -.1243 TRA-3.3962 TC3-4.0789 BAU 1.9437
RDE .0098 RRA -.6036 RC3-1.6710 FAU .39013
FDE 2.8978 FRA-4.4627 FC-10.2402 BSP 10939
BDE .1246 BRA 3.4495 BC3 4.4079 FSP 1864

MID-COURSE EXECUTION ACCURACY

SGT 6072.2 SGR 2038.4 8G3 1134.6
RRT .9405 RRF .9745 RTF .9322
8GB 6405.2 R23 .2567 R13 .9412
SG1 6371.0 8G2 660.3 THA 17.72

ORBIT DETERMINATION ACCURACY

ST 58.7 SR 10.7 SS 39.7
CRT .9771 CR8 -.5145 CST -.3771
LSA 62.5 MSA 35.1 S8A 1.5
EL1 59.6 EL2 2.2 ALF 10.12

LAUNCH DATE SEP 9 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.979 GAL 6.71 AZL 86.14 MCA 151.37 SMA 196.90 ECC .26081 INC 3.8603 V1 29.572
RP 247.97 LAP 1.85 LOP 137.59 VP 19.910 GAP -1.65 AZP 93.39 TAL 33.31 TAP 184.68 RCA 145.55 APO 248.26 V2 22.095
RC 323.917 GL 22.57 GP -25.08 ZAL 41.57 ZAP 63.23 ETS 168.10 ZAE 87.31 ETE 180.26 ZAC 63.98 ETC 265.76 LVI 2.36

PLANETOCENTRIC CONIC

C3 33.016 VHL 5.746 DLA 29.35 RAL 10.95 RAD 6648.2 VEL 12.367 PTH 7.29 VHP 2.823 DPA -16.81 RAP 27.14 ECC 1.5434
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 47 13 3868.55 -45.94 163.08 269.22 75.96 7 51 41 2868.6 -46.27 127.95
60.00 6 44 29 3875.83 -37.18 160.50 265.99 73.18 7 49 5 2875.8 -40.18 129.79
70.00 6 39 6 3891.73 -28.29 158.28 262.48 70.01 7 43 58 2891.7 -33.83 130.97
80.00 6 18 4 3958.01 -18.06 158.76 257.97 65.81 7 24 2 2958.0 -26.46 134.51
81.81 5 45 47 4061.49 -13.48 164.18 255.73 63.68 6 53 28 3061.5 -23.17 141.10
100.00 9 0 56 3432.48 -18.06 120.13 257.97 65.81 9 58 8 2432.5 -26.46 95.88
110.00 11 38 32 2938.55 -28.29 87.19 262.48 70.01 12 27 31 1938.6 -33.83 59.89

DIFFERENTIAL CORRECTIONS

TDE -.0818 TRA-3.4434 TC3-4.1540 BAU 1.9804
RDE .0430 RRA -.6204 RC3-1.6951 FAU .38107
FDE 2.9872 FRA-4.3429 FC3-9.9920 BSP 11191
BDE .0924 BRA 3.4989 BC3 4.4865 FSP 1833

MID-COURSE EXECUTION ACCURACY

SGT 6189.7 SGR 2073.7 8G3 1110.8
RRT .9420 RRF .9760 RTF .9317
8GB 6527.8 R23 .2625 R13 .9408
SG1 6494.0 8G2 663.2 THA 17.71

ORBIT DETERMINATION ACCURACY

ST 59.7 SR 11.2 SS 40.6
CRT .9557 CR8 -.6198 CST -.3949
LSA 63.9 MSA 35.4 S8A 1.4
EL1 60.6 EL2 3.3 ALF 10.24

LAUNCH DATE SEP 9 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 32.987 GAL 6.65 AZL 86.03 MCA 152.24 SMA 197.05 ECC .26087 INC 3.9741 V1 29.572
RP 248.09 LAP 1.85 LOP 138.48 VP 19.910 GAP -1.84 AZP 93.52 TAL 33.00 TAP 185.24 RCA 145.64 APO 248.45 V2 22.084
RC 326.069 GL 23.26 GP -25.60 ZAL 42.12 ZAP 62.70 ETS 167.45 ZAE 86.36 ETE 179.73 ZAC 63.45 ETC 265.85 LVI 2.89

PLANETOCENTRIC CONIC

C3 33.072 VHL 5.751 DLA 30.08 RAL 10.87 RAD 6648.2 VEL 12.369 PTH 7.29 VHP 2.849 DPA -17.23 RAP 27.48 ECC 1.5443
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 42 46 3886.00 -45.64 164.65 269.75 74.78 7 47 32 2886.0 -46.52 129.57
60.00 6 38 1 3898.67 -36.72 162.26 266.23 72.07 7 43 0 2898.7 -40.25 131.73
70.00 6 28 15 3927.30 -27.43 160.70 262.34 68.81 7 33 43 2927.5 -33.58 133.73
79.31 5 26 10 4123.64 -13.78 168.95 255.84 63.00 6 34 54 3123.6 -23.72 145.91
79.31 5 26 10 4123.64 -13.78 168.95 255.84 63.00 6 34 54 3123.6 -23.72 145.91
79.31 5 26 10 4123.64 -13.78 168.95 255.84 63.00 6 34 54 3123.6 -23.72 145.91
110.00 11 27 41 2974.32 -27.43 89.62 262.34 68.81 12 17 16 1974.3 -33.58 62.63

DIFFERENTIAL CORRECTIONS

TDE -.0376 TRA-3.4915 TC3-4.2267 BAU 2.0178
RDE .0772 RRA -.6389 RC3-1.7200 FAU .37196
FDE 3.0302 FRA-4.2278 FC3-9.7370 BSP 11428
BDE .0859 BRA 3.5495 BC3 4.5633 FSP 1796

MID-COURSE EXECUTION ACCURACY

SGT 6308.2 SGR 2112.0 8G3 1086.8
RRT .9436 RRF .9775 RTF .9313
8GB 6652.4 R23 .2680 R13 .9404
SG1 6618.9 8G2 666.6 THA 17.72

ORBIT DETERMINATION ACCURACY

ST 60.8 SR 12.1 SS 41.5
CRT .9279 CR8 -.7068 CST -.4143
LSA 65.5 MSA 35.7 S8A 1.4
EL1 61.8 EL2 4.4 ALF 10.49

LAUNCH DATE SEP 9 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC

DISTANCE 547.987

EARTH TO MARS

RL 150.67 LAL -0.00 LOL 346.17 VL 32.994 GAL 8.39 AZL 85.91 HCA 153.12 SMA 197.19 ECC .26094 INC 4.0945 V1 29.572  
 RP 248.20 LAP 1.85 LOP 139.36 VP 19.910 GAP -2.04 AZP 93.65 TAL 32.66 TAP 185.80 RCA 145.74 APO 248.65 V2 22.073  
 RC 328.191 GL 23.98 GP -28.15 ZAL 42.68 ZAP 62.20 ETS 166.78 ZAE 85.43 ETE 179.23 ZAC 62.88 ETC 278.93 LVI 3.45

PLANETOCENTRIC CONIC

C3 33.152 VHL 5.758 DLA 30.84 RAL 10.77 RAD 6648.2 VEL 12.372 PTH 7.29 VHP 2.877 DPA -17.67 RAP 27.85 ECC 1.5456  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 37 56 3904.57 -45.30 186.31 270.28 73.54 7 43 1 2904.6 -46.75 131.30  
 60.00 6 30 56 3923.27 -36.18 164.14 266.43 70.89 7 36 19 2923.3 -40.29 133.82  
 70.00 6 15 45 3968.10 -26.40 163.41 262.09 67.51 7 21 53 2968.1 -33.22 136.84  
 77.16 5 9 57 4174.47 -14.08 172.91 255.95 62.28 6 19 31 3174.5 -24.28 149.93  
 77.16 5 9 57 4174.47 -14.08 172.91 255.95 62.28 6 19 31 3174.5 -24.28 149.93  
 77.16 5 9 57 4174.47 -14.08 172.91 255.95 62.28 6 19 31 3174.5 -24.28 149.93  
 110.00 11 15 12 3014.92 -26.40 92.33 262.09 67.51 12 5 27 2014.9 -33.22 65.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0096 TRA-3.5397 TC3-4.2954 BAU 2.0548 SGT 6426.2 SGR 2152.4 SG3 1062.0 ST 62.0 SR 13.1 SS 42.4  
 RDE .1134 RRA -.6586 RC3-1.7449 FAU .36259 RRT .9450 RRF .9788 RTF .9308 CRT .8976 CRS -.7765 CST -.4350  
 FDE 3.0919 FRA-4.1129 FC3-9.4687 BSP 11672 SGB 6777.1 R23 .2736 R13 .9399 LSA 67.2 MSA 35.3 SSA 1.3  
 BDE .1138 BRA 3.6004 BC3 4.6363 FSP 1759 SGI 6743.8 SG2 670.7 THA 17.75 EL1 63.1 EL2 5.7 ALF 10.84

LAUNCH DATE SEP 9 1973

FLIGHT TIME 264.00

ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC

DISTANCE 551.762

EARTH TO MARS

RL 150.67 LAL -0.00 LOL 346.17 VL 33.002 GAL 6.53 AZL 85.78 HCA 154.00 SMA 197.34 ECC .26102 INC 4.2225 V1 29.572  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.911 GAP -2.24 AZP 93.80 TAL 32.36 TAP 186.36 RCA 145.83 APO 248.84 V2 22.062  
 RC 330.203 GL 24.75 GP -26.73 ZAL 43.27 ZAP 61.75 ETS 166.08 ZAE 84.94 ETE 178.70 ZAC 62.28 ETC 286.02 LVI 4.08

PLANETOCENTRIC CONIC

C3 33.260 VHL 5.767 DLA 31.63 RAL 10.65 RAD 6648.2 VEL 12.376 PTH 7.29 VHP 2.907 DPA -18.13 RAP 28.26 ECC 1.5474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 32 41 3924.39 -44.90 168.05 270.79 72.24 7 38 5 2924.4 -46.97 133.16  
 60.00 6 23 7 3949.91 -35.57 166.13 266.58 69.66 7 28 57 2949.9 -40.29 136.09  
 70.00 6 0 58 4019.41 -25.13 166.50 261.67 66.08 7 7 53 3015.4 -32.69 140.43  
 75.20 4 55 41 4218.64 -14.39 176.41 256.06 61.52 6 6 0 3218.6 -24.86 153.50  
 75.20 4 55 41 4218.64 -14.39 176.41 256.06 61.52 6 6 0 3218.6 -24.86 153.50  
 75.20 4 55 41 4218.64 -14.39 176.41 256.06 61.52 6 6 0 3218.6 -24.86 153.50  
 110.00 11 0 24 3082.23 -25.13 95.42 261.67 66.08 11 51 27 2082.2 -32.69 69.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0601 TRA-3.5871 TC3-4.3598 BAU 2.0923 SGT 6542.8 SGR 2195.9 SG3 1036.7 ST 63.3 SR 14.4 SS 43.2  
 RDE .1910 RRA -.6797 RC3-1.7706 FAU .35314 RRT .9464 RRF .9800 RTF .9303 CRT .8698 CRS -.8298 CST -.4873  
 FDE 3.1480 FRA-3.9987 FC3-9.1920 BSP 11916 SGB 6901.5 R23 .2789 R13 .9398 LSA 69.1 MSA 36.1 SSA 1.3  
 BDE .1625 BRA 3.6509 BC3 4.7054 FSP 1718 SGI 6868.3 SG2 675.6 THA 17.80 EL1 64.5 EL2 7.0 ALF 11.32

LAUNCH DATE SEP 9 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC

DISTANCE 555.536

EARTH TO MARS

RL 150.67 LAL -0.00 LOL 346.17 VL 33.009 GAL 6.47 AZL 85.84 HCA 154.88 SMA 197.48 ECC .26109 INC 4.3585 V1 29.572  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.912 GAP -2.43 AZP 93.95 TAL 32.04 TAP 186.92 RCA 145.92 APO 249.04 V2 22.052  
 RC 332.344 GL 25.55 GP -27.35 ZAL 43.88 ZAP 61.33 ETS 165.37 ZAE 83.67 ETE 178.16 ZAC 61.64 ETC 286.11 LVI 4.69

PLANETOCENTRIC CONIC

C3 33.399 VHL 5.779 DLA 32.46 RAL 10.50 RAD 6648.3 VEL 12.382 PTH 7.30 VHP 2.939 DPA -18.62 RAP 28.70 ECC 1.5497  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 28 56 3945.60 -44.44 169.89 271.27 70.89 7 32 42 2945.6 -47.17 135.17  
 60.00 6 14 27 3978.94 -34.86 168.27 266.66 68.36 7 20 46 2978.9 -40.24 138.55  
 70.00 5 42 38 4073.13 -23.49 170.18 260.99 64.46 6 50 31 3073.1 -31.89 144.74  
 73.35 4 42 40 4258.46 -14.70 179.62 256.17 60.72 5 53 39 3258.5 -25.46 156.77  
 73.35 4 42 40 4258.46 -14.70 179.62 256.17 60.72 5 53 39 3258.5 -25.46 156.77  
 73.35 4 42 40 4258.46 -14.70 179.62 256.17 60.72 5 53 39 3258.5 -25.46 156.77  
 110.00 10 42 4 3119.95 -23.49 99.10 260.99 64.46 11 34 4 2120.0 -31.89 73.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1110 TRA-3.6385 TC3-4.4207 BAU 2.1308 SGT 6661.7 SGR 2242.2 SG3 1010.4 ST 64.8 SR 15.9 SS 44.0  
 RDE .1903 RRA -.7026 RC3-1.7962 FAU .34341 RRT .9478 RRF .9812 RTF .9297 CRT .8453 CRS -.8689 CST -.4789  
 FDE 3.1989 FRA-3.8856 FC3-8.9013 BSP 12143 SGB 7028.9 R23 .2843 R13 .9391 LSA 71.2 MSA 36.3 SSA 1.2  
 BDE .2203 BRA 3.7037 BC3 4.7717 FSP 1671 SGI 6995.8 SG2 681.1 THA 17.87 EL1 66.2 EL2 8.3 ALF 11.89

LAUNCH DATE SEP 9 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC

DISTANCE 559.309

EARTH TO MARS

RL 150.67 LAL -0.00 LOL 346.17 VL 33.017 GAL 6.41 AZL 85.50 HCA 155.75 SMA 197.63 ECC .26118 INC 4.5036 V1 29.572  
 RP 248.50 LAP 1.85 LOP 141.99 VP 19.915 GAP -2.62 AZP 94.11 TAL 31.71 TAP 187.47 RCA 146.01 APO 249.24 V2 22.043  
 RC 334.378 GL 26.40 GP -28.00 ZAL 44.51 ZAP 60.95 ETS 164.64 ZAE 82.84 ETE 177.60 ZAC 60.96 ETC 286.21 LVI 5.36

PLANETOCENTRIC CONIC

C3 33.575 VHL 5.794 DLA 33.33 RAL 10.31 RAD 6648.4 VEL 12.389 PTH 7.30 VHP 2.972 DPA -19.13 RAP 29.17 ECC 1.5526  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 20 38 3968.37 -43.92 171.83 271.73 69.47 7 26 47 2968.4 -47.34 137.35  
 60.00 6 4 45 4010.79 -34.04 170.37 266.66 66.98 7 11 36 3010.8 -40.11 141.25  
 70.00 5 17 28 4151.06 -21.12 174.98 259.81 62.51 6 26 39 3151.1 -30.56 150.42  
 71.57 4 30 32 4295.08 -15.01 182.62 256.28 59.88 5 42 7 3295.1 -26.07 159.86  
 71.57 4 30 32 4295.08 -15.01 182.62 256.28 59.88 5 42 7 3295.1 -26.07 159.86  
 71.57 4 30 32 4295.08 -15.01 182.62 256.28 59.88 5 42 7 3295.1 -26.07 159.86  
 110.00 10 16 55 3197.88 -21.12 103.90 259.81 62.51 11 10 12 2197.9 -30.56 79.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1670 TRA-3.6848 TC3-4.4744 BAU 2.1683 SGT 6777.3 SGR 2290.4 SG3 982.8 ST 66.4 SR 17.6 SS 44.9  
 RDE .2328 RRA -.7266 RC3-1.8210 FAU .33325 RRT .9490 RRF .9822 RTF .9290 CRT .8257 CRS -.8988 CST -.5017  
 FDE 3.2507 FRA-3.7695 FC3-8.5929 BSP 12388 SGB 7153.9 R23 .2899 R13 .9385 LSA 73.5 MSA 36.5 SSA 1.1  
 BDE .2865 BRA 3.7558 BC3 4.8307 FSP 1628 SGI 7120.8 SG2 687.5 THA 17.95 EL1 68.0 EL2 9.7 ALF 12.59

LAUNCH DATE SEP 9 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 33.024 GAL 6.35 AZL 85.34 HCA 156.83 SMA 197.78 ECC .26126 INC 4.6588 V1 29.572
RP 248.59 LAP 1.85 LOP 142.87 VP 19.918 GAP -2.81 AZP 94.28 TAL 31.39 TAP 188.02 RCA 148.10 APO 249.45 V2 22.034
RC 336.377 GL 27.30 GP -28.70 ZAL 45.17 ZAP 80.62 ETS 163.88 ZAE 82.04 ETE 177.03 ZAC 60.24 ETC 286.32 LVI 6.08

PLANETOCENTRIC CONIC

C3 33.792 VHL 5.813 DLA 34.24 RAL 10.10 RAD 6648.4 VEL 12.398 PTH 7.31 VHP 3.009 DPA -19.67 RAP 29.68 ECC 1.5581
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 13 42 3992.89 -43.31 173.88 272.14 67.99 7 20 15 2992.9 -47.47 139.70
60.00 5 33 47 4046.08 -33.07 173.06 256.55 65.52 7 1 13 3046.1 -39.89 144.23
69.83 4 19 3 4329.19 -15.32 185.46 256.38 58.99 5 31 12 3329.2 -26.71 162.79
69.83 4 19 3 4329.19 -15.32 185.46 256.38 58.99 5 31 12 3329.2 -26.71 162.79
69.83 4 19 3 4329.19 -15.32 185.46 256.38 58.99 5 31 12 3329.2 -26.71 162.79
69.83 4 19 3 4329.19 -15.32 185.46 256.38 58.99 5 31 12 3329.2 -26.71 162.79

DIFFERENTIAL CORRECTIONS

TDE .2247 TRA-3.7336 TC3-4.5228 BAU 2.2069
RDE .2769 RRA -.7528 RC3-1.8463 FAU .32297
FDE 3.2935 FRA-3.6549 FC3-8.2744 BSP 12626
BDE .3566 BRA 3.8087 BC3 4.8851 FSP 1579

DISTANCE 563.082

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 33.032 GAL 6.29 AZL 85.17 HCA 157.51 SMA 197.92 ECC .26136 INC 4.8252 V1 29.572
RP 248.67 LAP 1.84 LOP 143.75 VP 19.921 GAP -3.01 AZP 94.46 TAL 31.06 TAP 188.57 RCA 146.19 APO 249.65 V2 22.026
RC 336.347 GL 28.25 GP -29.44 ZAL 45.86 ZAP 60.33 ETS 163.10 ZAE 81.27 ETE 176.44 ZAC 59.47 ETC 286.45 LVI 6.84

PLANETOCENTRIC CONIC

C3 34.056 VHL 5.836 DLA 35.20 RAL 9.84 RAD 6648.5 VEL 12.408 PTH 7.32 VHP 3.048 DPA -20.25 RAP 30.22 ECC 1.5805
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 6 1 4019.40 -42.81 176.04 272.48 66.44 7 13 0 3019.4 -47.55 142.26
60.00 5 41 13 4085.68 -31.92 175.79 266.29 63.97 6 49 19 3085.7 -39.54 147.54
68.11 4 7 58 4361.55 -15.63 188.20 256.49 58.05 5 20 40 3361.6 -27.36 165.64
68.11 4 7 58 4361.55 -15.63 188.20 256.49 58.05 5 20 40 3361.6 -27.36 165.64
68.11 4 7 58 4361.55 -15.63 188.20 256.49 58.05 5 20 40 3361.6 -27.36 165.64
68.11 4 7 58 4361.55 -15.63 188.20 256.49 58.05 5 20 40 3361.6 -27.36 165.64

DIFFERENTIAL CORRECTIONS

TDE .2835 TRA-3.7849 TC3-4.5657 BAU 2.2468
RDE .3233 RRA -.7819 RC3-1.8716 FAU .31247
FDE 3.3297 FRA-3.5428 FC3-7.9433 BSP 12840
BDE .4300 BRA 3.8648 BC3 4.9345 FSP 1925

DISTANCE 566.854

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 33.040 GAL 6.23 AZL 85.00 HCA 158.38 SMA 198.07 ECC .26145 INC 5.0043 V1 29.572
RP 248.75 LAP 1.84 LOP 144.63 VP 19.926 GAP -3.19 AZP 94.63 TAL 30.73 TAP 189.11 RCA 146.29 APO 249.86 V2 22.019
RC 340.287 GL 29.25 GP -30.22 ZAL 46.58 ZAP 60.09 ETS 162.30 ZAE 80.54 ETE 175.83 ZAC 58.65 ETC 286.59 LVI 7.63

PLANETOCENTRIC CONIC

C3 34.375 VHL 5.863 DLA 36.20 RAL 9.53 RAD 6648.7 VEL 12.421 PTH 7.33 VHP 3.090 DPA -20.85 RAP 30.81 ECC 1.5657
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 57 27 4048.20 -41.80 178.33 272.75 64.82 7 4 55 3048.2 -47.57 145.05
60.00 5 26 32 4130.94 -30.53 178.81 265.82 62.30 6 35 23 3130.9 -39.02 151.27
66.40 3 57 13 4392.43 -15.94 190.87 256.58 57.06 5 10 26 3392.4 -28.03 168.43
66.40 3 57 13 4392.43 -15.94 190.87 256.58 57.06 5 10 26 3392.4 -28.03 168.43
66.40 3 57 13 4392.43 -15.94 190.87 256.58 57.06 5 10 26 3392.4 -28.03 168.43
66.40 3 57 13 4392.43 -15.94 190.87 256.58 57.06 5 10 26 3392.4 -28.03 168.43

DIFFERENTIAL CORRECTIONS

TDE .3482 TRA-3.8336 TC3-4.5995 BAU 2.2882
RDE .3731 RRA -.8129 RC3-1.8958 FAU .30154
FDE 3.3620 FRA-3.4276 FC3-7.5944 BSP 13075
BDE .5090 BRA 3.9208 BC3 4.9749 FSP 1472

DISTANCE 570.626

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 12 1974

HELIOCENTRIC CONIC

RL 150.67 LAL -.00 LOL 346.17 VL 33.047 GAL 6.16 AZL 84.80 HCA 159.25 SMA 198.22 ECC .26156 INC 5.1977 V1 29.572
RP 248.82 LAP 1.84 LOP 145.50 VP 19.931 GAP -3.38 AZP 94.86 TAL 30.40 TAP 189.66 RCA 146.38 APO 250.07 V2 22.012
RC 342.196 GL 30.32 GP -31.06 ZAL 47.34 ZAP 59.91 ETS 161.47 ZAE 79.85 ETE 175.20 ZAC 57.78 ETC 286.74 LVI 8.51

PLANETOCENTRIC CONIC

C3 34.757 VHL 5.896 DLA 37.25 RAL 9.17 RAD 6648.8 VEL 12.436 PTH 7.34 VHP 3.136 DPA -21.50 RAP 31.44 ECC 1.5720
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 47 50 4079.65 -40.86 180.76 272.90 63.13 6 35 50 3079.7 -47.51 148.09
60.00 5 8 50 4184.17 -28.79 182.25 265.05 60.49 6 18 34 3184.2 -38.24 155.58
64.67 3 46 40 4422.18 -16.24 193.48 256.67 56.00 5 0 22 3422.2 -28.71 171.18
64.67 3 46 40 4422.18 -16.24 193.48 256.67 56.00 5 0 22 3422.2 -28.71 171.18
64.67 3 46 40 4422.18 -16.24 193.48 256.67 56.00 5 0 22 3422.2 -28.71 171.18
64.67 3 46 40 4422.18 -16.24 193.48 256.67 56.00 5 0 22 3422.2 -28.71 171.18

DIFFERENTIAL CORRECTIONS

TDE .4113 TRA-3.8869 TC3-4.6242 BAU 2.3265
RDE .4258 RRA -.8469 RC3-1.9193 FAU .29030
FDE 3.3853 FRA-3.3125 FC3-7.2307 BSP 13314
BDE .5920 BRA 3.9780 BC3 5.0067 FSP 1415

DISTANCE 574.388

EARTH TO MARS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 9 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC DISTANCE 578.188 EARTH TO MARS  
 RL 150.67 LAL -.00 LOL 346.17 VL 33.089 GAL 6.10 AZL 84.59 HCA 180.12 SMA 198.37 ECC .26186 INC 5.4070 V1 29.572  
 RP 248.88 LAP 1.84 LOP 146.38 VP 19.936 GAP -3.57 AZP 95.09 TAL 30.07 TAP 190.20 RCA 146.46 APO 250.28 V2 22.006  
 RC 344.074 GL 31.46 GP -31.95 ZAL 48.14 ZAP 59.78 ET8 180.62 ZAE 79.20 ETE 174.55 ZAC 56.85 ETC 286.91 LVI 9.44

PLANETOCENTRIC CONIC  
 C3 35.218 VHL 5.934 DLA 38.36 RAL 8.75 RAD 6649.0 VEL 12.455 PTH 7.35 VHP 3.186 DPA -22.19 RAP 32.11 ECC 1.5798  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 36 59 4114.22 -39.77 183.35 272.91 61.36 6 45 33 3114.2 -47.34 151.41  
 60.00 4 46 21 4250.12 -26.51 186.34 263.78 58.46 5 57 11 3250.1 -37.04 160.77  
 62.92 3 36 11 4451.09 -16.53 196.05 256.74 54.88 4 50 22 3451.1 -29.40 173.93  
 62.92 3 36 11 4451.09 -16.53 196.05 256.74 54.88 4 50 22 3451.1 -29.40 173.93  
 62.92 3 36 11 4451.09 -16.53 196.05 256.74 54.88 4 50 22 3451.1 -29.40 173.93  
 62.92 3 36 11 4451.09 -16.53 196.05 256.74 54.88 4 50 22 3451.1 -29.40 173.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4662 TRA-3.9514 TC3-4.6517 BAU 2.3750 SGT 7372.6 SGR 2604.6 S63 835.0 ST 76.8 SR 28.4 SS 47.8  
 RDE .4738 RRA -.8933 RC3-1.9515 FAU .28047 RRT .9554 RRF .9861 RTF .9267 CRT .8007 CR8 -.9622 CST -.6091  
 FDE 3.3656 FRA-3.2365 FC3-6.8949 B8P 13373 SGB 7819.1 R23 .3115 R13 .9371 LSA 87.4 MSA 36.7 S8A .8  
 BDE .6647 BRA 4.0511 BC3 5.0445 F8P 1316 S61 7785.1 S62 728.8 THA 18.82 EL1 80.3 EL2 16.3 ALF 17.23

LAUNCH DATE SEP 9 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC DISTANCE 581.933 EARTH TO MARS  
 RL 150.67 LAL -.00 LOL 346.17 VL 33.083 GAL 6.04 AZL 84.37 HCA 161.00 SMA 198.52 ECC .26177 INC 5.6347 V1 29.572  
 RP 248.94 LAP 1.83 LOP 147.28 VP 19.943 GAP -3.76 AZP 95.33 TAL 29.74 TAP 190.73 RCA 146.55 APO 250.49 V2 22.000  
 RC 345.920 GL 32.67 GP -32.90 ZAL 48.98 ZAP 59.72 ET8 159.75 ZAE 78.61 ETE 173.88 ZAC 55.85 ETC 287.10 LVI 10.42

PLANETOCENTRIC CONIC  
 C3 35.760 VHL 5.980 DLA 39.53 RAL 8.26 RAD 6649.2 VEL 12.476 PTH 7.37 VHP 3.241 DPA -22.92 RAP 32.84 ECC 1.5885  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME FO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 24 33 4152.82 -38.48 188.12 272.73 59.51 6 33 48 3152.6 -47.03 155.07  
 60.00 4 13 37 4343.75 -23.06 191.85 261.48 55.98 5 26 0 3343.8 -34.92 167.81  
 61.14 3 25 43 4479.32 -16.81 198.62 256.80 53.68 4 40 22 3479.3 -30.12 176.69  
 61.14 3 25 43 4479.32 -16.81 198.62 256.80 53.68 4 40 22 3479.3 -30.12 176.69  
 61.14 3 25 43 4479.32 -16.81 198.62 256.80 53.68 4 40 22 3479.3 -30.12 176.69  
 61.14 3 25 43 4479.32 -16.81 198.62 256.80 53.68 4 40 22 3479.3 -30.12 176.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5580 TRA-3.9838 TC3-4.6312 BAU 2.4021 SGT 7446.8 SGR 2646.6 S63 790.5 ST 79.3 SR 31.7 SS 49.1  
 RDE .5538 RRA -.9142 RC3-1.9490 FAU .26431 RRT .9546 RRF .9858 RTF .9216 CRT .7960 CR8 -.9700 CST -.6265  
 FDE 3.4556 FRA-3.0303 FC3-6.3990 B8P 13955 SGB 7903.1 R23 .3260 R13 .9327 LSA 91.1 MSA 37.5 S8A .8  
 BDE .7859 BRA 4.0873 BC3 5.0246 F8P 1341 S61 7867.9 S62 745.9 THA 18.92 EL1 83.5 EL2 18.2 ALF 18.57

LAUNCH DATE SEP 9 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 18 1974

HELIOCENTRIC CONIC DISTANCE 585.702 EARTH TO MARS  
 RL 150.67 LAL -.00 LOL 346.17 VL 33.070 GAL 5.98 AZL 84.12 HCA 161.87 SMA 198.67 ECC .26189 INC 5.8833 V1 29.572  
 RP 249.00 LAP 1.83 LOP 148.13 VP 19.950 GAP -3.94 AZP 95.59 TAL 29.41 TAP 191.27 RCA 146.64 APO 250.70 V2 21.995  
 RC 347.734 GL 33.97 GP -33.92 ZAL 49.86 ZAP 59.71 ET8 158.85 ZAE 78.06 ETE 173.19 ZAC 54.79 ETC 287.31 LVI 11.47

PLANETOCENTRIC CONIC  
 C3 36.411 VHL 6.034 DLA 40.76 RAL 7.68 RAD 6649.4 VEL 12.502 PTH 7.39 VHP 3.301 DPA -23.71 RAP 33.62 ECC 1.5992  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 10 11 4195.61 -36.95 189.10 272.28 57.58 6 20 7 3195.6 -46.54 159.11  
 59.33 3 15 9 4507.10 -17.07 201.18 256.83 52.41 4 30 16 3507.1 -30.83 179.48  
 59.33 3 15 9 4507.10 -17.07 201.18 256.83 52.41 4 30 16 3507.1 -30.83 179.48  
 59.33 3 15 9 4507.10 -17.07 201.18 256.83 52.41 4 30 16 3507.1 -30.83 179.48  
 59.33 3 15 9 4507.10 -17.07 201.18 256.83 52.41 4 30 16 3507.1 -30.83 179.48  
 59.33 3 15 9 4507.10 -17.07 201.18 256.83 52.41 4 30 16 3507.1 -30.83 179.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6192 TRA-4.0484 TC3-4.6294 BAU 2.4497 SGT 7588.9 SGR 2734.0 S63 757.1 ST 82.0 SR 34.5 SS 49.1  
 RDE .6125 RRA -.9851 RC3-1.9739 FAU .25291 RRT .9561 RRF .9862 RTF .9214 CRT .8017 CR8 -.9728 CST -.6426  
 FDE 3.4289 FRA-2.9340 FC3-6.0134 B8P 14084 SGB 8047.6 R23 .3288 R13 .9327 LSA 94.4 MSA 37.5 S8A .7  
 BDE .8710 BRA 4.1599 BC3 5.0325 F8P 1252 S61 8011.9 S62 756.7 THA 19.23 EL1 86.8 EL2 19.5 ALF 19.65

LAUNCH DATE SEP 9 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 20 1974

HELIOCENTRIC CONIC DISTANCE 589.487 EARTH TO MARS  
 RL 150.67 LAL -.00 LOL 346.17 VL 33.078 GAL 5.91 AZL 83.84 HCA 162.74 SMA 198.82 ECC .26200 INC 6.1560 V1 29.572  
 RP 249.05 LAP 1.82 LOP 149.01 VP 19.957 GAP -4.12 AZP 95.88 TAL 29.07 TAP 191.41 RCA 146.73 APO 250.92 V2 21.990  
 RC 349.518 GL 35.35 GP -35.01 ZAL 50.80 ZAP 59.79 ET8 157.94 ZAE 77.58 ETE 172.48 ZAC 53.65 ETC 287.55 LVI 12.60

PLANETOCENTRIC CONIC  
 C3 37.187 VHL 6.098 DLA 42.06 RAL 7.00 RAD 6649.7 VEL 12.533 PTH 7.41 VHP 3.368 DPA -24.55 RAP 34.48 ECC 1.6120  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 53 14 4244.63 -35.11 192.33 271.48 55.55 6 3 59 3244.6 -45.79 163.80  
 57.47 3 4 22 4534.68 -17.30 203.75 256.82 51.05 4 19 57 3534.7 -31.55 182.33  
 57.47 3 4 22 4534.68 -17.30 203.75 256.82 51.05 4 19 57 3534.7 -31.55 182.33  
 57.47 3 4 22 4534.68 -17.30 203.75 256.82 51.05 4 19 57 3534.7 -31.55 182.33  
 57.47 3 4 22 4534.68 -17.30 203.75 256.82 51.05 4 19 57 3534.7 -31.55 182.33  
 57.47 3 4 22 4534.68 -17.30 203.75 256.82 51.05 4 19 57 3534.7 -31.55 182.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6982 TRA-4.0951 TC3-4.5953 BAU 2.4872 SGT 7661.3 SGR 2804.2 S63 715.5 ST 84.8 SR 37.8 SS 49.6  
 RDE .6912 RRA -1.0061 RC3-1.9782 FAU .23822 RRT .9563 RRF .9859 RTF .9179 CRT .8041 CR8 -.9760 CST -.6584  
 FDE 3.4485 FRA-2.7765 FC3-5.5459 B8P 14481 SGB 8158.4 R23 .3385 R13 .9299 LSA 98.2 MSA 37.9 S8A .7  
 BDE .9824 BRA 4.2169 BC3 5.0030 F8P 1219 S61 8121.6 S62 773.2 THA 19.48 EL1 90.4 EL2 21.1 ALF 20.94

LAUNCH DATE SEP 9 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 22 1974

HELIOCENTRIC CONIC

RL 150.67 LAL	-.00 LOL 346.17 VL 33.086 GAL	5.85 AZL 83.54 MCA 163.61 SMA 198.98 ECC .26213 INC 6.4566 VI 29.872
RP 249.09 LAP	1.82 LOP 149.88 VP 19.965 GAP	-4.31 AZP 96.20 TAL 28.73 TAP 192.34 RCA 146.82 APO 251.13 VZ 21.988
RC 331.261 GL	36.83 GP -36.17 ZAL 51.79 ZAP	59.94 ETS 157.01 ZAE 77.13 ETE 171.76 ZAC 52.44 ETC 287.82 LVI 13.81

PLANETOCENTRIC CONIC

C3 38.117 VHL	6.174 DLA 43.42 RAL 6.19 RAD 6650.0 VEL 12.570 PTH 7.44 VMP 3.443 DPA -25.44 RAP 35.37 ECC 1.6273
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG	
50.00	4 32 43 4301.81 -32.85 195.92 270.15 93.42 5 44 25 3301.8 -44.68 168.66
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24
55.56	2 53 20 4562.10 -17.49 206.35 256.76 49.60 4 9 22 3562.1 -32.25 185.24

DIFFERENTIAL CORRECTIONS

TDE .7498 TRA-4.1693 TC3-4.9688 BAU 2.5418
RDE .7548 RRA-1.0741 RC3-2.0016 FAU .22647
PDE 3.3793 FRA-2.6919 FC3-5.1437 BSP 14508
BDE 1.0639 BRA 4.3055 BC3 4.9880 PSP 1107

MID-COURSE EXECUTION ACCURACY

SGT 7790.6 SGR 2912.5 SG3 680.3
RRT .9582 RRF .9861 RTF .9183
SCB 8317.2 R23 .3393 R13 .9305
SG1 8260.2 SG2 783.7 THA 19.90

ORBIT DETERMINATION ACCURACY

ST 87.6 SR 40.8 SS 49.2
CRY .8104 CRS -.9768 CST -.6671
LSA 101.5 MSA 38.0 SSA .6
EL1 94.0 EL2 22.5 ALP 21.88

LAUNCH DATE SEP 9 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 24 1974

HELIOCENTRIC CONIC

RL 150.67 LAL	-.00 LOL 346.17 VL 33.093 GAL	5.79 AZL 83.21 MCA 164.48 SMA 199.13 ECC .26228 INC 6.7898 VI 29.872
RP 249.12 LAP	1.81 LOP 150.75 VP 19.974 GAP	-4.49 AZP 96.54 TAL 28.40 TAP 192.87 RCA 146.90 APO 251.33 VZ 21.982
RC 332.974 GL	36.42 GP -37.42 ZAL 52.84 ZAP	60.18 ETS 156.08 ZAE 76.76 ETE 171.01 ZAC 51.14 ETC 288.13 LVI 15.10

PLANETOCENTRIC CONIC

C3 39.231 VHL	6.263 DLA 44.87 RAL 5.25 RAD 6650.4 VEL 12.614 PTH 7.47 VMP 3.527 DPA -26.40 RAP 36.34 ECC 1.6456
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG	
50.00	4 8 39 4371.67 -29.94 200.03 268.02 51.12 5 19 30 3371.7 -43.01 174.54
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24
53.59	2 41 52 4589.72 -17.63 208.99 256.64 48.04 3 58 21 3589.7 -32.94 188.24

DIFFERENTIAL CORRECTIONS

TDE .8097 TRA-4.2334 TC3-4.5110 BAU 2.5898
RDE .8348 RRA-1.1371 RC3-2.0080 FAU .21213
PDE 3.3362 FRA-2.5574 FC3-4.6817 BSP 14749
BDE 1.1630 BRA 4.3835 BC3 4.9377 PSP 1035

MID-COURSE EXECUTION ACCURACY

SGT 7895.5 SGR 3010.7 SG3 638.5
RRT .9591 RRF .9856 RTF .9159
SCB 8450.0 R23 .3461 R13 .9286
SG1 8412.1 SG2 799.6 THA 20.28

ORBIT DETERMINATION ACCURACY

ST 90.3 SR 44.2 SS 49.0
CRY .8134 CRS -.9778 CST -.6741
LSA 103.1 MSA 38.4 SSA .8
EL1 97.7 EL2 23.8 ALP 23.17



LAUNCH DATE SEP 10 1973

FLIGHT TIME 172.00

ARRIVAL DATE MAR 1 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.807 GAL 9.01 AZL 88.49 HCA 111.64 SMA 193.51 ECC .26908 INC 1.5122 V1 29.580  
 RP 238.14 LAP 1.41 LOP 98.79 VP 20.707 GAP 8.19 AZP 90.56 TAL 44.58 TAP 156.22 RCA 141.44 APO 243.58 V2 23.073  
 RC 211.443 GL 7.79 GP -13.02 ZAL 27.78 ZAP 112.23 ETS 187.24 ZAE 147.68 ETE 205.78 ZAC 72.72 ETC 284.20 LVI -7.13

DISTANCE 376.140 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.849 VHL 6.313 DLA 12.65 RAL 9.70 RAD 6650.6 VEL 12.638 PTH 7.49 VHP 2.795 DPA -.58 RAP 34.54 ECC 1.6558  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 54 26 3558.39 -46.98 133.56 256.24 98.55 8 53 44 2558.4 -36.30 102.63  
 60.00 8 20 1 3490.29 -40.09 128.52 257.33 94.54 9 18 11 2490.3 -33.92 99.26  
 70.00 8 56 24 3383.19 -34.13 120.24 257.73 91.49 9 52 48 2383.2 -29.96 92.31  
 80.00 9 49 57 3215.43 -29.85 107.56 257.77 89.46 10 43 33 2215.4 -27.04 80.49  
 90.00 11 4 51 2973.73 -28.25 89.76 257.74 88.73 11 54 24 1973.7 -25.93 62.99  
 100.00 12 32 49 2689.90 -29.85 68.92 257.77 89.46 13 17 39 1689.9 -27.04 41.85  
 110.00 13 55 51 2430.01 -34.13 49.15 257.73 91.49 14 36 21 1430.0 -29.96 21.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5107 TRA-1.2839 TC3 -.4177 BAU .4190 SGT 1385.4 SGR 1061.0 SG3 1113.6 ST 29.3 SR 32.2 SS 19.3  
 RDE -.7094 RRA -.0612 RC3 -.6664 FAU .43005 RRT .5512 RRF .7459 RTF .6950 CRT .8073 CRS -.0147 CST -.5863  
 FDE .0350 FRA-5.5836 FC3-9.3430 BSP 1991 SGB 1745.0 R23 .2056 R13 .7936 LSA 41.9 MSA 22.5 SBA 2.6  
 BDE .8741 BRA 1.2854 BC3 .7865 FSP 1888 SG1 1557.1 SG2 787.6 THA 31.95 EL1 41.4 EL2 13.5 ALF 48.37

LAUNCH DATE SEP 10 1973

FLIGHT TIME 174.00

ARRIVAL DATE MAR 3 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.803 GAL 8.97 AZL 88.46 HCA 112.60 SMA 193.44 ECC .26851 INC 1.5439 V1 29.580  
 RP 238.47 LAP 1.43 LOP 99.75 VP 20.664 GAP 7.92 AZP 90.59 TAL 44.47 TAP 157.06 RCA 141.50 APO 245.39 V2 23.040  
 RC 214.394 GL 7.97 GP -13.25 ZAL 27.90 ZAP 110.64 ETS 186.90 ZAE 146.02 ETE 204.59 ZAC 72.64 ETC 284.25 LVI -7.05

DISTANCE 379.948 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.643 VHL 6.296 DLA 12.85 RAL 9.69 RAD 6650.5 VEL 12.630 PTH 7.48 VHP 2.762 DPA -1.03 RAP 34.02 ECC 1.6524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 53 38 3561.16 -47.01 133.82 256.31 98.35 8 52 59 2561.2 -36.40 102.83  
 60.00 8 18 58 3493.71 -40.11 128.81 257.37 94.34 9 17 12 2493.7 -34.01 99.51  
 70.00 8 55 5 3387.45 -34.13 120.57 257.74 91.30 9 51 32 2387.5 -30.04 92.61  
 80.00 9 48 21 3220.56 -29.85 107.94 257.77 89.26 10 42 2 2220.6 -27.12 80.85  
 90.00 11 3 7 2979.27 -28.24 90.17 257.73 88.52 11 52 46 1979.3 -26.01 63.38  
 100.00 12 31 13 2695.03 -29.85 69.31 257.77 89.26 13 16 8 1695.0 -27.12 42.21  
 110.00 13 54 31 2434.27 -34.13 49.49 257.74 91.30 14 35 6 1434.3 -30.04 21.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5188 TRA-1.3283 TC3 -.4828 BAU .4460 SGT 1459.2 SGR 1080.3 SG3 1141.0 ST 30.1 SR 32.0 SS 19.6  
 RDE -.7022 RRA -.0749 RC3 -.6895 FAU .43943 RRT .5611 RRF .7585 RTF .7221 CRT .8056 CRS .0001 CST -.5771  
 FDE .0741 FRA-5.7060 FC3-9.5964 BSP 2149 SGB 1815.6 R23 .1998 R13 .8093 LSA 42.2 MSA 22.9 SBA 2.6  
 BDE .8730 BRA 1.3304 BC3 .8418 FSP 1940 SG1 1637.9 SG2 783.2 THA 31.14 EL1 41.7 EL2 13.7 ALF 47.21

LAUNCH DATE SEP 10 1973

FLIGHT TIME 176.00

ARRIVAL DATE MAR 5 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.800 GAL 8.93 AZL 88.42 HCA 113.55 SMA 193.39 ECC .26798 INC 1.5761 V1 29.580  
 RP 238.79 LAP 1.44 LOP 100.70 VP 20.623 GAP 7.64 AZP 90.63 TAL 44.34 TAP 157.89 RCA 141.56 APO 245.21 V2 23.008  
 RC 217.340 GL 8.16 GP -13.48 ZAL 28.03 ZAP 109.05 ETS 186.55 ZAE 144.34 ETE 203.46 ZAC 72.36 ETC 284.31 LVI -6.87

DISTANCE 383.757 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.440 VHL 6.280 DLA 13.05 RAL 9.70 RAD 6650.5 VEL 12.622 PTH 7.48 VHP 2.732 DPA -1.48 RAP 33.50 ECC 1.6491  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 50 3564.06 -47.04 134.08 256.40 98.14 8 52 14 2564.1 -36.50 103.03  
 60.00 8 17 56 3497.27 -40.12 129.11 257.43 94.14 9 16 13 2497.3 -34.11 99.76  
 70.00 8 53 44 3391.89 -34.14 120.92 257.77 91.09 9 50 16 2391.9 -30.13 92.92  
 80.00 9 46 43 3225.90 -29.84 108.33 257.78 89.08 10 40 29 2225.9 -27.20 81.22  
 90.00 11 1 21 2985.04 -28.23 90.59 257.74 88.31 11 51 6 1985.0 -26.09 63.79  
 100.00 12 29 35 2700.37 -29.84 69.70 257.78 89.08 13 14 35 1700.4 -27.20 42.59  
 110.00 13 53 11 2438.70 -34.14 49.83 257.77 91.09 14 33 49 1438.7 -30.13 21.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5267 TRA-1.3742 TC3 -.5500 BAU .4746 SGT 1537.7 SGR 1099.8 SG3 1167.4 ST 30.8 SR 31.7 SS 19.8  
 RDE -.6946 RRA -.0888 RC3 -.7126 FAU .44837 RRT .6089 RRF .7706 RTF .7163 CRT .8038 CRS .0193 CST -.5677  
 FDE .1158 FRA-5.8213 FC3-9.8421 BSP 2313 SGB 1890.5 R23 .1942 R13 .8235 LSA 42.5 MSA 23.2 SBA 2.6  
 BDE .8717 BRA 1.3770 BC3 .9002 FSP 1889 SG1 1722.7 SG2 776.8 THA 30.38 EL1 42.0 EL2 13.9 ALF 46.02

LAUNCH DATE SEP 10 1973

FLIGHT TIME 178.00

ARRIVAL DATE MAR 7 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.798 GAL 8.90 AZL 88.39 HCA 114.50 SMA 193.34 ECC .26749 INC 1.6085 V1 29.580  
 RP 239.10 LAP 1.46 LOP 101.65 VP 20.584 GAP 7.37 AZP 90.67 TAL 44.21 TAP 158.71 RCA 141.63 APO 245.06 V2 22.975  
 RC 220.278 GL 8.35 GP -13.70 ZAL 28.17 ZAP 107.47 ETS 186.20 ZAE 142.65 ETE 202.44 ZAC 72.48 ETC 284.36 LVI -6.89

DISTANCE 387.567 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.239 VHL 6.264 DLA 13.26 RAL 9.71 RAD 6650.4 VEL 12.614 PTH 7.47 VHP 2.704 DPA -1.93 RAP 32.99 ECC 1.6450  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 52 2 3567.09 -47.07 134.38 256.50 97.93 8 51 29 2567.1 -36.60 103.25  
 60.00 8 16 52 3500.99 -40.14 129.42 257.49 93.93 9 15 13 2501.0 -34.21 100.03  
 70.00 8 52 23 3396.50 -34.14 121.28 257.81 90.88 9 48 59 2396.5 -30.22 93.25  
 80.00 9 45 3 3231.45 -29.84 108.75 257.80 88.84 10 38 55 2231.5 -27.28 81.61  
 90.00 10 59 32 2991.05 -28.22 91.03 257.75 88.09 11 49 23 1991.0 -26.16 64.21  
 100.00 12 27 55 2705.93 -29.84 70.12 257.80 88.84 13 13 1 1705.9 -27.28 42.98  
 110.00 13 51 49 2443.32 -34.14 50.19 257.81 90.88 14 32 32 1443.3 -30.22 22.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5344 TRA-1.4213 TC3 -.6194 BAU .5046 SGT 1620.2 SGR 1119.5 SG3 1192.5 ST 31.6 SR 31.5 SS 20.1  
 RDE -.6865 RRA -.1023 RC3 -.7358 FAU .45679 RRT .6344 RRF .7820 RTF .7677 CRT .8019 CRS .0316 CST -.5572  
 FDE .1618 FRA-5.9288 FC3-10.0783 BSP 2485 SGB 1969.3 R23 .1895 R13 .8361 LSA 42.8 MSA 23.5 SBA 2.6  
 BDE .8699 BRA 1.4250 BC3 .9618 FSP 2036 SG1 1810.7 SG2 774.3 THA 29.60 EL1 42.3 EL2 14.0 ALF 44.81

LAUNCH DATE SEP 10 1973

FLIGHT TIME 180.00

ARRIVAL DATE MAR 9 1974

Heliocentric Conic  
 RL 150.83 LAL -0.00 LOL 347.15 VL 32.796 GAL 8.86 AZL 88.36 HCA 115.44 SMA 193.31 ECC .26702 INC 1.6415 V1 29.580  
 RP 239.42 LAP 1.48 LOP 102.60 VP 20.546 GAP 7.10 AZP 90.71 TAL 44.08 TAP 159.52 RCA 141.69 APO 244.93 V2 22.944  
 RC 223.209 GL 8.54 GP -13.93 ZAL 28.32 ZAP 105.89 ETS 185.84 ZAE 140.96 ETE 201.46 ZAC 72.40 ETC 284.41 LVI -6.81

Planetoentric Conic  
 C3 39.040 VHL 6.248 DLA 13.48 RAL 9.72 RAD 6650.3 VEL 12.606 PTH 7.46 VHP 2.679 DPA -2.37 RAP 32.48 ECC 1.6425  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 51 14 3570.24 -47.10 134.68 256.61 97.70 8 50 44 2570.2 -38.71 103.47  
 60.00 8 15 48 3504.86 -40.16 129.75 257.57 93.70 9 14 13 2504.9 -34.31 100.30  
 70.00 8 50 59 3401.30 -34.15 121.65 257.86 90.66 9 47 41 2401.3 -30.31 93.59  
 80.00 9 43 21 3237.23 -29.83 109.18 257.82 88.61 10 37 19 2237.2 -27.37 82.02  
 90.00 10 57 42 2997.29 -28.21 91.49 257.77 87.87 11 47 39 1997.3 -26.25 64.65  
 100.00 12 26 13 2711.70 -29.83 70.54 257.82 88.61 13 11 25 1711.7 -27.37 43.39  
 110.00 13 50 26 2448.12 -34.15 50.57 257.86 90.66 14 31 14 1448.1 -30.31 22.51

Differential Corrections  
 TDE -.5415 TRA-1.4693 TC3 -.6908 BAU .5357 SGT 1706.4 SGR 1139.5 SCS 1216.5  
 RDE -.6781 RRA -.1159 RC3 -.7591 FAU .46478 RRT .6579 RRF .7928 RTF .7867 CRT .7999 CRS .0473 CST -.5474  
 FDE .2083 FRA-6.0287 FC-10.3065 BSP 2663 SGB 2051.8 R23 .1853 R13 .8475 LSA 43.1 MSA 23.8 SSA 2.6  
 BDE .8678 BRA 1.4739 BC3 1.0264 FSP 2079 SGI 1901.9 SCS 769.9 THA 28.88 EL1 42.7 EL2 14.2 ALF 43.60

LAUNCH DATE SEP 10 1973

FLIGHT TIME 182.00

ARRIVAL DATE MAR 11 1974

Heliocentric Conic  
 RL 150.63 LAL -0.00 LOL 347.15 VL 32.795 GAL 8.82 AZL 88.33 HCA 116.39 SMA 193.29 ECC .26659 INC 1.6748 V1 29.580  
 RP 239.73 LAP 1.50 LOP 103.54 VP 20.509 GAP 6.84 AZP 90.74 TAL 43.93 TAP 160.31 RCA 141.76 APO 244.82 V2 22.912  
 RC 226.132 GL 8.74 GP -14.15 ZAL 28.48 ZAP 104.33 ETS 185.48 ZAE 139.27 ETE 200.54 ZAC 72.33 ETC 284.46 LVI -6.72

Planetoentric Conic  
 C3 38.843 VHL 6.232 DLA 13.71 RAL 9.74 RAD 6650.3 VEL 12.598 PTH 7.46 VHP 2.656 DPA -2.02 RAP 31.97 ECC 1.6393  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 50 26 3573.53 -47.13 134.99 256.74 97.46 8 49 59 2573.5 -38.82 103.71  
 60.00 8 14 43 3508.88 -40.18 130.09 257.65 93.47 9 13 12 2508.9 -34.41 100.59  
 70.00 8 49 35 3406.29 -34.15 122.04 257.91 90.43 9 46 21 2406.3 -30.41 93.95  
 80.00 9 41 37 3243.23 -29.82 109.62 257.86 88.38 10 35 40 2243.2 -27.45 82.45  
 90.00 10 55 49 3003.77 -28.19 91.96 257.79 87.63 11 45 52 2003.8 -26.33 65.10  
 100.00 12 24 29 2713.70 -29.82 70.99 257.86 88.38 13 9 47 1717.7 -27.45 43.81  
 110.00 13 49 1 2453.11 -34.15 50.98 257.91 90.43 14 29 54 1453.1 -30.41 22.87

Differential Corrections  
 TDE -.5484 TRA-1.5184 TC3 -.7643 BAU .5680 SGT 1796.2 SGR 1159.7 SCS 1259.3  
 RDE -.6695 RRA -.1296 RC3 -.7824 FAU .47226 RRT .6795 RRF .8032 RTF .8036 CRT .7979 CRS .0618 CST -.5384  
 FDE .2545 FRA-6.1222 FC-10.5257 BSP 2846 SGB 2138.0 R23 .1814 R13 .8577 LSA 43.5 MSA 24.1 SSA 2.6  
 BDE .8655 BRA 1.5240 BC3 1.0937 FSP 2116 SGI 1996.3 SCS 765.5 THA 28.20 EL1 43.0 EL2 14.4 ALF 42.39

LAUNCH DATE SEP 10 1973

FLIGHT TIME 184.00

ARRIVAL DATE MAR 13 1974

Heliocentric Conic  
 RL 150.63 LAL -0.00 LOL 347.15 VL 32.794 GAL 8.78 AZL 88.29 HCA 117.33 SMA 193.28 ECC .26618 INC 1.7086 V1 29.580  
 RP 240.03 LAP 1.52 LOP 104.48 VP 20.473 GAP 6.57 AZP 90.78 TAL 43.77 TAP 161.10 RCA 141.83 APO 244.73 V2 22.882  
 RC 229.048 GL 8.94 GP -14.36 ZAL 28.64 ZAP 102.78 ETS 185.11 ZAE 137.58 ETE 199.67 ZAC 72.25 ETC 284.50 LVI -6.64

Planetoentric Conic  
 C3 38.848 VHL 6.217 DLA 13.93 RAL 9.77 RAD 6650.2 VEL 12.591 PTH 7.45 VHP 2.635 DPA -3.26 RAP 31.47 ECC 1.6361  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 49 37 3576.95 -47.16 135.32 256.87 97.21 8 49 14 2576.9 -38.94 103.93  
 60.00 8 13 37 3513.06 -40.19 130.45 257.75 93.23 9 12 10 2513.1 -34.52 100.90  
 70.00 8 48 8 3411.46 -34.15 122.44 257.98 90.19 9 45 0 2411.5 -30.51 94.32  
 80.00 9 39 51 3249.45 -29.80 110.08 257.90 88.14 10 34 0 2249.5 -27.54 82.89  
 90.00 10 53 53 3010.51 -28.17 92.45 257.83 87.38 11 44 3 2010.5 -26.41 65.58  
 100.00 12 22 43 2723.92 -29.80 71.45 257.90 88.14 13 8 7 1723.9 -27.54 44.26  
 110.00 13 47 35 2458.28 -34.15 51.36 257.98 90.19 14 28 33 1458.3 -30.51 23.24

Differential Corrections  
 TDE -.5544 TRA-1.5681 TC3 -.8392 BAU .6011 SGT 1888.7 SGR 1180.3 SCS 1261.1  
 RDE -.6608 RRA -.1432 RC3 -.8058 FAU .47930 RRT .6994 RRF .8131 RTF .8186 CRT .7956 CRS .0749 CST -.5308  
 FDE .2996 FRA-6.2091 FC-10.7365 BSP 3038 SGB 2227.2 R23 .1780 R13 .8670 LSA 43.8 MSA 24.4 SSA 2.6  
 BDE .8628 BRA 1.5747 BC3 1.1634 FSP 2147 SGI 2093.1 SCS 761.2 THA 27.56 EL1 43.3 EL2 14.5 ALF 41.20

LAUNCH DATE SEP 10 1973

FLIGHT TIME 186.00

ARRIVAL DATE MAR 15 1974

Heliocentric Conic  
 RL 150.63 LAL -0.00 LOL 347.15 VL 32.794 GAL 8.74 AZL 88.26 HCA 118.27 SMA 193.28 ECC .26580 INC 1.7429 V1 29.580  
 RP 240.34 LAP 1.54 LOP 105.42 VP 20.439 GAP 6.31 AZP 90.83 TAL 43.61 TAP 161.88 RCA 141.90 APO 244.65 V2 22.831  
 RC 231.955 GL 9.15 GP -14.58 ZAL 28.82 ZAP 101.24 ETS 184.74 ZAE 135.89 ETE 198.85 ZAC 72.18 ETC 284.55 LVI -6.55

Planetoentric Conic  
 C3 38.456 VHL 6.201 DLA 14.17 RAL 9.79 RAD 6650.1 VEL 12.583 PTH 7.45 VHP 2.617 DPA -3.69 RAP 30.98 ECC 1.6329  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 48 48 3580.50 -47.19 135.66 257.02 96.95 8 48 28 2580.5 -39.06 104.21  
 60.00 8 12 30 3517.39 -40.21 130.81 257.86 92.98 9 11 8 2517.4 -34.63 101.21  
 70.00 8 46 40 3416.82 -34.15 122.86 258.05 89.94 9 43 37 2416.8 -30.61 94.71  
 80.00 9 38 2 3255.91 -29.79 110.56 257.95 87.88 10 32 18 2255.9 -27.63 83.35  
 90.00 10 51 54 3017.49 -28.15 92.96 257.87 87.13 11 42 11 2017.5 -26.50 66.07  
 100.00 12 20 54 2730.58 -29.79 71.93 257.95 87.88 13 6 24 1730.4 -27.63 44.71  
 110.00 13 46 7 2463.64 -34.15 51.78 258.05 89.94 14 27 10 1463.6 -30.61 23.62

Differential Corrections  
 TDE -.5593 TRA-1.6179 TC3 -.9151 BAU .6352 SGT 1982.9 SGR 1202.4 SCS 1283.2  
 RDE -.6525 RRA -.1577 RC3 -.8300 FAU .48638 RRT .7179 RRF .8230 RTF .8323 CRT .7933 CRS .0817 CST -.5285  
 FDE .3347 FRA-6.3011 FC-10.9496 BSP 3237 SGB 2319.0 R23 .1747 R13 .8750 LSA 44.2 MSA 24.7 SSA 2.6  
 BDE .8594 BRA 1.6255 BC3 1.2354 FSP 2160 SGI 2191.8 SCS 757.3 THA 27.00 EL1 43.7 EL2 14.7 ALF 40.08

LAUNCH DATE SEP 10 1973 FLIGHT TIME 108.00 ARRIVAL DATE MAR 17 1974

Heliocentric Conic: RL 150.63 LAL -0.00 LOL 347.15 VL 32.799 GAL 8.70 AZL 88.22 HCA 119.21 SMA 193.29 ECC .26545 INC 1.7777 V1 29.580  
 RP 240.83 LAP 1.95 LOP 106.36 VP 20.407 GAP 8.06 AZP 90.87 TAL 43.43 TAP 162.64 RCA 141.99 APO 244.59 V2 22.821  
 RC 234.852 GL 9.38 GP -14.79 ZAL 29.00 ZAP 99.75 ETS 184.36 ZAE 134.20 ETE 198.06 ZAC 72.10 ETC 284.59 LVI -6.45

Planetocentric Conic: C3 38.264 VHL 6.186 DLA 14.41 RAL 9.83 RAD 6650.1 VEL 12.576 PTH 7.44 VHP 2.600 DPA -4.12 RAP 30.51 ECC 1.6297  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 58 3584.19 -47.22 136.01 257.18 96.68 8 47 42 2584.2 -39.18 104.47  
 60.00 8 11 22 3521.89 -40.22 131.20 257.97 92.73 9 10 4 2321.9 -34.75 101.54  
 70.00 8 45 10 3422.40 -34.15 123.30 258.13 89.68 9 42 13 2422.4 -30.71 95.11  
 80.00 9 38 10 3262.62 -29.77 111.06 258.01 87.62 10 30 33 2262.6 -27.73 83.82  
 90.00 10 49 52 3024.75 -26.12 93.49 257.92 86.87 11 40 17 2024.7 -26.59 66.59  
 100.00 12 19 2 2737.09 -29.77 72.43 258.01 87.62 13 4 39 1737.1 -27.73 45.19  
 110.00 13 44 37 2469.22 -34.15 52.22 258.13 89.68 14 25 46 1469.2 -30.71 24.03

Differential Corrections: TDE -.5677 TRA-1.6728 TC3 -.9974 BAU .6705 SGT 2087.7 SGR 1218.6 SG3 1296.6 ST 35.6 SR 29.8 SS 21.4  
 RDE -.6402 RRA -.1685 RC3 -.8506 FAU .49040 RRT .7343 RRF .8304 RTF .8431 CRT .7915 CR8 .1174 CST -.5006  
 FDE .4260 FRA-6.3294 FC-11.0955 BSP 3422 SGB 2417.3 R23 .1732 R13 .8819 LSA 44.5 MSA 25.0 SSA 2.6  
 BDE .8557 BRA 1.6812 BC3 1.3108 FSP 2230 SGI 2297.4 SG2 751.6 THA 26.22 EL1 44.1 EL2 14.7 ALF 38.58

LAUNCH DATE SEP 10 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 19 1974

Heliocentric Conic: RL 150.63 LAL -0.00 LOL 347.15 VL 32.799 GAL 8.66 AZL 88.19 HCA 120.14 SMA 193.30 ECC .26512 INC 1.8131 V1 29.580  
 RP 240.93 LAP 1.97 LOP 107.30 VP 20.375 GAP 5.80 AZP 90.91 TAL 43.25 TAP 163.39 RCA 142.06 APO 244.55 V2 22.792  
 RC 237.739 GL 9.57 GP -15.01 ZAL 29.19 ZAP 98.23 ETS 183.98 ZAE 132.53 ETE 197.31 ZAC 72.02 ETC 284.62 LVI -6.36

Planetocentric Conic: C3 38.075 VHL 6.170 DLA 14.66 RAL 9.87 RAD 6650.0 VEL 12.568 PTH 7.44 VHP 2.585 DPA -4.54 RAP 30.05 ECC 1.6266  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 47 7 3588.01 -47.25 136.37 257.35 96.40 8 46 55 2588.0 -39.31 104.75  
 60.00 8 10 13 3526.53 -40.24 131.59 258.10 92.46 9 8 59 2526.6 -34.86 101.88  
 70.00 8 43 38 3428.17 -34.15 123.75 258.22 89.42 9 40 47 2428.2 -30.82 95.52  
 80.00 9 34 15 3269.57 -29.75 111.58 258.08 87.35 10 28 45 2269.6 -27.82 84.32  
 90.00 10 47 47 3032.27 -26.09 94.04 257.98 86.59 11 38 19 2032.3 -26.67 67.12  
 100.00 12 17 7 2744.04 -29.75 72.94 258.08 87.35 13 2 51 1744.0 -27.82 45.69  
 110.00 13 43 5 2474.99 -34.15 52.67 258.22 89.42 14 24 20 1475.0 -30.82 24.44

Differential Corrections: TDE -.5730 TRA-1.7256 TC3 -1.0782 BAU .7082 SGT 2190.2 SGR 1238.3 SG3 1312.9 ST 36.9 SR 29.4 SS 21.6  
 RDE -.6297 RRA -.1813 RC3 -.8732 FAU .49934 RRT .7497 RRF .8386 RTF .8533 CRT .7893 CR8 .1357 CST -.4881  
 FDE .4861 FRA-6.3814 FC-11.2630 BSP 3624 SGB 2516.0 R23 .1713 R13 .8883 LSA 44.9 MSA 25.3 SSA 2.6  
 BDE .8514 BRA 1.7351 BC3 1.3874 FSP 2239 SGI 2402.5 SG2 747.1 THA 25.62 EL1 44.4 EL2 14.8 ALF 37.32

LAUNCH DATE SEP 10 1973 FLIGHT TIME 192.00 ARRIVAL DATE MAR 21 1974

Heliocentric Conic: RL 150.63 LAL -0.00 LOL 347.15 VL 32.797 GAL 8.62 AZL 88.15 HCA 121.07 SMA 193.33 ECC .26481 INC 1.8491 V1 29.580  
 RP 241.22 LAP 1.98 LOP 108.23 VP 20.345 GAP 5.55 AZP 90.95 TAL 43.07 TAP 164.14 RCA 142.13 APO 244.52 V2 22.763  
 RC 240.815 GL 9.79 GP -15.22 ZAL 29.39 ZAP 96.74 ETS 183.60 ZAE 130.86 ETE 196.59 ZAC 71.95 ETC 284.66 LVI -6.26

Planetocentric Conic: C3 37.888 VHL 6.155 DLA 14.91 RAL 9.81 RAD 6649.9 VEL 12.561 PTH 7.43 VHP 2.572 DPA -4.96 RAP 29.80 ECC 1.6235  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 46 16 3591.98 -47.28 136.75 257.53 96.11 8 46 8 2592.0 -39.44 105.04  
 60.00 8 9 2 3531.39 -40.25 132.00 258.23 92.18 9 7 53 2531.4 -34.98 102.83  
 70.00 8 42 4 3434.15 -34.14 124.21 258.32 89.14 9 39 18 2434.1 -30.93 95.96  
 80.00 9 32 18 3276.77 -29.73 112.11 258.15 87.07 10 26 54 2276.8 -27.91 84.83  
 90.00 10 45 38 3040.08 -26.06 94.61 258.04 86.31 11 36 18 2040.1 -26.76 67.67  
 100.00 12 15 9 2751.24 -29.73 73.48 258.15 87.07 13 1 1 1751.2 -27.91 46.20  
 110.00 13 41 30 2480.96 -34.14 53.13 258.32 89.14 14 22 51 1481.0 -30.93 24.87

Differential Corrections: TDE -.5779 TRA-1.7792 TC3 -1.1607 BAU .7425 SGT 2293.4 SGR 1257.6 SG3 1327.3 ST 37.3 SR 29.0 SS 21.9  
 RDE -.6188 RRA -.1938 RC3 -.8954 FAU .49954 RRT .7638 RRF .8463 RTF .8624 CRT .7871 CR8 .1344 CST -.4749  
 FDE .5489 FRA-6.4231 FC-11.4145 BSP 3828 SGB 2617.3 R23 .1698 R13 .8940 LSA 45.3 MSA 25.3 SSA 2.6  
 BDE .8486 BRA 1.7897 BC3 1.4660 FSP 2287 SGI 2509.8 SG2 742.4 THA 25.05 EL1 44.8 EL2 14.9 ALF 36.05

LAUNCH DATE SEP 10 1973 FLIGHT TIME 194.00 ARRIVAL DATE MAR 23 1974

Heliocentric Conic: RL 150.63 LAL -0.00 LOL 347.15 VL 32.799 GAL 8.57 AZL 88.11 HCA 122.00 SMA 193.36 ECC .26452 INC 1.8857 V1 29.580  
 RP 241.50 LAP 1.80 LOP 109.16 VP 20.316 GAP 5.30 AZP 91.00 TAL 42.87 TAP 164.88 RCA 142.21 APO 244.51 V2 22.734  
 RC 243.479 GL 10.01 GP -15.43 ZAL 29.39 ZAP 95.28 ETS 183.21 ZAE 129.20 ETE 195.90 ZAC 71.87 ETC 284.70 LVI -6.15

Planetocentric Conic: C3 37.702 VHL 6.140 DLA 15.18 RAL 9.95 RAD 6649.9 VEL 12.553 PTH 7.43 VHP 2.561 DPA -5.37 RAP 29.18 ECC 1.6206  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 45 24 3596.10 -47.31 137.15 257.72 95.81 8 45 20 2596.1 -39.58 105.34  
 60.00 8 7 49 3536.39 -40.26 132.43 258.38 91.89 9 6 46 2536.4 -35.11 102.60  
 70.00 8 40 27 3440.34 -34.14 124.70 258.43 88.85 9 37 48 2440.3 -31.04 96.41  
 80.00 9 30 16 3284.24 -29.70 112.66 258.23 86.78 10 25 1 2284.2 -28.01 85.37  
 90.00 10 43 25 3048.17 -26.02 95.19 258.11 86.02 11 34 13 2048.2 -26.85 68.25  
 100.00 12 13 8 2758.71 -29.70 74.03 258.23 86.78 12 59 7 1758.7 -28.01 46.73  
 110.00 13 39 54 2487.16 -34.14 53.62 258.43 88.85 14 21 21 1487.2 -31.04 25.32

Differential Corrections: TDE -.5821 TRA-1.8333 TC3 -1.2447 BAU .7795 SGT 2402.8 SGR 1277.1 SG3 1340.4 ST 38.1 SR 28.6 SS 22.2  
 RDE -.6076 RRA -.2062 RC3 -.9177 FAU .50324 RRT .7768 RRF .8536 RTF .8704 CRT .7848 CR8 .1271 CST -.4625  
 FDE .6112 FRA-6.4565 FC-11.5555 BSP 4036 SGB 2721.1 R23 .1686 R13 .8992 LSA 45.7 MSA 25.8 SSA 2.6  
 BDE .8414 BRA 1.8448 BC3 1.5464 FSP 2309 SGI 2619.2 SG2 737.8 THA 24.51 EL1 45.2 EL2 14.9 ALF 34.80

LAUNCH DATE SEP 10 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 25 1974

HELIOCENTRIC CONIC											DISTANCE 421.844				EARTH TO MARS										
RL	150.63	LAL	-0.00	LOL	347.19	VL	32.801	GAL	8.33	AZL	88.08	HCA	122.93	SMA	193.40	ECC	.26425	INC	1.9229	V1	29.580				
RP	241.78	LAP	1.61	LOP	110.09	VP	20.288	GAP	5.05	AZP	91.05	TAL	42.67	TAP	165.60	RCA	142.30	APO	244.51	V2	22.708				
RC	246.330	GL	10.24	GP	-15.63	ZAL	29.81	ZAP	93.84	ETS	182.82	ZAE	127.58	ETE	195.24	ZAC	71.79	ETC	284.73	LVI	-6.08				
PLANETOCENTRIC CONIC											EARTH TO MARS														
C3	37.519	VHL	6.129	DLA	15.44	RAL	10.00	RAD	6649.8	VEL	12.546	PTH	7.42	VHP	2.552	DPA	-5.77	RAP	28.74	ECC	1.6178				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		7	44	30	3800.36		-47.33		137.55		257.92		95.49		8	44	31	2600.4		-39.72		105.65			
60.00		8	6	35	3541.58		-40.27		132.87		258.53		91.59		9	5	37	2541.6		-35.23		102.98			
70.00		8	38	48	3446.75		-34.13		125.20		258.54		88.56		9	36	15	2446.8		-31.15		96.87			
80.00		9	28	12	3291.99		-29.67		113.24		258.31		86.48		10	23	4	2292.0		-28.11		85.92			
90.00		10	41	8	3056.57		-27.98		95.81		258.18		85.71		11	32	4	2056.6		-26.94		68.85			
100.00		12	11	3	2786.46		-29.67		74.61		258.31		86.48		12	57	10	1766.5		-28.11		47.29			
110.00		13	38	15	2493.97		-34.13		54.12		258.54		88.56		14	19	48	1493.6		-31.15		25.79			
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY									
TDE	-.5858	TRA	-1.0879	TC3	-1.3299	BAU	.8168		SGT	2512.2	SGR	1296.5	SG3	1351.0		ST	38.9	SR	28.1	SS	22.4				
RDE	-.5960	RRA	-.2185	RC3	-.9397	FAU	.50631		RRT	.7889	RRF	.8606	RTF	.8776		CRT	.7828	CRS	.1897	CST	-.4500				
FDE	.6749	FRA	-6.4823	FC	-11.6831	BSP	4246		SGB	2027.0	R23	1.677	R13	.9039		LSA	46.1	NSA	26.0	NSA	2.6				
BDE	.8357	BRA	1.9005	BC3	1.6284	FSP	2327		SG1	2730.3	SG2	733.2	THA	23.99		EL1	45.6	EL2	14.9	ALF	33.56				

LAUNCH DATE SEP 10 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 27 1974

HELIOCENTRIC CONIC											DISTANCE 425.650				EARTH TO MARS										
RL	150.63	LAL	-0.00	LOL	347.15	VL	32.803	GAL	8.49	AZL	88.04	HCA	123.86	SMA	193.45	ECC	.26400	INC	1.9608	V1	29.580				
RP	242.06	LAP	1.63	LOP	111.02	VP	20.261	GAP	4.80	AZP	91.09	TAL	42.47	TAP	166.32	RCA	142.38	APO	244.52	V2	22.679				
RC	249.167	GL	10.47	GP	-15.84	ZAL	30.03	ZAP	92.42	ETS	182.43	ZAE	125.92	ETE	194.60	ZAC	71.71	ETC	284.76	LVI	-5.94				
PLANETOCENTRIC CONIC											EARTH TO MARS														
C3	37.337	VHL	6.110	DLA	15.72	RAL	10.05	RAD	6649.7	VEL	12.539	PTH	7.42	VHP	2.544	DPA	-6.17	RAP	28.34	ECC	1.6145				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		7	43	36	3604.78		-47.36		137.98		258.14		95.17		8	43	40	2604.8		-39.86		105.98			
60.00		8	5	19	3546.95		-40.28		133.33		258.69		91.28		9	4	26	2546.9		-35.36		103.37			
70.00		8	37	6	3453.40		-34.11		125.72		258.66		88.25		9	34	39	2453.4		-31.26		97.36			
80.00		9	26	3	3300.02		-29.63		113.83		258.40		86.17		10	21	3	2300.0		-28.21		86.50			
90.00		10	38	46	3065.29		-27.93		96.44		258.26		85.40		11	29	51	2065.3		-27.03		69.47			
100.00		12	8	55	2774.49		-29.63		75.20		258.40		86.17		12	55	9	1774.5		-28.21		47.87			
110.00		13	36	32	2500.22		-34.11		54.64		258.66		88.25		14	18	13	1500.2		-31.26		26.27			
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY									
TDE	-.5885	TRA	-1.9427	TC3	-1.4161	BAU	.8545		SGT	2623.0	SGR	1316.3	SG3	1362.3		ST	39.7	SR	27.7	SS	22.7				
RDE	-.5843	RRA	-.2309	RC3	-.9619	FAU	.50896		RRT	.8000	RRF	.8673	RTF	.8841		CRT	.7803	CRS	.2053	CST	-.4391				
FDE	.7362	FRA	-6.5024	FC	-11.8018	BSP	4460		SGB	2934.8	R23	1.671	R13	.9082		LSA	46.5	NSA	26.2	NSA	2.3				
BDE	.8293	BRA	1.9564	BC3	1.7119	FSP	2338		SG1	2842.9	SG2	728.7	THA	23.51		EL1	46.0	EL2	14.9	ALF	32.38				

LAUNCH DATE SEP 10 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC											DISTANCE 429.456				EARTH TO MARS										
RL	150.63	LAL	-0.00	LOL	347.15	VL	32.806	GAL	8.44	AZL	88.00	HCA	124.78	SMA	193.50	ECC	.26377	INC	1.9995	V1	29.580				
RP	242.33	LAP	1.64	LOP	111.94	VP	20.233	GAP	4.55	AZP	91.14	TAL	42.25	TAP	167.03	RCA	142.46	APO	244.54	V2	22.652				
RC	251.989	GL	10.70	GP	-16.05	ZAL	30.25	ZAP	91.02	ETS	182.03	ZAE	124.30	ETE	193.98	ZAC	71.62	ETC	284.75	LVI	-5.82				
PLANETOCENTRIC CONIC											EARTH TO MARS														
C3	37.158	VHL	6.096	DLA	16.00	RAL	10.11	RAD	6649.7	VEL	12.532	PTH	7.41	VHP	2.538	DPA	-6.56	RAP	28.79	ECC	1.6115				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		7	42	40	3609.35		-47.39		138.42		258.36		94.83		8	42	49	2609.4		-40.01		106.32			
60.00		8	4	1	3552.50		-40.29		133.80		258.86		90.96		9	3	14	2552.5		-35.50		103.78			
70.00		8	35	21	3460.28		-34.10		126.25		258.79		87.94		9	33	1	2460.3		-31.38		97.86			
80.00		9	23	50	3308.34		-29.59		114.45		258.50		85.85		10	18	58	2308.3		-28.31		87.10			
90.00		10	36	20	3074.33		-27.88		97.10		258.34		85.08		11	27	34	2074.3		-27.12		70.11			
100.00		12	6	42	2782.81		-29.59		75.81		258.50		85.85		12	53	5	1782.8		-28.31		48.46			
110.00		13	34	47	2507.10		-34.10		55.17		258.79		87.94		14	16	34	1507.1		-31.38		26.78			
DIFFERENTIAL CORRECTIONS											MID-COURSE EXECUTION ACCURACY					ORBIT DETERMINATION ACCURACY									
TDE	-.5901	TRA	-1.9972	TC3	-1.5028	BAU	.8928		SGT	2734.6	SGR	1338.7	SG3	1374.2		ST	40.4	SR	27.3	SS	23.0				
RDE	-.5739	RRA	-.2446	RC3	-.9856	FAU	.51211		RRT	.8107	RRF	.8743	RTF	.8804		CRT	.7783	CRS	.2099	CST	-.4379				
FDE	.7760	FRA	-6.5359	FC	-11.9318	BSP	4672		SGB	3044.7	R23	1.663	R13	.9126		LSA	46.9	NSA	26.4	NSA	2.9				
BDE	.8231	BRA	2.0121	BC3	1.7972	FSP	2321		SG1	2957.2	SG2	724.7	THA	23.12		EL1	46.4	EL2	14.9	ALF	31.28				

LAUNCH DATE SEP 10 1973

FLIGHT TIME 202.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC											DISTANCE 433.260				EARTH TO MARS										
RL	150.63	LAL	-0.00	LOL	347.15	VL	32.810	GAL	8.39	AZL	87.96	HCA	125.70	SMA	193.56	ECC	.26359	INC	2.0390	V1	29.580				
RP	242.60	LAP	1.66	LOP	112.86	VP	20.211	GAP	4.31	AZP	91.19	TAL	42.03	TAP	167.74	RCA	142.55	APO	244.58	V2	22.625				
RC	254.795	GL	10.95	GP	-16.25	ZAL	30.49	ZAP	89.65	ETS	181.63	ZAE	122.70	ETE	193.38	ZAC	71.53	ETC	284.81	LVI	-5.70				
PLANETOCENTRIC CONIC											EARTH TO MARS														
C3	36.979	VHL	6.081	DLA	16.29	RAL	10.16	RAD	6649.6	VEL	12.525	PTH	7.40	VHP	2.533	DPA	-6.94	RAP	27.58	ECC	1.6086				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG
50.00		7	41	43	3614.10		-47.42		138.87		258.60		94.48		8	41	57	2614.1		-40.16		106.67			
60.00		8	2	41	3558.26		-40.30		134.29		259.04		90.63		9	1	59	2558.3		-35.63		104.21			
70.00		8	33	33	3467.42		-34.08		126.81		258.92		87.61		9	31	20	2467.4		-31.50		98.38			
80.00		9	21	33	3317.00		-29.55		113.09		258.60		85.52		10	16	50	2317.0		-28.41		87.72			
90.00		10	33	48	3083.74		-27.83		97.78		258.43		84.74		11	25	12	2083.7		-27.21		70.79			
100.00		12	4	2																					

LAUNCH DATE SEP 10 1973      FLIGHT TIME 204.00      ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC      DISTANCE 437.063      EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.813 GAL 8.35 AZL 87.92 HCA 126.62 SMA 193.63 ECC .26336 INC 2.0793 V1 29.580  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.187 GAP 4.07 AZP 91.24 TAL 41.81 TAP 160.43 RCA 142.64 APO 244.62 V2 22.599  
 RC 257.584 GL 11.20 GP -16.46 ZAL 30.73 ZAP 86.31 ETS 181.22 ZAE 121.12 ETE 192.80 ZAC 71.43 ETC 284.84 LVI -5.57

PLANETOCENTRIC CONIC  
 C3 36.803 VHL 6.087 DLA 16.58 RAL 10.22 RAD 6649.5 VEL 12.518 PTH 7.40 VHP 2.529 DPA -7.31 RAP 27.24 ECC 1.6057  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 40 44 3619.01 -47.44 139.34 258.05 94.12 8 41 3 2619.0 -40.32 107.03  
 60.00 8 1 18 3564.23 -40.30 134.80 259.23 90.28 9 0 42 2564.2 -35.77 104.66  
 70.00 8 31 41 3474.81 -34.06 127.39 259.06 87.27 9 29 36 2474.8 -31.62 98.92  
 80.00 9 19 10 3325.97 -29.50 115.75 258.70 85.17 10 14 36 2326.0 -26.51 88.37  
 90.00 10 31 12 3093.50 -27.76 98.48 258.52 84.39 11 22 45 2093.5 -27.31 71.49  
 100.00 12 2 2 2800.44 -29.50 77.12 258.70 85.17 12 48 43 1800.4 -26.51 49.74  
 110.00 13 31 7 2521.63 -34.06 56.30 259.06 87.27 14 13 9 1521.6 -31.62 27.84

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.5930 TRA-2.1096 TC3-1.6819 BAU .9692      SGT 2966.5 SGR 1371.4 SG3 1380.5      ST 42.0 SR 26.1 S8 23.6  
 RDE -.5449 RRA -.2651 RC3-1.0253 FAU .51215      RRT .8284 RRF .8849 RTF .8989      CRT .7737 CR8 .2634 CST -.3946  
 FDE .9545 FRA-6.4839 FC-12.0476 B8P 5116      SGB 3268.1 R23 .1677 R13 .9179      LSA 47.7 MSA 26.9 S5A 2.5  
 BDE .8054 BRA 2.1262 BC3 1.9698 F8P 2381      SGI 3189.0 SG2 714.8 THA 22.12      EL1 47.2 EL2 14.7 ALF 26.71

LAUNCH DATE SEP 10 1973      FLIGHT TIME 206.00      ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC      DISTANCE 440.868      EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.817 GAL 8.30 AZL 87.88 HCA 127.54 SMA 193.70 ECC .26317 INC 2.1205 V1 29.580  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.165 GAP 3.83 AZP 91.29 TAL 41.58 TAP 169.12 RCA 142.72 APO 244.68 V2 22.573  
 RC 260.358 GL 11.45 GP -16.66 ZAL 30.98 ZAP 86.98 ETS 180.81 ZAE 119.55 ETE 192.24 ZAC 71.34 ETC 284.86 LVI -5.44

PLANETOCENTRIC CONIC  
 C3 36.631 VHL 6.052 DLA 16.89 RAL 10.28 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 2.527 DPA -7.68 RAP 26.91 ECC 1.6029  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 39 43 3624.09 -47.46 139.83 259.10 93.74 8 40 7 2624.1 -40.48 107.42  
 60.00 7 59 53 3570.39 -40.30 135.32 259.42 89.93 8 59 23 2570.4 -35.92 105.12  
 70.00 8 29 45 3482.46 -34.03 127.98 259.20 86.92 9 27 48 2482.5 -31.74 99.49  
 80.00 9 16 43 3335.26 -29.45 116.43 258.81 84.82 10 12 19 2335.3 -28.61 89.04  
 90.00 10 28 29 3103.63 -27.69 99.22 258.62 84.03 11 20 12 2103.6 -27.40 72.21  
 100.00 11 59 35 2809.74 -29.45 77.80 258.81 84.82 12 46 23 1809.7 -26.61 50.41  
 110.00 13 29 12 2529.28 -34.03 56.90 259.20 86.92 14 11 21 1529.3 -31.74 26.40

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.5927 TRA-2.1848 TC3-1.7714 BAU 1.0089      SGT 3082.1 SGR 1398.5 SG3 1393.0      ST 42.8 SR 25.8 S8 23.9  
 RDE -.5363 RRA -.2814 RC3-1.0517 FAU .51535      RRT .8377 RRF .8917 RTF .9044      CRT .7725 CR8 .2499 CST -.4092  
 FDE .9583 FRA-6.5319 FC-12.1798 B8P 5314      SGB 3384.5 R23 .1668 R13 .9222      LSA 48.3 MSA 27.0 S8A 2.5  
 BDE .7993 BRA 2.1830 BC3 2.0600 F8P 2313      SGI 3308.9 SG2 711.5 THA 21.88      EL1 47.7 EL2 14.7 ALF 27.84

LAUNCH DATE SEP 10 1973      FLIGHT TIME 208.00      ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC      DISTANCE 444.669      EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.821 GAL 8.26 AZL 87.84 HCA 128.45 SMA 193.76 ECC .26300 INC 2.1627 V1 29.580  
 RP 243.37 LAP 1.69 LOP 115.62 VP 20.144 GAP 3.60 AZP 91.35 TAL 41.34 TAP 169.80 RCA 142.81 APO 244.74 V2 22.548  
 RC 263.112 GL 11.71 GP -16.87 ZAL 31.24 ZAP 85.69 ETS 180.40 ZAE 118.01 ETE 191.69 ZAC 71.23 ETC 284.89 LVI -5.31

PLANETOCENTRIC CONIC  
 C3 36.458 VHL 6.038 DLA 17.20 RAL 10.35 RAD 6649.4 VEL 12.504 PTH 7.39 VHP 2.527 DPA -8.03 RAP 26.61 ECC 1.6000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 40 3629.38 -47.49 140.34 259.37 93.35 8 39 10 2629.4 -40.64 107.81  
 60.00 7 58 25 3576.80 -40.30 135.86 259.62 89.56 8 58 2 2576.8 -36.06 105.60  
 70.00 8 27 46 3490.41 -34.00 128.60 259.36 86.55 9 25 56 2490.4 -31.86 100.07  
 80.00 9 14 10 3344.96 -29.38 117.15 258.93 84.45 10 9 55 2345.0 -26.71 89.74  
 90.00 10 25 39 3114.21 -27.62 99.98 258.72 83.65 11 17 34 2114.2 -27.48 72.96  
 100.00 11 57 2 2819.43 -29.38 78.52 258.93 84.45 12 44 2 1819.4 -26.71 51.11  
 110.00 13 27 12 2537.23 -34.00 57.52 259.36 86.55 14 9 29 1537.2 -31.86 28.99

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.5919 TRA-2.2214 TC3-1.8634 BAU 1.0467      SGT 3201.3 SGR 1408.8 SG3 1386.5      ST 43.3 SR 25.0 S8 24.3  
 RDE -.5175 RRA -.2879 RC3-1.0875 FAU .51184      RRT .8443 RRF .8955 RTF .5.65      CRT .7699 CR8 .2947 CST -.3700  
 FDE 1.0940 FRA-6.4414 FC-12.1585 B8P 5556      SGB 3497.6 R23 .1693 R13 .9231      LSA 48.5 MSA 27.4 S8A 2.5  
 BDE .7862 BRA 2.2400 BC3 2.1475 F8P 2383      SGI 3425.7 SG2 705.5 THA 21.33      EL1 48.1 EL2 14.4 ALF 28.42

LAUNCH DATE SEP 10 1973      FLIGHT TIME 210.00      ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC      DISTANCE 448.470      EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.826 GAL 8.21 AZL 87.79 HCA 129.37 SMA 193.86 ECC .26285 INC 2.2058 V1 29.580  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.123 GAP 3.36 AZP 91.40 TAL 41.10 TAP 170.47 RCA 142.90 APO 244.82 V2 22.523  
 RC 265.850 GL 11.98 GP -17.08 ZAL 31.50 ZAP 84.43 ETS 179.99 ZAE 116.49 ETE 191.16 ZAC 71.12 ETC 284.91 LVI -5.16

PLANETOCENTRIC CONIC  
 C3 36.289 VHL 6.024 DLA 17.52 RAL 10.41 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 2.527 DPA -8.38 RAP 26.32 ECC 1.5972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 36 3634.82 -47.51 140.87 259.65 92.95 8 38 11 2634.8 -40.81 108.23  
 60.00 7 56 54 3583.43 -40.29 136.43 259.84 89.18 8 56 37 2583.4 -36.21 106.10  
 70.00 8 25 42 3498.66 -33.96 129.24 259.51 86.17 9 24 0 2498.7 -31.99 100.68  
 80.00 9 11 31 3355.02 -29.32 117.89 259.05 84.06 10 7 26 2355.0 -28.81 90.47  
 90.00 10 22 43 3125.20 -27.53 100.77 258.82 83.27 11 14 48 2125.2 -27.57 73.77  
 100.00 11 54 23 2829.49 -29.32 79.28 259.05 84.06 12 41 33 1829.5 -28.81 51.84  
 110.00 13 25 8 2545.47 -33.96 58.16 259.51 86.17 14 7 33 1545.5 -31.99 29.60

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.5901 TRA-2.2774 TC3-1.9550 BAU 1.0855      SGT 3320.0 SGR 1427.0 SG3 1386.9      ST 44.3 SR 24.4 S8 24.7  
 RDE -.5031 RRA -.2990 RC3-1.0881 FAU .51088      RRT .8514 RRF .9003 RTF .9096      CRT .7683 CR8 .3102 CST -.3373  
 FDE 1.1687 FRA-6.4067 FC-12.1877 B8P 5781      SGB 3613.7 R23 .1708 R13 .9252      LSA 49.0 MSA 27.6 S3A 2.5  
 BDE .7754 BRA 2.2969 BC3 2.2374 F8P 2383      SGI 3545.0 SG2 701.0 THA 20.96      EL1 48.5 EL2 14.3 ALF 25.30

LAUNCH DATE SEP 10 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 10 1974

MELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.030 GAL 8.16 AZL 87.75 HCA 130.28 SMA 103.95 ECC .26271 INC 2.2500 V1 29.580  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.104 GAP 3.13 AZP 91.46 TAL 40.86 TAP 171.14 RCA 143.00 APO 244.90 V2 22.499  
 RC 268.570 GL 12.26 GP -17.29 ZAL 31.78 ZAP 83.19 ETS 179.57 ZAE 114.98 ETE 190.64 ZAC 71.00 ETC 284.93 LVI -5.01

PLANETOCENTRIC CONIC  
 C3 36.123 VHL 6.010 DLA 17.84 RAL 10.48 RAD 6649.3 VEL 12.491 PTH 7.38 VHP 2.529 DPA -8.73 RAP 26.06 ECC 1.5945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 29 3640.47 -47.52 141.41 259.94 92.53 8 37 9 2640.5 -40.99 108.66  
 60.00 7 55 20 3590.30 -40.29 137.01 260.05 86.78 8 55 10 2590.3 -36.36 106.82  
 70.00 8 23 33 3507.21 -33.92 129.91 259.68 85.78 9 22 0 2507.2 -32.11 101.32  
 80.00 9 8 46 3365.48 -29.24 118.66 259.17 83.67 10 4 52 2365.5 -28.91 91.24  
 90.00 10 19 39 3136.66 -27.44 101.60 258.93 82.86 11 11 56 2136.7 -27.66 74.59  
 100.00 11 31 38 2839.96 -29.24 80.02 259.17 83.67 12 38 58 1840.0 -28.91 52.60  
 110.00 13 22 59 2554.03 -33.92 58.82 259.68 85.78 14 5 33 1554.0 -32.11 30.24

DIFFERENTIAL CORRECTIONS  
 TDE -.5873 TRA-2.3332 TC3-2.0472 BAU 1.1243 SGT 3439.4 SGR 1445.1 SG3 1385.9 ST 45.0 SR 23.8 SS 25.0  
 RDE -.4881 RRA -.3097 RC3-1.1086 FAU .50930 RRT .8580 RRF .9050 RTF .9124 CRT .7668 CR8 .3254 CST -.3444  
 FDE 1.2410 FRA-6.3630 FC-12.2062 BSP 6008 SGB 3730.6 R23 .1722 R13 .9270 LSA 49.4 MSA 27.8 SSA 2.4  
 BDE .7636 BRA 2.3536 BC3 2.3281 FSP 2382 SG1 3665.0 SG2 696.6 THA 20.60 EL1 48.9 EL2 14.1 ALF 24.20

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 10 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 12 1974

MELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.835 GAL 8.11 AZL 87.70 HCA 131.19 SMA 194.04 ECC .26258 INC 2.2953 V1 29.580  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.085 GAP 2.90 AZP 91.51 TAL 40.61 TAP 171.80 RCA 143.09 APO 244.99 V2 22.475  
 RC 271.273 GL 12.54 GP -17.50 ZAL 32.06 ZAP 81.98 ETS 179.15 ZAE 113.50 ETE 190.13 ZAC 70.87 ETC 284.95 LVI -4.86

PLANETOCENTRIC CONIC  
 C3 35.959 VHL 5.997 DLA 18.18 RAL 10.54 RAD 6649.2 VEL 12.484 PTH 7.37 VHP 2.532 DPA -9.06 RAP 25.82 ECC 1.5918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 20 3646.33 -47.54 141.98 260.24 92.09 8 36 6 2646.3 -41.16 109.11  
 60.00 7 53 42 3597.42 -40.27 137.62 260.28 88.37 8 53 39 2597.4 -36.52 107.16  
 70.00 8 21 19 3516.09 -33.88 130.60 259.84 85.38 9 19 55 2516.1 -32.24 101.98  
 80.00 9 5 54 3376.38 -29.15 119.45 259.29 83.25 10 2 10 2376.4 -29.00 92.03  
 90.00 10 16 28 3148.60 -27.33 102.46 259.03 82.44 11 8 56 2148.6 -27.74 75.46  
 100.00 11 48 46 2850.85 -29.15 80.82 259.29 83.25 12 36 16 1850.9 -29.00 53.40  
 110.00 13 20 46 2562.91 -33.88 59.51 259.84 85.38 14 3 29 1562.9 -32.24 30.90

DIFFERENTIAL CORRECTIONS  
 TDE -.5834 TRA-2.3890 TC3-2.1400 BAU 1.1632 SGT 3559.5 SGR 1463.5 SG3 1383.8 ST 45.7 SR 23.2 SS 25.4  
 RDE -.4728 RRA -.3207 RC3-1.1291 FAU .50732 RRT .8643 RRF .9095 RTF .9149 CRT .7656 CR8 .3390 CST -.3326  
 FDE 1.3154 FRA-6.3164 FC-12.2141 BSP 6234 SGB 3848.6 R23 .1759 R13 .9207 LSA 49.8 MSA 28.1 SSA 2.4  
 BDE .7509 BRA 2.4105 BC3 2.4196 FSP 2376 SG1 3785.9 SG2 692.2 THA 20.27 EL1 49.4 EL2 13.8 ALF 23.14

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 10 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 14 1974

MELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.840 GAL 8.06 AZL 87.66 HCA 132.10 SMA 194.14 ECC .26247 INC 2.3418 V1 29.580  
 RP 244.34 LAP 1.74 LOP 119.27 VP 20.068 GAP 2.67 AZP 91.57 TAL 40.35 TAP 172.45 RCA 143.18 APO 245.09 V2 22.452  
 RC 273.957 GL 12.83 GP -17.72 ZAL 32.34 ZAP 80.79 ETS 178.73 ZAE 112.04 ETE 189.63 ZAC 70.74 ETC 284.97 LVI -4.69

PLANETOCENTRIC CONIC  
 C3 35.798 VHL 5.963 DLA 18.53 RAL 10.61 RAD 6649.2 VEL 12.478 PTH 7.37 VHP 2.536 DPA -9.40 RAP 25.80 ECC 1.5891  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 8 3652.41 -47.55 142.57 260.55 91.84 8 35 0 2652.4 -41.35 109.58  
 60.00 7 52 0 3604.81 -40.26 138.25 260.52 87.94 8 52 5 2604.8 -36.67 107.73  
 70.00 8 19 0 3525.32 -33.82 131.31 260.02 84.98 9 17 46 2525.3 -32.37 102.67  
 80.00 9 2 54 3387.74 -29.06 120.29 259.42 82.83 9 59 22 2387.7 -29.10 92.86  
 90.00 10 13 7 3161.07 -27.22 103.35 259.14 82.01 11 5 46 2161.1 -27.82 76.36  
 100.00 11 45 46 2862.21 -29.06 81.65 259.42 82.83 12 33 28 1862.2 -29.10 54.23  
 110.00 13 18 27 2572.13 -33.82 60.23 260.02 84.98 14 1 19 1572.1 -32.37 31.59

DIFFERENTIAL CORRECTIONS  
 TDE -.5783 TRA-2.4444 TC3-2.2330 BAU 1.2019 SGT 3679.8 SGR 1481.8 SG3 1380.2 ST 46.4 SR 22.5 SS 25.8  
 RDE -.4570 RRA -.3314 RC3-1.1494 FAU .50483 RRT .8701 RRF .9138 RTF .9171 CRT .7646 CR8 .3518 CST -.3209  
 FDE 1.3904 FRA-6.2806 FC-12.2088 BSP 6464 SGB 3966.9 R23 .1760 R13 .9302 LSA 50.2 MSA 28.3 SSA 2.4  
 BDE .7371 BRA 2.4668 BC3 2.5114 FSP 2370 SG1 3906.8 SG2 687.0 THA 19.95 EL1 49.8 EL2 13.8 ALF 22.10

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 10 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 16 1974

MELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.848 GAL 8.01 AZL 87.61 HCA 133.01 SMA 194.23 ECC .26236 INC 2.3895 V1 29.580  
 RP 244.56 LAP 1.75 LOP 120.18 VP 20.051 GAP 2.44 AZP 91.83 TAL 40.09 TAP 173.10 RCA 143.28 APO 245.19 V2 22.430  
 RC 276.623 GL 13.13 GP -17.93 ZAL 32.64 ZAP 79.64 ETS 178.30 ZAE 110.61 ETE 189.14 ZAC 70.59 ETC 284.99 LVI -4.52

PLANETOCENTRIC CONIC  
 C3 35.640 VHL 5.970 DLA 18.88 RAL 10.68 RAD 6649.1 VEL 12.471 PTH 7.37 VHP 2.541 DPA -9.72 RAP 25.41 ECC 1.5866  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 32 53 3658.72 -47.57 143.18 260.88 91.17 8 33 52 2658.7 -41.53 110.06  
 60.00 7 50 15 3612.48 -40.24 138.90 260.76 87.50 8 50 27 2612.5 -36.83 108.31  
 70.00 8 16 35 3534.91 -33.76 132.05 260.19 84.52 9 15 30 2534.9 -32.50 103.39  
 80.00 8 59 46 3399.58 -28.96 121.15 259.55 82.38 9 56 25 2399.6 -29.20 93.73  
 90.00 10 9 37 3174.10 -27.09 104.28 259.25 81.56 11 2 31 2174.1 -27.90 77.31  
 100.00 11 42 38 2874.05 -28.96 82.52 259.55 82.38 12 30 32 1874.1 -29.20 55.10  
 110.00 13 16 2 2581.73 -33.76 60.97 260.19 84.52 13 59 4 1581.7 -32.50 32.30

DIFFERENTIAL CORRECTIONS  
 TDE -.5727 TRA-2.5000 TC3-2.3266 BAU 1.2408 SGT 3801.2 SGR 1500.2 SG3 1375.7 ST 47.1 SR 21.9 SS 26.3  
 RDE -.4411 RRA -.3423 RC3-1.1698 FAU .50190 RRT .8756 RRF .9179 RTF .9191 CRT .7643 CR8 .3622 CST -.3107  
 FDE 1.4630 FRA-6.2021 FC-12.1935 BSP 6687 SGB 4086.6 R23 .1782 R13 .9316 LSA 50.7 MSA 28.6 SSA 2.4  
 BDE .7228 BRA 2.5233 BC3 2.6041 FSP 2359 SG1 4029.0 SG2 683.7 THA 19.65 EL1 50.2 EL2 13.2 ALF 21.09

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 10 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 18 1974

Heliocentric Conic: RL 150.63 LAL -.00 LOL 347.15 VL 32.851 GAL 7.96 AZL 87.56 HCA 133.91 SMA 194.34 ECC .26227 INC 2.4388 V1 29.580  
 RP 244.79 LAP 1.76 LOP 121.08 VP 20.035 GAP 2.22 AZP 91.69 TAL 39.83 TAP 173.74 RCA 143.37 APO 245.31 V2 22.407  
 RC 279.288 GL 13.44 GP -18.16 ZAL 32.94 ZAP 78.51 ETS 177.87 ZAE 109.19 ETE 188.66 ZAC 70.44 ETC 285.01 LVI -4.34

Distance 467.461 Earth to Mars

Planetocentric Conic: C3 35.486 VHL 5.957 DLA 19.25 RAL 10.74 RAD 6649.1 VEL 12.465 PTH 7.36 VHP 2.547 DPA -10.04 RAP 25.24 ECC 1.5840  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 31 35 3689.27 -47.57 143.81 261.21 90.68 8 32 40 2665.3 -41.73 110.98  
 60.00 7 48 25 3620.45 -40.21 139.57 261.01 87.04 8 48 45 2620.4 -37.00 108.93  
 70.00 8 14 4 3544.89 -33.70 132.82 260.38 84.07 9 13 9 2544.9 -32.63 104.14  
 80.00 8 58 29 3411.95 -28.84 122.05 259.60 81.92 9 53 21 2411.9 -29.29 94.63  
 90.00 10 5 56 3187.75 -26.95 105.26 259.36 81.09 10 59 4 2187.7 -27.98 78.30  
 100.00 11 39 21 2886.42 -28.84 83.42 259.68 81.92 12 27 27 1886.4 -29.29 56.00  
 110.00 13 13 31 2591.71 -33.70 61.74 260.38 84.07 13 56 42 1391.7 -32.63 33.05

Differential Corrections: TDE -.5682 TRA-2.5549 TC3-2.4198 BAU 1.2793 SGT 3922.0 SGR 1518.4 SG3 1369.5 ST 47.8 SR 21.2 SS 26.7  
 RDE -.4243 RRA -.3530 RC3-1.1899 FAU .49856 RRT .8807 RRF .9218 RTF .9208 CRT .7642 CRS .3724 CST -.3002  
 FDE 1.5401 FRA-6.1356 FC-12.1832 BSP 6917 SGB 4205.6 R23 .1808 R13 .9327 LSA 51.1 MSA 29.1 SSA 2.3  
 BDE .7067 BRA 2.5792 BC3 2.6966 FSP 2348 SG1 4150.4 SG2 679.6 THA 19.37 EL1 50.6 EL2 12.9 ALF 20.11

LAUNCH DATE SEP 10 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 20 1974

Heliocentric Conic: RL 150.63 LAL -.00 LOL 347.15 VL 32.857 GAL 7.91 AZL 87.51 HCA 134.81 SMA 194.45 ECC .26218 INC 2.4891 V1 29.580  
 RP 245.01 LAP 1.77 LOP 121.99 VP 20.021 GAP 1.99 AZP 91.75 TAL 39.58 TAP 174.38 RCA 143.46 APO 245.43 V2 22.386  
 RC 281.893 GL 13.76 GP -18.39 ZAL 33.25 ZAP 77.41 ETS 177.43 ZAE 107.80 ETE 188.18 ZAC 70.28 ETC 285.03 LVI -4.15

Distance 471.256 Earth to Mars

Planetocentric Conic: C3 35.335 VHL 5.944 DLA 19.62 RAL 10.81 RAD 6649.0 VEL 12.459 PTH 7.36 VHP 2.554 DPA -10.35 RAP 25.10 ECC 1.5815  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 14 3672.06 -47.58 144.47 261.56 90.18 8 31 26 2672.1 -41.92 111.11  
 60.00 7 46 30 3628.72 -40.18 140.28 261.27 86.57 8 46 59 2628.7 -37.16 109.57  
 70.00 8 11 26 3555.29 -33.62 133.63 260.56 83.60 9 10 42 2555.3 -32.75 104.92  
 80.00 8 53 2 3424.88 -28.71 122.99 259.81 81.44 9 50 7 2424.9 -29.38 95.59  
 90.00 10 2 4 3202.05 -26.80 106.28 259.47 80.60 10 55 26 2202.1 -28.04 79.34  
 100.00 11 35 54 2899.35 -28.71 84.36 259.81 81.44 12 24 14 1899.4 -29.38 56.95  
 110.00 13 10 53 2602.11 -33.62 62.54 260.56 83.60 13 54 15 1602.1 -32.75 33.84

Differential Corrections: TDE -.5570 TRA-2.6096 TC3-2.5135 BAU 1.3178 SGT 4043.3 SGR 1536.9 SG3 1362.4 ST 48.4 SR 20.5 SS 27.2  
 RDE -.4073 RRA -.3638 RC3-1.2101 FAU .49479 RRT .8856 RRF .9256 RTF .9223 CRT .7649 CRS .3802 CST -.2909  
 FDE 1.6146 FRA-6.0637 FC-12.1228 BSP 7148 SGB 4325.6 R23 .1836 R13 .9337 LSA 51.5 MSA 29.1 SSA 2.3  
 BDE .6900 BRA 2.6348 BC3 2.7896 FSP 2336 SG1 4272.5 SG2 675.7 THA 19.10 EL1 51.1 EL2 12.5 ALF 19.16

LAUNCH DATE SEP 10 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 22 1974

Heliocentric Conic: RL 150.63 LAL -.00 LOL 347.15 VL 32.863 GAL 7.86 AZL 87.46 HCA 135.72 SMA 194.58 ECC .26211 INC 2.5412 V1 29.580  
 RP 245.22 LAP 1.77 LOP 122.89 VP 20.007 GAP 1.77 AZP 91.82 TAL 39.29 TAP 175.01 RCA 143.56 APO 245.55 V2 22.365  
 RC 284.497 GL 14.08 GP -18.62 ZAL 33.57 ZAP 76.34 ETS 176.99 ZAE 106.43 ETE 187.72 ZAC 70.10 ETC 285.05 LVI -3.95

Distance 475.051 Earth to Mars

Planetocentric Conic: C3 35.188 VHL 5.932 DLA 20.01 RAL 10.88 RAD 6649.0 VEL 12.453 PTH 7.35 VHP 2.561 DPA -10.66 RAP 24.98 ECC 1.5791  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 49 3679.12 -47.58 145.15 261.92 89.65 8 30 8 2679.1 -42.12 111.67  
 60.00 7 44 30 3637.33 -40.14 141.01 261.53 86.07 8 45 8 2637.3 -37.33 110.24  
 70.00 8 8 41 3568.12 -33.54 134.46 260.75 83.12 9 8 7 2568.1 -32.88 105.74  
 80.00 8 49 25 3438.42 -28.57 123.97 259.94 80.95 9 46 44 2438.4 -29.46 96.58  
 90.00 9 57 59 3217.07 -26.62 107.34 259.57 80.10 10 51 36 2217.1 -28.11 80.43  
 100.00 11 32 17 2912.89 -28.57 85.34 259.94 80.95 12 20 50 1912.9 -29.46 57.95  
 110.00 13 8 7 2612.94 -33.54 63.38 260.75 83.12 13 51 40 1612.9 -32.88 34.66

Differential Corrections: TDE -.5478 TRA-2.6643 TC3-2.6075 BAU 1.3584 SGT 4165.3 SGR 1556.1 SG3 1354.5 ST 49.1 SR 19.8 SS 27.7  
 RDE -.3898 RRA -.3744 RC3-1.2306 FAU .49079 RRT .8902 RRF .9293 RTF .5236 CRT .7664 CRS .3856 CST -.2828  
 FDE 1.6892 FRA-5.9895 FC-12.0748 BSP 7373 SGB 4446.5 R23 .1866 R13 .9346 LSA 52.0 MSA 29.3 SSA 2.3  
 BDE .6722 BRA 2.6905 BC3 2.8833 FSP 2318 SG1 4395.4 SG2 671.9 THA 18.85 EL1 51.5 EL2 12.1 ALF 18.24

LAUNCH DATE SEP 10 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 24 1974

Heliocentric Conic: RL 150.63 LAL -.00 LOL 347.15 VL 32.869 GAL 7.80 AZL 87.41 HCA 136.82 SMA 194.87 ECC .26208 INC 2.5948 V1 29.580  
 RP 245.43 LAP 1.78 LOP 123.78 VP 19.994 GAP 1.55 AZP 91.89 TAL 39.02 TAP 175.63 RCA 143.66 APO 245.68 V2 22.344  
 RC 287.079 GL 14.42 GP -18.86 ZAL 33.90 ZAP 75.30 ETS 176.54 ZAE 105.08 ETE 187.26 ZAC 69.92 ETC 285.08 LVI -3.74

Distance 478.844 Earth to Mars

Planetocentric Conic: C3 35.045 VHL 5.920 DLA 20.40 RAL 10.94 RAD 6648.9 VEL 12.448 PTH 7.35 VHP 2.570 DPA -10.97 RAP 24.88 ECC 1.5788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 27 20 3688.46 -47.57 145.86 262.28 89.11 8 28 46 2688.5 -42.33 112.25  
 60.00 7 42 25 3646.28 -40.10 141.76 261.80 85.56 8 43 11 2646.3 -37.50 110.94  
 70.00 8 5 48 3577.43 -33.44 135.33 260.94 82.61 9 5 25 2577.4 -33.01 106.60  
 80.00 8 45 37 3452.61 -28.42 125.00 260.07 80.43 9 43 9 2452.6 -29.54 97.63  
 90.00 9 53 40 3232.88 -26.43 108.46 259.68 79.57 10 47 33 2232.9 -28.16 81.58  
 100.00 11 28 28 2927.09 -28.42 86.37 260.07 80.43 12 17 15 1927.1 -29.54 59.00  
 110.00 13 5 14 2624.25 -33.44 64.25 260.94 82.61 13 48 58 1624.2 -33.01 35.51

Differential Corrections: TDE -.5388 TRA-2.7184 TC3-2.7011 BAU 1.3947 SGT 4286.9 SGR 1575.4 SG3 1345.5 ST 49.7 SR 19.1 SS 28.2  
 RDE -.3720 RRA -.3853 RC3-1.2510 FAU .48636 RRT .8945 RRF .9328 RTF .9248 CRT .7687 CRS .3885 CST -.2759  
 FDE 1.7629 FRA-5.9111 FC-12.0146 BSP 7603 SGB 4567.2 R23 .1897 R13 .9354 LSA 52.4 MSA 29.6 SSA 2.3  
 BDE .6531 BRA 2.7458 BC3 2.9768 FSP 2301 SG1 4518.0 SG2 668.3 THA 18.62 EL1 51.9 EL2 11.7 ALF 17.36

LAUNCH DATE SEP 10 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.878 GAL 7.75 AZL 87.35 HCA 137.51 SMA 194.79 ECC .26199 INC 2.6801 V1 29.580  
 RP 245.63 LAP 1.79 LOP 124.69 VP 19.982 GAP 1.33 AZP 91.95 TAL 38.74 TAP 176.25 RCA 143.75 APO 245.82 V2 22.324  
 RC 289.637 GL 14.77 GP -19.11 ZAL 34.24 ZAP 74.29 ETS 176.09 ZAE 103.76 ETE 186.80 ZAC 69.72 ETC 285.10 LVI -3.52

DISTANCE 482.636 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.907 VHL 5.908 DLA 20.81 RAL 11.01 RAD 6648.9 VEL 12.442 PTH 7.34 VHP 2.580 DPA -11.27 RAP 24.81 ECC 1.8745  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 47 3694.10 -47.56 146.60 262.67 88.54 8 27 21 2694.1 -42.54 112.86  
 60.00 7 40 14 3655.61 -40.05 142.55 262.08 85.03 8 41 9 2655.6 -37.67 111.67  
 70.00 8 2 46 3589.24 -33.33 136.23 261.14 82.09 9 2 35 2589.2 -33.14 107.50  
 80.00 8 41 35 3467.52 -28.24 126.07 260.20 79.89 9 39 23 2467.5 -29.62 98.73  
 90.00 9 49 6 3249.54 -26.22 109.63 259.77 79.02 10 43 16 2249.5 -29.21 82.80  
 100.00 11 24 27 2942.00 -28.24 87.44 260.20 79.89 12 13 29 1942.0 -29.62 60.10  
 110.00 13 2 12 2636.06 -33.33 65.15 261.14 82.09 13 46 8 1636.1 -33.14 36.41

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 4408.9 SGR 1595.0 SG3 1335.5 ST 50.3 SR 18.4 SS 28.7  
 RRT .8986 RRF .9362 RTF .9258 CRT .7723 CR8 .3888 CST -.2699  
 SGB 4688.6 R23 .1932 R13 .9361 LSA 52.9 MSA 29.9 SSA 2.2  
 SGI 4641.2 SGI 664.8 THA 18.40 EL1 52.4 EL2 11.2 ALF 16.51

DIFFERENTIAL CORRECTIONS  
 TDE -.3250 TRA-2.7723 TC3-2.7950 BAU 1.4330  
 RDE -.3536 RRA -.3963 RC3-1.2715 FAU .48159  
 FDE 1.8366 FRA-5.8284 FC-11.9441 B8P 7829  
 BDE .6330 BRA 2.8004 BC3 3.0706 F8P 2281

LAUNCH DATE SEP 10 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.881 GAL 7.70 AZL 87.29 HCA 138.41 SMA 194.90 ECC .26195 INC 2.7072 V1 29.580  
 RP 245.63 LAP 1.80 LOP 125.59 VP 19.970 GAP 1.11 AZP 92.03 TAL 38.46 TAP 176.87 RCA 143.85 APO 245.96 V2 22.305  
 RC 292.172 GL 15.13 GP -19.37 ZAL 34.58 ZAP 73.31 ETS 175.63 ZAE 102.45 ETE 186.35 ZAC 69.51 ETC 285.12 LVI -3.29

DISTANCE 486.427 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.774 VHL 5.897 DLA 21.23 RAL 11.07 RAD 6648.8 VEL 12.437 PTH 7.34 VHP 2.591 DPA -11.58 RAP 24.76 ECC 1.8723  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 24 9 3702.05 -47.54 147.37 263.06 87.95 8 25 51 2702.0 -42.76 113.51  
 60.00 7 37 56 3665.33 -39.98 143.37 262.37 84.48 8 39 1 2665.3 -37.85 112.44  
 70.00 7 59 35 3601.59 -33.21 137.18 261.33 81.54 8 59 36 2601.6 -33.26 108.44  
 80.00 8 37 20 3483.22 -28.05 127.20 260.32 79.33 9 35 23 2483.2 -29.69 99.89  
 90.00 9 44 15 3267.16 -25.99 110.87 259.87 78.44 10 38 42 2267.2 -28.25 84.09  
 100.00 11 20 11 2957.69 -28.05 88.57 260.32 79.33 12 9 29 1957.7 -29.69 61.26  
 110.00 12 59 1 2648.41 -33.21 66.10 261.33 81.54 13 43 9 1648.4 -33.26 37.35

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 4531.5 SGR 1615.4 SG3 1324.8 ST 51.0 SR 17.6 SS 29.3  
 RRT .9025 RRF .9394 RTF .9268 CRT .7773 CR8 .3852 CST -.2655  
 SGB 4810.8 R23 .1967 R13 .9367 LSA 53.4 MSA 30.2 SSA 2.2  
 SGI 4765.1 SGI 661.5 THA 18.20 EL1 52.9 EL2 10.7 ALF 15.70

DIFFERENTIAL CORRECTIONS  
 TDE -.5121 TRA-2.8263 TC3-2.8888 BAU 1.4713  
 RDE -.3348 RRA -.4077 RC3-1.2923 FAU .47658  
 FDE 1.9085 FRA-5.7447 FC-11.8651 B8P 8052  
 BDE .6119 BRA 2.8555 BC3 3.1647 F8P 2258

LAUNCH DATE SEP 10 1973

FLIGHT TIME 232.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.888 GAL 7.64 AZL 87.23 HCA 139.31 SMA 195.03 ECC .26191 INC 2.7664 V1 29.580  
 RP 246.02 LAP 1.80 LOP 126.49 VP 19.960 GAP .89 AZP 92.10 TAL 38.17 TAP 177.48 RCA 143.95 APO 246.11 V2 22.286  
 RC 294.682 GL 15.50 GP -19.63 ZAL 34.94 ZAP 72.35 ETS 175.17 ZAE 101.18 ETE 185.90 ZAC 69.29 ETC 285.15 LVI -3.05

DISTANCE 490.218 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.646 VHL 5.886 DLA 21.66 RAL 11.13 RAD 6648.8 VEL 12.432 PTH 7.34 VHP 2.602 DPA -11.88 RAP 24.74 ECC 1.8702  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 22 26 3710.33 -47.52 148.17 263.46 87.33 8 24 16 2710.3 -42.98 114.18  
 60.00 7 35 31 3675.46 -39.91 144.22 262.66 83.90 8 36 47 2675.5 -38.02 113.24  
 70.00 7 56 13 3614.52 -33.08 138.16 261.53 80.97 8 56 27 2614.5 -33.38 109.43  
 80.00 8 32 49 3499.77 -27.84 128.38 260.44 78.74 9 31 8 2499.8 -29.75 101.12  
 90.00 9 39 4 3285.83 -25.73 112.17 259.95 77.84 10 33 50 2285.8 -28.27 85.45  
 100.00 11 15 40 2974.24 -27.84 89.75 260.44 78.74 12 5 15 1974.2 -29.75 62.49  
 110.00 12 55 39 2661.34 -33.08 67.08 261.53 80.97 13 40 1 1661.3 -33.38 38.34

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 4652.4 SGR 1635.8 SG3 1312.8 ST 51.6 SR 16.9 SS 29.9  
 RRT .9062 RRF .9426 RTF .9275 CRT .7835 CR8 .3790 CST -.2619  
 SGB 4931.6 R23 .2006 R13 .9372 LSA 53.8 MSA 30.2 SSA 2.1  
 SGI 4887.4 SGI 658.6 THA 18.01 EL1 53.3 EL2 10.1 ALF 14.92

DIFFERENTIAL CORRECTIONS  
 TDE -.4970 TRA-2.8788 TC3-2.9815 BAU 1.5089  
 RDE -.3153 RRA -.4187 RC3-1.3130 FAU .47115  
 FDE 1.9822 FRA-5.6534 FC-11.7732 B8P 8285  
 BDE .5886 BRA 2.9091 BC3 3.2578 F8P 2236

LAUNCH DATE SEP 10 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.895 GAL 7.59 AZL 87.17 HCA 140.20 SMA 195.15 ECC .26188 INC 2.8277 V1 29.580  
 RP 246.21 LAP 1.81 LOP 127.38 VP 19.950 GAP .68 AZP 92.17 TAL 37.88 TAP 178.08 RCA 144.04 APO 246.26 V2 22.267  
 RC 297.187 GL 15.89 GP -19.90 ZAL 35.30 ZAP 71.42 ETS 174.69 ZAE 99.92 ETE 185.46 ZAC 69.05 ETC 285.17 LVI -2.79

DISTANCE 494.007 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.523 VHL 5.876 DLA 22.11 RAL 11.18 RAD 6648.7 VEL 12.427 PTH 7.33 VHP 2.614 DPA -12.18 RAP 24.74 ECC 1.8682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 38 3718.96 -47.49 149.00 263.88 86.69 8 22 37 2719.0 -43.20 114.89  
 60.00 7 32 59 3686.05 -39.83 145.11 262.95 83.30 8 34 25 2686.1 -38.20 114.08  
 70.00 7 52 40 3628.08 -32.93 139.19 261.73 80.38 8 53 8 2628.1 -33.50 110.47  
 80.00 8 28 0 3517.26 -27.60 129.63 260.55 78.13 9 26 37 2517.3 -29.80 102.42  
 90.00 9 33 32 3305.68 -25.44 113.55 260.03 77.21 10 28 38 2305.7 -28.28 86.90  
 100.00 11 10 52 2991.73 -27.60 90.99 260.55 78.13 12 0 44 1991.7 -29.80 63.79  
 110.00 12 52 6 2674.90 -32.93 68.11 261.73 80.38 13 36 41 1674.9 -33.50 39.38

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 SGT 4773.7 SGR 1656.8 SG3 1300.1 ST 52.2 SR 16.1 SS 30.5  
 RRT .9096 RRF .9456 RTF .9281 CRT .7917 CR8 .3681 CST -.2595  
 SGB 5053.1 R23 .2047 R13 .9376 LSA 54.3 MSA 30.8 SSA 2.1  
 SGI 5010.3 SGI 655.8 THA 17.84 EL1 53.7 EL2 9.5 ALF 14.18

DIFFERENTIAL CORRECTIONS  
 TDE -.4803 TRA-2.9314 TC3-3.0741 BAU 1.5466  
 RDE -.2951 RRA -.4302 RC3-1.3339 FAU .46547  
 FDE 2.0572 FRA-5.5611 FC-11.6725 B8P 8517  
 BDE .5638 BRA 2.9628 BC3 3.3510 F8P 2213



LAUNCH DATE SEP 10 1973 FLIGHT TIME 236.00 ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC DISTANCE 497.795 EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.901 GAL 7.34 AZL 87.11 HCA 141.09 SMA 195.28 ECC .26186 INC 2.8912 V1 29.580  
 RP 246.38 LAP 1.82 LOP 128.27 VP 19.941 GAP .47 AZP 92.25 TAL 37.59 TAP 178.69 RCA 144.14 APO 246.41 V2 22.249  
 RC 299.628 GL 16.29 GP -20.19 ZAL 35.67 ZAP 70.33 ETS 174.21 ZAE 98.69 ETE 185.01 ZAC 68.80 ETC 285.20 LVI -2.53

PLANETOCENTRIC CONIC  
 C3 34.407 VHL 5.866 DLA 22.56 RAL 11.23 RAD 6648.7 VEL 12.422 PTH 7.33 VHP 2.628 DPA -12.48 RAP 24.78 ECC 1.5663  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 44 3727.96 -47.45 149.87 264.31 86.02 8 20 52 2728.0 -43.43 115.63  
 60.00 7 30 19 3697.12 -39.74 146.04 263.26 82.68 8 31 56 2697.1 -38.38 114.97  
 70.00 7 48 55 3642.33 -32.76 140.27 261.92 79.76 8 49 37 2642.3 -33.62 111.56  
 80.00 8 22 52 3535.81 -27.33 130.94 260.66 77.49 9 21 48 2535.8 -29.83 103.79  
 90.00 9 27 35 3326.68 -25.11 115.02 260.09 76.54 10 23 2 2326.9 -28.27 88.45  
 100.00 11 5 44 3010.28 -27.33 92.31 260.66 77.49 11 55 55 2010.3 -29.83 65.16  
 110.00 12 48 21 2689.15 -32.76 69.19 261.92 79.76 13 33 10 1689.1 -33.62 40.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4630 TRA-2.9838 TC3-3.1669 BAU 1.5846 SGT 4895.8 SGR 1679.0 SG3 1287.0 ST 52.8 SR 15.3 SS 31.1  
 RDE -.2748 RRA -.4420 RC3-1.3554 FAU .45966 RRT .9130 RRF .9485 RTF .9287 CRT .8022 CRS .3514 CST -.2592  
 FDE 2.1273 FRA-5.4679 FC-11.5658 BSP 8741 SGB 5175.7 R23 .2088 R13 .9379 LSA 54.9 MSA 31.2 SSA 2.1  
 BDE .5384 BRA 3.0184 BC3 3.4447 FSP 2185 SG1 5134.3 SG2 653.3 THA 17.68 EL1 54.2 EL2 8.9 ALF 13.49

LAUNCH DATE SEP 10 1973 FLIGHT TIME 238.00 ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC DISTANCE 501.582 EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.908 GAL 7.48 AZL 87.04 HCA 141.99 SMA 195.41 ECC .26185 INC 2.9570 V1 29.580  
 RP 246.57 LAP 1.82 LOP 129.17 VP 19.933 GAP .25 AZP 92.33 TAL 37.30 TAP 179.28 RCA 144.24 APO 246.57 V2 22.232  
 RC 302.065 GL 16.70 GP -20.48 ZAL 36.06 ZAP 69.66 ETS 173.73 ZAE 97.48 ETE 184.57 ZAC 68.53 ETC 285.23 LVI -2.24

PLANETOCENTRIC CONIC  
 C3 34.298 VHL 5.856 DLA 23.04 RAL 11.28 RAD 6648.6 VEL 12.418 PTH 7.33 VHP 2.642 DPA -12.78 RAP 24.81 ECC 1.5645  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 43 3737.37 -47.40 150.77 264.75 85.33 8 19 1 2737.4 -43.67 116.41  
 60.00 7 27 29 3708.70 -39.64 147.01 263.56 82.03 8 29 18 2708.7 -38.56 115.90  
 70.00 7 44 56 3657.32 -32.58 141.40 262.11 79.12 8 45 53 2657.3 -33.72 112.72  
 80.00 8 17 23 3555.53 -27.03 132.33 260.75 76.81 9 16 38 2555.5 -29.85 105.26  
 90.00 9 21 9 3349.62 -24.74 116.58 260.13 75.84 10 16 59 2349.6 -28.24 90.12  
 100.00 11 0 14 3030.00 -27.03 93.70 260.75 76.81 11 50 44 2030.0 -29.85 66.63  
 110.00 12 44 22 2704.13 -32.58 70.32 262.11 79.12 13 29 26 1704.1 -33.72 41.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4440 TRA-3.0359 TC3-3.2589 BAU 1.6222 SGT 5017.6 SGR 1701.8 SG3 1272.9 ST 53.4 SR 14.6 SS 31.7  
 RDE -.2537 RRA -.4541 RC3-1.3770 FAU .45353 RRT .9161 RRF .9513 RTF .9292 CRT .8153 CRS .3285 CST -.2600  
 FDE 2.1978 FRA-5.3726 FC-11.4477 BSP 8969 SGB 5298.3 R23 .2132 R13 .9382 LSA 55.4 MSA 31.5 SSA 2.0  
 BDE .5114 BRA 3.0697 BC3 3.5378 FSP 2159 SG1 5258.2 SG2 651.0 THA 17.54 EL1 54.7 EL2 8.2 ALF 12.84

LAUNCH DATE SEP 10 1973 FLIGHT TIME 240.00 ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC DISTANCE 505.369 EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.915 GAL 7.43 AZL 86.97 HCA 142.88 SMA 195.54 ECC .26184 INC 3.0255 V1 29.580  
 RP 246.74 LAP 1.83 LOP 130.06 VP 19.926 GAP .04 AZP 92.41 TAL 37.00 TAP 179.88 RCA 144.34 APO 246.74 V2 22.219  
 RC 304.476 GL 17.13 GP -20.79 ZAL 36.45 ZAP 68.82 ETS 173.23 ZAE 96.30 ETE 184.13 ZAC 68.25 ETC 285.26 LVI -1.93

PLANETOCENTRIC CONIC  
 C3 34.196 VHL 5.848 DLA 23.53 RAL 11.33 RAD 6648.6 VEL 12.414 PTH 7.32 VHP 2.656 DPA -13.08 RAP 24.89 ECC 1.5628  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 14 38 3747.21 -47.34 151.71 265.20 84.60 8 17 3 2747.2 -43.90 117.24  
 60.00 7 24 30 3720.84 -39.52 148.02 263.88 81.36 8 26 30 2720.8 -38.73 116.89  
 70.00 7 40 41 3673.12 -32.37 142.58 262.30 78.45 8 41 55 2673.1 -35.83 113.94  
 80.00 8 11 28 3576.59 -26.70 133.80 260.83 76.11 9 11 4 2576.6 -29.86 106.82  
 90.00 9 14 10 3374.14 -24.32 118.26 260.16 75.11 10 10 24 2374.1 -28.18 91.91  
 100.00 10 54 20 3051.06 -26.70 95.17 260.83 76.11 11 45 11 2051.1 -29.86 68.19  
 110.00 12 40 8 2719.94 -32.37 71.50 262.30 78.45 13 25 26 1719.9 -35.83 42.86

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4229 TRA-3.0872 TC3-3.3901 BAU 1.6597 SGT 5138.8 SGR 1725.2 SG3 1257.9 ST 54.0 SR 13.8 SS 32.4  
 RDE -.2317 RRA -.4663 RC3-1.3888 FAU .44714 RRT .9191 RRF .9540 RTF .9295 CRT .8311 CRS .2988 CST -.2621  
 FDE 2.2888 FRA-5.2727 FC-11.3200 BSP 9200 SGB 5420.6 R23 .2178 R13 .9384 LSA 56.0 MSA 31.9 SSA 2.0  
 BDE .4822 BRA 3.1222 BC3 3.6304 FSP 2131 SG1 5381.6 SG2 648.2 THA 17.41 EL1 55.2 EL2 7.5 ALF 12.24

LAUNCH DATE SEP 10 1973 FLIGHT TIME 242.00 ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC DISTANCE 509.153 EARTH TO MARS  
 RL 150.63 LAL -.00 LOL 347.15 VL 32.922 GAL 7.37 AZL 86.90 HCA 143.78 SMA 195.67 ECC .26184 INC 3.0967 V1 29.580  
 RP 246.90 LAP 1.83 LOP 130.95 VP 19.919 GAP -.16 AZP 92.50 TAL 36.70 TAP 180.47 RCA 144.44 APO 246.91 V2 22.199  
 RC 306.883 GL 17.58 GP -21.11 ZAL 36.85 ZAP 68.01 ETS 172.72 ZAE 95.13 ETE 183.69 ZAC 67.94 ETC 285.30 LVI -1.64

PLANETOCENTRIC CONIC  
 C3 34.103 VHL 5.840 DLA 24.03 RAL 11.38 RAD 6648.6 VEL 12.410 PTH 7.32 VHP 2.672 DPA -13.39 RAP 24.99 ECC 1.5612  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 21 3757.50 -47.27 152.70 265.66 83.85 8 14 58 2757.5 -44.15 118.11  
 60.00 7 21 19 3733.58 -39.38 149.07 264.19 80.65 8 23 33 2733.6 -38.91 117.92  
 70.00 7 36 11 3689.81 -32.13 143.83 262.49 77.75 8 37 40 2689.8 -33.92 115.24  
 80.00 8 5 4 3599.16 -26.32 135.37 260.89 75.37 9 5 4 2599.2 -29.84 108.50  
 90.00 9 6 31 3400.76 -23.84 120.06 260.15 74.33 10 3 11 2400.8 -28.09 93.85  
 100.00 10 47 56 3073.63 -26.32 96.74 260.89 75.37 11 39 10 2073.6 -29.84 69.87  
 110.00 12 35 37 2736.63 -32.13 72.75 262.49 77.75 13 21 14 1736.6 -33.92 44.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4000 TRA-3.1381 TC3-3.4401 BAU 1.6969 SGT 5259.5 SGR 1749.4 SG3 1242.2 ST 54.6 SR 13.1 SS 33.1  
 RDE -.2091 RRA -.4789 RC3-1.4208 FAU .44049 RRT .9219 RRF .9566 RTF .9297 CRT .8499 CRS .2594 CST -.2660  
 FDE 2.3406 FRA-5.1721 FC-11.1823 BSP 9428 SGB 5542.8 R23 .2225 R13 .9385 LSA 56.6 MSA 32.2 SSA 1.9  
 BDE .4513 BRA 3.1745 BC3 3.7220 FSP 2101 SG1 5504.9 SG2 647.7 THA 17.29 EL1 55.7 EL2 6.7 ALF 11.60

LAUNCH DATE SEP 10 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.18 VL 32.929 GAL 7.31 AZL 86.83 HCA 144.65 SMA 195.81 ECC .26185 INC 3.1709 V1 29.580
RP 247.06 LAP 1.83 LOP 131.84 VP 19.914 GAP -.37 AZP 92.59 TAL 36.40 TAP 181.09 RCA 144.53 APO 247.08 V2 22.183
RC 309.224 GL 18.04 GP -21.44 ZAL 37.27 ZAP 67.23 ETS 172.20 ZAE 93.99 ETE 183.24 ZAC 67.62 ETC 265.33 LVI -1.31

PLANETOCENTRIC CONIC

C3 34.018 VHL 5.832 DLA 24.55 RAL 11.40 RAD 6648.5 VEL 12.407 PTH 7.32 VHP 2.689 DPA -13.70 RAP 25.12 ECC 1.3599
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 9 57 3766.28 -47.19 153.73 268.14 83.06 8 12 46 2768.3 -44.39 119.03
60.00 7 17 57 3746.97 -39.23 150.18 264.51 79.92 8 20 24 2747.0 -39.09 119.02
70.00 7 31 21 3707.50 -31.87 145.14 262.66 77.01 8 33 8 2707.5 -34.00 116.61
80.00 7 58 8 3623.48 -25.89 137.05 260.93 74.58 8 58 31 2623.5 -29.79 110.31
90.00 8 58 4 3429.91 -23.29 122.02 260.12 73.49 9 55 14 2429.9 -27.95 95.97
100.00 10 40 59 3097.95 -25.89 98.42 260.93 74.58 11 32 37 2098.0 -29.79 71.68
110.00 12 30 47 2754.31 -31.87 74.06 262.66 77.01 13 16 42 1754.3 -34.00 45.53

DIFFERENTIAL CORRECTIONS

TDE -.3755 TRA-3.1887 TC3-3.5293 BAU 1.7341
RDE -.1898 RRA -.4919 RC3-1.4433 FAU .43366
FDE 2.4097 FRA-5.0702 FC-11.0363 BSP 9657
BDE .4190 BRA 3.2264 BC3 3.8130 FSP 2071

MID-COURSE EXECUTION ACCURACY

SGT 5380.1 SGR 1774.8 SG3 1225.9
RRT .9245 RRF .9590 RTF .9299
SGB 5665.3 R23 .2274 R13 .9386
SG1 5628.3 SG2 646.5 THA 17.20

ORBIT DETERMINATION ACCURACY

ST 55.2 SR 12.4 SS 33.8
CRT .8719 CRS .2094 CST -.2716
LSA 57.2 MSA 32.6 SSA 1.9
EL1 56.3 EL2 5.9 ALF 11.19

LAUNCH DATE SEP 10 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 32.936 GAL 7.26 AZL 86.75 HCA 145.54 SMA 195.94 ECC .26187 INC 3.2483 V1 29.580
RP 247.22 LAP 1.84 LOP 132.73 VP 19.909 GAP -.58 AZP 92.68 TAL 36.09 TAP 181.63 RCA 144.63 APO 247.25 V2 22.168
RC 311.559 GL 18.53 GP -21.80 ZAL 37.69 ZAP 66.47 ETS 171.67 ZAE 92.88 ETE 182.79 ZAC 67.28 ETC 285.37 LVI -.96

PLANETOCENTRIC CONIC

C3 33.943 VHL 5.828 DLA 25.10 RAL 11.42 RAD 6648.5 VEL 12.404 PTH 7.31 VHP 2.706 DPA -14.02 RAP 25.27 ECC 1.5586
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 7 25 3779.59 -47.09 154.80 266.63 82.24 8 10 24 2779.6 -44.64 120.00
60.00 7 14 22 3761.06 -39.05 151.34 264.82 79.15 8 17 3 2761.1 -39.26 120.17
70.00 7 26 10 3726.27 -31.57 146.52 262.83 76.24 8 28 17 2726.3 -34.07 118.07
80.00 7 50 31 3649.87 -25.40 138.86 260.94 73.75 8 51 21 2649.9 -29.71 112.26
90.00 8 48 38 3462.20 -22.65 124.17 260.04 72.60 9 46 20 2462.2 -27.75 98.31
100.00 10 33 23 3124.34 -25.40 100.23 260.94 73.75 11 25 27 2124.3 -29.71 73.63
110.00 12 25 37 2773.09 -31.57 75.44 262.83 76.24 13 11 50 1773.1 -34.07 46.99

DIFFERENTIAL CORRECTIONS

TDE -.3499 TRA-3.2395 TC3-3.6181 BAU 1.7716
RDE -.1820 RRA -.5057 RC3-1.4663 FAU .42670
FDE 2.4755 FRA-4.9694 FC-10.8832 BSP 9879
BDE .3856 BRA 3.2788 BC3 3.9040 FSP 2037

MID-COURSE EXECUTION ACCURACY

SGT 5501.7 SGR 1801.7 SG3 1209.2
RRT .9271 RRF .9814 RTF .9300
SGB 5789.2 R23 .2323 R13 .9386
SG1 5753.0 SG2 645.8 THA 17.11

ORBIT DETERMINATION ACCURACY

ST 55.9 SR 11.7 SS 34.5
CRT .8963 CRS .1468 CST -.2790
LSA 57.9 MSA 33.0 SSA 1.8
EL1 56.9 EL2 5.1 ALF 10.76

LAUNCH DATE SEP 10 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 32.944 GAL 7.20 AZL 86.67 HCA 146.42 SMA 196.08 ECC .26189 INC 3.3293 V1 29.580
RP 247.37 LAP 1.84 LOP 133.81 VP 19.904 GAP -.78 AZP 92.77 TAL 35.79 TAP 182.21 RCA 144.73 APO 247.43 V2 22.154
RC 313.869 GL 19.03 GP -22.16 ZAL 38.13 ZAP 65.75 ETS 171.13 ZAE 91.79 ETE 182.34 ZAC 66.92 ETC 285.41 LVI -.59

PLANETOCENTRIC CONIC

C3 33.879 VHL 5.821 DLA 25.65 RAL 11.44 RAD 6648.5 VEL 12.401 PTH 7.31 VHP 2.724 DPA -14.34 RAP 25.45 ECC 1.5376
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 4 42 3791.48 -46.97 155.93 267.12 81.38 8 7 54 2791.5 -44.89 121.04
60.00 7 10 33 3775.91 -38.86 152.55 265.14 78.35 8 13 29 2775.9 -39.43 121.40
70.00 7 20 36 3746.28 -31.24 147.99 262.98 75.44 8 23 2 2746.3 -34.12 119.83
80.00 7 42 7 3678.72 -24.83 140.82 260.92 72.87 8 43 26 2678.7 -29.58 114.40
90.00 8 37 55 3498.53 -21.89 126.56 259.89 71.64 9 36 13 2498.5 -27.48 100.93
100.00 10 24 59 3153.19 -24.83 102.18 260.92 72.87 11 17 33 2153.2 -29.58 75.77
110.00 12 20 2 2793.10 -31.24 76.91 262.98 75.44 13 6 33 1793.1 -34.12 48.55

DIFFERENTIAL CORRECTIONS

TDE -.3211 TRA-3.2892 TC3-3.7048 BAU 1.8084
RDE -.1367 RRA -.5198 RC3-1.4892 FAU .41934
FDE 2.5452 FRA-4.8645 FC-10.7157 BSP 10112
BDE .3490 BRA 3.3300 BC3 3.9927 FSP 2005

MID-COURSE EXECUTION ACCURACY

SGT 5621.4 SGR 1829.1 SG3 1191.3
RRT .9295 RRF .9637 RTF .5001
SGB 5911.5 R23 .2375 R13 .9386
SG1 5878.1 SG2 645.4 THA 17.04

ORBIT DETERMINATION ACCURACY

ST 56.5 SR 11.2 SS 35.2
CRT .9225 CRS .0698 CST -.2878
LSA 58.7 MSA 33.4 SSA 1.8
EL1 57.5 EL2 4.2 ALF 10.38

LAUNCH DATE SEP 10 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.18 VL 32.951 GAL 7.14 AZL 86.59 HCA 147.31 SMA 196.22 ECC .26192 INC 3.4139 V1 29.580
RP 247.31 LAP 1.84 LOP 134.50 VP 19.901 GAP -.99 AZP 92.87 TAL 35.48 TAP 182.79 RCA 144.83 APO 247.61 V2 22.140
RC 316.151 GL 19.56 GP -22.55 ZAL 38.59 ZAP 65.06 ETS 170.58 ZAE 90.71 ETE 181.88 ZAC 66.54 ETC 285.46 LVI -.21

PLANETOCENTRIC CONIC

C3 33.829 VHL 5.816 DLA 26.23 RAL 11.44 RAD 6648.5 VEL 12.399 PTH 7.31 VHP 2.744 DPA -14.68 RAP 25.65 ECC 1.5567
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 1 49 3803.96 -46.84 157.10 267.63 80.48 8 5 13 2804.0 -45.15 122.13
60.00 7 6 28 3791.59 -38.63 153.82 265.45 77.51 8 9 39 2791.6 -39.59 122.70
70.00 7 14 35 3767.64 -30.86 149.54 263.11 74.59 8 17 23 2767.6 -34.15 121.30
80.00 7 32 46 3710.54 -24.18 142.95 260.84 71.93 8 34 37 2710.5 -29.39 116.75
90.00 8 25 28 3540.28 -20.97 129.27 259.66 70.58 9 24 29 2540.3 -27.10 103.93
100.00 10 15 38 3185.02 -24.18 104.32 260.84 71.93 11 8 43 2185.0 -29.39 78.11
110.00 12 14 1 2214.46 -30.86 78.46 263.11 74.59 13 0 56 1814.5 -34.15 50.22

DIFFERENTIAL CORRECTIONS

TDE -.3010 TRA-3.3480 TC3-3.8005 BAU 1.8517
RDE -.1195 RRA -.5429 RC3-1.5231 FAU .41530
FDE 2.5397 FRA-4.8336 FC-10.6282 BSP 10187
BDE .3239 BRA 3.3917 BC3 4.0943 FSP 1894

MID-COURSE EXECUTION ACCURACY

SGT 5757.7 SGR 1873.0 SG3 1182.4
RRT .9328 RRF .9665 RTF .9319
SGB 6054.7 R23 .2388 R13 .9403
SG1 6020.2 SG2 645.6 THA 17.08

ORBIT DETERMINATION ACCURACY

ST 57.5 SR 11.0 SS 35.4
CRT .9431 CRS -.0151 CST -.3095
LSA 59.8 MSA 33.2 SSA 1.7
EL1 58.4 EL2 3.6 ALF 10.30

LAUNCH DATE SEP 10 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 20 1974

Heliocentric Conic

RL 150.63 LAL -.00 LOL 347.15 VL 32.950 GAL 7.08 AZL 86.30 HCA 148.10 SMA 196.36 ECC .26195 INC 3.5026 V1 29.580  
 RP 247.65 LAP 1.85 LOP 135.39 VP 19.898 GAP -1.19 AZP 92.98 TAL 35.16 TAP 183.36 RCA 144.93 APO 247.80 V2 22.126  
 RC 316.406 GL 20.11 GP -22.98 ZAL 39.05 ZAP 64.40 ETS 170.01 ZAE 89.67 ETE 181.42 ZAC 66.13 ETC 285.51 LVI .20

Planetocentric Conic

C3 33.789 VHL 5.813 DLA 26.84 RAL 11.44 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 2.764 DPA -15.02 RAP 25.88 ECC 1.5561  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 44 3817.13 -46.68 158.34 268.14 79.54 8 2 21 2817.1 -45.40 123.30  
 60.00 7 2 4 3808.20 -38.38 155.16 265.76 76.63 8 5 33 2808.2 -39.74 124.09  
 70.00 7 8 2 3790.61 -30.44 151.19 263.22 73.70 8 11 13 2790.6 -34.15 123.09  
 80.00 7 22 9 3746.28 -23.40 145.32 260.70 70.91 8 24 38 2746.3 -29.13 119.37  
 90.00 8 10 26 3590.30 -19.81 132.48 259.30 69.39 9 10 16 2590.3 -26.55 107.49  
 100.00 10 5 1 3220.75 -23.40 106.69 260.70 70.91 10 58 42 2220.8 -29.13 80.74  
 110.00 12 7 29 2837.43 -30.44 80.11 263.22 73.70 12 54 46 1837.4 -34.15 52.01

Differential Corrections

TDE -.2663 TRA-3.3953 TC3-3.8821 BAU 1.8874  
 RDE -.0904 RRA -.5560 RC3-1.5446 FAU .40675  
 FDE 2.6245 FRA-4.7078 FC-10.4216 BSP 10451  
 BDE .2813 BRA 3.4405 BC3 4.1781 FSP 1879

Mid-Course Execution Accuracy

SGT 5874.1 SGR 1899.9 SG3 1160.9  
 RRT .9347 RRF .9684 RTF .9314  
 SGB 6173.7 R23 .2451 R13 .9397  
 SG1 6139.8 SG2 646.2 THA 17.01

Orbit Determination Accuracy

ST 58.2 SR 10.6 SS 36.3  
 CRT .9667 CRS -.1187 CST -.3180  
 LSA 60.6 MSA 33.7 SSA 1.7  
 EL1 59.1 EL2 2.7 ALF 10.00

LAUNCH DATE SEP 10 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 22 1974

Heliocentric Conic

RL 150.63 LAL -.00 LOL 347.15 VL 32.966 GAL 7.02 AZL 86.40 HCA 149.07 SMA 196.51 ECC .26199 INC 3.5957 V1 29.580  
 RP 247.78 LAP 1.85 LOP 136.27 VP 19.896 GAP -1.39 AZP 93.09 TAL 34.85 TAP 183.92 RCA 145.02 APO 247.99 V2 22.113  
 RC 320.632 GL 20.68 GP -23.37 ZAL 39.53 ZAP 63.77 ETS 169.43 ZAE 86.65 ETE 180.96 ZAC 65.70 ETC 285.56 LVI .63

Planetocentric Conic

C3 33.765 VHL 5.811 DLA 27.46 RAL 11.43 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 2.786 DPA -15.37 RAP 26.14 ECC 1.5557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 25 3831.01 -46.51 159.63 268.66 78.56 7 59 16 2831.0 -45.66 124.54  
 60.00 6 57 21 3825.83 -38.09 156.57 266.06 75.71 8 1 7 2825.8 -39.88 125.57  
 70.00 7 0 54 3815.39 -29.95 152.96 263.29 72.76 8 4 29 2815.4 -34.12 125.03  
 80.00 7 9 53 3787.17 -22.47 148.00 260.47 69.80 8 13 0 2787.2 -28.76 122.35  
 90.00 7 50 50 3654.75 -18.21 136.53 258.72 67.98 8 51 45 2654.7 -25.70 112.01  
 100.00 9 52 45 3261.64 -22.47 109.37 260.47 69.80 10 47 6 2261.6 -28.76 83.72  
 110.00 12 0 20 2862.21 -29.95 81.87 263.29 72.76 12 48 2 1862.2 -34.12 53.95

Differential Corrections

TDE -.2308 TRA-3.4430 TC3-3.9628 BAU 1.9236  
 RDE -.0610 RRA -.5704 RC3-1.5672 FAU .39828  
 FDE 2.7009 FRA-4.5875 FC-10.2121 BSP 10701  
 BDE .2387 BRA 3.4900 BC3 4.2615 FSP 1857

Mid-Course Execution Accuracy

SGT 5991.7 SGR 1929.4 SG3 1139.5  
 RRT .9365 RRF .9702 RTF .9308  
 SGB 6294.7 R23 .2512 R13 .9392  
 SG1 6261.3 SG2 647.3 THA 16.97

Orbit Determination Accuracy

ST 58.9 SR 10.3 SS 37.2  
 CRT .9829 CRS -.2346 CST -.3290  
 LSA 61.6 MSA 34.2 SSA 1.6  
 EL1 59.8 EL2 1.9 ALF 9.80

LAUNCH DATE SEP 10 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 24 1974

Heliocentric Conic

RL 150.63 LAL -.00 LOL 347.15 VL 32.973 GAL 6.97 AZL 86.31 HCA 149.96 SMA 196.68 ECC .26203 INC 3.6936 V1 29.580  
 RP 247.91 LAP 1.85 LOP 137.15 VP 19.895 GAP -1.59 AZP 93.20 TAL 34.53 TAP 184.49 RCA 145.12 APO 248.10 V2 22.101  
 RC 322.829 GL 21.28 GP -23.82 ZAL 40.03 ZAP 63.17 ETS 168.83 ZAE 87.85 ETE 180.48 ZAC 65.24 ETC 285.61 LVI 1.09

Planetocentric Conic

C3 33.756 VHL 5.810 DLA 28.11 RAL 11.40 RAD 6648.4 VEL 12.398 PTH 7.31 VHP 2.808 DPA -15.74 RAP 26.42 ECC 1.5555  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 51 51 3845.69 -46.30 160.99 269.18 77.53 7 55 57 2845.7 -45.91 125.87  
 60.00 6 52 16 3844.58 -37.77 158.06 266.35 74.75 7 56 20 2844.6 -40.01 127.15  
 70.00 6 53 2 3842.30 -29.39 154.85 263.33 71.77 7 57 5 2842.3 -34.06 127.13  
 80.00 6 55 12 3835.51 -21.30 151.11 260.11 68.57 7 59 7 2835.5 -28.23 125.85  
 90.00 7 18 14 3780.98 -15.38 143.04 257.49 65.97 8 20 55 2781.0 -23.97 119.31  
 100.00 9 38 4 3309.98 -21.30 112.48 260.11 68.57 10 33 14 2310.0 -28.23 87.21  
 110.00 11 52 29 2869.12 -29.39 83.77 263.33 71.77 12 40 38 1869.1 -34.06 56.04

Differential Corrections

TDE -.1927 TRA-3.4908 TC3-4.0411 BAU 1.9598  
 RDE -.0303 RRA -.5856 RC3-1.5902 FAU .38963  
 FDE 2.7760 FRA-4.4879 FC3-9.9927 BSP 10948  
 BDE .1950 BRA 3.5394 BC3 4.3428 FSP 1832

Mid-Course Execution Accuracy

SGT 6108.7 SGR 1960.8 SG3 1117.4  
 RRT .9383 RRF .9719 RTF .9303  
 SGB 6415.7 R23 .2573 R13 .9387  
 SG1 6382.7 SG2 649.0 THA 16.94

Orbit Determination Accuracy

ST 59.7 SR 10.3 SS 38.1  
 CRT .9881 CRS -.3378 CST -.3422  
 LSA 62.6 MSA 34.6 SSA 1.9  
 EL1 60.6 EL2 1.6 ALF 9.69

LAUNCH DATE SEP 10 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 26 1974

Heliocentric Conic

RL 150.63 LAL -.00 LOL 347.15 VL 32.981 GAL 6.91 AZL 86.20 HCA 150.84 SMA 196.78 ECC .26208 INC 3.7989 V1 29.580  
 RP 248.03 LAP 1.85 LOP 138.03 VP 19.894 GAP -1.79 AZP 93.32 TAL 34.21 TAP 185.05 RCA 145.22 APO 248.37 V2 22.089  
 RC 324.997 GL 21.91 GP -24.29 ZAL 40.54 ZAP 62.60 ETS 168.21 ZAE 86.68 ETE 180.00 ZAC 64.76 ETC 285.68 LVI 1.57

Planetocentric Conic

C3 33.766 VHL 5.811 DLA 28.78 RAL 11.36 RAD 6648.4 VEL 12.397 PTH 7.31 VHP 2.832 DPA -16.12 RAP 26.74 ECC 1.5557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 48 1 3861.23 -46.06 162.41 269.71 76.46 7 52 22 2861.2 -46.16 127.28  
 60.00 6 48 45 3864.59 -37.40 159.63 266.63 73.74 7 51 10 2864.6 -40.12 128.84  
 70.00 6 44 20 3871.73 -28.75 156.90 263.32 70.71 7 48 52 2871.7 -33.94 129.42  
 80.00 6 36 32 3896.26 -19.74 154.95 259.52 67.13 7 41 29 2896.3 -27.43 130.18  
 84.40 6 4 11 4000.47 -13.07 159.48 256.37 64.13 7 10 51 3000.5 -22.62 136.41  
 100.00 9 19 24 3370.73 -19.74 116.32 259.52 67.13 10 15 35 2370.7 -27.43 91.55  
 110.00 11 43 46 2918.55 -28.75 85.82 263.32 70.71 12 32 25 1918.6 -33.94 58.33

Differential Corrections

TDE -.1517 TRA-3.5375 TC3-4.1159 BAU 1.9957  
 RDE .0014 RRA -.6020 RC3-1.6137 FAU .38085  
 FDE 2.8464 FRA-4.3508 FC3-9.7647 BSP 11202  
 BDE .1517 BRA 3.5884 BC3 4.4210 FSP 1803

Mid-Course Execution Accuracy

SGT 6224.3 SGR 1993.9 SG3 1095.0  
 RRT .9400 RRF .9735 RTF .9298  
 SGB 6535.9 R23 .2633 R13 .9382  
 SG1 6503.4 SG2 651.2 THA 16.93

Orbit Determination Accuracy

ST 60.6 SR 10.5 SS 39.0  
 CRT .9803 CRS -.4784 CST -.3580  
 LSA 63.8 MSA 35.0 SSA 1.5  
 EL1 61.5 EL2 2.1 ALF 9.69

LAUNCH DATE SEP 10 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 32.988 GAL 6.85 AZL 86.09 HCA 151.72 SMA 198.94 ECC .26213 INC 3.9058 V1 29.580
RP 248.14 LAP 1.85 LOP 138.92 VP 19.894 GAP -1.99 AZP 93.44 TAL 33.89 TAP 185.61 RCA 145.32 APO 248.56 V2 22.078
RC 327.134 GL 22.57 GP -24.79 ZAL 41.08 ZAP 62.07 ETS 167.58 ZAE 85.74 ETE 179.50 ZAC 64.24 ETC 285.74 LVI 2.08

PLANETOCENTRIC CONIC

C3 33.796 VHL 5.813 DLA 29.49 RAL 11.30 RAD 6648.4 VEL 12.398 PTH 7.31 VHP 2.057 DPA -16.52 RAP 27.08 ECC 1.5362
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 52 3877.71 -45.79 163.91 270.24 75.33 7 48 30 2877.7 -46.40 128.80
60.00 6 40 46 3885.99 -36.98 181.29 266.88 72.68 7 45 32 2886.0 -40.21 130.85
70.00 6 34 35 3904.24 -28.00 159.13 263.24 69.59 7 39 39 2904.2 -33.75 131.94
80.00 6 8 37 3986.12 -17.27 160.48 258.42 65.26 7 15 3 2986.1 -25.97 136.46
81.28 5 39 3 4080.76 -13.36 165.55 256.48 63.47 6 47 4 3080.8 -23.15 142.52
100.00 8 51 28 3460.59 -17.27 121.84 258.42 65.26 9 49 9 2460.6 -25.97 97.82
110.00 11 34 1 2951.06 -28.00 88.05 263.24 69.59 12 23 12 1951.1 -33.75 60.85

DIFFERENTIAL CORRECTIONS

TDE -.1097 TRA-3.5854 TC3-4.1896 BAU 2.0325
RDE .0339 RRA -.6197 RC3-1.6383 FAU .37209
FDE 2.9105 FRA-4.2360 FC3-9.5316 B3P 11441
BDE .1148 BRA 3.6386 BC3 4.4985 F3P 1769

MID-COURSE EXECUTION ACCURACY

SGT 6342.0 SGR 2030.2 SG3 1072.4
RRY .9416 RRF .9751 RTF .9292
SGB 6659.0 R23 .2893 R13 .9378
SG1 6626.8 SG2 654.3 THA 16.94

ORBIT DETERMINATION ACCURACY

ST 61.6 SR 11.0 SS 39.8
CRT .9609 CRS -.5869 CST -.3753
LSA 65.1 MSA 35.4 SSA 1.4
EL1 62.5 EL2 3.0 ALF 9.79

LAUNCH DATE SEP 10 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 32.996 GAL 6.79 AZL 85.98 HCA 152.59 SMA 197.09 ECC .26219 INC 4.0210 V1 29.580
RP 248.25 LAP 1.85 LOP 139.80 VP 19.895 GAP -2.18 AZP 93.57 TAL 33.57 TAP 186.17 RCA 145.41 APO 248.76 V2 22.067
RC 329.241 GL 23.26 GP -25.32 ZAL 41.63 ZAP 61.57 ETS 166.92 ZAE 84.82 ETE 179.00 ZAC 63.70 ETC 285.81 LVI 2.63

PLANETOCENTRIC CONIC

C3 33.849 VHL 5.818 DLA 30.22 RAL 11.22 RAD 6648.5 VEL 12.400 PTH 7.31 VHP 2.884 DPA -16.93 RAP 27.45 ECC 1.5571
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 39 23 3895.22 -45.47 165.48 270.76 74.16 7 44 18 2895.2 -46.64 130.42
60.00 6 34 13 3908.99 -36.50 163.05 267.10 71.57 7 39 22 2909.0 -40.28 132.60
70.00 6 23 31 3940.62 -27.11 161.59 263.08 68.38 7 29 12 2940.6 -33.47 134.74
78.88 5 20 23 4139.81 -13.66 170.09 256.58 62.78 6 29 22 3139.8 -23.69 147.11
78.88 5 20 23 4139.81 -13.66 170.09 256.58 62.78 6 29 22 3139.8 -23.69 147.11
78.88 5 20 23 4139.81 -13.66 170.09 256.58 62.78 6 29 22 3139.8 -23.69 147.11
110.00 11 22 57 2987.44 -27.11 90.50 263.08 68.38 12 12 45 1987.4 -33.47 63.66

DIFFERENTIAL CORRECTIONS

TDE -.0648 TRA-3.6328 TC3-4.2597 BAU 2.0693
RDE .0683 RRA -.6383 RC3-1.6629 FAU .36305
FDE 2.9739 FRA-4.1202 FC3-9.2857 B3P 11685
BDE .0942 BRA 3.6884 BC3 4.5728 F3P 1735

MID-COURSE EXECUTION ACCURACY

SGT 6458.6 SGR 2068.2 SG3 1048.9
RRY .9431 RRF .9766 RTF .9286
SGB 6781.6 R23 .2753 R13 .9372
SG1 6749.7 SG2 658.0 THA 16.97

ORBIT DETERMINATION ACCURACY

ST 62.6 SR 11.8 SS 40.7
CRT .9331 CRS -.6799 CST -.3938
LSA 66.6 MSA 35.8 SSA 1.4
EL1 63.6 EL2 4.2 ALF 10.00

LAUNCH DATE SEP 10 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 33.004 GAL 6.73 AZL 85.86 HCA 153.47 SMA 197.24 ECC .26226 INC 4.1432 V1 29.580
RP 248.35 LAP 1.85 LOP 140.68 VP 19.897 GAP -2.38 AZP 93.71 TAL 33.25 TAP 186.72 RCA 145.51 APO 248.96 V2 22.057
RC 331.317 GL 23.99 GP -25.88 ZAL 42.20 ZAP 61.11 ETS 166.25 ZAE 83.92 ETE 178.48 ZAC 63.12 ETC 285.89 LVI 3.20

PLANETOCENTRIC CONIC

C3 33.927 VHL 5.825 DLA 30.98 RAL 11.12 RAD 6648.5 VEL 12.403 PTH 7.31 VHP 2.912 DPA -17.37 RAP 27.85 ECC 1.5584
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 34 31 3913.89 -45.11 167.13 271.27 72.93 7 39 45 2913.9 -46.86 132.17
60.00 6 27 3 3933.80 -35.95 164.93 267.28 70.40 7 32 37 2933.8 -40.30 134.71
70.00 6 10 43 3982.08 -26.04 164.33 262.79 67.07 7 17 5 2982.1 -33.08 137.91
76.78 5 4 40 4188.93 -13.95 173.93 256.69 62.05 6 14 29 3188.9 -24.25 151.01
76.78 5 4 40 4188.93 -13.95 173.93 256.69 62.05 6 14 29 3188.9 -24.25 151.01
76.78 5 4 40 4188.93 -13.95 173.93 256.69 62.05 6 14 29 3188.9 -24.25 151.01
110.00 11 10 9 3028.90 -26.04 93.25 262.79 67.07 12 0 38 2028.9 -33.08 66.83

DIFFERENTIAL CORRECTIONS

TDE -.0178 TRA-3.6803 TC3-4.3263 BAU 2.1084
RDE .1038 RRA -.6588 RC3-1.6884 FAU .35399
FDE 3.0307 FRA-4.0092 FC3-9.0330 B3P 11922
BDE .1053 BRA 3.7390 BC3 4.6441 F3P 1694

MID-COURSE EXECUTION ACCURACY

SGT 6575.3 SGR 2109.6 SG3 1025.1
RRY .9446 RRF .9780 RTF .9281
SGB 6905.4 R23 .2810 R13 .9368
SG1 6873.6 SG2 662.2 THA 17.02

ORBIT DETERMINATION ACCURACY

ST 63.8 SR 12.8 SS 41.8
CRT .9028 CRS -.7540 CST -.4143
LSA 68.2 MSA 36.0 SSA 1.5
EL1 64.8 EL2 5.4 ALF 10.32

LAUNCH DATE SEP 10 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

RL 150.63 LAL -.00 LOL 347.15 VL 33.011 GAL 6.66 AZL 85.73 HCA 154.35 SMA 197.38 ECC .26232 INC 4.2729 V1 29.580
RP 248.45 LAP 1.85 LOP 141.56 VP 19.899 GAP -2.57 AZP 93.85 TAL 32.92 TAP 187.27 RCA 145.61 APO 249.16 V2 22.048
RC 333.384 GL 24.76 GP -26.46 ZAL 42.79 ZAP 60.68 ETS 165.55 ZAE 83.08 ETE 177.95 ZAC 62.50 ETC 285.98 LVI 3.81

PLANETOCENTRIC CONIC

C3 34.034 VHL 5.834 DLA 31.78 RAL 10.99 RAD 6648.5 VEL 12.407 PTH 7.32 VHP 2.943 DPA -17.82 RAP 28.28 ECC 1.5601
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 29 12 3933.82 -44.70 168.87 271.76 71.64 7 34 46 2933.8 -47.06 134.05
60.00 6 19 8 3960.71 -35.31 166.93 267.41 69.17 7 25 9 2960.7 -40.28 137.00
70.00 5 55 27 4030.74 -24.71 167.49 262.32 65.63 7 2 38 3030.7 -32.49 141.58
74.85 4 50 45 4231.90 -14.26 177.34 256.80 61.29 6 1 17 3231.9 -24.83 154.49
74.85 4 50 45 4231.90 -14.26 177.34 256.80 61.29 6 1 17 3231.9 -24.83 154.49
74.85 4 50 45 4231.90 -14.26 177.34 256.80 61.29 6 1 17 3231.9 -24.83 154.49
110.00 10 54 53 3077.56 -24.71 96.41 262.32 65.63 11 46 11 2077.6 -32.49 70.50

DIFFERENTIAL CORRECTIONS

TDE .0314 TRA-3.7292 TC3-4.3891 BAU 2.1439
RDE .1412 RRA -.6805 RC3-1.7138 FAU .34458
FDE 3.0855 FRA-3.8969 FC3-8.7652 B3P 12151
BDE .1447 BRA 3.7908 BC3 4.7118 F3P 1653

MID-COURSE EXECUTION ACCURACY

SGT 6692.6 SGR 2153.1 SG3 1000.3
RRY .9460 RRF .9792 RTF .9275
SGB 7030.4 R23 .2868 R13 .9363
SG1 6998.6 SG2 667.3 THA 17.09

ORBIT DETERMINATION ACCURACY

ST 65.1 SR 14.0 SS 42.4
CRT .8729 CRS -.8114 CST -.4349
LSA 70.1 MSA 36.3 SSA 1.2
EL1 66.3 EL2 6.7 ALF 10.75

LAUNCH DATE SEP 10 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

DISTANCE 558.201

EARTH TO MARS

RL 150.63 LAL -.00 LOL 347.15 VL 33.019 GAL 6.60 AZL 85.59 HCA 155.22 SMA 197.53 ECC .26240 INC 4.4111 V1 29.580
RP 248.54 LAP 1.85 LOP 142.43 VP 19.902 GAP -2.76 AZP 94.01 TAL 32.59 TAP 187.82 RCA 145.70 APO 249.37 V2 22.039
RC 335.360 GL 25.57 GP -27.09 ZAL 43.41 ZAP 60.30 ETS 164.84 ZAE 82.23 ETE 177.40 ZAC 61.85 ETC 286.07 LVI 4.45

PLANETOCENTRIC CONIC

C3 34.175 VHL 5.846 DLA 32.62 RAL 10.84 RAD 6640.6 VEL 12.413 PTH 7.32 VHP 2.975 DPA -18.31 RAP 29.78 ECC 1.5624
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 23 23 3955.18 -44.23 170.71 272.23 70.29 7 29 19 2955.2 -47.25 136.09
60.00 6 10 20 3990.06 -34.58 169.08 267.47 67.87 7 16 50 2990.1 -40.20 139.50
70.00 5 36 18 4090.85 -22.97 171.29 261.56 64.00 6 44 28 3090.8 -31.62 146.05
73.03 4 37 58 4270.88 -14.57 180.49 256.90 60.49 5 49 9 3270.9 -25.43 157.71
73.03 4 37 58 4270.88 -14.57 180.49 256.90 60.49 5 49 9 3270.9 -25.43 157.71
73.03 4 37 58 4270.88 -14.57 180.49 256.90 60.49 5 49 9 3270.9 -25.43 157.71
110.00 10 35 44 3137.87 -22.97 100.20 261.56 64.00 11 28 2 2137.7 -31.62 74.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0844 TRA-3.7766 TC3-4.4463 BAW 2.1814 SGT 6807.7 SGR 2199.3 SG3 974.7 ST 66.5 SR 15.5 SS 43.2
RDE .1810 RRA -.7034 RC3-1.7393 FAU .33497 RRT .9473 RRF .9804 RTF .9267 CRT .8464 CRS -.8552 CST -.4567
FDE 3.1384 FRA-3.7824 FC3-8.4858 BSP 12393 SGB 7154.1 R23 .2927 R13 .9357 LSA 72.0 MSA 36.6 SBA 1.2
BDE .1997 BRA 3.8416 BC3 4.7744 FSP 1611 SGI 7122.4 SG2 673.3 THA 17.17 EL1 67.8 EL2 8.1 ALF 11.29

LAUNCH DATE SEP 10 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC

DISTANCE 562.054

EARTH TO MARS

RL 150.63 LAL -.00 LOL 347.15 VL 33.027 GAL 6.54 AZL 85.44 HCA 156.10 SMA 197.68 ECC .26248 INC 4.5587 V1 29.580
RP 248.83 LAP 1.85 LOP 143.31 VP 19.905 GAP -2.95 AZP 94.17 TAL 32.26 TAP 188.36 RCA 145.80 APO 249.37 V2 22.030
RC 337.368 GL 26.42 GP -27.75 ZAL 44.05 ZAP 59.95 ETS 164.10 ZAE 81.42 ETE 176.84 ZAC 61.15 ETC 286.18 LVI 5.14

PLANETOCENTRIC CONIC

C3 34.352 VHL 5.861 DLA 33.49 RAL 10.65 RAD 6648.7 VEL 12.420 PTH 7.33 VHP 3.009 DPA -18.02 RAP 29.25 ECC 1.5654
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 17 0 3978.13 -43.68 172.65 272.66 68.88 7 23 19 2978.1 -47.40 138.28
60.00 6 0 27 4022.35 -33.73 171.39 267.44 66.49 7 7 30 3022.3 -40.05 142.23
70.00 5 9 6 4174.80 -20.37 176.41 260.23 61.97 6 18 41 3174.8 -30.11 152.12
71.26 4 26 0 4306.83 -14.87 183.45 257.01 59.64 5 37 47 3306.8 -26.05 160.75
71.26 4 26 0 4306.83 -14.87 183.45 257.01 59.64 5 37 47 3306.8 -26.05 160.75
71.26 4 26 0 4306.83 -14.87 183.45 257.01 59.64 5 37 47 3306.8 -26.05 160.75
110.00 10 8 32 3221.62 -20.37 105.33 260.23 61.97 11 2 14 2221.6 -30.11 81.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1395 TRA-3.8250 TC3-4.4984 BAW 2.2192 SGT 6922.9 SGR 2248.5 SG3 948.1 ST 68.1 SR 17.1 SS 44.0
RDE .2227 RRA -.7282 RC3-1.7648 FAU .32507 RRT .9486 RRF .9814 RTF .9260 CRT .8253 CRS -.8875 CST -.4790
FDE 3.1854 FRA-3.6688 FC3-8.1923 BSP 12631 SGB 7278.9 R23 .2984 R13 .9351 LSA 74.2 MSA 36.8 SBA 1.1
BDE .2628 BRA 3.8937 BC3 4.8322 FSP 1566 SGI 7247.1 SG2 679.9 THA 17.28 EL1 69.5 EL2 9.4 ALF 11.93

LAUNCH DATE SEP 10 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

DISTANCE 565.827

EARTH TO MARS

RL 150.63 LAL -.00 LOL 347.15 VL 33.034 GAL 6.48 AZL 85.28 HCA 156.97 SMA 197.83 ECC .26256 INC 4.7166 V1 29.580
RP 248.71 LAP 1.84 LOP 144.19 VP 19.910 GAP -3.14 AZP 94.34 TAL 31.93 TAP 188.91 RCA 145.89 APO 249.78 V2 22.023
RC 339.321 GL 27.32 GP -29.46 ZAL 44.72 ZAP 59.66 ETS 163.33 ZAE 80.65 ETE 176.26 ZAC 60.41 ETC 286.29 LVI 5.87

PLANETOCENTRIC CONIC

C3 34.573 VHL 5.880 DLA 34.41 RAL 10.43 RAD 6648.7 VEL 12.429 PTH 7.33 VHP 3.046 DPA -19.36 RAP 29.78 ECC 1.5690
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 58 4002.88 -43.05 174.70 273.05 67.40 7 16 41 3002.9 -47.51 140.67
60.00 5 49 16 4058.21 -32.73 173.90 267.30 65.04 6 56 54 3058.2 -39.79 145.25
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67
69.53 4 14 37 4340.53 -15.18 186.26 257.11 58.74 5 26 58 3340.5 -26.68 163.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1995 TRA-3.8756 TC3-4.5462 BAW 2.2586 SGT 7040.7 SGR 2303.2 SG3 921.4 ST 69.8 SR 18.9 SS 44.7
RDE .2658 RRA -.7565 RC3-1.7916 FAU .31523 RRT .9499 RRF .9824 RTF .9254 CRT .8104 CRS -.9108 CST -.5015
FDE 3.2222 FRA-3.5631 FC3-7.8935 BSP 12844 SGB 7407.9 R23 .3035 R13 .9347 LSA 76.5 MSA 36.9 SBA 1.0
BDE .3299 BRA 3.9488 BC3 4.8865 FSP 1513 SGI 7375.9 SG2 687.2 THA 17.42 EL1 71.5 EL2 10.8 ALF 12.68

LAUNCH DATE SEP 10 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC

DISTANCE 569.802

EARTH TO MARS

RL 150.63 LAL -.00 LOL 347.15 VL 33.042 GAL 6.42 AZL 85.11 HCA 157.85 SMA 197.99 ECC .26265 INC 4.8863 V1 29.580
RP 248.78 LAP 1.84 LOP 145.07 VP 19.914 GAP -3.33 AZP 94.53 TAL 31.60 TAP 189.45 RCA 145.99 APO 249.99 V2 22.015
RC 341.248 GL 28.28 GP -29.21 ZAL 45.42 ZAP 59.40 ETS 162.55 ZAE 79.92 ETE 175.66 ZAC 59.63 ETC 286.41 LVI 6.65

PLANETOCENTRIC CONIC

C3 34.845 VHL 5.903 DLA 35.37 RAL 10.17 RAD 6648.8 VEL 12.440 PTH 7.34 VHP 3.085 DPA -19.94 RAP 30.35 ECC 1.5735
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 2 9 4029.67 -42.33 176.86 273.37 65.86 7 9 19 3029.7 -47.57 143.26
60.00 5 36 24 4098.55 -31.53 176.66 266.99 63.48 6 44 42 3098.6 -39.41 148.61
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49
67.81 4 3 39 4372.46 -15.49 188.97 257.21 57.80 5 16 31 3372.5 -27.33 166.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2427 TRA-3.9377 TC3-4.5992 BAW 2.3055 SGT 7176.8 SGR 2375.3 SG3 899.0 ST 71.7 SR 20.7 SS 44.0
RDE .3031 RRA -.7957 RC3-1.8282 FAU .30716 RRT .9519 RRF .9836 RTF .9266 CRT .8067 CRS -.9244 CST -.5246
FDE 3.2116 FRA-3.5015 FC3-7.6317 BSP 12884 SGB 7559.6 R23 .3045 R13 .9359 LSA 79.0 MSA 36.7 SBA 1.0
BDE .3883 BRA 4.0172 BC3 4.9492 FSP 1411 SGI 7527.7 SG2 693.6 THA 17.64 EL1 73.7 EL2 11.9 ALF 13.46

LAUNCH DATE SEP 10 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC										DISTANCE 573.371										EARTH TO MARS																																																																					
RL	150.63	LAL	-.00	LOL	347.19	VL	33.080	GAL	6.35	AZL	84.93	HCA	158.72	SMA	198.14	ECC	.26274	INC	5.0690	V1	29.580	RP	248.85	LAP	1.84	LOP	145.94	VP	19.920	GAP	-3.52	AZP	94.73	TAL	31.27	TAP	189.99	RCA	146.08	APO	250.20	V2	22.009	RC	343.139	GL	29.30	GP	-30.01	ZAL	46.16	ZAP	59.20	ETS	161.73	ZAE	79.22	ETE	175.04	ZAC	58.79	ETC	286.55	LVI	7.48																								
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																					
C3	35.171	VHL	5.931	DLA	36.38	RAL	9.86	RAD	6649.0	VEL	12.453	PTH	7.35	VHP	3.128	DPA	-20.55	RAP	30.97	ECC	1.5788	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	73.7	SR	23.1	SS	46.0	CRT	.7930	CRS	-.9417	CST	-.5450	LSA	81.8	MSA	37.2	SSA	.9	EL1	76.0	EL2	13.6	ALF	14.43																		
50.00	5	53	26	4058.85	-41.49	179.16	273.60	64.24	7	1	4	3058.9	-47.56	146.08	60.00	5	21	15	4144.95	-30.08	179.73	266.46	61.81	6	30	20	3145.0	-38.83	152.42	66.09	3	52	56	4403.06	-15.79	191.62	257.30	56.79	5	6	20	3403.1	-28.00	169.27	66.09	3	52	56	4403.06	-15.79	191.62	257.30	56.79	5	6	20	3403.1	-28.00	169.27	66.09	3	52	56	4403.06	-15.79	191.62	257.30	56.79	5	6	20	3403.1	-28.00	169.27	66.09	3	52	56	4403.06	-15.79	191.62	257.30	56.79	5	6	20	3403.1	-28.00	169.27

LAUNCH DATE SEP 10 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 15 1974

HELIOCENTRIC CONIC										DISTANCE 577.142										EARTH TO MARS																																																						
RL	150.63	LAL	-.00	LOL	347.15	VL	33.050	GAL	6.29	AZL	84.73	HCA	159.59	SMA	198.29	ECC	.26284	INC	5.2685	V1	29.580	RP	248.92	LAP	1.83	LOP	146.82	VP	19.926	GAP	-3.71	AZP	94.94	TAL	30.93	TAP	190.53	RCA	146.17	APO	250.41	V2	22.003	RC	345.001	GL	30.38	GP	-30.86	ZAL	46.93	ZAP	59.05	ETS	160.90	ZAE	78.56	ETE	174.41	ZAC	57.89	ETC	286.71	LVI	8.36									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																						
C3	35.567	VHL	5.964	DLA	37.44	RAL	9.49	RAD	6649.1	VEL	12.469	PTH	7.36	VHP	3.175	DPA	-21.20	RAP	31.62	ECC	1.5833	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	75.9	SR	25.3	SS	46.4	CRT	.7924	CRS	-.9505	CST	-.5661	LSA	84.7	MSA	37.2	SSA	.9	EL1	78.6	EL2	14.9	ALF	15.39			
50.00	5	43	37	4090.78	-40.52	181.60	273.72	62.55	6	51	48	3090.8	-47.47	149.16	60.00	5	2	54	4199.90	-28.28	183.24	265.60	59.98	6	12	54	3199.9	-37.98	156.83	64.36	3	42	24	4432.58	-16.09	194.22	257.37	55.72	4	56	17	3432.6	-28.68	172.01	64.36	3	42	24	4432.58	-16.09	194.22	257.37	55.72	4	56	17	3432.6	-28.68	172.01	64.36	3	42	24	4432.58	-16.09	194.22	257.37	55.72	4	56	17	3432.6	-28.68	172.01

LAUNCH DATE SEP 10 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC										DISTANCE 580.910										EARTH TO MARS																																																						
RL	150.63	LAL	-.00	LOL	347.15	VL	33.086	GAL	6.23	AZL	84.52	HCA	160.47	SMA	198.44	ECC	.26294	INC	5.4807	V1	29.580	RP	248.97	LAP	1.83	LOP	147.69	VP	19.933	GAP	-3.89	AZP	95.17	TAL	30.60	TAP	191.06	RCA	146.27	APO	250.62	V2	21.997	RC	346.831	GL	31.53	GP	-31.77	ZAL	47.74	ZAP	58.96	ETS	160.04	ZAE	77.95	ETE	173.75	ZAC	56.94	ETC	286.88	LVI	9.31									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																						
C3	36.039	VHL	6.003	DLA	38.58	RAL	9.06	RAD	6649.3	VEL	12.487	PTH	7.38	VHP	3.226	DPA	-21.90	RAP	32.33	ECC	1.5931	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	76.2	SR	28.1	SS	47.3	CRT	.7879	CRS	-.9597	CST	-.5680	LSA	87.9	MSA	37.7	SSA	.8	EL1	81.4	EL2	16.6	ALF	16.53			
50.00	5	32	30	4125.95	-39.38	184.21	273.68	60.78	6	41	16	3125.9	-47.26	152.53	60.00	4	39	10	4269.15	-25.83	187.49	264.19	57.92	5	50	19	3269.2	-36.65	162.23	62.61	3	31	55	4461.35	-16.38	196.79	257.44	54.59	4	46	17	3461.4	-29.37	174.76	62.61	3	31	55	4461.35	-16.38	196.79	257.44	54.59	4	46	17	3461.4	-29.37	174.76	62.61	3	31	55	4461.35	-16.38	196.79	257.44	54.59	4	46	17	3461.4	-29.37	174.76

LAUNCH DATE SEP 10 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC										DISTANCE 584.679										EARTH TO MARS																																																						
RL	150.63	LAL	-.00	LOL	347.15	VL	33.073	GAL	6.16	AZL	84.29	HCA	181.34	SMA	198.80	ECC	.26304	INC	5.7141	V1	29.580	RP	249.02	LAP	1.83	LOP	148.57	VP	19.941	GAP	-4.07	AZP	95.42	TAL	30.26	TAP	191.60	RCA	146.38	APO	250.84	V2	21.992	RC	348.628	GL	32.76	GP	-32.74	ZAL	48.59	ZAP	58.93	ETS	159.16	ZAE	77.39	ETE	173.07	ZAC	55.92	ETC	287.07	LVI	10.32									
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																						
C3	36.606	VHL	6.050	DLA	39.74	RAL	8.55	RAD	6649.5	VEL	12.510	PTH	7.39	VHP	3.282	DPA	-22.64	RAP	33.08	ECC	1.6024	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	ST	80.6	SR	30.9	SS	47.8	CRT	.7895	CRS	-.9651	CST	-.6029	LSA	91.1	MSA	37.9	SSA	.8	EL1	84.4	EL2	18.1	ALF	17.65			
50.00	5	19	45	4165.05	-38.04	186.99	273.44	58.94	6	29	10	3165.1	-46.91	156.25	60.00	4	2	53	4372.41	-21.96	193.48	261.51	55.32	5	15	45	3372.4	-34.19	169.89	60.82	3	21	26	4489.44	-16.65	199.35	257.48	53.38	4	36	16	3489.4	-30.08	177.52	60.82	3	21	26	4489.44	-16.65	199.35	257.48	53.38	4	36	16	3489.4	-30.08	177.52	60.82	3	21	26	4489.44	-16.65	199.35	257.48	53.38	4	36	16	3489.4	-30.08	177.52

LAUNCH DATE SEP 10 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 33.081 GAL 6.10 AZL 84.03 HCA 162.21 SMA 198.75 ECC .26315 INC 5.9693 V1 29.580  
 RP 249.07 LAP 1.82 LOP 149.44 VP 19.949 GAP -4.26 AZP 95.69 TAL 29.92 TAP 192.13 RCA 146.45 APO 251.05 V2 21.980  
 RC 350.392 GL 34.07 GP -33.78 ZAL 49.50 ZAP 59.97 ETS 158.25 ZAE 76.88 ETE 172.36 ZAC 54.43 ETC 287.29 LVI 11.40

DISTANCE 588.445 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.282 VHL 6.106 DLA 40.99 RAL 7.95 RAD 6849.7 VEL 12.537 PTH 7.41 VHP 3.343 DPA -23.44 RAP 33.89 ECC 1.6136  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 3 4 56 4209.08 -36.45 190.00 272.91 57.01 6 15 9 3209.1 -46.35 160.35  
 59.00 3 10 49 4517.19 -16.90 201.91 257.50 52.08 4 26 6 3517.2 -30.80 180.32  
 59.00 3 10 49 4517.19 -16.90 201.91 257.50 52.08 4 26 6 3517.2 -30.80 180.32  
 59.00 3 10 49 4517.19 -16.90 201.91 257.50 52.08 4 26 6 3517.2 -30.80 180.32  
 59.00 3 10 49 4517.19 -16.90 201.91 257.50 52.08 4 26 6 3517.2 -30.80 180.32  
 59.00 3 10 49 4517.19 -16.90 201.91 257.50 52.08 4 26 6 3517.2 -30.80 180.32

DIFFERENTIAL CORRECTIONS  
 TDE .5995 TRA-4.1764 TC3-4.6247 BAU 2.4943 SGT 7692.0 SGR 2686.9 SG3 724.3 ST 83.2 SR 34.1 SS 48.5  
 RDE .6115 RRA -.9654 RC3-1.9116 FAU .24419 RRT .9550 RRF .9848 RTF .9154 CRT .7899 CR8 -.9702 CST -.6187  
 FDE 3.3922 FRA-2.8098 FC3-5.6702 B8P 14470 SGB 8147.8 R23 .3440 R13 .9267 LSA 94.7 MSA 38.4 SSA .7  
 BDE .8564 BRA 4.2865 BC3 5.0042 FSP 1233 SGI 8112.7 SG2 755.4 TMA 18.62 EL1 87.7 EL2 19.8 ALF 18.91

LAUNCH DATE SEP 10 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 23 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 33.089 GAL 6.04 AZL 83.75 HCA 163.08 SMA 198.91 ECC .26326 INC 6.2497 V1 29.580  
 RP 249.11 LAP 1.82 LOP 150.32 VP 19.958 GAP -4.44 AZP 95.98 TAL 29.58 TAP 192.66 RCA 146.54 APO 251.27 V2 21.984  
 RC 352.122 GL 35.48 GP -34.90 ZAL 50.45 ZAP 59.09 ETS 157.33 ZAE 76.42 ETE 171.64 ZAC 53.66 ETC 287.53 LVI 12.55

DISTANCE 592.216 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.095 VHL 6.172 DLA 42.30 RAL 7.24 RAD 6650.0 VEL 12.569 PTH 7.44 VHP 3.412 DPA -24.29 RAP 34.76 ECC 1.6270  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 47 23 4259.42 -34.54 193.28 272.00 54.98 5 58 22 3259.4 -45.53 164.93  
 57.12 2 59 59 4544.70 -17.12 204.48 257.47 50.71 4 15 43 3544.7 -31.51 183.18  
 57.12 2 59 59 4544.70 -17.12 204.48 257.47 50.71 4 15 43 3544.7 -31.51 183.18  
 57.12 2 59 59 4544.70 -17.12 204.48 257.47 50.71 4 15 43 3544.7 -31.51 183.18  
 57.12 2 59 59 4544.70 -17.12 204.48 257.47 50.71 4 15 43 3544.7 -31.51 183.18  
 57.12 2 59 59 4544.70 -17.12 204.48 257.47 50.71 4 15 43 3544.7 -31.51 183.18

DIFFERENTIAL CORRECTIONS  
 TDE .6482 TRA-4.2511 TC3-4.6144 BAU 2.5495 SGT 7828.0 SGR 2792.6 SG3 692.5 ST 85.9 SR 36.8 SS 48.1  
 RDE .6690 RRA-1.0304 RC3-1.9409 FAU .23341 RRT .9571 RRF .9852 RTF .9162 CRT .7964 CR8 -.9715 CST -.6314  
 FDE 3.3320 FRA-2.7358 FC3-5.3044 B8P 14447 SGB 8311.2 R23 .3443 R13 .9276 LSA 97.9 MSA 38.4 SSA .6  
 BDE .9316 BRA 4.3742 BC3 5.0060 FSP 1118 SGI 8275.9 SG2 765.8 TMA 19.02 EL1 91.1 EL2 21.0 ALF 19.93

LAUNCH DATE SEP 10 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC  
 RL 150.63 LAL -.00 LOL 347.15 VL 33.097 GAL 5.97 AZL 83.44 HCA 163.85 SMA 199.06 ECC .26338 INC 6.5596 V1 29.880  
 RP 249.14 LAP 1.81 LOP 151.19 VP 19.967 GAP -4.62 AZP 96.31 TAL 29.24 TAP 193.19 RCA 146.63 APO 251.49 V2 21.981  
 RC 353.817 GL 36.99 GP -36.09 ZAL 51.47 ZAP 59.28 ETS 156.39 ZAE 76.03 ETE 170.69 ZAC 52.41 ETC 287.61 LVI 13.79

DISTANCE 595.982 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.069 VHL 6.250 DLA 43.69 RAL 6.41 RAD 6650.3 VEL 12.607 PTH 7.46 VHP 3.489 DPA -25.21 RAP 35.70 ECC 1.6430  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 25 56 4318.70 -32.16 196.94 270.53 52.83 5 37 54 3318.7 -44.31 170.11  
 55.19 2 48 49 4572.21 -17.30 207.09 257.39 49.23 4 5 1 3572.2 -32.21 186.11  
 55.19 2 48 49 4572.21 -17.30 207.09 257.39 49.23 4 5 1 3572.2 -32.21 186.11  
 55.19 2 48 49 4572.21 -17.30 207.09 257.39 49.23 4 5 1 3572.2 -32.21 186.11  
 55.19 2 48 49 4572.21 -17.30 207.09 257.39 49.23 4 5 1 3572.2 -32.21 186.11  
 55.19 2 48 49 4572.21 -17.30 207.09 257.39 49.23 4 5 1 3572.2 -32.21 186.11

DIFFERENTIAL CORRECTIONS  
 TDE .7124 TRA-4.3109 TC3-4.5688 BAU 2.5949 SGT 7931.8 SGR 2884.3 SG3 652.9 ST 88.7 SR 40.1 SS 48.1  
 RDE .7449 RRA-1.0877 RC3-1.9315 FAU .21962 RRT .9579 RRF .9848 RTF .9138 CRT .7996 CR8 -.9735 CST -.6418  
 FDE 3.3068 FRA-2.6043 FC3-4.8665 B8P 14696 SGB 8439.9 R23 .3513 R13 .9256 LSA 101.4 MSA 38.8 SSA .6  
 BDE 1.0307 BRA 4.4460 BC3 4.9682 FSP 1052 SGI 8403.7 SG2 781.4 TMA 19.38 EL1 94.6 EL2 22.5 ALF 21.13

LAUNCH DATE SEP 11 1973 FLIGHT TIME 184.00 ARRIVAL DATE MAR 14 1974

HELIOCENTRIC CONIC DISTANCE 397.947 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.784 GAL 9.02 AZL 88.29 HCA 116.83 SMA 192.96 ECC .26765 INC 1.7108 V1 29.588

PLANETOCENTRIC CONIC C3 39.978 VHL 6.323 DLA 13.92 RAL 9.88 RAD 6650.7 VEL 12.643 PTH 7.49 VHP 2.645 DPA -3.26 RAP 30.74 ECC 1.6579
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5775 TRA-1.6384 TC3 -.8673 BAU .6204 SGT 1953.0 SGR 1161.5 SG3 1243.4 ST 34.8 SR 30.9 SS 20.7

LAUNCH DATE SEP 11 1973 FLIGHT TIME 186.00 ARRIVAL DATE MAR 16 1974

HELIOCENTRIC CONIC DISTANCE 401.758 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.785 GAL 8.98 AZL 88.26 HCA 117.77 SMA 192.97 ECC .26727 INC 1.7442 V1 29.588

PLANETOCENTRIC CONIC C3 39.774 VHL 6.307 DLA 14.05 RAL 9.92 RAD 6650.6 VEL 12.635 PTH 7.48 VHP 2.627 DPA -3.68 RAP 30.25 ECC 1.6546
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5830 TRA-1.6894 TC3 -.9414 BAU .6550 SGT 2047.8 SGR 1182.5 SG3 1265.0 ST 35.6 SR 30.7 SS 21.0

LAUNCH DATE SEP 11 1973 FLIGHT TIME 188.00 ARRIVAL DATE MAR 18 1974

HELIOCENTRIC CONIC DISTANCE 405.566 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.785 GAL 8.94 AZL 88.22 HCA 118.70 SMA 192.99 ECC .26692 INC 1.7784 V1 29.588

PLANETOCENTRIC CONIC C3 39.569 VHL 6.290 DLA 14.29 RAL 9.96 RAD 6650.5 VEL 12.627 PTH 7.48 VHP 2.611 DPA -4.10 RAP 29.79 ECC 1.6512
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5926 TRA-1.7461 TC3-1.0222 BAU .6909 SGT 2153.8 SGR 1196.1 SG3 1275.9 ST 36.6 SR 30.2 SS 21.1

LAUNCH DATE SEP 11 1973 FLIGHT TIME 190.00 ARRIVAL DATE MAR 20 1974

HELIOCENTRIC CONIC DISTANCE 409.375 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.787 GAL 8.90 AZL 88.19 HCA 119.63 SMA 193.01 ECC .26659 INC 1.8131 V1 29.588

PLANETOCENTRIC CONIC C3 39.368 VHL 6.274 DLA 14.53 RAL 10.00 RAD 6650.4 VEL 12.619 PTH 7.47 VHP 2.597 DPA -4.50 RAP 29.33 ECC 1.6479
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.5986 TRA-1.8002 TC3-1.1013 BAU .7270 SGT 2256.8 SGR 1214.1 SG3 1290.9 ST 37.4 SR 29.8 SS 21.4



LAUNCH DATE SEP 11 1973

FLIGHT TIME 192.00

ARRIVAL DATE MAR 22 1974

HELIOCENTRIC CONIC

DISTANCE 413.184

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.789 GAL 8.85 AZL 88.15 HCA 120.57 SMA 193.05 ECC .26628 INC 1.0483 V1 29.588
RP 241.38 LAP 1.59 LOP 108.70 VP 20.304 GAP 5.39 AZP 90.94 TAL 44.16 TAP 164.73 RCA 141.64 APO 244.45 V2 22.749
RC 242.049 GL 9.81 GP -14.89 ZAL 28.49 ZAP 95.56 ETS 183.26 ZAE 129.80 ETE 195.72 ZAC 72.40 ETC 284.65 LVI -6.69

PLANETOCENTRIC CONIC

C3 39.168 VHL 6.258 DLA 14.78 RAL 10.05 RAD 6650.4 VEL 12.611 PTH 7.47 VHP 2.585 DPA -4.90 RAP 28.89 ECC 1.6446
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 43 26 3597.69 -47.32 137.30 258.37 95.69 8 43 24 2597.7 -39.63 105.46
60.00 8 6 22 3536.85 -40.26 132.45 259.02 91.88 9 5 19 2536.6 -35.11 102.61
70.00 8 39 38 3438.82 -34.14 124.58 259.07 88.93 9 38 58 2438.8 -31.01 96.29
80.00 9 30 2 3280.81 -29.71 112.41 258.88 86.92 10 24 43 2280.8 -27.97 85.12
90.00 10 43 28 3043.80 -28.04 94.88 258.77 86.18 11 34 12 2043.8 -26.80 67.94
100.00 12 12 54 2755.28 -29.71 73.78 258.88 86.92 12 58 49 1755.3 -27.97 46.49
110.00 13 39 3 2485.63 -34.14 53.50 259.07 88.93 14 20 28 1485.6 -31.01 25.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6041 TRA-1.8549 TC3-1.1819 BAU .7638 SGT 2362.0 SGR 1232.1 SG3 1304.5 ST 38.3 SR 29.4 SS 21.6
RDE -.6393 RRA -.1857 RC3 -.8547 FAU .49880 RRT .7612 RRF .8374 RTF .8669 CRT .7837 CR8 .1299 CST -.5017
FDE .4816 FRA-6.4656 FC-11.0207 BSP 3919 SGB 2864.0 R23 .1625 R13 .8944 LSA 46.3 MSA 25.3 SSA 2.5
BDE .8795 BRA 1.8642 BC3 1.4586 FSP 2245 SG1 2360.0 SG2 737.2 THA 23.75 EL1 45.8 EL2 15.3 ALF 35.64

LAUNCH DATE SEP 11 1973

FLIGHT TIME 194.00

ARRIVAL DATE MAR 24 1974

HELIOCENTRIC CONIC

DISTANCE 416.992

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.791 GAL 8.81 AZL 88.12 HCA 121.50 SMA 193.09 ECC .26600 INC 1.8841 V1 29.588
RP 241.64 LAP 1.61 LOP 109.63 VP 20.276 GAP 5.14 AZP 90.98 TAL 43.96 TAP 165.48 RCA 141.73 APO 244.45 V2 22.720
RC 244.907 GL 9.83 GP -15.09 ZAL 28.70 ZAP 94.23 ETS 182.88 ZAE 128.15 ETE 195.07 ZAC 72.34 ETC 284.68 LVI -6.60

PLANETOCENTRIC CONIC

C3 38.970 VHL 6.243 DLA 15.04 RAL 10.10 RAD 6650.3 VEL 12.603 PTH 7.46 VHP 2.575 DPA -5.30 RAP 28.46 ECC 1.6414
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 42 37 3601.66 -47.34 137.68 258.56 95.40 8 42 38 2601.7 -39.76 105.75
60.00 8 5 13 3541.49 -40.27 132.86 259.16 91.60 9 4 14 2541.5 -35.23 102.97
70.00 8 38 4 3444.81 -34.13 125.05 259.18 88.65 9 35 28 2444.8 -31.12 96.73
80.00 9 28 5 3288.05 -29.69 112.95 258.96 86.64 10 22 53 2288.0 -28.06 85.64
90.00 10 41 20 3051.65 -28.00 95.45 258.84 85.89 11 32 11 2051.6 -26.89 68.50
100.00 12 10 57 2762.52 -29.69 74.31 258.96 86.64 12 57 0 1762.5 -28.06 47.01
110.00 13 37 30 2491.63 -34.13 53.97 259.18 88.65 14 19 2 1491.6 -31.12 25.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6091 TRA-1.9102 TC3-1.2637 BAU .8009 SGT 2469.3 SGR 1249.9 SG3 1316.4 ST 39.1 SR 29.0 SS 21.8
RDE -.6282 RRA -.1977 RC3 -.8753 FAU .50190 RRT .7737 RRF .8448 RTF .8742 CRT .7816 CR8 .1484 CST -.4887
FDE .5422 FRA-6.4932 FC-11.1500 BSP 4126 SGB 2767.6 R23 .1617 R13 .8993 LSA 46.8 MSA 25.6 SSA 2.5
BDE .8751 BRA 1.9204 BC3 1.5372 FSP 2266 SG1 2668.8 SG2 732.7 THA 23.24 EL1 46.2 EL2 15.3 ALF 34.41

LAUNCH DATE SEP 11 1973

FLIGHT TIME 196.00

ARRIVAL DATE MAR 26 1974

HELIOCENTRIC CONIC

DISTANCE 420.800

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.793 GAL 8.78 AZL 88.08 HCA 122.42 SMA 193.13 ECC .26573 INC 1.9206 V1 29.588
RP 241.92 LAP 1.62 LOP 110.55 VP 20.249 GAP 4.89 AZP 91.03 TAL 43.75 TAP 166.18 RCA 141.81 APO 244.46 V2 22.692
RC 247.751 GL 10.05 GP -15.28 ZAL 28.92 ZAP 92.81 ETS 182.50 ZAE 126.52 ETE 194.43 ZAC 72.26 ETC 284.71 LVI -6.50

PLANETOCENTRIC CONIC

C3 38.774 VHL 6.227 DLA 15.30 RAL 10.16 RAD 6650.2 VEL 12.596 PTH 7.46 VHP 2.568 DPA -5.68 RAP 28.05 ECC 1.6381
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 41 46 3605.77 -47.37 138.07 258.77 95.10 8 41 52 2605.8 -39.89 106.05
60.00 8 4 2 3546.50 -40.28 133.29 259.31 91.31 9 3 9 2546.5 -35.35 103.34
70.00 8 38 28 3451.02 -34.12 125.53 259.29 88.36 9 33 59 2451.0 -31.22 97.18
80.00 9 26 5 3295.55 -29.65 113.50 259.05 86.35 10 21 1 2295.5 -28.15 86.18
90.00 10 39 8 3059.79 -27.96 96.04 258.91 85.60 11 30 8 2059.8 -26.98 69.07
100.00 12 8 57 2770.02 -29.65 74.87 259.05 86.35 12 55 7 1770.0 -28.15 47.54
110.00 13 35 55 2497.84 -34.12 54.45 259.29 88.36 14 17 33 1497.8 -31.22 26.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6133 TRA-1.9658 TC3-1.3466 BAU .8384 SGT 2578.2 SGR 1267.6 SG3 1326.9 ST 39.9 SR 28.6 SS 22.1
RDE -.6188 RRA -.2056 RC3 -.8959 FAU .50468 RRT .7852 RRF .8519 RTF .8707 CRT .7793 CR8 .1667 CST -.4758
FDE .6044 FRA-6.5142 FC-11.2683 BSP 4337 SGB 2873.0 R23 .1611 R13 .9037 LSA 47.2 MSA 25.8 SSA 2.5
BDE .8698 BRA 1.9769 BC3 1.6173 FSP 2282 SG1 2779.2 SG2 728.2 THA 22.76 EL1 46.6 EL2 15.3 ALF 33.21

LAUNCH DATE SEP 11 1973

FLIGHT TIME 198.00

ARRIVAL DATE MAR 28 1974

HELIOCENTRIC CONIC

DISTANCE 424.606

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.796 GAL 8.72 AZL 88.04 HCA 123.35 SMA 193.19 ECC .26548 INC 1.9577 V1 29.588
RP 242.19 LAP 1.64 LOP 111.48 VP 20.223 GAP 4.64 AZP 91.08 TAL 43.54 TAP 166.89 RCA 141.90 APO 244.48 V2 22.665
RC 250.580 GL 10.27 GP -15.48 ZAL 29.14 ZAP 91.40 ETS 182.12 ZAE 124.90 ETE 193.82 ZAC 72.19 ETC 284.74 LVI -6.39

PLANETOCENTRIC CONIC

C3 38.580 VHL 6.211 DLA 15.57 RAL 10.21 RAD 6650.2 VEL 12.588 PTH 7.45 VHP 2.559 DPA -6.06 RAP 27.66 ECC 1.6349
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 40 55 3610.03 -47.39 138.48 258.98 94.78 8 41 5 2610.0 -40.03 106.37
60.00 8 2 50 3551.68 -40.29 133.73 259.47 91.01 9 2 1 2551.7 -35.48 103.72
70.00 8 34 50 3457.45 -34.11 126.03 259.41 88.07 9 32 28 2457.4 -31.33 97.65
80.00 9 24 2 3303.32 -29.62 114.08 259.14 86.05 10 19 5 2303.3 -28.25 86.73
90.00 10 36 52 3068.22 -27.92 96.65 258.99 85.29 11 28 0 2068.2 -27.06 69.68
100.00 12 6 53 2777.79 -29.62 75.44 259.14 86.05 12 53 11 1777.8 -28.25 48.10
110.00 13 34 17 2504.27 -34.11 54.95 259.41 88.07 14 16 1 1504.3 -31.33 26.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6168 TRA-2.0216 TC3-1.4305 BAU .8763 SGT 2688.8 SGR 1286.0 SG3 1336.7 ST 40.7 SR 28.2 SS 22.3
RDE -.6055 RRA -.2218 RC3 -.9167 FAU .50716 RRT .7961 RRF .8588 RTF .8867 CRT .7772 CR8 .1816 CST -.4656
FDE .6609 FRA-6.5323 FC-11.3805 BSP 4548 SGB 2980.5 R23 .1607 R13 .9079 LSA 47.6 MSA 26.0 SSA 2.5
BDE .8644 BRA 2.0338 BC3 1.6990 FSP 2289 SG1 2891.3 SG2 723.8 THA 22.32 EL1 47.1 EL2 15.3 ALF 32.04

LAUNCH DATE SEP 11 1973 FLIGHT TIME 200.00 ARRIVAL DATE MAR 30 1974

HELIOCENTRIC CONIC DISTANCE 428.413 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.800 GAL 8.67 AZL 88.00 HCA 124.27 SMA 193.25 ECC .26525 INC 1.9956 V1 29.588
RP 242.46 LAP 1.65 LOP 112.40 VP 20.198 GAP 4.40 AZP 91.12 TAL 43.32 TAP 167.59 RCA 141.99 APO 244.51 V2 22.630
RC 253.394 GL 10.50 GP -15.67 ZAL 29.37 ZAP 90.02 ETS 181.73 ZAE 123.29 ETE 193.23 ZAC 72.11 ETC 284.77 LVI -6.28
PLANETOCENTRIC CONIC
C3 38.389 VHL 6.196 DLA 15.84 RAL 10.27 RAD 6650.1 VEL 12.580 PTH 7.45 VHP 2.553 DPA -6.43 RAP 27.29 ECC 1.6318
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 40 2 3614.43 -47.42 138.90 259.20 94.46 8 40 16 2614.4 -40.17 108.69
60.00 8 1 35 3557.04 -40.30 134.18 259.64 90.70 9 0 52 2357.0 -35.61 104.12
70.00 8 33 10 3464.09 -34.09 126.55 259.54 87.76 9 30 54 2464.1 -31.44 98.14
80.00 9 21 54 3311.37 -29.58 114.67 259.23 85.73 10 17 5 2311.4 -28.34 87.31
90.00 10 34 31 3076.96 -27.87 97.29 259.08 84.98 11 25 48 2077.0 -27.15 70.30
100.00 12 4 46 2785.84 -29.58 76.04 259.23 85.73 12 51 12 1785.8 -28.34 48.68
110.00 13 32 36 2510.91 -34.09 55.47 259.54 87.76 14 14 27 1510.9 -31.44 27.05
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.6192 TRA-2.0770 TC3-1.5147 BAU .9148 SGT 2799.4 SGR 1308.1 SG3 1349.3 ST 41.5 SR 27.8 SS 22.5
RDE -.5962 RRA -.2360 RC3 -.9396 FAU .51055 RRT .8067 RRF .8663 RTF .8928 CRT .7753 CRS .1806 CST -.4692
FDE .6854 FRA-6.5732 FC-11.5138 BSP 4755 SGB 3090.0 R23 .1600 R13 .9124 LSA 48.2 MSA 26.1 SSA 2.5
BDE .8595 BRA 2.0903 BC3 1.7825 FSP 2257 SG1 3004.9 SG2 720.3 THA 21.98 EL1 47.6 EL2 15.3 ALF 31.04

LAUNCH DATE SEP 11 1973 FLIGHT TIME 202.00 ARRIVAL DATE APR 1 1974

HELIOCENTRIC CONIC DISTANCE 432.217 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.803 GAL 8.63 AZL 87.97 HCA 125.19 SMA 193.32 ECC .26503 INC 2.0342 V1 29.588
RP 242.73 LAP 1.66 LOP 113.32 VP 20.175 GAP 4.16 AZP 91.17 TAL 43.09 TAP 168.28 RCA 142.08 APO 244.55 V2 22.612
RC 256.191 GL 10.74 GP -15.86 ZAL 29.60 ZAP 88.87 ETS 181.34 ZAE 121.71 ETE 192.66 ZAC 72.03 ETC 284.79 LVI -6.17
PLANETOCENTRIC CONIC
C3 38.197 VHL 6.180 DLA 16.13 RAL 10.34 RAD 6650.0 VEL 12.573 PTH 7.44 VHP 2.549 DPA -6.00 RAP 26.93 ECC 1.6286
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 39 8 3619.00 -47.44 139.34 259.43 94.12 8 39 27 2619.0 -40.32 107.03
60.00 8 0 19 3562.60 -40.30 134.66 259.82 90.38 8 59 41 2562.6 -35.74 104.54
70.00 8 31 26 3470.99 -34.07 127.09 259.67 87.44 9 29 17 2471.0 -31.56 98.64
80.00 9 19 42 3319.73 -29.54 115.29 259.34 85.41 10 15 2 2319.7 -28.44 87.92
90.00 10 32 6 3086.06 -27.81 97.95 259.17 84.65 11 23 32 2086.1 -27.24 70.95
100.00 12 2 34 2794.20 -29.54 76.66 259.34 85.41 12 49 8 1794.2 -28.44 49.29
110.00 13 30 52 2517.81 -34.07 56.01 259.67 87.44 14 12 50 1517.8 -31.56 27.56
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.6225 TRA-2.1348 TC3-1.6023 BAU .9528 SGT 2915.5 SGR 1319.1 SG3 1348.2 ST 42.4 SR 27.2 SS 22.8
RDE -.5798 RRA -.2436 RC3 -.9558 FAU .50909 RRT .8151 RRF .8709 RTF .8961 CRT .7728 CRS .2250 CST -.4323
FDE .8061 FRA-6.5141 FC-11.5385 BSP 4982 SGB 3200.0 R23 .1614 R13 .9142 LSA 48.5 MSA 26.4 SSA 2.5
BDE .8506 BRA 2.1488 BC3 1.8658 FSP 2324 SG1 3119.3 SG2 714.3 THA 21.42 EL1 48.0 EL2 15.2 ALF 29.63

LAUNCH DATE SEP 11 1973 FLIGHT TIME 204.00 ARRIVAL DATE APR 3 1974

HELIOCENTRIC CONIC DISTANCE 436.021 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.807 GAL 8.58 AZL 87.93 HCA 126.11 SMA 193.39 ECC .26483 INC 2.0735 V1 29.588
RP 242.99 LAP 1.68 LOP 114.24 VP 20.152 GAP 3.92 AZP 91.22 TAL 42.86 TAP 168.97 RCA 142.17 APO 244.61 V2 22.586
RC 258.972 GL 10.98 GP -16.06 ZAL 29.85 ZAP 87.35 ETS 180.94 ZAE 120.14 ETE 192.11 ZAC 71.94 ETC 284.81 LVI -6.05
PLANETOCENTRIC CONIC
C3 38.009 VHL 6.165 DLA 16.42 RAL 10.40 RAD 6650.0 VEL 12.565 PTH 7.43 VHP 2.546 DPA -7.15 RAP 26.60 ECC 1.6255
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 38 12 3623.72 -47.46 139.80 259.67 93.77 8 38 36 2623.7 -40.47 107.39
60.00 7 59 0 3568.35 -40.30 135.15 260.00 90.05 8 58 28 2568.3 -35.87 104.97
70.00 8 29 39 3478.13 -34.05 127.65 259.81 87.11 9 27 37 2478.1 -31.67 99.17
80.00 9 17 25 3328.40 -29.49 115.93 259.44 85.08 10 12 54 2328.4 -28.53 88.54
90.00 10 29 35 3095.49 -27.75 98.63 259.26 84.32 11 21 10 2095.5 -27.32 71.63
100.00 12 0 17 2802.87 -29.49 77.30 259.44 85.08 12 47 0 1802.9 -28.53 49.91
110.00 13 29 5 2524.95 -34.05 56.56 259.81 87.11 14 11 10 1524.9 -31.67 28.08
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.6240 TRA-2.1915 TC3-1.6894 BAU .9913 SGT 3030.5 SGR 1336.2 SG3 1352.6 ST 43.2 SR 26.7 SS 23.1
RDE -.5669 RRA -.2549 RC3 -.9755 FAU .50951 RRT .8237 RRF .8768 RTF .9102 CRT .7708 CRS .2427 CST -.4188
FDE .8729 FRA-6.5005 FC-11.6053 BSP 5196 SGB 3312.0 R23 .1620 R13 .9171 LSA 48.9 MSA 26.6 SSA 2.5
BDE .8431 BRA 2.2639 BC3 1.9508 FSP 2327 SG1 3235.0 SG2 709.7 THA 21.02 EL1 48.4 EL2 15.1 ALF 28.48

LAUNCH DATE SEP 11 1973 FLIGHT TIME 206.00 ARRIVAL DATE APR 5 1974

HELIOCENTRIC CONIC DISTANCE 439.825 EARTH TO MARS
RL 150.59 LAL -.00 LOL 348.12 VL 32.812 GAL 8.53 AZL 87.89 HCA 127.03 SMA 193.47 ECC .26465 INC 2.1138 V1 29.588
RP 243.24 LAP 1.69 LOP 115.16 VP 20.130 GAP 3.68 AZP 91.27 TAL 42.82 TAP 169.65 RCA 142.27 APO 244.67 V2 22.560
RC 261.738 GL 11.22 GP -16.25 ZAL 30.10 ZAP 86.04 ETS 180.55 ZAE 118.59 ETE 191.57 ZAC 71.85 ETC 284.83 LVI -5.93
PLANETOCENTRIC CONIC
C3 37.822 VHL 6.150 DLA 16.71 RAL 10.47 RAD 6649.9 VEL 12.558 PTH 7.43 VHP 2.544 DPA -7.50 RAP 26.29 ECC 1.6225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 37 14 3628.61 -47.48 140.27 259.92 93.41 8 37 43 2628.6 -40.62 107.76
60.00 7 57 38 3574.30 -40.30 135.65 260.19 89.70 8 57 13 2574.3 -36.01 105.41
70.00 8 27 48 3483.52 -34.02 128.22 259.95 86.77 9 25 54 2483.5 -31.79 99.71
80.00 9 15 4 3337.38 -29.43 116.59 259.55 84.74 10 10 42 2337.4 -28.63 89.19
90.00 10 26 59 3105.28 -27.68 99.34 259.35 83.97 11 18 44 2105.3 -27.41 72.33
100.00 11 57 56 2811.86 -29.43 77.96 259.55 84.74 12 44 48 1811.9 -28.63 50.56
110.00 13 27 14 2532.34 -34.02 57.14 259.95 86.77 14 9 27 1532.3 -31.79 28.63
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.6247 TRA-2.2482 TC3-1.7773 BAU 1.0299 SGT 3146.4 SGR 1352.9 SG3 1355.3 ST 44.0 SR 26.1 SS 23.4
RDE -.5533 RRA -.2657 RC3 -.9950 FAU .50930 RRT .8317 RRF .8823 RTF .9038 CRT .7687 CRS .2616 CST -.4041
FDE .9438 FRA-6.4753 FC-11.6577 BSP 5417 SGB 3425.0 R23 .1630 R13 .9196 LSA 49.4 MSA 26.8 SSA 2.5
BDE .8345 BRA 2.2639 BC3 2.0368 FSP 2333 SG1 3351.6 SG2 705.1 THA 20.63 EL1 48.9 EL2 15.0 ALF 27.35

LAUNCH DATE SEP 11 1973

FLIGHT TIME 208.00

ARRIVAL DATE APR 7 1974

HELIOCENTRIC CONIC

DISTANCE 443.627

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.816 GAL 8.48 AZL 87.85 HCA 127.94 SMA 193.55 ECC .28448 INC 2.1549 V1 29.588
RP 243.50 LAP 1.70 LOP 116.08 VP 20.110 GAP 3.44 AZP 91.33 TAL 42.38 TAP 170.32 RCA 142.36 APO 244.74 V2 22.535
RC 264.483 GL 11.47 GP -16.45 ZAL 30.35 ZAP 84.77 ETS 180.15 ZAE 117.06 ETE 191.04 ZAC 71.75 ETC 284.85 LVI -5.80

PLANETOCENTRIC CONIC

C3 37.838 VHL 6.135 DLA 17.02 RAL 10.54 RAD 6649.8 VEL 12.551 PTH 7.42 VHP 2.544 DPA -7.84 RAP 25.99 ECC 1.6194
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 38 15 3633.88 -47.50 140.76 260.18 93.03 8 36 49 2633.7 -40.78 108.14
60.00 7 56 15 3580.46 -40.30 136.18 260.39 89.35 8 55 55 2580.5 -36.14 105.86
70.00 8 25 54 3493.18 -33.99 128.82 260.10 86.42 9 24 7 2493.2 -31.90 100.28
80.00 9 12 38 3346.72 -29.37 117.28 259.66 84.38 10 8 24 2346.7 -28.72 89.87
90.00 10 24 16 3115.46 -27.61 100.07 259.45 83.61 11 16 12 2115.5 -27.49 73.07
100.00 11 55 29 2821.19 -29.37 78.64 259.66 84.38 12 42 31 1821.2 -28.72 51.24
110.00 13 25 20 2540.00 -33.99 57.73 260.10 86.42 14 7 40 1540.0 -31.90 29.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6246 TRA-2.3050 TC3-1.8657 BAU 1.0688 SGT 3263.3 SGR 1369.9 SG3 1356.9 ST 44.8 SR 25.6 S8 23.7
RDE -.5397 RRA -.2767 RC3-1.0145 FAU .50868 RRT .8933 RRF .8876 RTF .9071 CRT .7669 CRS .2782 CST -.3909
FDE 1.0116 FRA-6.4472 FC-11.7003 B8P 9638 SGB 3538.1 R23 .1641 R13 .9219 LSA 49.0 MSA 27.2 S8A 2.5
BDE .8255 BRA 2.3216 BC3 2.1237 F8P 2333 SG1 3469.1 SG2 700.5 THA 20.27 EL1 49.4 EL2 14.9 ALF 26.25

LAUNCH DATE SEP 11 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 9 1974

HELIOCENTRIC CONIC

DISTANCE 447.429

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.821 GAL 8.43 AZL 87.80 HCA 128.85 SMA 193.64 ECC .28432 INC 2.1970 V1 29.588
RP 243.74 LAP 1.71 LOP 116.99 VP 20.090 GAP 3.21 AZP 91.38 TAL 42.13 TAP 170.99 RCA 142.48 APO 244.82 V2 22.511
RC 267.212 GL 11.73 GP -16.64 ZAL 30.62 ZAP 83.52 ETS 179.75 ZAE 115.55 ETE 190.53 ZAC 71.64 ETC 284.87 LVI -5.86

PLANETOCENTRIC CONIC

C3 37.457 VHL 6.120 DLA 17.33 RAL 10.61 RAD 6649.8 VEL 12.544 PTH 7.42 VHP 2.545 DPA -8.17 RAP 25.72 ECC 1.6164
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 35 14 3638.92 -47.52 141.26 260.46 92.64 8 35 53 2638.9 -40.94 108.54
60.00 7 54 48 3586.84 -40.29 136.72 260.60 88.98 8 54 35 2586.8 -36.29 106.36
70.00 8 23 55 3501.12 -33.95 129.43 260.26 86.06 9 22 16 2501.1 -32.02 100.87
80.00 9 10 5 3356.41 -29.31 117.99 259.78 84.01 10 6 2 2356.4 -28.82 90.57
90.00 10 21 27 3126.04 -27.52 100.83 259.55 83.24 11 13 33 2126.0 -27.58 73.83
100.00 11 52 57 2830.88 -29.31 79.36 259.78 84.01 12 40 8 1830.9 -28.82 51.94
110.00 13 23 21 2547.94 -33.95 58.35 260.26 86.06 14 5 49 1547.9 -32.02 29.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6236 TRA-2.3616 TC3-1.9547 BAU 1.1073 SGT 3380.7 SGR 1386.6 SG3 1357.0 ST 45.5 SR 25.0 S8 24.0
RDE -.5255 RRA -.2873 RC3-1.0338 FAU .50749 RRT .8464 RRF .8927 RTF .9100 CRT .7651 CRS .2954 CST -.3769
FDE 1.0826 FRA-6.4082 FC-11.7297 B8P 5862 SGB 3654.0 R23 .1656 R13 .9239 LSA 50.3 MSA 27.2 S8A 2.4
BDE .8155 BRA 2.3790 BC3 2.2112 F8P 2332 SG1 3587.1 SG2 696.0 THA 19.93 EL1 49.8 EL2 14.7 ALF 25.17

LAUNCH DATE SEP 11 1973

FLIGHT TIME 212.00

ARRIVAL DATE APR 11 1974

HELIOCENTRIC CONIC

DISTANCE 451.229

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.826 GAL 8.38 AZL 87.76 HCA 129.76 SMA 193.73 ECC .28417 INC 2.2401 V1 29.588
RP 243.98 LAP 1.72 LOP 117.90 VP 20.072 GAP 2.98 AZP 91.43 TAL 41.88 TAP 171.64 RCA 142.55 APO 244.91 V2 22.487
RC 269.924 GL 12.00 GP -16.84 ZAL 30.89 ZAP 82.30 ETS 179.34 ZAE 114.07 ETE 190.03 ZAC 71.53 ETC 284.89 LVI -5.52

PLANETOCENTRIC CONIC

C3 37.277 VHL 6.106 DLA 17.85 RAL 10.68 RAD 6649.7 VEL 12.536 PTH 7.41 VHP 2.547 DPA -8.50 RAP 25.47 ECC 1.6135
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 34 11 3644.35 -47.54 141.79 260.74 92.24 8 34 55 2644.4 -41.10 108.96
60.00 7 53 18 3593.45 -40.28 137.28 260.81 88.60 8 53 11 2593.5 -36.43 106.86
70.00 8 21 52 3509.36 -33.91 130.07 260.42 85.68 9 20 21 2509.4 -32.14 101.48
80.00 9 7 27 3366.49 -29.23 118.73 259.90 83.63 10 3 34 2366.5 -28.92 91.31
90.00 10 18 31 3137.06 -27.43 101.63 259.66 82.85 11 10 49 2137.1 -27.66 74.62
100.00 11 50 19 2840.98 -29.23 80.10 259.90 83.63 12 37 40 1841.0 -28.92 52.68
110.00 13 21 18 2556.17 -33.91 58.99 260.42 85.68 14 3 54 1556.2 -32.14 30.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6218 TRA-2.4183 TC3-2.0445 BAU 1.1481 SGT 3499.2 SGR 1403.5 SG3 1355.9 ST 46.3 SR 24.5 S8 24.3
RDE -.5110 RRA -.2981 RC3-1.0331 FAU .50590 RRT .8530 RRF .8976 RTF .9226 CRT .7635 CRS .3115 CST -.3635
FDE 1.1339 FRA-6.3649 FC-11.7490 B8P 6081 SGB 3770.2 R23 .1673 R13 .9257 LSA 50.7 MSA 27.4 S8A 2.4
BDE .8047 BRA 2.4366 BC3 2.2998 F8P 2327 SG1 3706.2 SG2 691.5 THA 19.60 EL1 50.3 EL2 14.5 ALF 24.12

LAUNCH DATE SEP 11 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 13 1974

HELIOCENTRIC CONIC

DISTANCE 455.029

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 32.831 GAL 8.33 AZL 87.72 HCA 130.87 SMA 193.83 ECC .28404 INC 2.2843 V1 29.588
RP 244.22 LAP 1.73 LOP 118.81 VP 20.054 GAP 2.74 AZP 91.49 TAL 41.62 TAP 172.30 RCA 142.65 APO 245.01 V2 22.464
RC 272.818 GL 12.27 GP -17.04 ZAL 31.17 ZAP 81.11 ETS 178.94 ZAE 112.60 ETE 189.54 ZAC 71.41 ETC 284.91 LVI -5.37

PLANETOCENTRIC CONIC

C3 37.101 VHL 6.091 DLA 17.98 RAL 10.75 RAD 6649.6 VEL 12.529 PTH 7.41 VHP 2.550 DPA -8.82 RAP 25.25 ECC 1.6106
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 33 5 3649.98 -47.55 142.33 261.03 91.82 8 33 55 2650.0 -41.27 109.39
60.00 7 51 45 3600.30 -40.27 137.86 261.04 88.20 8 51 45 2600.3 -36.58 107.38
70.00 8 19 44 3517.90 -33.87 130.74 260.58 85.29 9 18 22 2517.9 -32.27 102.11
80.00 9 4 42 3376.97 -29.15 119.50 260.02 83.23 10 0 59 2377.0 -29.01 92.07
90.00 10 15 28 3148.55 -27.33 102.45 259.77 82.45 11 7 57 2148.5 -27.74 75.45
100.00 11 47 34 2851.44 -29.15 80.87 260.02 83.23 12 35 6 1851.4 -29.01 53.44
110.00 13 19 11 2564.72 -33.87 59.65 260.58 85.29 14 1 55 1564.7 -32.27 31.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6190 TRA-2.4748 TC3-2.1347 BAU 1.1848 SGT 3618.2 SGR 1420.1 SG3 1353.4 ST 47.0 SR 23.9 S8 24.7
RDE -.4960 RRA -.3086 RC3-1.0721 FAU .50373 RRT .8592 RRF .9022 RTF .9148 CRT .7622 CRS .3269 CST -.3501
FDE 1.2254 FRA-6.3138 FC-11.7545 B8P 6304 SGB 3886.9 R23 .1693 R13 .9273 LSA 51.2 MSA 27.6 S8A 2.4
BDE .7932 BRA 2.4939 BC3 2.3888 F8P 2321 SG1 3825.7 SG2 687.1 THA 19.28 EL1 50.7 EL2 14.3 ALF 23.09

LAUNCH DATE SEP 11 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 15 1974

HELIOCENTRIC CONIC										DISTANCE 450.027										EARTH TO MARS																																													
RL	150.59	LAL	-0.00	LOL	348.12	VL	32.836	GAL	8.28	AZL	87.67	HCA	131.58	SMA	193.93	ECC	.26392	INC	2.3296	V1	29.588	RP	244.43	LAP	1.74	LOP	119.72	VP	20.037	GAP	2.52	AZP	91.55	TAL	41.36	TAP	172.94	RCA	142.75	APO	245.11	V2	22.441	RC	275.292	GL	12.53	GP	-17.25	ZAL	31.46	ZAP	79.94	ETS	178.53	ZAE	111.16	ETE	189.08	ZAC	71.28	ETC	284.93	LVI	-5.21
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.927	VHL	6.077	DLA	18.31	RAL	10.83	RAD	6649.6	VEL	12.523	PTH	7.40	VHP	2.554	DPA	-9.13	RAP	25.05	ECC	1.6077	ST	47.7	SR	23.2	SS	25.1	SGT	3737.5	SGR	1436.6	SG3	1349.7	CRT	.7610	CR8	.3420	CST	-.3367																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	51.6	MSA	27.8	SSA	2.4	SG8	4004.1	R23	.1716	R13	.9286	EL1	51.2	EL2	14.1	ALF	22.07																						
50.00	7	31	57	3655.82	-47.56	142.90	261.34	91.39	8	32	53	2655.8	-41.45	109.84	50.00	7	31	57	3655.82	-47.56	142.90	261.34	91.39	8	32	53	2655.8	-41.45	109.84	50.00	7	31	57	3655.82	-47.56	142.90	261.34	91.39	8	32	53	2655.8	-41.45	109.84																					

LAUNCH DATE SEP 11 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 17 1974

HELIOCENTRIC CONIC										DISTANCE 462.625										EARTH TO MARS																																													
RL	150.59	LAL	-0.00	LOL	348.12	VL	32.842	GAL	8.23	AZL	87.62	HCA	132.49	SMA	194.04	ECC	.26381	INC	2.3761	V1	29.588	RP	244.68	LAP	1.75	LOP	120.83	VP	20.021	GAP	2.29	AZP	91.61	TAL	41.10	TAP	173.58	RCA	142.85	APO	245.23	V2	22.418	RC	277.948	GL	12.84	GP	-17.46	ZAL	31.75	ZAP	78.80	ETS	178.11	ZAE	109.74	ETE	188.59	ZAC	71.15	ETC	284.95	LVI	-5.05
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.756	VHL	6.063	DLA	18.66	RAL	10.90	RAD	6649.5	VEL	12.516	PTH	7.40	VHP	2.559	DPA	-9.44	RAP	24.87	ECC	1.6049	ST	47.7	SR	22.6	SS	25.4	SGT	3857.0	SGR	1453.6	SG3	1344.8	CRT	.7603	CR8	.3549	CST	-.3246																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	52.1	MSA	28.1	SSA	2.4	SG8	4121.8	R23	.1740	R13	.9299	EL1	51.7	EL2	13.8	ALF	21.10																						
50.00	7	30	47	3661.87	-47.57	143.48	261.65	90.94	8	31	49	2661.9	-41.63	110.31	50.00	7	30	47	3661.87	-47.57	143.48	261.65	90.94	8	31	49	2661.9	-41.63	110.31	50.00	7	30	47	3661.87	-47.57	143.48	261.65	90.94	8	31	49	2661.9	-41.63	110.31																					

LAUNCH DATE SEP 11 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 19 1974

HELIOCENTRIC CONIC										DISTANCE 466.421										EARTH TO MARS																																													
RL	150.59	LAL	-0.00	LOL	348.12	VL	32.848	GAL	8.18	AZL	87.58	HCA	133.39	SMA	194.15	ECC	.26371	INC	2.4238	V1	29.588	RP	244.90	LAP	1.76	LOP	121.53	VP	20.006	GAP	2.06	AZP	91.67	TAL	40.83	TAP	174.22	RCA	142.95	APO	245.34	V2	22.397	RC	280.584	GL	13.14	GP	-17.67	ZAL	32.05	ZAP	77.69	ETS	177.69	ZAE	108.34	ETE	188.13	ZAC	71.00	ETC	284.97	LVI	-4.87
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.588	VHL	6.049	DLA	19.01	RAL	10.97	RAD	6649.5	VEL	12.509	PTH	7.39	VHP	2.565	DPA	-9.74	RAP	24.71	ECC	1.6021	ST	49.1	SR	21.9	SS	25.9	SGT	3976.9	SGR	1470.5	SG3	1338.9	CRT	.7600	CR8	.3669	CST	-.3127																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	52.5	MSA	28.3	SSA	2.3	SG8	4240.1	R23	.1767	R13	.9310	EL1	52.1	EL2	13.5	ALF	20.15																						
50.00	7	29	33	3668.14	-47.57	144.09	261.98	90.47	8	30	41	2668.1	-41.81	110.80	50.00	7	29	33	3668.14	-47.57	144.09	261.98	90.47	8	30	41	2668.1	-41.81	110.80	50.00	7	29	33	3668.14	-47.57	144.09	261.98	90.47	8	30	41	2668.1	-41.81	110.80																					

LAUNCH DATE SEP 11 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC										DISTANCE 470.217										EARTH TO MARS																																													
RL	150.59	LAL	-0.00	LOL	348.12	VL	32.854	GAL	8.13	AZL	87.53	HCA	134.29	SMA	194.26	ECC	.26363	INC	2.4729	V1	29.588	RP	245.11	LAP	1.77	LOP	122.44	VP	19.992	GAP	1.84	AZP	91.73	TAL	40.55	TAP	174.85	RCA	143.05	APO	245.47	V2	22.375	RC	283.198	GL	13.45	GP	-17.88	ZAL	32.36	ZAP	76.61	ETS	177.27	ZAE	108.96	ETE	187.67	ZAC	70.84	ETC	284.99	LVI	-4.89
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.424	VHL	6.035	DLA	19.38	RAL	11.05	RAD	6649.4	VEL	12.503	PTH	7.39	VHP	2.572	DPA	-10.03	RAP	24.58	ECC	1.5994	ST	49.8	SR	21.3	SS	26.3	SGT	4097.1	SGR	1488.0	SG3	1332.1	CRT	.7602	CR8	.3766	CST	-.3023																										
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	LSA	53.0	MSA	28.5	SSA	2.3	SG8	4358.9	R23	.1796	R13	.9320	EL1	52.6	EL2	13.1	ALF	19.24																						
50.00	7	28	16	3674.66	-47.58	144.72	262.31	89.98	8	29	31	2674.7	-42.00	111.31	50.00	7	28	16	3674.66	-47.58	144.72	262.31	89.98	8	29	31	2674.7	-42.00	111.31	50.00	7	28	16	3674.66	-47.58	144.72	262.31	89.98	8	29	31	2674.7	-42.00	111.31																					

LAUNCH DATE SEP 11 1973 FLIGHT TIME 224.00 ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC DISTANCE 474.011 EARTH TO MARS  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.860 GAL 8.07 AZL 87.48 HCA 135.20 SMA 194.37 ECC .26355 INC 2.5235 V1 29.588  
 RP 245.32 LAP 1.78 LOP 123.34 VP 19.979 GAP 1.62 AZP 91.79 TAL 40.28 TAP 175.47 RCA 143.15 APO 245.60 V2 22.334  
 RC 285.791 GL 13.76 GP -18.11 ZAL 32.88 ZAP 75.56 ETS 176.84 ZAE 105.61 ETE 187.22 ZAC 70.68 ETC 285.01 LVI -4.50

PLANETOCENTRIC CONIC  
 C3 36.263 VHL 6.022 DLA 19.75 RAL 11.12 RAD 6649.3 VEL 12.496 PTH 7.38 VHP 2.580 DPA -10.32 RAP 24.47 ECC 1.5988  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 26 56 3681.42 -47.57 145.37 262.66 89.48 8 28 17 2681.4 -42.19 111.85  
 60.00 7 43 1 3638.61 -40.14 141.11 262.26 86.00 8 43 39 2638.6 -37.35 110.34  
 70.00 8 7 41 3565.94 -33.54 134.45 261.47 83.12 9 7 7 2565.9 -32.88 105.73  
 80.00 8 48 59 3436.46 -28.59 123.83 260.67 81.02 9 46 16 2436.5 -29.45 96.44  
 90.00 9 57 52 3214.14 -26.66 107.13 260.31 80.20 10 51 26 2214.1 -28.10 80.22  
 100.00 11 31 51 2910.93 -28.59 85.20 260.67 81.02 12 20 22 1910.9 -29.45 57.81  
 110.00 13 7 8 2612.76 -33.54 63.36 261.47 83.12 13 50 40 1612.8 -32.88 34.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5885 TRA-2.7531 TC3-2.5894 BAU 1.3770 SGT 4217.3 SGR 1505.4 SG3 1324.3 ST 30.5 SR 20.6 SS 26.7  
 RDE -.4151 RRA -.3610 RC3-1.1675 FAU .48702 RRT .8855 RRF .9231 RTF .9228 CRT .7609 CR8 .3854 CST -.2920  
 FDE 1.5889 FRA-5.9796 FC-11.6271 BSP 7434 SGB 4477.9 R23 .1828 R13 .9328 LSA 53.4 MSA 28.7 SSA 2.3  
 BDE .7202 BRA 2.7767 BC3 2.8404 FSP 2264 SG1 4428.1 SG2 666.1 THA 17.96 EL1 53.0 EL2 12.7 ALF 18.34

LAUNCH DATE SEP 11 1973 FLIGHT TIME 226.00 ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC DISTANCE 477.805 EARTH TO MARS  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.866 GAL 8.02 AZL 87.42 HCA 136.09 SMA 194.49 ECC .26348 INC 2.5756 V1 29.588  
 RP 245.53 LAP 1.79 LOP 124.24 VP 19.967 GAP 1.40 AZP 91.86 TAL 40.00 TAP 176.09 RCA 143.25 APO 245.73 V2 22.334  
 RC 288.361 GL 14.09 GP -18.34 ZAL 33.00 ZAP 74.53 ETS 176.41 ZAE 104.27 ETE 186.78 ZAC 70.50 ETC 285.03 LVI -4.30

PLANETOCENTRIC CONIC  
 C3 36.107 VHL 6.009 DLA 20.14 RAL 11.19 RAD 6649.3 VEL 12.490 PTH 7.38 VHP 2.589 DPA -10.61 RAP 24.38 ECC 1.5942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 32 3688.45 -47.57 146.05 263.02 88.96 8 27 1 2688.4 -42.38 112.41  
 60.00 7 41 2 3647.19 -40.09 141.84 262.52 85.51 8 41 49 2647.2 -37.52 111.01  
 70.00 8 4 56 3576.77 -33.45 135.28 261.66 82.64 9 4 33 2576.8 -33.00 106.55  
 80.00 8 45 22 3450.03 -28.45 124.81 260.80 80.52 9 42 52 2450.0 -29.53 97.44  
 90.00 9 53 46 3229.21 -26.48 108.20 260.41 79.69 10 47 35 2229.2 -28.15 81.32  
 100.00 11 28 14 2924.50 -28.45 86.18 260.80 80.52 12 16 58 1924.5 -29.53 58.81  
 110.00 13 4 23 2623.59 -33.45 64.20 261.66 82.64 13 48 6 1623.6 -33.00 35.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5793 TRA-2.8080 TC3-2.6809 BAU 1.4152 SGT 4338.0 SGR 1523.4 SG3 1315.6 ST 31.1 SR 19.9 SS 27.2  
 RDE -.3977 RRA -.3717 RC3-1.1868 FAU .48265 RRT .8900 RRF .9268 RTF .9239 CRT .7625 CR8 .3916 CST -.2829  
 FDE 1.6606 FRA-5.9004 FC-11.5726 BSP 7657 SGB 4597.7 R23 .1862 R13 .9335 LSA 53.9 MSA 29.0 SSA 2.3  
 BDE .7027 BRA 2.8325 BC3 2.9319 FSP 2246 SG1 4549.8 SG2 662.3 THA 17.74 EL1 53.5 EL2 12.3 ALF 17.48

LAUNCH DATE SEP 11 1973 FLIGHT TIME 228.00 ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC DISTANCE 481.597 EARTH TO MARS  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.873 GAL 7.97 AZL 87.37 HCA 136.99 SMA 194.61 ECC .26342 INC 2.6294 V1 29.588  
 RP 245.73 LAP 1.79 LOP 125.14 VP 19.955 GAP 1.18 AZP 91.92 TAL 39.71 TAP 176.70 RCA 143.35 APO 245.88 V2 22.314  
 RC 290.907 GL 14.42 GP -18.57 ZAL 33.33 ZAP 73.54 ETS 175.97 ZAE 102.97 ETE 186.34 ZAC 70.31 ETC 285.05 LVI -4.09

PLANETOCENTRIC CONIC  
 C3 35.954 VHL 5.996 DLA 20.53 RAL 11.26 RAD 6649.2 VEL 12.484 PTH 7.37 VHP 2.599 DPA -10.90 RAP 24.32 ECC 1.5817  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 24 4 3695.75 -47.56 146.76 263.39 88.41 8 25 40 2695.8 -42.59 113.00  
 60.00 7 38 57 3656.12 -40.04 142.59 262.79 85.00 8 39 53 2656.1 -37.68 111.71  
 70.00 8 2 3 3588.07 -33.34 136.15 261.85 82.14 9 1 52 2588.1 -33.12 107.41  
 80.00 8 41 33 3464.26 -28.28 125.84 260.93 80.01 9 39 17 2464.3 -29.60 96.49  
 90.00 9 49 26 3245.08 -26.28 109.32 260.51 79.16 10 43 32 2245.1 -28.20 82.48  
 100.00 11 24 25 2938.73 -26.28 87.21 260.93 80.01 12 13 24 1938.7 -29.60 59.86  
 110.00 13 1 30 2634.89 -33.34 65.06 261.85 82.14 13 45 25 1634.9 -33.12 36.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5682 TRA-2.8621 TC3-2.7720 BAU 1.4531 SGT 4458.1 SGR 1541.3 SG3 1305.7 ST 31.8 SR 19.2 SS 27.7  
 RDE -.3787 RRA -.3823 RC3-1.2061 FAU .47787 RRT .8942 RRF .9304 RTF .9248 CRT .7648 CR8 .3981 CST -.2744  
 FDE 1.7346 FRA-5.8139 FC-11.5086 BSP 7885 SGB 4717.0 R23 .1897 R13 .9341 LSA 54.4 MSA 29.3 SSA 2.2  
 BDE .6834 BRA 2.8875 BC3 3.0230 FSP 2228 SG1 4670.8 SG2 658.6 THA 17.54 EL1 53.9 EL2 11.9 ALF 18.65

LAUNCH DATE SEP 11 1973 FLIGHT TIME 230.00 ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC DISTANCE 485.388 EARTH TO MARS  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.879 GAL 7.91 AZL 87.32 HCA 137.89 SMA 194.74 ECC .26336 INC 2.6849 V1 29.588  
 RP 245.93 LAP 1.80 LOP 126.04 VP 19.945 GAP .96 AZP 91.99 TAL 39.42 TAP 177.31 RCA 143.45 APO 246.02 V2 22.295  
 RC 293.430 GL 14.77 GP -18.82 ZAL 33.68 ZAP 72.57 ETS 175.53 ZAE 101.68 ETE 185.91 ZAC 70.11 ETC 285.07 LVI -3.87

PLANETOCENTRIC CONIC  
 C3 35.807 VHL 5.984 DLA 20.94 RAL 11.33 RAD 6649.2 VEL 12.478 PTH 7.37 VHP 2.609 DPA -11.10 RAP 24.29 ECC 1.5893  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 22 32 3703.35 -47.54 147.49 263.77 87.85 8 24 15 2703.4 -42.79 113.61  
 60.00 7 36 47 3665.42 -39.98 143.38 263.07 84.47 8 37 52 2665.4 -37.85 112.44  
 70.00 7 59 2 3599.88 -33.23 137.05 262.04 81.61 8 59 2 2599.9 -33.24 108.31  
 80.00 8 37 31 3479.21 -28.10 126.91 261.05 79.47 9 35 30 2479.2 -29.67 99.60  
 90.00 9 44 51 3261.82 -26.06 110.50 260.61 78.61 10 39 13 2261.8 -28.24 83.70  
 100.00 11 20 23 2953.68 -28.10 88.28 261.05 79.47 12 9 37 1953.7 -29.67 60.96  
 110.00 12 58 28 2646.70 -33.23 65.97 262.04 81.61 13 42 35 1646.7 -33.24 37.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5561 TRA-2.9162 TC3-2.8632 BAU 1.4909 SGT 4578.6 SGR 1560.2 SG3 1295.4 ST 32.4 SR 18.5 SS 28.2  
 RDE -.3614 RRA -.3933 RC3-1.2257 FAU .47294 RRT .8982 RRF .9339 RTF .9256 CRT .7682 CR8 .3970 CST -.2679  
 FDE 1.8054 FRA-5.7310 FC-11.4347 BSP 8109 SGB 4837.2 R23 .1935 R13 .9347 LSA 54.8 MSA 29.5 SSA 2.2  
 BDE .6632 BRA 2.9426 BC3 3.1145 FSP 2206 SG1 4792.6 SG2 655.2 THA 17.35 EL1 54.4 EL2 11.4 ALF 15.86

LAUNCH DATE SEP 11 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.886 GAL 7.86 AZL 87.26 HCA 138.78 SMA 194.86 ECC .26332 INC 2.7423 V1 29.588
RP 246.12 LAP 1.81 LOP 126.93 VP 19.935 GAP .74 AZP 92.06 TAL 39.13 TAP 177.92 RCA 143.55 APO 246.17 V2 22.276
RC 295.928 GL 15.13 GP -19.07 ZAL 34.03 ZAP 71.63 ETS 175.08 ZAE 100.41 ETE 185.47 ZAC 69.89 ETC 285.09 LVI -3.64

DISTANCE 489.179

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.664 VHL 5.972 DLA 21.36 RAL 11.39 RAD 6649.1 VEL 12.472 PTH 7.37 VHP 2.621 DPA -11.46 RAP 24.27 ECC 1.5869
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 20 55 3711.27 -47.52 148.26 264.16 87.26 8 22 48 2711.3 -43.00 114.26
60.00 7 34 29 3675.12 -39.92 144.19 263.35 83.92 8 35 45 2675.1 -36.02 113.21
70.00 7 55 51 3612.23 -33.10 137.99 262.24 81.07 8 56 3 2612.2 -33.36 109.25
80.00 8 33 15 3494.95 -27.90 128.04 261.17 78.91 9 31 30 2495.0 -29.73 100.76
90.00 9 39 58 3279.53 -25.82 111.73 260.70 78.04 10 34 38 2279.5 -26.26 84.99
100.00 11 16 6 2969.43 -27.90 89.41 261.17 78.91 12 5 36 1969.4 -29.73 62.13
110.00 12 55 17 2659.05 -33.10 66.91 262.24 81.07 13 39 36 1659.0 -33.36 38.17

DIFFERENTIAL CORRECTIONS

TDE -.5428 TRA-2.9697 TC3-2.9543 BAU 1.5286
RDE -.3428 RRA -.4044 RC3-1.2455 FAU .46766
FDE 1.8764 FRA-5.6419 FC-11.3524 BSP 8336
BDE .6419 BRA 2.9971 BC3 3.2061 FSP 2184

MID-COURSE EXECUTION ACCURACY

SGT 4699.1 SGR 1579.4 SG3 1284.1
RRT .9020 RRF .9373 RTF .9263
SG8 4957.4 R23 .1975 R13 .9351
SG1 4914.4 SG2 651.9 THA 17.18

ORBIT DETERMINATION ACCURACY

ST 53.0 SR 17.7 SS 28.7
CRT .7730 CR8 .3952 CST -.2621
LSA 55.3 MSA 29.8 S8A 2.2
EL1 54.8 EL2 10.9 ALF 15.09

LAUNCH DATE SEP 11 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.893 GAL 7.80 AZL 87.20 HCA 139.68 SMA 194.98 ECC .26329 INC 2.8016 V1 29.588
RP 246.30 LAP 1.81 LOP 127.83 VP 19.928 GAP .53 AZP 92.14 TAL 38.84 TAP 178.52 RCA 143.65 APO 246.33 V2 22.258
RC 298.401 GL 15.50 GP -19.33 ZAL 34.38 ZAP 70.71 ETS 174.62 ZAE 99.17 ETE 185.04 ZAC 69.66 ETC 285.12 LVI -3.39

DISTANCE 492.968

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.527 VHL 5.960 DLA 21.79 RAL 11.46 RAD 6649.1 VEL 12.467 PTH 7.36 VHP 2.633 DPA -11.75 RAP 24.28 ECC 1.5847
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 19 13 3719.51 -47.49 149.05 264.57 86.65 8 21 13 2719.5 -43.22 114.93
60.00 7 32 5 3685.23 -39.84 145.04 263.64 83.35 8 33 30 2685.2 -38.19 114.02
70.00 7 52 29 3625.17 -32.96 138.97 262.43 80.51 8 52 54 2625.2 -33.48 110.24
80.00 8 28 42 3511.57 -27.68 129.22 261.29 78.33 9 27 14 2511.6 -29.78 101.99
90.00 9 34 46 3298.31 -25.55 113.04 260.78 77.44 10 29 44 2298.3 -28.28 86.37
100.00 11 11 34 2986.04 -27.68 90.59 261.29 78.33 12 1 20 1986.0 -29.78 63.36
110.00 12 51 55 2671.99 -32.96 67.89 262.43 80.51 13 38 27 1672.0 -33.48 39.16

DIFFERENTIAL CORRECTIONS

TDE -.5281 TRA-3.0231 TC3-3.0452 BAU 1.5663
RDE -.3233 RRA -.4157 RC3-1.2656 FAU .46218
FDE 1.9475 FRA-5.5502 FC-11.2625 BSP 8559
BDE .6192 BRA 3.0315 BC3 3.2977 FSP 2160

MID-COURSE EXECUTION ACCURACY

SGT 4819.8 SGR 1599.3 SG3 1272.1
RRT .9057 RRF .9405 RTF .9268
SG8 5078.2 R23 .2018 R13 .9355
SG1 5036.6 SG2 648.9 THA 17.02

ORBIT DETERMINATION ACCURACY

ST 53.6 SR 17.0 SS 29.3
CRT .7793 CR8 .3897 CST -.2578
LSA 55.8 MSA 30.1 S8A 2.1
EL1 55.3 EL2 10.3 ALF 14.36

LAUNCH DATE SEP 11 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.900 GAL 7.75 AZL 87.14 HCA 140.57 SMA 195.12 ECC .26326 INC 2.8631 V1 29.588
RP 246.48 LAP 1.82 LOP 128.72 VP 19.918 GAP .32 AZP 92.21 TAL 38.54 TAP 179.11 RCA 143.76 APO 246.49 V2 22.241
RC 300.850 GL 15.88 GP -19.60 ZAL 34.75 ZAP 69.83 ETS 174.16 ZAE 97.96 ETE 184.62 ZAC 69.42 ETC 285.14 LVI -3.14

DISTANCE 496.757

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.396 VHL 5.949 DLA 22.24 RAL 11.52 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 2.646 DPA -12.03 RAP 24.32 ECC 1.5825
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 17 26 3728.11 -47.45 149.88 264.98 86.01 8 19 34 2728.1 -43.43 115.64
60.00 7 29 33 3695.80 -39.75 145.95 263.94 82.75 8 31 9 2695.8 -38.36 114.86
70.00 7 48 56 3638.74 -32.81 140.00 262.83 79.92 8 49 34 2638.7 -33.59 111.29
80.00 8 23 53 3529.14 -27.43 130.47 261.40 77.72 9 22 42 2529.1 -29.82 103.30
90.00 9 29 11 3318.31 -25.24 114.43 260.85 76.81 10 24 29 2318.3 -28.28 87.83
100.00 11 6 44 3003.61 -27.43 91.84 261.40 77.72 11 56 48 2003.6 -29.82 64.67
110.00 12 48 22 2685.56 -32.81 68.92 262.83 79.92 13 33 8 1685.6 -33.59 40.20

DIFFERENTIAL CORRECTIONS

TDE -.5118 TRA-3.0754 TC3-3.1354 BAU 1.6036
RDE -.3033 RRA -.4269 RC3-1.2856 FAU .45634
FDE 2.0179 FRA-5.4540 FC-11.1814 BSP 8792
BDE .5949 BRA 3.1049 BC3 3.3887 FSP 2138

MID-COURSE EXECUTION ACCURACY

SGT 4939.6 SGR 1619.5 SG3 1259.1
RRT .9091 RRF .9436 RTF .9273
SG8 5198.3 R23 .2062 R13 .9358
SG1 5158.0 SG2 646.1 THA 16.87

ORBIT DETERMINATION ACCURACY

ST 54.2 SR 16.2 SS 29.8
CRT .7873 CR8 .3804 CST -.2542
LSA 56.3 MSA 30.4 S8A 2.1
EL1 55.8 EL2 9.7 ALF 13.67

LAUNCH DATE SEP 11 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.907 GAL 7.89 AZL 87.07 HCA 141.48 SMA 195.26 ECC .26224 INC 2.9268 V1 29.588
RP 246.65 LAP 1.82 LOP 129.81 VP 19.911 GAP .11 AZP 92.29 TAL 38.24 TAP 179.70 RCA 143.86 APO 246.65 V2 22.224
RC 303.274 GL 16.28 GP -19.88 ZAL 35.13 ZAP 68.97 ETS 173.68 ZAE 96.76 ETE 184.19 ZAC 69.16 ETC 285.17 LVI -2.87

DISTANCE 500.545

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 35.271 VHL 5.939 DLA 22.70 RAL 11.57 RAD 6649.0 VEL 12.457 PTH 7.35 VHP 2.659 DPA -12.31 RAP 24.38 ECC 1.5805
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 15 32 3737.09 -47.40 150.74 265.41 85.35 8 17 49 2737.1 -43.68 116.39
60.00 7 28 53 3706.85 -39.66 146.85 264.24 82.14 8 28 40 2706.9 -38.93 115.75
70.00 7 45 10 3653.00 -32.63 141.08 262.82 79.30 8 46 3 2653.0 -33.69 112.39
80.00 8 18 43 3547.78 -27.15 131.78 261.50 77.08 9 17 51 2547.8 -29.85 104.68
90.00 9 23 10 3339.67 -24.90 115.90 260.90 76.15 10 18 50 2339.7 -28.26 89.39
100.00 11 1 35 3022.25 -27.15 93.15 261.50 77.08 11 51 57 2022.3 -29.85 66.05
110.00 12 44 36 2699.82 -32.63 69.99 262.82 79.30 13 29 36 1699.8 -33.69 41.30

DIFFERENTIAL CORRECTIONS

TDE -.4942 TRA-3.1280 TC3-3.2257 BAU 1.6410
RDE -.2830 RRA -.4389 RC3-1.3063 FAU .45042
FDE 2.0868 FRA-5.3603 FC-11.0557 BSP 9010
BDE .5695 BRA 3.1587 BC3 3.4802 FSP 2109

MID-COURSE EXECUTION ACCURACY

SGT 5060.3 SGR 1641.0 SG3 1245.8
RRT .9124 RRF .9466 RTF .9277
SG8 5319.8 R23 .2107 R13 .9360
SG1 5280.7 SG2 643.6 THA 16.74

ORBIT DETERMINATION ACCURACY

ST 54.9 SR 15.5 SS 30.5
CRT .7977 CR8 .3653 CST -.2528
LSA 56.8 MSA 30.8 S8A 2.0
EL1 56.3 EL2 9.1 ALF 13.02

LAUNCH DATE SEP 11 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.914 GAL 7.83 AZL 87.01 HCA 142.35 SMA 195.39 ECC .26322 INC 2.9931 V1 29.588  
 RP 246.82 LAP 1.83 LOP 130.50 VP 19.904 GAP -.10 AZP 92.37 TAL 37.84 TAP 180.29 RCA 143.96 APO 246.82 V2 22.207  
 RC 305.673 GL 16.70 GP -20.17 ZAL 35.32 ZAP 68.14 ETS 173.20 ZAE 95.59 ETE 183.76 ZAC 68.89 ETC 265.20 LVI -2.58

DISTANCE 504.330 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 35.154 VHL 5.929 DLA 23.17 RAL 11.63 RAD 6648.9 VEL 12.452 PTH 7.35 VHP 2.674 DPA -12.59 RAP 24.47 ECC 1.5785  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 13 32 3746.47 -47.35 131.64 265.85 84.66 8 15 59 2746.5 -43.89 117.18  
 60.00 7 24 4 3718.42 -39.54 147.82 264.54 81.49 8 26 2 2718.4 -38.70 116.69  
 70.00 7 41 10 3668.01 -32.44 142.20 263.01 78.66 8 42 18 2668.0 -33.79 113.55  
 80.00 8 13 11 3567.62 -26.84 133.18 261.58 76.41 9 12 38 2567.6 -29.86 106.16  
 90.00 9 16 40 3382.61 -24.32 117.47 260.94 75.45 10 12 43 2362.6 -28.21 91.07  
 100.00 10 56 3 3042.09 -26.84 94.54 261.58 76.41 11 46 45 2042.1 -29.86 67.53  
 110.00 12 40 37 2714.83 -32.44 71.12 263.01 78.66 13 25 52 1714.8 -33.79 42.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4745 TRA-3.1798 TC3-3.3149 BAU 1.6781 SGT 5180.1 5GR 1662.9 5G3 1231.6 ST 55.4 SR 14.7 SS 31.1  
 RDE -.2617 RRA -.4508 RC3-1.3271 FAU .44420 RRT .9185 RRF .9495 RTF .9279 CRT .8102 CR8 .3451 CST -.2522  
 FDE 2.1578 FRA-5.2608 FC-10.9393 BSP 9243 SGB 5440.4 R23 .2196 R13 .9361 LSA 57.3 MSA 31.1 SSA 2.0  
 BDE .5419 BRA 3.2114 BC3 3.5707 FSP 2084 SGI 5402.5 5G2 641.5 THA 16.82 EL1 56.7 EL2 8.4 ALF 12.40

LAUNCH DATE SEP 11 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.921 GAL 7.58 AZL 86.94 HCA 143.24 SMA 195.53 ECC .26322 INC 3.0619 V1 29.588  
 RP 246.98 LAP 1.83 LOP 131.39 VP 19.898 GAP -.31 AZP 92.45 TAL 37.64 TAP 180.88 RCA 144.06 APO 246.99 V2 22.191  
 RC 308.047 GL 17.13 GP -20.48 ZAL 35.91 ZAP 67.34 ETS 172.71 ZAE 94.44 ETE 183.33 ZAC 68.59 ETC 285.23 LVI -2.28

DISTANCE 508.116 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 35.044 VHL 5.920 DLA 23.86 RAL 11.67 RAD 6648.9 VEL 12.448 PTH 7.35 VHP 2.689 DPA -12.88 RAP 24.57 ECC 1.5787  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 11 25 3756.27 -47.28 152.58 266.30 83.94 8 14 1 2756.3 -44.12 118.01  
 60.00 7 21 4 3730.55 -39.42 148.82 264.85 80.82 8 23 15 2730.5 -38.67 117.67  
 70.00 7 36 55 3683.85 -32.22 143.39 263.19 78.00 8 38 19 2683.8 -33.89 114.77  
 80.00 8 7 13 3588.82 -26.49 134.65 261.66 75.70 9 7 2 2588.8 -29.85 107.73  
 90.00 9 9 36 3387.39 -24.09 119.16 260.95 74.72 10 6 3 2387.4 -28.14 92.87  
 100.00 10 50 5 3063.29 -26.49 96.02 261.66 75.70 11 41 8 2063.3 -29.85 69.10  
 110.00 12 36 22 2730.67 -32.22 72.30 263.19 78.00 13 21 52 1730.7 -33.89 43.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4535 TRA-3.2311 TC3-3.4037 BAU 1.7152 SGT 5299.9 5GR 1685.7 5G3 1216.8 ST 56.0 SR 13.9 SS 31.8  
 RDE -.2399 RRA -.4632 RC3-1.3483 FAU .43774 RRT .9185 RRF .9523 RTF .9281 CRT .8257 CR8 .3172 CST -.2534  
 FDE 2.2288 FRA-5.1617 FC-10.8142 BSP 9467 SGB 5561.6 R23 .2205 R13 .9362 LSA 57.9 MSA 31.5 SSA 2.0  
 BDE .5131 BRA 3.2642 BC3 3.6610 FSP 2055 SGI 5524.7 5G2 639.5 THA 16.51 EL1 57.2 EL2 7.7 ALF 11.83

LAUNCH DATE SEP 11 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.929 GAL 7.92 AZL 86.67 HCA 144.13 SMA 195.67 ECC .26322 INC 3.1335 V1 29.588  
 RP 247.14 LAP 1.84 LOP 132.26 VP 19.893 GAP -.52 AZP 92.54 TAL 37.33 TAP 181.46 RCA 144.16 APO 247.17 V2 22.176  
 RC 310.395 GL 17.57 GP -20.80 ZAL 36.32 ZAP 66.57 ETS 172.21 ZAE 93.31 ETE 182.90 ZAC 68.28 ETC 285.26 LVI -1.96

DISTANCE 511.900 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.942 VHL 5.911 DLA 24.17 RAL 11.71 RAD 6648.9 VEL 12.444 PTH 7.34 VHP 2.705 DPA -13.17 RAP 24.71 ECC 1.5751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 9 10 3766.54 -47.20 153.56 266.76 83.19 8 11 57 2766.5 -44.35 118.88  
 60.00 7 17 54 3743.28 -39.27 149.88 265.16 80.12 8 20 17 2743.3 -39.04 118.71  
 70.00 7 32 23 3700.59 -31.97 144.63 263.37 77.30 8 34 4 2700.6 -33.97 116.07  
 80.00 8 0 46 3611.57 -26.10 136.23 261.71 74.96 9 0 57 2611.6 -29.82 109.42  
 90.00 9 1 51 3414.33 -23.59 120.97 260.94 73.93 9 58 45 2414.3 -28.03 94.84  
 100.00 10 43 38 3086.04 -26.10 97.60 261.71 74.96 11 35 4 2086.0 -29.82 70.79  
 110.00 12 31 50 2747.41 -31.97 73.55 263.37 77.30 13 17 37 1747.4 -33.97 44.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4312 TRA-3.2824 TC3-3.4920 BAU 1.7523 SGT 5420.1 5GR 1709.8 5G3 1201.4 ST 56.7 SR 13.2 SS 32.4  
 RDE -.2177 RRA -.4761 RC3-1.3699 FAU .43115 RRT .9213 RRF .9550 RTF .9281 CRT .8442 CR8 .2808 CST -.2583  
 FDE 2.2934 FRA-5.0614 FC-10.6821 BSP 9688 SGB 5683.4 R23 .2256 R13 .9363 LSA 58.5 MSA 31.8 SSA 1.9  
 BDE .4831 BRA 3.3167 BC3 3.7511 FSP 2025 SGI 5647.5 5G2 638.0 THA 16.42 EL1 57.8 EL2 7.0 ALF 11.31

LAUNCH DATE SEP 11 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 32.936 GAL 7.48 AZL 86.79 HCA 145.01 SMA 195.81 ECC .26322 INC 3.2082 V1 29.588  
 RP 247.29 LAP 1.84 LOP 133.17 VP 19.889 GAP -.73 AZP 92.63 TAL 37.02 TAP 182.03 RCA 144.27 APO 247.35 V2 22.163  
 RC 312.717 GL 18.03 GP -21.13 ZAL 36.74 ZAP 65.83 ETS 171.70 ZAE 92.20 ETE 182.47 ZAC 67.96 ETC 285.30 LVI -1.63

DISTANCE 515.684 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 34.850 VHL 5.903 DLA 24.69 RAL 11.75 RAD 6648.8 VEL 12.440 PTH 7.34 VHP 2.722 DPA -13.47 RAP 24.87 ECC 1.5735  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 6 47 3777.31 -47.11 154.59 267.23 82.40 8 9 44 2777.3 -44.59 119.81  
 60.00 7 14 32 3756.67 -39.11 150.98 265.47 79.39 8 17 8 2756.7 -39.21 119.81  
 70.00 7 27 32 3718.33 -31.70 145.94 263.54 76.57 8 29 31 2718.3 -34.04 117.45  
 80.00 7 53 44 3636.12 -25.66 137.92 261.74 74.18 8 54 20 2636.1 -29.75 111.25  
 90.00 8 53 15 3443.91 -23.02 122.95 260.89 73.10 9 50 39 2443.9 -27.87 96.99  
 100.00 10 36 36 3110.59 -25.66 99.29 261.74 74.18 11 28 27 2110.6 -29.75 72.61  
 110.00 12 26 59 2765.15 -31.70 74.86 263.54 76.57 13 13 4 1765.1 -34.04 46.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4066 TRA-3.3328 TC3-3.5788 BAU 1.7891 SGT 5539.4 5GR 1734.6 5G3 1185.2 ST 57.3 SR 12.5 SS 33.1  
 RDE -.1944 RRA -.4892 RC3-1.3918 FAU .42431 RRT .9240 RRF .9575 RTF .9283 CRT .8656 CR8 .2343 CST -.2605  
 FDE 2.3617 FRA-4.9586 FC-10.5405 BSP 9916 SGB 5804.6 R23 .2309 R13 .9362 LSA 59.1 MSA 32.2 SSA 1.9  
 BDE .4507 BRA 3.3685 BC3 3.8399 FSP 1995 SGI 5769.5 5G2 636.9 THA 16.34 EL1 58.3 EL2 6.2 ALF 10.63

LAUNCH DATE SEP 11 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.944 GAL 7.40 AZL 86.71 HCA 145.90 SMA 195.95 ECC .26325 INC 3.2862 V1 29.588
RP 247.44 LAP 1.84 LOP 134.06 VP 19.885 GAP -.93 AZP 92.72 TAL 36.71 TAP 182.60 RCA 144.37 APO 247.53 V2 22.147
RC 315.013 GL 18.52 GP -21.48 ZAL 37.18 ZAP 65.11 ETS 171.17 ZAE 91.12 ETE 182.03 ZAC 67.61 ETC 285.34 LVI -1.28

PLANETOCENTRIC CONIC

C3 34.768 VHL 5.896 DLA 25.23 RAL 11.78 RAD 6648.8 VEL 12.437 PTH 7.34 VHP 2.740 DPA -13.77 RAP 25.05 ECC 1.5722
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 4 15 3788.60 -47.00 155.66 267.71 81.58 8 7 23 2788.6 -44.83 120.79
60.00 7 10 56 3770.77 -38.93 152.13 265.78 78.62 8 13 47 2770.8 -39.37 120.98
70.00 7 22 20 3737.19 -31.39 147.32 263.69 75.60 8 24 37 2737.2 -34.10 118.92
80.00 7 46 2 3662.80 -25.15 139.74 261.74 73.35 8 47 5 2662.8 -29.65 113.22
90.00 8 43 38 3476.77 -22.35 125.13 260.79 72.21 9 41 35 2476.8 -27.65 99.36
100.00 10 28 54 3137.27 -25.15 101.11 261.74 73.35 11 21 11 2137.3 -29.65 74.59
110.00 12 21 46 2784.00 -31.39 76.24 263.69 75.60 13 8 10 1784.0 -34.10 47.84

DIFFERENTIAL CORRECTIONS

TDE -.3801 TRA-3.3830 TC3-3.6647 BAU 1.8259
RDE -.1705 RRA -.5029 RC3-1.4141 FAU .41730
FDE 2.4277 FRA-4.8561 FC-10.3909 BSP 10142
BDE .4166 BRA 3.4202 BC3 3.9281 FSP 1963

MID-COURSE EXECUTION ACCURACY

SGT 5658.6 SGR 1760.8 SG3 1168.6
RRR .9265 RRF .9600 RTF .9283
SGB 5926.2 R23 .2363 R13 .9362
SG1 5892.0 SGT 636.2 THA 16.28

ORBIT DETERMINATION ACCURACY

ST 57.9 SR 11.9 SS 33.8
CRT .8898 CRS .1755 CST -.2669
LSA 59.8 MSA 32.6 SSA 1.8
EL1 58.9 EL2 5.3 ALF 10.41

LAUNCH DATE SEP 11 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.951 GAL 7.34 AZL 86.83 HCA 146.78 SMA 196.09 ECC .26325 INC 3.3677 V1 29.588
RP 247.58 LAP 1.84 LOP 134.94 VP 19.882 GAP -1.13 AZP 92.82 TAL 36.40 TAP 183.18 RCA 144.47 APO 247.72 V2 22.133
RC 317.282 GL 19.02 GP -21.85 ZAL 37.62 ZAP 64.42 ETS 170.63 ZAE 90.06 ETE 181.59 ZAC 67.24 ETC 285.38 LVI -0.91

PLANETOCENTRIC CONIC

C3 34.699 VHL 5.891 DLA 25.79 RAL 11.80 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 2.759 DPA -14.09 RAP 25.25 ECC 1.5711
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 1 32 3800.46 -46.88 156.78 268.20 80.73 8 4 53 2800.5 -45.08 121.83
60.00 7 7 6 3785.62 -38.72 153.34 266.09 77.83 8 10 12 2785.6 -39.53 122.21
70.00 7 16 43 3757.26 -31.05 148.79 263.83 75.00 8 19 21 2757.3 -34.14 120.49
80.00 7 37 31 3691.98 -24.57 141.71 261.70 72.47 8 39 3 2692.0 -29.51 115.38
90.00 8 32 40 3513.84 -21.56 127.56 260.63 71.24 9 31 14 2513.8 -27.35 102.03
100.00 10 20 23 3166.45 -24.57 103.08 261.70 72.47 11 13 10 2166.5 -29.51 76.75
110.00 12 16 10 2804.08 -31.05 77.70 263.83 75.00 13 2 54 1804.1 -34.14 49.41

DIFFERENTIAL CORRECTIONS

TDE -.3811 TRA-3.4415 TC3-3.7593 BAU 1.8684
RDE -.1533 RRA -.5251 RC3-1.4460 FAU .41329
FDE 2.4283 FRA-4.8210 FC-10.3116 BSP 10227
BDE .3923 BRA 3.4813 BC3 4.0278 FSP 1860

MID-COURSE EXECUTION ACCURACY

SGT 5793.0 SGR 1801.7 SG3 1180.1
RRR .9299 RRF .9630 RTF .9300
SGB 6066.7 R23 .2383 R13 .9378
SG1 6033.3 SG2 636.2 THA 16.32

ORBIT DETERMINATION ACCURACY

ST 58.8 SR 11.6 SS 34.0
CRT .9120 CRS .1022 CST -.2861
LSA 60.8 MSA 32.5 SSA 1.8
EL1 59.8 EL2 4.7 ALF 10.25

LAUNCH DATE SEP 11 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.959 GAL 7.29 AZL 86.55 HCA 147.66 SMA 196.24 ECC .26328 INC 3.4531 V1 29.588
RP 247.71 LAP 1.85 LOP 135.83 VP 19.880 GAP -1.33 AZP 92.92 TAL 36.08 TAP 183.74 RCA 144.57 APO 247.90 V2 22.120
RC 319.522 GL 19.55 GP -22.24 ZAL 38.08 ZAP 63.77 ETS 170.08 ZAE 89.02 ETE 181.14 ZAC 66.85 ETC 285.42 LVI -.52

PLANETOCENTRIC CONIC

C3 34.640 VHL 5.886 DLA 26.37 RAL 11.81 RAD 6648.8 VEL 12.432 PTH 7.34 VHP 2.778 DPA -14.41 RAP 25.49 ECC 1.5701
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 58 38 3812.96 -46.74 157.95 268.70 79.84 8 2 11 2813.0 -45.32 122.93
60.00 7 3 0 3801.35 -38.49 154.61 266.40 76.99 8 6 21 2801.3 -39.68 123.52
70.00 7 10 39 3778.78 -30.66 150.34 263.96 74.16 8 13 38 2778.8 -34.15 122.17
80.00 7 27 59 3724.37 -23.88 143.87 261.61 71.53 8 30 3 2724.4 -29.30 117.78
90.00 8 19 49 3556.88 -20.59 130.34 260.37 70.18 9 19 6 2556.9 -26.93 105.11
100.00 10 10 51 3198.84 -23.88 105.24 261.61 71.53 11 4 9 2198.8 -29.30 79.13
110.00 12 10 5 2825.60 -30.66 79.26 263.96 74.16 12 57 11 1825.6 -34.15 51.09

DIFFERENTIAL CORRECTIONS

TDE -.3293 TRA-3.4898 TC3-3.8412 BAU 1.9042
RDE -.1260 RRA -.9383 RC3-1.4674 FAU .40319
FDE 2.5079 FRA-4.7012 FC-10.1268 BSP 10477
BDE .3526 BRA 3.5311 BC3 4.1119 FSP 1843

MID-COURSE EXECUTION ACCURACY

SGT 5909.7 SGR 1827.8 SG3 1140.2
RRR .9320 RRF .9651 RTF .9294
SGB 6185.9 R23 .2446 R13 .9372
SG1 6153.1 SG2 636.2 THA 16.26

ORBIT DETERMINATION ACCURACY

ST 59.5 SR 11.0 SS 34.8
CRT .9387 CRS .0187 CST -.2920
LSA 61.5 MSA 33.0 SSA 1.7
EL1 60.4 EL2 3.7 ALF 9.90

LAUNCH DATE SEP 11 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

RL 150.59 LAL -.00 LOL 348.12 VL 32.966 GAL 7.23 AZL 86.46 HCA 148.55 SMA 196.38 ECC .26331 INC 3.5426 V1 29.588
RP 247.84 LAP 1.85 LOP 136.71 VP 19.879 GAP -1.54 AZP 93.02 TAL 35.76 TAP 184.30 RCA 144.68 APO 248.09 V2 22.107
RC 321.734 GL 20.10 GP -22.64 ZAL 36.55 ZAP 63.14 ETS 169.92 ZAE 88.01 ETE 180.68 ZAC 66.43 ETC 285.47 LVI -1.10

PLANETOCENTRIC CONIC

C3 34.594 VHL 5.882 DLA 26.97 RAL 11.80 RAD 6648.7 VEL 12.430 PTH 7.33 VHP 2.799 DPA -14.74 RAP 25.75 ECC 1.5693
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 55 32 3826.13 -46.57 159.18 269.20 78.90 7 59 18 2826.1 -45.57 124.10
60.00 6 58 35 3818.00 -38.22 155.95 266.70 76.12 8 2 13 2818.0 -39.82 124.91
70.00 7 4 2 3801.92 -30.22 152.00 264.05 73.27 8 7 24 2801.9 -34.14 123.98
80.00 7 17 8 3760.81 -23.08 146.28 261.44 70.51 8 19 49 2760.8 -29.01 120.43
90.00 8 4 7 3608.94 -19.35 133.66 259.97 68.97 9 4 16 2608.9 -26.32 108.80
100.00 10 0 0 3235.28 -23.08 107.65 261.44 70.51 10 53 55 2235.3 -29.01 81.80
110.00 12 3 29 2848.74 -30.22 80.92 264.05 73.27 12 50 58 1848.7 -34.14 52.89

DIFFERENTIAL CORRECTIONS

TDE -.2947 TRA-3.5365 TC3-3.9202 BAU 1.9394
RDE -.0974 RRA -.5518 RC3-1.4887 FAU .39678
FDE 2.5874 FRA-4.5779 FC3-9.9296 BSP 10735
BDE .3104 BRA 3.5793 BC3 4.1933 FSP 1825

MID-COURSE EXECUTION ACCURACY

SGT 6024.1 SGR 1854.6 SG3 1119.3
RRR .9339 RRF .9670 RTF .9288
SGB 6303.1 R23 .2512 R13 .9366
SG1 6270.9 SG2 636.8 THA 16.21

ORBIT DETERMINATION ACCURACY

ST 60.1 SR 10.5 SS 35.7
CRT .9631 CRS -.0816 CST -.2999
LSA 62.3 MSA 33.5 SSA 1.6
EL1 61.0 EL2 2.8 ALF 9.61



LAUNCH DATE SEP 11 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 25 1974

Heliocentric Conic: RL 150.59 LAL -.00 LOL 348.12 VL 32.974 GAL 7.17 AZL 86.36 MCA 149.43 SMA 196.53 ECC .26334 INC 3.6366 V1 29.588  
 RP 247.97 LAP 1.85 LOP 137.59 VP 19.878 GAP -1.73 AZP 93.13 TAL 35.44 TAP 184.86 RCA 144.78 APO 248.29 V2 22.084  
 RC 323.917 GL 20.67 GP -23.07 ZAL 39.03 ZAP 62.54 ETS 168.93 ZAE 87.02 ETE 180.22 ZAC 65.99 ETC 285.52 LVI .04

Distance 534.590 Earth to Mars

Planeto-centric Conic: C3 34.564 VHL 5.879 DLA 27.60 RAL 11.79 RAD 6648.7 VEL 12.429 PTH 7.33 VHP 2.021 DPA -15.08 RAP 26.04 ECC 1.5688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 13 3840.02 -46.38 160.47 269.71 77.93 7 56 13 2840.0 -45.81 125.35  
 60.00 6 53 50 3835.69 -37.93 157.35 266.99 75.21 7 57 46 2835.7 -39.95 126.40  
 70.00 6 56 49 3826.91 -29.71 153.77 264.12 72.33 8 0 36 2826.9 -34.10 125.93  
 80.00 7 4 31 3802.73 -22.10 149.01 261.18 69.39 8 7 53 2802.7 -28.60 123.48  
 90.00 7 43 8 3677.84 -17.62 137.96 259.30 67.51 8 44 26 2677.8 -25.36 113.61  
 100.00 9 47 22 3277.21 -22.10 110.38 261.18 69.39 10 42 0 2277.2 -28.60 84.85  
 110.00 11 56 15 2873.73 -29.71 82.69 264.12 72.33 12 44 9 1873.7 -34.10 54.84

Differential Corrections: TDE -.2589 TRA-3.5842 TC3-3.9989 BAU 1.9755 SGT 6140.7 SGR 1884.7 SG3 1098.9 ST 60.9 SR 10.3 SS 36.6  
 RDE -.0684 RRA -.5668 RC3-1.5118 FAU .38858 RRT .9358 RRF .0689 RTF .9282 CRT .9810 CR8 -.1958 CST -.3107  
 FDE 2.6597 FRA-4.4617 FC3-9.7328 BSP 10984 SGB 6423.4 R23 .2575 R13 .9361 LSA 63.1 MSA 34.0 SSA 1.6  
 BDE .2678 BRA 3.6288 BC3 4.2750 FSP 1801 SG1 6391.6 SG2 638.1 THA 16.19 EL1 61.7 EL2 2.0 ALF 9.41

LAUNCH DATE SEP 11 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 27 1974

Heliocentric Conic: RL 150.59 LAL -.00 LOL 348.12 VL 32.982 GAL 7.11 AZL 86.26 MCA 150.31 SMA 196.68 ECC .26338 INC 3.7356 V1 29.588  
 RP 248.09 LAP 1.85 LOP 138.48 VP 19.878 GAP -1.93 AZP 93.25 TAL 35.12 TAP 185.42 RCA 144.88 APO 248.48 V2 22.084  
 RC 326.069 GL 21.27 GP -23.52 ZAL 39.54 ZAP 61.98 ETS 168.34 ZAE 86.06 ETE 179.75 ZAC 65.52 ETC 285.58 LVI .80

Distance 538.368 Earth to Mars

Planeto-centric Conic: C3 34.551 VHL 5.878 DLA 28.25 RAL 11.76 RAD 6648.7 VEL 12.428 PTH 7.33 VHP 2.844 DPA -15.44 RAP 26.35 ECC 1.5688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 48 38 3854.72 -46.16 161.82 270.23 76.91 7 52 53 2854.7 -46.06 126.69  
 60.00 6 48 43 3854.51 -37.59 158.84 267.27 74.25 7 52 57 2854.5 -40.07 127.98  
 70.00 6 48 52 3854.08 -29.14 155.68 264.14 71.34 7 53 6 2854.1 -34.01 128.04  
 80.00 6 49 17 3852.76 -20.87 152.21 260.78 68.15 7 53 30 2852.8 -28.02 127.08  
 90.00 7 0 17 3817.10 -13.79 146.40 257.58 65.07 8 3 54 2817.1 -22.90 123.07  
 100.00 9 32 9 3327.23 -20.87 113.58 260.78 68.15 10 27 36 2327.2 -28.02 88.45  
 110.00 11 48 18 2900.90 -29.14 84.59 264.14 71.34 12 36 39 1900.9 -34.01 56.96

Differential Corrections: TDE -.2206 TRA-3.6318 TC3-4.0747 BAU 2.0112 SGT 6256.4 SGR 1916.4 SG3 1077.9 ST 61.7 SR 10.2 SS 37.4  
 RDE -.0381 RRA -.5828 RC3-1.5348 FAU .38018 RRT .9377 RRF .9708 RTF .9277 CRT .9885 CR8 -.3189 CST -.3238  
 FDE 2.7302 FRA-4.3473 FC3-9.5261 BSP 11227 SGB 6543.3 R23 .2638 R13 .9356 LSA 64.1 MSA 34.5 SSA 1.5  
 BDE .2238 BRA 3.6783 BC3 4.3542 FSP 1773 SG1 6511.9 SG2 639.9 THA 16.19 EL1 62.5 EL2 1.5 ALF 9.31

LAUNCH DATE SEP 11 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 29 1974

Heliocentric Conic: RL 150.59 LAL -.00 LOL 348.12 VL 32.990 GAL 7.04 AZL 86.16 MCA 151.19 SMA 196.83 ECC .26342 INC 3.8399 V1 29.588  
 RP 248.20 LAP 1.85 LOP 139.36 VP 19.879 GAP -2.13 AZP 93.37 TAL 34.79 TAP 185.98 RCA 144.98 APO 248.68 V2 22.073  
 RC 328.191 GL 21.90 GP -24.00 ZAL 40.06 ZAP 61.45 ETS 167.72 ZAE 85.11 ETE 179.27 ZAC 65.02 ETC 285.64 LVI 1.29

Distance 542.145 Earth to Mars

Planeto-centric Conic: C3 34.556 VHL 5.878 DLA 28.92 RAL 11.72 RAD 6648.7 VEL 12.428 PTH 7.33 VHP 2.868 DPA -15.81 RAP 26.69 ECC 1.5687  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 44 47 3870.30 -45.91 163.24 270.75 75.84 7 49 17 2870.3 -46.30 128.11  
 60.00 6 43 9 3874.62 -37.20 160.41 267.53 73.24 7 47 44 2874.6 -40.17 129.69  
 70.00 6 40 1 3883.86 -28.47 157.74 264.11 70.29 7 44 45 2883.9 -33.87 130.36  
 80.00 6 29 32 3916.86 -19.19 156.23 260.12 66.68 7 34 49 2916.9 -27.12 131.63  
 83.66 5 55 43 4025.65 -12.96 161.27 257.14 63.91 7 2 49 3025.6 -22.60 138.25  
 100.00 9 12 24 3391.33 -19.19 117.60 260.12 66.68 10 8 56 2391.3 -27.12 93.00  
 110.00 11 39 28 2930.68 -28.47 86.65 264.11 70.29 12 28 18 1930.7 -33.87 59.28

Differential Corrections: TDE -.1813 TRA-3.6798 TC3-4.1498 BAU 2.0480 SGT 6373.9 SGR 1951.2 SG3 1058.8 ST 62.5 SR 10.4 SS 38.2  
 RDE -.0074 RRA -.6001 RC3-1.5592 FAU .37184 RRT .9394 RRF .9725 RTF .9271 CRT .9833 CR8 -.4397 CST -.3388  
 FDE 2.7934 FRA-4.2361 FC3-9.3157 BSP 11456 SGB 6665.9 R23 .2700 R13 .9351 LSA 65.3 MSA 34.8 SSA 1.5  
 BDE .1815 BRA 3.7285 BC3 4.4330 FSP 1739 SG1 6634.9 SG2 642.3 THA 16.20 EL1 63.4 EL2 1.9 ALF 9.30

LAUNCH DATE SEP 11 1973

FLIGHT TIME 262.00

ARRIVAL DATE MAY 31 1974

Heliocentric Conic: RL 150.59 LAL -.00 LOL 348.12 VL 32.997 GAL 6.98 AZL 86.05 HCA 152.06 SMA 196.98 ECC .26347 INC 3.9502 V1 29.588  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.880 GAP -2.32 AZP 93.49 TAL 34.46 TAP 186.53 RCA 145.08 APO 248.88 V2 22.062  
 RC 330.283 GL 22.56 GP -24.50 ZAL 40.59 ZAP 60.95 ETS 167.08 ZAE 84.20 ETE 178.78 ZAC 64.50 ETC 285.71 LVI 1.81

Distance 545.922 Earth to Mars

Planeto-centric Conic: C3 34.583 VHL 5.881 DLA 29.63 RAL 11.66 RAD 6648.7 VEL 12.429 PTH 7.33 VHP 2.893 DPA -16.20 RAP 27.06 ECC 1.5691  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 40 36 3886.83 -45.63 164.73 271.26 74.72 7 45 23 2886.8 -46.53 129.64  
 60.00 6 37 7 3896.15 -36.77 162.07 267.77 72.19 7 42 3 2896.2 -40.25 131.51  
 70.00 6 30 6 3916.84 -27.69 159.99 264.01 69.16 7 35 23 2916.8 -33.66 132.91  
 80.00 5 57 38 4019.27 -16.31 162.47 258.79 64.64 7 4 37 3019.3 -25.36 138.73  
 80.77 5 32 37 4099.29 -13.25 166.86 257.24 63.25 6 40 56 3099.3 -23.13 143.88  
 100.00 8 40 30 3493.74 -16.31 123.84 258.79 64.64 9 38 44 2493.7 -25.36 100.09  
 110.00 11 29 33 2963.66 -27.69 88.90 264.01 69.16 12 18 56 1963.7 -33.66 61.83

Differential Corrections: TDE -.1385 TRA-3.7267 TC3-4.2203 BAU 2.0840 SGT 6488.8 SGR 1987.0 SG3 1034.7 ST 63.5 SR 10.8 SS 39.1  
 RDE .0253 RRA -.6180 RC3-1.5833 FAU .36313 RRT .9411 RRF .9741 RTF .9265 CRT .9655 CR8 -.5530 CST -.3550  
 FDE 2.8575 FRA-4.1214 FC3-9.0906 BSP 11700 SGB 6786.3 R23 .2764 R13 .9345 LSA 66.5 MSA 35.3 SSA 1.4  
 BDE .1408 BRA 3.7776 BC3 4.5075 FSP 1706 SG1 6755.5 SG2 645.5 THA 16.23 EL1 64.3 EL2 2.8 ALF 9.37

LAUNCH DATE SEP 11 1973 FLIGHT TIME 264.00 ARRIVAL DATE JUN 2 1974

EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 33.005 GAL 6.92 AZL 85.93 HCA 152.94 SMA 197.13 ECC .26353 INC 4.0668 V1 29.588  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.882 GAP -2.52 AZP 93.62 TAL 34.14 TAP 187.08 RCA 145.18 APO 249.08 V2 22.052  
 RC 332.344 GL 23.26 GP -25.03 ZAL 41.15 ZAP 80.48 ETS 166.43 ZAE 83.31 ETE 178.27 ZAC 63.94 ETC 285.78 LVI 2.36

PLANETOCENTRIC CONIC  
 C3 34.633 VHL 5.885 DLA 30.37 RAL 11.58 RAD 6648.8 VEL 12.431 PTH 7.34 VHP 2.920 DPA -16.61 RAP 27.46 ECC 1.5700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 36 5 3904.41 -45.30 166.30 271.77 73.55 7 41 9 2904.4 -46.75 131.28  
 60.00 6 30 30 3919.31 -36.27 163.84 267.97 71.08 7 35 49 2919.3 -40.29 133.48  
 70.00 6 18 48 3933.86 -26.77 162.47 263.82 67.95 7 24 42 2953.9 -33.36 135.75  
 78.45 5 14 46 4155.57 -13.54 171.20 257.34 62.56 6 24 2 3155.6 -23.67 148.28  
 78.45 5 14 46 4155.57 -13.54 171.20 257.34 62.56 6 24 2 3155.6 -23.67 148.28  
 78.45 5 14 46 4155.57 -13.54 171.20 257.34 62.56 6 24 2 3155.6 -23.67 148.28  
 110.00 11 18 15 3000.88 -26.77 91.39 263.82 67.95 12 8 15 2000.7 -33.36 64.67

MID-COURSE EXECUTION ACCURACY  
 SGT 6805.5 SGR 2025.9 SG3 1012.2  
 RRT .9426 RRF .9756 RTF .9258  
 SGB 6909.2 R23 .2827 R13 .9340  
 SGI 6878.6 SGI2 849.4 THA 16.27

ORBIT DETERMINATION ACCURACY  
 ST 64.5 SR 11.5 SS 39.9  
 CRT .9386 CRS -.6508 CST -.3730  
 LSA 67.9 MSA 35.7 SSA 1.3  
 EL1 65.4 EL2 3.9 ALF 9.55

DIFFERENTIAL CORRECTIONS  
 TDE -.0938 TRA-3.7743 TC3-4.2892 BAU 2.1210  
 RDE .0593 RRA -.6373 RC3-1.6084 FAU .35438  
 FDE 2.9181 FRA-4.0095 FC3-8.8587 BSP 11934  
 BDE .1109 BRA 3.8278 BC3 4.5808 FSP 1671

LAUNCH DATE SEP 11 1973 FLIGHT TIME 266.00 ARRIVAL DATE JUN 4 1974

EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 33.013 GAL 6.86 AZL 85.81 HCA 153.82 SMA 197.28 ECC .26359 INC 4.1907 V1 29.588  
 RP 248.50 LAP 1.85 LOP 141.99 VP 19.885 GAP -2.71 AZP 93.76 TAL 33.81 TAP 187.62 RCA 145.28 APO 249.28 V2 22.043  
 RC 334.378 GL 23.99 GP -25.60 ZAL 41.73 ZAP 80.05 ETS 165.75 ZAE 82.45 ETE 177.75 ZAC 63.35 ETC 285.86 LVI 2.98

PLANETOCENTRIC CONIC  
 C3 34.709 VHL 5.891 DLA 31.13 RAL 11.48 RAD 6648.8 VEL 12.434 PTH 7.34 VHP 2.949 DPA -17.04 RAP 27.88 ECC 1.5712  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 31 10 3923.17 -44.92 167.95 272.27 72.32 7 36 33 2923.2 -46.98 133.05  
 60.00 6 23 14 3944.33 -35.70 165.72 268.14 69.91 7 28 58 2944.3 -40.30 135.61  
 70.00 6 5 40 3996.26 -25.66 165.26 263.49 66.64 7 12 16 2996.3 -32.92 138.98  
 78.41 4 59 34 4202.98 -13.83 174.92 257.45 61.83 6 9 37 3203.0 -24.23 152.06  
 78.41 4 59 34 4202.98 -13.83 174.92 257.45 61.83 6 9 37 3203.0 -24.23 152.06  
 78.41 4 59 34 4202.98 -13.83 174.92 257.45 61.83 6 9 37 3203.0 -24.23 152.06  
 110.00 11 5 6 3043.08 -25.66 94.18 263.49 66.64 11 55 49 2043.1 -32.92 67.90

MID-COURSE EXECUTION ACCURACY  
 SGT 6721.1 SGR 2067.4 SG3 989.1  
 RRT .9442 RRF .9770 RTF .9252  
 SGB 7031.9 R23 .2887 R13 .9334  
 SGI 7001.5 SGI2 853.9 THA 16.34

ORBIT DETERMINATION ACCURACY  
 ST 65.6 SR 12.5 SS 40.7  
 CRT .9078 CRS -.7300 CST -.3928  
 LSA 69.4 MSA 35.7 SSA 1.3  
 EL1 66.6 EL2 5.2 ALF 9.84

DIFFERENTIAL CORRECTIONS  
 TDE -.0467 TRA-3.8223 TC3-4.3534 BAU 2.1577  
 RDE .0946 RRA -.6584 RC3-1.6338 FAU .34543  
 FDE 2.9732 FRA-3.9006 FC3-8.6159 BSP 12170  
 BDE .1055 BRA 3.8786 BC3 4.6499 FSP 1631

LAUNCH DATE SEP 11 1973 FLIGHT TIME 268.00 ARRIVAL DATE JUN 6 1974

EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 33.021 GAL 6.80 AZL 85.68 HCA 154.69 SMA 197.44 ECC .26365 INC 4.3224 V1 29.588  
 RP 248.59 LAP 1.85 LOP 142.87 VP 19.889 GAP -2.90 AZP 93.91 TAL 33.47 TAP 188.17 RCA 145.38 APO 249.49 V2 22.034  
 RC 336.377 GL 24.76 GP -26.19 ZAL 42.33 ZAP 59.66 ETS 165.05 ZAE 81.61 ETE 177.22 ZAC 62.72 ETC 285.94 LVI 3.56

PLANETOCENTRIC CONIC  
 C3 34.818 VHL 5.901 DLA 31.93 RAL 11.36 RAD 6648.8 VEL 12.439 PTH 7.34 VHP 2.979 DPA -17.50 RAP 28.34 ECC 1.5730  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 25 48 3943.23 -44.50 169.69 272.75 71.04 7 31 31 2943.2 -47.15 134.95  
 60.00 6 15 12 3971.51 -35.05 167.73 268.25 68.69 7 21 24 2971.5 -40.26 137.92  
 70.00 5 49 53 4046.38 -24.26 168.49 262.97 65.19 6 57 20 3046.4 -32.28 142.75  
 74.51 4 45 56 4244.98 -14.13 178.27 257.55 61.06 5 56 41 3245.0 -24.81 155.47  
 74.51 4 45 56 4244.98 -14.13 178.27 257.55 61.06 5 56 41 3245.0 -24.81 155.47  
 74.51 4 45 56 4244.98 -14.13 178.27 257.55 61.06 5 56 41 3245.0 -24.81 155.47  
 110.00 10 49 20 3093.20 -24.26 97.40 262.97 65.19 11 40 53 2093.2 -32.28 71.67

MID-COURSE EXECUTION ACCURACY  
 SGT 6836.4 SGR 2111.8 SG3 985.4  
 RRT .9456 RRF .9784 RTF .9245  
 SGB 7155.1 R23 .2948 R13 .9329  
 SGI 7124.7 SGI2 859.2 THA 16.43

ORBIT DETERMINATION ACCURACY  
 ST 66.9 SR 13.6 SS 41.5  
 CRT .8770 CRS -.7922 CST -.4134  
 LSA 71.1 MSA 36.4 SSA 1.2  
 EL1 67.9 EL2 6.5 ALF 10.23

DIFFERENTIAL CORRECTIONS  
 TDE .0033 TRA-3.8698 TC3-4.4137 BAU 2.1949  
 RDE .1318 RRA -.6807 RC3-1.6598 FAU .33632  
 FDE 3.0256 FRA-3.7908 FC3-8.3630 BSP 12403  
 BDE .1318 BRA 3.9292 BC3 4.7155 FSP 1589

LAUNCH DATE SEP 11 1973 FLIGHT TIME 270.00 ARRIVAL DATE JUN 8 1974

EARTH TO MARS

HELIOCENTRIC CONIC  
 RL 150.59 LAL -.00 LOL 348.12 VL 33.029 GAL 6.74 AZL 85.54 HCA 155.57 SMA 197.59 ECC .26372 INC 4.4626 V1 29.588  
 RP 248.67 LAP 1.84 LOP 143.78 VP 19.893 GAP -3.09 AZP 94.06 TAL 33.14 TAP 188.71 RCA 145.48 APO 249.70 V2 22.026  
 RC 338.347 GL 25.57 GP -26.83 ZAL 42.95 ZAP 59.30 ETS 164.33 ZAE 80.81 ETE 176.87 ZAC 62.05 ETC 286.04 LVI 4.22

PLANETOCENTRIC CONIC  
 C3 34.957 VHL 5.912 DLA 32.77 RAL 11.20 RAD 6648.8 VEL 12.444 PTH 7.35 VHP 3.011 DPA -17.98 RAP 28.83 ECC 1.5753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 19 55 3964.74 -44.00 171.52 273.20 69.70 7 26 0 2964.7 -47.31 137.00  
 60.00 6 6 15 4001.21 -34.29 169.88 268.28 67.39 7 12 57 3001.2 -40.16 140.44  
 70.00 5 29 48 4109.20 -22.41 172.42 262.14 63.53 6 38 17 3109.2 -31.31 147.39  
 72.70 4 33 23 4283.12 -14.44 181.36 257.65 60.25 5 44 46 3283.1 -25.40 158.64  
 72.70 4 33 23 4283.12 -14.44 181.36 257.65 60.25 5 44 46 3283.1 -25.40 158.64  
 72.70 4 33 23 4283.12 -14.44 181.36 257.65 60.25 5 44 46 3283.1 -25.40 158.64  
 110.00 10 29 14 3156.02 -22.41 101.34 262.14 63.53 11 21 50 2156.0 -31.31 76.31

MID-COURSE EXECUTION ACCURACY  
 SGT 6953.5 SGR 2159.3 SG3 940.9  
 RRT .9470 RRF .9796 RTF .9238  
 SGB 7281.1 R23 .3007 R13 .9323  
 SGI 7250.6 SGI2 865.3 THA 16.53

ORBIT DETERMINATION ACCURACY  
 ST 68.3 SR 15.0 SS 42.3  
 CRT .8491 CRS -.8391 CST -.4342  
 LSA 73.0 MSA 36.7 SSA 1.2  
 EL1 69.5 EL2 7.8 ALF 10.73

DIFFERENTIAL CORRECTIONS  
 TDE .0545 TRA-3.9189 TC3-4.4707 BAU 2.2330  
 RDE .1707 RRA -.7050 RC3-1.6861 FAU .32699  
 FDE 3.0739 FRA-3.6823 FC3-8.0982 BSP 12622  
 BDE .1792 BRA 3.9818 BC3 4.7781 FSP 1545

LAUNCH DATE SEP 11 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC

DISTANCE 564.795

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 33.037 GAL 6.67 AZL 85.39 HCA 156.44 SMA 197.74 ECC .26380 INC 4.6126 V1 29.588
RP 248.75 LAP 1.84 LOP 144.63 VP 19.898 GAP -3.28 AZP 94.23 TAL 32.81 TAP 189.29 RCA 145.58 APO 249.91 V2 22.019
RC 340.287 GL 28.43 GP -27.50 ZAL 43.60 ZAP 58.99 ETS 163.58 ZAE 80.04 ETE 176.10 ZAC 61.34 ETC 286.14 LVI 4.92

PLANETOCENTRIC CONIC

C3 35.137 VHL 5.928 DLA 33.65 RAL 11.01 RAD 6648.9 VEL 12.451 PTH 7.35 VHP 3.048 DPA -18.49 RAP 29.36 ECC 1.5783
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 13 27 3987.88 -43.44 173.46 273.61 68.29 7 19 55 2987.9 -47.45 139.22
60.00 5 56 12 4033.95 -33.41 172.21 268.23 66.02 7 3 26 3033.9 -39.98 143.21
70.00 4 59 58 4200.98 -19.52 177.97 260.59 61.40 6 9 59 3201.0 -29.57 153.97
70.95 4 21 34 4318.48 -14.74 184.27 257.75 59.40 5 33 33 3318.5 -26.02 161.64
70.95 4 21 34 4318.48 -14.74 184.27 257.75 59.40 5 33 33 3318.5 -26.02 161.64
70.95 4 21 34 4318.48 -14.74 184.27 257.75 59.40 5 33 33 3318.5 -26.02 161.64
110.00 9 59 25 3247.80 -19.52 106.89 260.59 61.40 10 53 33 2247.8 -29.57 82.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1092 TRA-3.9674 TC3-4.5212 BAU 2.2710 SGT 7068.6 SGR 2209.3 SG3 915.1 ST 69.8 SR 16.6 SS 43.1
RDE .2123 RRA -.7305 RC3-1.7120 FAU .31729 RRT .9482 RRF .9806 RTF .9229 CRT .8257 CRS -.8747 CST -.4557
FDE 3.1203 FRA-3.5708 FC3-7.8177 BSP 12851 SGB 7405.8 R23 .3068 R13 .9318 LSA 75.0 MSA 37.4 SSA 1.1
BDE .2387 BRA 4.0341 BC3 4.8345 FSP 1501 SG1 7375.2 SG2 672.4 THA 16.63 EL1 71.1 EL2 9.2 ALF 11.32

LAUNCH DATE SEP 11 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 12 1974

HELIOCENTRIC CONIC

DISTANCE 568.570

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 33.045 GAL 6.61 AZL 85.23 HCA 157.32 SMA 197.90 ECC .26387 INC 4.7735 V1 29.588
RP 248.82 LAP 1.84 LOP 145.50 VP 19.903 GAP -3.47 AZP 94.41 TAL 32.47 TAP 189.79 RCA 145.68 APO 250.12 V2 22.012
RC 342.196 GL 27.35 GP -28.22 ZAL 44.28 ZAP 58.72 ETS 162.81 ZAE 79.29 ETE 175.52 ZAC 60.59 ETC 286.25 LVI 5.67

PLANETOCENTRIC CONIC

C3 35.363 VHL 5.947 DLA 34.58 RAL 10.79 RAD 6649.0 VEL 12.460 PTH 7.36 VHP 3.083 DPA -19.03 RAP 29.92 ECC 1.5820
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 6 18 4012.86 -42.79 175.51 273.97 66.82 7 13 11 3012.9 -47.54 141.63
60.00 5 44 47 4070.38 -32.37 174.74 268.05 64.56 6 52 37 3070.4 -39.69 146.26
69.22 4 10 19 4351.65 -15.05 187.05 257.85 58.50 5 22 51 3351.7 -26.65 164.53
69.22 4 10 19 4351.65 -15.05 187.05 257.85 58.50 5 22 51 3351.7 -26.65 164.53
69.22 4 10 19 4351.65 -15.05 187.05 257.85 58.50 5 22 51 3351.7 -26.65 164.53
69.22 4 10 19 4351.65 -15.05 187.05 257.85 58.50 5 22 51 3351.7 -26.65 164.53
69.22 4 10 19 4351.65 -15.05 187.05 257.85 58.50 5 22 51 3351.7 -26.65 164.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1559 TRA-4.0266 TC3-4.5768 BAU 2.3160 SGT 7200.8 SGR 2276.0 SG3 893.8 ST 71.5 SR 18.3 SS 43.4
RDE .2485 RRA -.7666 RC3-1.7472 FAU .30940 RRT .9502 RRF .9819 RTF .9238 CRT .8155 CRS -.8961 CST -.4793
FDE 3.1200 FRA-3.5054 FC3-7.5746 BSP 12928 SGB 7551.9 R23 .3088 R13 .9326 LSA 77.3 MSA 36.9 SSA 1.0
BDE .2934 BRA 4.0989 BC3 4.8987 FSP 1410 SG1 7521.3 SG2 678.7 THA 16.86 EL1 73.1 EL2 10.4 ALF 12.01

LAUNCH DATE SEP 11 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC

DISTANCE 572.340

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 33.053 GAL 6.55 AZL 85.05 HCA 158.19 SMA 198.08 ECC .26396 INC 4.9464 V1 29.588
RP 248.88 LAP 1.84 LOP 146.38 VP 19.909 GAP -3.66 AZP 94.59 TAL 32.13 TAP 190.32 RCA 145.78 APO 250.33 V2 22.006
RC 344.074 GL 28.31 GP -28.98 ZAL 45.00 ZAP 58.51 ETS 162.02 ZAE 78.59 ETE 174.91 ZAC 59.78 ETC 286.36 LVI 6.46

PLANETOCENTRIC CONIC

C3 35.639 VHL 5.970 DLA 35.55 RAL 10.52 RAD 6649.1 VEL 12.471 PTH 7.37 VHP 3.123 DPA -19.61 RAP 30.92 ECC 1.5865
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 58 21 4039.97 -42.04 177.68 274.26 65.28 7 5 41 3040.0 -47.58 144.25
60.00 5 31 34 4111.61 -31.13 177.53 267.70 63.00 6 40 6 3111.6 -39.26 149.68
67.51 3 59 24 4383.29 -15.35 189.74 257.94 57.54 5 12 28 3383.3 -27.30 167.34
67.51 3 59 24 4383.29 -15.35 189.74 257.94 57.54 5 12 28 3383.3 -27.30 167.34
67.51 3 59 24 4383.29 -15.35 189.74 257.94 57.54 5 12 28 3383.3 -27.30 167.34
67.51 3 59 24 4383.29 -15.35 189.74 257.94 57.54 5 12 28 3383.3 -27.30 167.34
67.51 3 59 24 4383.29 -15.35 189.74 257.94 57.54 5 12 28 3383.3 -27.30 167.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2244 TRA-4.0679 TC3-4.6045 BAU 2.3499 SGT 7300.3 SGR 2322.5 SG3 861.7 ST 73.2 SR 20.4 SS 44.5
RDE .3015 RRA -.7901 RC3-1.7652 FAU .29741 RRT .9508 RRF .9824 RTF .9214 CRT .7963 CRS -.9200 CST -.4999
FDE 3.1904 FRA-3.3574 FC3-7.2248 BSP 13283 SGB 7660.8 R23 .3179 R13 .9305 LSA 79.7 MSA 37.4 SSA 1.0
BDE .3758 BRA 4.1439 BC3 4.9312 FSP 1397 SG1 7629.8 SG2 688.5 THA 16.97 EL1 75.1 EL2 12.0 ALF 12.82

LAUNCH DATE SEP 11 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC

DISTANCE 576.113

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 33.061 GAL 6.48 AZL 84.87 HCA 159.08 SMA 198.21 ECC .26404 INC 5.1329 V1 29.588
RP 248.94 LAP 1.83 LOP 147.26 VP 19.916 GAP -3.84 AZP 94.80 TAL 31.79 TAP 190.86 RCA 145.87 APO 250.54 V2 22.000
RC 345.920 GL 29.34 GP -29.79 ZAL 45.74 ZAP 58.34 ETS 161.20 ZAE 77.92 ETE 174.28 ZAC 58.92 ETC 286.52 LVI 7.31

PLANETOCENTRIC CONIC

C3 35.976 VHL 5.998 DLA 36.58 RAL 10.20 RAD 6649.2 VEL 12.485 PTH 7.38 VHP 3.167 DPA -20.23 RAP 31.15 ECC 1.5921
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 49 28 4069.51 -41.17 179.99 274.46 63.67 6 57 17 3069.5 -47.54 147.11
60.00 5 15 59 4159.15 -29.62 180.65 267.1 61.32 6 25 18 3159.2 -38.63 153.57
65.79 3 48 45 4413.62 -15.65 192.37 258.02 56.52 5 2 18 3413.6 -27.97 170.10
65.79 3 48 45 4413.62 -15.65 192.37 258.02 56.52 5 2 18 3413.6 -27.97 170.10
65.79 3 48 45 4413.62 -15.65 192.37 258.02 56.52 5 2 18 3413.6 -27.97 170.10
65.79 3 48 45 4413.62 -15.65 192.37 258.02 56.52 5 2 18 3413.6 -27.97 170.10
65.79 3 48 45 4413.62 -15.65 192.37 258.02 56.52 5 2 18 3413.6 -27.97 170.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2806 TRA-4.1241 TC3-4.6400 BAU 2.3930 SGT 7423.7 SGR 2391.5 SG3 835.6 ST 75.2 SR 22.4 SS 44.9
RDE .3467 RRA -.8277 RC3-1.7958 FAU .28790 RRT .9523 RRF .9833 RTF .9213 CRT .7915 CRS -.9331 CST -.5219
FDE 3.1997 FRA-3.2686 FC3-6.9281 BSP 13423 SGB 7799.4 R23 .3214 R13 .9306 LSA 82.3 MSA 37.4 SSA .9
BDE .4460 BRA 4.2063 BC3 4.9754 FSP 1322 SG1 7768.2 SG2 697.1 THA 17.20 EL1 77.4 EL2 13.3 ALF 13.68

LAUNCH DATE SEP 11 1973 FLIGHT TIME 280.00 ARRIVAL DATE JUN 18 1974

Heliocentric Conic: RL 190.59 LAL -0.00 LOL 348.12 VL 33.068 GAL 6.42 AZL 84.67 HCA 159.93 SMA 198.36 ECC .26413 INC 5.3346 V1 29.588  
 RP 249.00 LAP 1.83 LOP 148.13 VP 19.923 GAP -4.03 AZP 95.01 TAL 31.45 TAP 191.39 RCA 145.97 APO 250.76 V2 21.995  
 RC 347.734 GL 30.43 GP -30.66 ZAL 46.53 ZAP 58.22 ETS 160.35 ZAE 77.30 ETE 173.64 ZAC 58.00 ETC 286.68 LVI 8.21

Planetocentric Conic: C3 36.383 VHL 6.032 DLA 37.64 RAL 9.82 RAD 6649.4 VEL 12.501 PTH 7.39 VHP 3.214 DPA -20.89 RAP 31.84 ECC 1.5888  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 39 27 4101.92 -40.16 182.44 274.54 61.98 6 47 49 3101.9 -47.42 150.23  
 60.00 4 56 52 4216.06 -27.71 184.25 266.15 59.48 6 7 8 3216.1 -37.69 158.11  
 64.06 3 38 14 4442.91 -15.94 194.95 258.10 55.44 4 52 17 3442.9 -28.65 172.84  
 64.06 3 38 14 4442.91 -15.94 194.95 258.10 55.44 4 52 17 3442.9 -28.65 172.84  
 64.06 3 38 14 4442.91 -15.94 194.95 258.10 55.44 4 52 17 3442.9 -28.65 172.84  
 64.06 3 38 14 4442.91 -15.94 194.95 258.10 55.44 4 52 17 3442.9 -28.65 172.84

Differential Corrections: TDE .3529 TRA-4.1679 TC3-4.6520 BAU 2.4264 SGT 7523.4 SGR 2446.8 SG3 801.5 ST 77.3 SR 24.9 88 45.8  
 RDE .4063 RRA -.8568 RC3-1.8126 FAU .27536 RRT .9528 RRF .9836 RTF .9186 CRT .7825 CRS -.9462 CST -.5415  
 FDE 3.2554 FRA-3.1218 FC3-6.5524 BSP 13769 SGB 7911.3 R23 .3307 R13 .9283 LSA 85.2 MSA 37.9 88A .9  
 BDE .5382 BRA 4.2551 BC3 4.9926 FSP 1303 SG1 7879.4 SG2 789.3 THA 17.38 EL1 79.8 EL2 15.0 ALF 14.69

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 11 1973 FLIGHT TIME 280.00 ARRIVAL DATE JUN 20 1974

Heliocentric Conic: RL 190.59 LAL -0.00 LOL 348.12 VL 33.076 GAL 6.35 AZL 84.45 HCA 160.80 SMA 198.52 ECC .26423 INC 5.5539 V1 29.588  
 RP 249.05 LAP 1.82 LOP 149.01 VP 19.932 GAP -4.21 AZP 95.25 TAL 31.11 TAP 191.92 RCA 146.07 APO 250.97 V2 21.990  
 RC 349.515 GL 31.60 GP -31.59 ZAL 47.35 ZAP 58.17 ETS 159.48 ZAE 76.72 ETE 172.96 ZAC 57.02 ETC 286.85 LVI 9.18

Planetocentric Conic: C3 36.872 VHL 6.072 DLA 38.77 RAL 9.38 RAD 6649.6 VEL 12.520 PTH 7.40 VHP 3.266 DPA -21.59 RAP 32.57 ECC 1.6068  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 28 3 4137.71 -38.99 185.06 274.45 60.22 6 37 1 3137.7 -47.17 153.66  
 60.00 4 31 44 4289.00 -25.11 188.67 264.58 57.38 5 43 13 3289.0 -36.22 163.74  
 62.29 3 27 46 4471.47 -16.23 197.52 258.15 54.29 4 42 17 3471.5 -29.34 175.59  
 62.29 3 27 46 4471.47 -16.23 197.52 258.15 54.29 4 42 17 3471.5 -29.34 175.59  
 62.29 3 27 46 4471.47 -16.23 197.52 258.15 54.29 4 42 17 3471.5 -29.34 175.59  
 62.29 3 27 46 4471.47 -16.23 197.52 258.15 54.29 4 42 17 3471.5 -29.34 175.59

Differential Corrections: TDE .4243 TRA-4.2149 TC3-4.6556 BAU 2.4660 SGT 7825.4 SGR 2510.1 SG3 767.6 ST 79.5 SR 27.6 88 46.5  
 RDE .4675 RRA -.8915 RC3-1.8305 FAU .26299 RRT .9534 RRF .9838 RTF .9163 CRT .7792 CRS -.9552 CST -.5607  
 FDE 3.2910 FRA-2.9864 FC3-6.1748 BSP 14081 SGB 8027.9 R23 .3389 R13 .9263 LSA 88.2 MSA 38.3 88A .8  
 BDE .6314 BRA 4.3081 BC3 5.0025 FSP 1266 SG1 7995.3 SG2 722.1 THA 17.57 EL1 82.5 EL2 16.7 ALF 15.77

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 11 1973 FLIGHT TIME 284.00 ARRIVAL DATE JUN 22 1974

Heliocentric Conic: RL 190.59 LAL -0.00 LOL 348.12 VL 33.084 GAL 6.29 AZL 84.21 HCA 161.88 SMA 198.68 ECC .26433 INC 5.7931 V1 29.588  
 RP 249.09 LAP 1.82 LOP 149.88 VP 19.940 GAP -4.39 AZP 95.50 TAL 30.77 TAP 192.45 RCA 146.16 APO 251.19 V2 21.986  
 RC 351.261 GL 32.84 GP -32.58 ZAL 48.22 ZAP 58.18 ETS 158.59 ZAE 76.19 ETE 172.27 ZAC 55.98 ETC 287.04 LVI 10.21

Planetocentric Conic: C3 37.461 VHL 6.121 DLA 39.96 RAL 8.85 RAD 6649.8 VEL 12.544 PTH 7.42 VHP 3.323 DPA -22.35 RAP 33.35 ECC 1.6165  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 14 58 4177.60 -37.60 187.86 274.14 58.37 6 24 35 3177.6 -46.77 157.43  
 60.00 3 50 15 4406.46 -20.63 195.37 261.37 54.56 5 3 42 3406.5 -33.26 172.30  
 60.50 3 17 14 4499.49 -16.49 200.07 258.18 53.07 4 32 14 3499.5 -30.05 178.35  
 60.50 3 17 14 4499.49 -16.49 200.07 258.18 53.07 4 32 14 3499.5 -30.05 178.35  
 60.50 3 17 14 4499.49 -16.49 200.07 258.18 53.07 4 32 14 3499.5 -30.05 178.35  
 60.50 3 17 14 4499.49 -16.49 200.07 258.18 53.07 4 32 14 3499.5 -30.05 178.35

Differential Corrections: TDE .4869 TRA-4.2728 TC3-4.6569 BAU 2.5104 SGT 7741.7 SGR 2590.0 SG3 735.8 ST 82.0 SR 30.2 88 46.8  
 RDE .5257 RRA -.9376 RC3-1.8547 FAU .25165 RRT .9547 RRF .9841 RTF .9153 CRT .7814 CRS -.9606 CST -.5785  
 FDE 3.2868 FRA-2.8818 FC3-5.8156 BSP 14259 SGB 8163.4 R23 .3436 R13 .9257 LSA 91.3 MSA 38.4 88A .7  
 BDE .7166 BRA 4.3742 BC3 5.0126 FSP 1195 SG1 8130.4 SG2 734.1 THA 17.86 EL1 85.5 EL2 18.1 ALF 16.84

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 11 1973 FLIGHT TIME 286.00 ARRIVAL DATE JUN 24 1974

Heliocentric Conic: RL 190.59 LAL -0.00 LOL 348.12 VL 33.092 GAL 6.22 AZL 83.94 HCA 162.95 SMA 198.83 ECC .26443 INC 6.0552 V1 29.588  
 RP 249.12 LAP 1.81 LOP 150.75 VP 19.950 GAP -4.57 AZP 95.78 TAL 30.43 TAP 192.97 RCA 146.26 APO 251.41 V2 21.982  
 RC 352.974 GL 34.17 GP -33.65 ZAL 49.15 ZAP 58.26 ETS 157.67 ZAE 75.72 ETE 171.55 ZAC 54.86 ETC 287.26 LVI 11.32

Planetocentric Conic: C3 38.187 VHL 6.178 DLA 41.22 RAL 8.24 RAD 6650.0 VEL 12.572 PTH 7.44 VHP 3.386 DPA -23.16 RAP 34.19 ECC 1.6281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 59 40 4222.67 -35.95 190.90 273.54 56.44 6 10 3 3222.7 -46.15 161.60  
 58.66 3 6 34 4527.18 -16.73 202.63 258.18 51.76 4 22 1 3527.2 -30.76 181.16  
 58.66 3 6 34 4527.18 -16.73 202.63 258.18 51.76 4 22 1 3527.2 -30.76 181.16  
 58.66 3 6 34 4527.18 -16.73 202.63 258.18 51.76 4 22 1 3527.2 -30.76 181.16  
 58.66 3 6 34 4527.18 -16.73 202.63 258.18 51.76 4 22 1 3527.2 -30.76 181.16  
 58.66 3 6 34 4527.18 -16.73 202.63 258.18 51.76 4 22 1 3527.2 -30.76 181.16

Differential Corrections: TDE .5517 TRA-4.3300 TC3-4.6427 BAU 2.5547 SGT 7853.2 SGR 2672.2 SG3 701.2 ST 84.5 SR 33.1 88 47.1  
 RDE .5909 RRA -.9861 RC3-1.8741 FAU .23930 RRT .9557 RRF .9841 RTF .9135 CRT .7835 CRS -.9649 CST -.5937  
 FDE 3.2837 FRA-2.7632 FC3-5.4279 BSP 14466 SGB 8295.4 R23 .3500 R13 .9243 LSA 94.6 MSA 38.7 88A .7  
 BDE .8084 BRA 4.4408 BC3 5.0067 FSP 1133 SG1 8261.6 SG2 747.9 THA 18.17 EL1 88.6 EL2 19.6 ALF 17.97

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE SEP 11 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 28 1974

HELIOCENTRIC CONIC

DISTANCE 594.958

EARTH TO MARS

RL 150.59 LAL -.00 LOL 348.12 VL 33.100 GAL 6.16 AZL 83.66 MCA 163.41 SMA 198.99 ECC .26454 INC 6.3439 V1 29.588  
 RP 249.15 LAP 1.81 LOP 151.63 VP 19.960 GAP -4.73 AZP 96.08 TAL 30.08 TAP 183.50 RCA 146.35 APO 251.63 V2 21.979  
 RC 354.652 GL 39.60 GP -34.79 ZAL 50.13 ZAP 58.42 ETS 156.73 ZAE 75.31 ETE 170.81 ZAC 55.66 ETC 287.51 LVI 12.51

PLANETOCENTRIC CONIC

C3 39.018 VHL 6.246 DLA 42.55 RAL 7.51 RAD 8650.3 VEL 12.605 PTH 7.46 VHP 3.456 DPA -24.03 RAP 39.09 ECC 1.6421  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 41 27 4274.53 -33.94 194.23 272.52 54.41 5 32 41 3274.5 -45.24 166.27  
 56.77 2 55 37 4554.75 -16.94 205.21 258.14 50.36 4 11 32 3554.7 -31.47 184.04  
 56.77 2 55 37 4554.75 -16.94 205.21 258.14 50.36 4 11 32 3554.7 -31.47 184.04  
 56.77 2 55 37 4554.75 -16.94 205.21 258.14 50.36 4 11 32 3554.7 -31.47 184.04  
 56.77 2 55 37 4554.75 -16.94 205.21 258.14 50.36 4 11 32 3554.7 -31.47 184.04  
 56.77 2 55 37 4554.75 -16.94 205.21 258.14 50.36 4 11 32 3554.7 -31.47 184.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6169 TRA-4.3872 TC3-4.6109 BAV 2.5992 SGT 7958.8 SGR 2759.5 SG3 664.3 ST 87.1 SR 36.2 SS 47.2  
 RDE .6616 RRA-1.0391 RC3-1.8896 FAU .22624 RRT .9566 RRF .9638 RTF .9113 CRT .7864 CRS -.9680 CST -.8069  
 FDE 3.2704 FRA-2.6379 FC3-5.0202 BSP 14717 SGB 8423.6 R23 .3568 R13 .9226 LSA 98.0 MSA 39.1 SSA .6  
 BDE .9046 BRA 4.5086 BC3 4.9830 FSP 1071 SGI 8389.0 SG2 762.9 TMA 18.51 EL1 91.9 EL2 21.2 ALF 19.15

LAUNCH DATE SEP 12 1973

FLIGHT TIME 108.00

ARRIVAL DATE MAR 29 1974

HELIOCENTRIC CONIC

RL 180.85 LAL -.00 LOL 349.09 VL 32.789 GAL 8.95 AZL 88.05 HCA 122.84 SMA 192.93 ECC .26701 INC 1.9546 V1 29.596  
 RP 242.33 LAP 1.84 LOP 111.94 VP 20.185 GAP 4.49 AZP 91.06 TAL 44.81 TAP 167.45 RCA 141.41 APO 244.44 V2 22.652  
 RC 251.989 GL 10.08 GP -15.11 ZAL 28.27 ZAP 90.39 ETS 181.82 ZAE 123.87 ETE 193.08 ZAC 72.67 ETC 284.72 LVI -6.85

PLANETOCENTRIC CONIC

C3 39.864 VHL 6.314 DLA 15.43 RAL 10.39 RAD 6650.6 VEL 12.639 PTH 7.49 VHP 2.575 DPA -5.95 RAP 26.99 ECC 1.6561  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 38 15 3615.50 -47.42 139.01 259.84 94.38 8 38 30 2615.5 -40.21 106.77  
 60.00 8 0 20 3356.68 -40.30 134.15 260.28 90.72 8 59 37 2556.7 -35.60 104.09  
 70.00 8 32 34 3461.82 -34.10 126.37 260.19 87.86 9 30 16 2461.8 -31.41 97.97  
 80.00 9 21 58 3307.01 -29.60 114.35 259.90 85.90 10 17 5 2307.0 -28.29 87.00  
 90.00 10 34 55 3071.57 -27.90 96.89 259.75 85.17 11 26 6 2071.6 -27.10 69.92  
 100.00 12 4 50 2781.48 -29.60 75.72 259.90 85.90 12 31 12 1781.5 -28.29 48.37  
 110.00 13 32 0 2508.64 -34.10 55.29 260.19 87.86 14 13 49 1508.6 -31.41 26.89

DIFFERENTIAL CORRECTIONS

TDE -.6462 TRA-2.1020 TC3-1.4431 BAU .8909 SGT 2753.2 SGR 1256.5 S63 1310.7 ST 41.8 SR 28.6 SS 21.9  
 RDE -.6267 RRA -.2119 RC3 -.8731 FAU .50503 RRT .7913 RRF .8497 RTF .8890 CRT .7742 CRS .1583 CST -.4909  
 FDE .5872 FRA-6.5510 FC-10.9682 B8P 4634 SGB 3026.4 R23 .1543 R13 .9076 LSA 48.8 MSA 25.7 SSA 2.5  
 BDE .9002 BRA 2.1126 BC3 1.6866 F8P 2234 S61 2939.6 S62 719.6 THA 21.19 EL1 48.2 EL2 15.7 ALF 31.71

LAUNCH DATE SEP 12 1973

FLIGHT TIME 200.00

ARRIVAL DATE MAR 31 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.793 GAL 8.91 AZL 88.01 HCA 123.76 SMA 192.99 ECC .26678 INC 1.9916 V1 29.596  
 RP 242.60 LAP 1.66 LOP 112.86 VP 20.161 GAP 4.24 AZP 91.11 TAL 44.38 TAP 168.14 RCA 141.51 APO 244.48 V2 22.625  
 RC 254.795 GL 10.30 GP -15.29 ZAL 28.50 ZAP 89.03 ETS 181.44 ZAE 122.28 ETE 192.52 ZAC 72.60 ETC 284.74 LVI -6.75

PLANETOCENTRIC CONIC

C3 39.658 VHL 6.297 DLA 15.70 RAL 10.46 RAD 6650.5 VEL 12.630 PTH 7.48 VHP 2.570 DPA -6.30 RAP 26.63 ECC 1.6527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 37 25 3619.74 -47.44 139.41 260.06 94.07 8 37 45 2619.7 -40.34 107.09  
 60.00 7 59 9 3561.86 -40.30 134.59 260.45 90.42 8 58 31 2561.9 -35.72 104.48  
 70.00 8 30 57 3468.25 -34.08 126.88 260.31 87.57 9 28 46 2468.3 -31.51 98.44  
 80.00 9 19 56 3314.81 -29.56 114.92 259.99 85.60 10 15 10 2314.8 -28.38 87.56  
 90.00 10 32 40 3080.04 -27.85 97.51 259.83 84.87 11 24 0 2080.0 -27.18 70.52  
 100.00 12 2 47 2789.28 -29.56 76.29 259.99 85.60 12 49 17 1789.3 -28.38 48.93  
 110.00 13 30 24 2515.07 -34.08 55.79 260.31 87.57 14 12 19 1515.1 -31.51 27.36

DIFFERENTIAL CORRECTIONS

TDE -.6508 TRA-2.1800 TC3-1.5268 BAU .9371 SGT 2866.3 SGR 1270.3 S63 1315.0 ST 42.7 SR 28.1 SS 22.1  
 RDE -.6134 RRA -.2218 RC3 -.8906 FAU .50549 RRT .8007 RRF .8557 RTF .8932 CRT .7720 CRS .1885 CST -.4689  
 FDE .6688 FRA-6.5309 FC-11.0349 B8P 4846 SGB 3135.2 R23 .1549 R13 .9105 LSA 49.2 MSA 26.0 SSA 2.5  
 BDE .8942 BRA 2.1714 BC3 1.7876 F8P 2263 S61 3052.7 S62 714.6 THA 20.73 EL1 48.7 EL2 15.7 ALF 30.47

LAUNCH DATE SEP 12 1973

FLIGHT TIME 202.00

ARRIVAL DATE APR 2 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.797 GAL 8.86 AZL 87.97 HCA 124.68 SMA 193.07 ECC .26656 INC 2.0293 V1 29.596  
 RP 242.86 LAP 1.67 LOP 113.78 VP 20.138 GAP 4.00 AZP 91.15 TAL 44.15 TAP 168.83 RCA 141.60 APO 244.53 V2 22.599  
 RC 257.584 GL 10.53 GP -15.48 ZAL 28.74 ZAP 87.70 ETS 181.07 ZAE 120.71 ETE 191.97 ZAC 72.53 ETC 284.77 LVI -6.64

PLANETOCENTRIC CONIC

C3 39.455 VHL 6.281 DLA 15.98 RAL 10.53 RAD 6650.5 VEL 12.622 PTH 7.48 VHP 2.566 DPA -6.65 RAP 26.29 ECC 1.6493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 36 34 3624.14 -47.46 139.84 260.29 93.74 8 36 58 2624.1 -40.48 107.42  
 60.00 7 57 56 3567.22 -40.30 135.05 260.62 90.11 8 57 24 2567.2 -35.84 104.88  
 70.00 8 29 18 3474.91 -34.06 127.39 260.44 87.26 9 27 13 2474.9 -31.62 98.93  
 80.00 9 17 49 3322.88 -29.52 115.52 260.09 85.29 10 13 12 2322.9 -28.47 88.14  
 90.00 10 30 20 3088.82 -27.79 98.15 259.92 84.56 11 21 48 2088.8 -27.26 71.15  
 100.00 12 0 41 2797.35 -29.52 76.89 260.09 85.29 12 47 18 1797.4 -28.47 49.51  
 110.00 13 28 44 2521.73 -34.06 56.31 260.44 87.26 14 10 46 1521.7 -31.62 27.85

DIFFERENTIAL CORRECTIONS

TDE -.6536 TRA-2.2173 TC3-1.6105 BAU .9755 SGT 2979.0 SGR 1285.9 S63 1320.0 ST 43.5 SR 27.7 SS 22.4  
 RDE -.6010 RRA -.2326 RC3 -.9091 FAU .50620 RRT .8097 RRF .8620 RTF .8774 CRT .7699 CRS .2059 CST -.4544  
 FDE .7337 FRA-6.5188 FC-11.1073 B8P 5062 SGB 3244.7 R23 .1555 R13 .9134 LSA 49.7 MSA 26.1 SSA 2.5  
 BDE .8879 BRA 2.2294 BC3 1.8493 F8P 2271 S61 3166.1 S62 710.0 THA 20.33 EL1 49.1 EL2 15.6 ALF 29.33

LAUNCH DATE SEP 12 1973

FLIGHT TIME 204.00

ARRIVAL DATE APR 4 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.801 GAL 8.81 AZL 87.93 HCA 125.60 SMA 193.15 ECC .26636 INC 2.0678 V1 29.596  
 RP 243.12 LAP 1.68 LOP 114.70 VP 20.116 GAP 3.76 AZP 91.20 TAL 43.91 TAP 169.51 RCA 141.70 APO 244.59 V2 22.573  
 RC 260.358 GL 10.76 GP -15.66 ZAL 28.98 ZAP 86.39 ETS 180.68 ZAE 119.16 ETE 191.44 ZAC 72.44 ETC 284.79 LVI -6.53

PLANETOCENTRIC CONIC

C3 39.253 VHL 6.265 DLA 16.26 RAL 10.60 RAD 6650.4 VEL 12.615 PTH 7.47 VHP 2.564 DPA -6.99 RAP 25.97 ECC 1.6460  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 35 41 3628.68 -47.48 140.28 260.52 93.40 8 36 10 2628.7 -40.62 107.76  
 60.00 7 56 41 3572.76 -40.30 135.52 260.80 89.79 8 56 14 2572.8 -35.97 105.30  
 70.00 8 27 35 3481.80 -34.03 127.93 260.58 86.95 9 25 37 2481.8 -31.73 99.44  
 80.00 9 15 38 3331.25 -29.47 116.14 260.20 84.97 10 11 9 2331.2 -28.56 88.75  
 90.00 10 27 55 3097.93 -27.73 98.80 260.01 84.23 11 19 33 2097.9 -27.35 71.80  
 100.00 11 58 30 2805.72 -29.47 77.51 260.20 84.97 12 45 15 1805.7 -28.56 50.12  
 110.00 13 27 2 2528.62 -34.03 56.85 260.58 86.95 14 9 10 1528.6 -31.73 28.36

DIFFERENTIAL CORRECTIONS

TDE -.6558 TRA-2.2747 TC3-1.6951 BAU 1.0140 SGT 3093.0 SGR 1301.6 S63 1323.9 ST 44.3 SR 27.2 SS 22.6  
 RDE -.5884 RRA -.2436 RC3 -.9275 FAU .50642 RRT .8182 RRF .8680 RTF .9012 CRT .7678 CRS .2241 CST -.4406  
 FDE .7979 FRA-6.5027 FC-11.1692 B8P 5277 SGB 3355.7 R23 .1563 R13 .9162 LSA 50.2 MSA 26.3 SSA 2.5  
 BDE .8811 BRA 2.2801 BC3 1.9322 F8P 2274 S61 3280.8 S62 705.4 THA 19.96 EL1 49.6 EL2 15.6 ALF 28.23

LAUNCH DATE SEP 12 1973 FLIGHT TIME 206.00 ARRIVAL DATE APR 6 1974

HELIOCENTRIC CONIC DISTANCE 436.779 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.806 GAL 8.76 AZL 87.89 HCA 126.51 SMA 193.23 ECC .26617 INC 2.1071 V1 29.898  
 RP 243.37 LAP 1.69 LOP 118.62 VP 20.095 GAP 3.52 AZP 91.25 TAL 43.66 TAP 170.18 RCA 141.80 APO 244.67 V2 22.548  
 RC 263.112 GL 11.00 GP -15.84 ZAL 29.23 ZAP 85.11 ETS 180.30 ZAE 117.63 ETE 190.92 ZAC 72.36 ETC 264.60 LVI -6.41

PLANETOCENTRIC CONIC  
 C3 39.054 VHL 6.249 DLA 16.55 RAL 10.87 RAD 6650.3 VEL 12.607 PTH 7.46 VHP 2.563 DPA -7.32 RAP 25.67 ECC 1.6427  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 34 47 3633.38 -47.50 140.73 260.77 93.06 8 35 20 2633.4 -40.77 108.12  
 60.00 7 55 24 3578.50 -40.30 136.01 260.99 89.46 8 55 2 2578.5 -36.10 105.73  
 70.00 8 25 49 3488.93 -34.01 128.49 260.72 86.62 9 23 58 2488.9 -31.84 99.96  
 80.00 9 13 22 3339.93 -29.42 116.78 260.31 84.64 10 9 2 2339.9 -28.65 89.38  
 90.00 10 25 25 3107.38 -27.67 99.49 260.11 83.90 11 17 12 2107.4 -27.43 72.48  
 100.00 11 56 14 2814.40 -29.42 78.15 260.31 84.64 12 43 8 1814.4 -28.65 50.75  
 110.00 13 25 16 2535.75 -34.01 57.40 260.72 86.62 14 7 31 1535.8 -31.84 26.88

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6575 TRA-2.3323 TC3-1.7804 BAU 1.0526 SGT 3208.1 SGR 1317.2 SG3 1326.4 ST 45.2 SR 26.7 SS 22.8  
 RDE -.5753 RRA -.2543 RC3 -.9459 FAU .50615 RRT .8262 RRF .8738 RTF .9046 CRT .7659 CRS .2425 CST -.4264  
 FDE .8634 FRA-6.4765 FC-11.2203 BSP 5494 SGB 3468.0 R23 .1574 R13 .9186 LSA 50.6 HSA 26.5 SSA 2.5  
 BDE .8736 BRA 2.3461 BC3 2.0161 FSP 2275 SG1 3396.4 SG2 700.9 THA 19.61 EL1 50.1 EL2 15.5 ALF 27.14

LAUNCH DATE SEP 12 1973 FLIGHT TIME 208.00 ARRIVAL DATE APR 8 1974

HELIOCENTRIC CONIC DISTANCE 442.582 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.811 GAL 8.71 AZL 87.85 HCA 127.43 SMA 193.32 ECC .26600 INC 2.1473 V1 29.896  
 RP 243.62 LAP 1.71 LOP 116.53 VP 20.076 GAP 3.29 AZP 91.31 TAL 43.41 TAP 170.84 RCA 141.90 APO 244.74 V2 22.923  
 RC 265.850 GL 11.24 GP -16.02 ZAL 29.49 ZAP 83.85 ETS 179.91 ZAE 116.11 ETE 190.42 ZAC 72.27 ETC 264.82 LVI -6.29

PLANETOCENTRIC CONIC  
 C3 38.857 VHL 6.234 DLA 16.85 RAL 10.75 RAD 6650.3 VEL 12.599 PTH 7.46 VHP 2.563 DPA -7.64 RAP 25.39 ECC 1.6395  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 33 51 3638.25 -47.52 141.20 261.03 92.69 8 34 29 2638.3 -40.92 108.49  
 60.00 7 54 4 3584.43 -40.29 136.51 261.19 89.12 8 53 48 2584.4 -36.23 106.18  
 70.00 8 24 0 3496.32 -33.98 129.06 260.87 86.28 9 22 16 2496.3 -31.95 100.51  
 80.00 9 11 2 3348.93 -29.36 117.44 260.42 84.29 10 6 50 2348.9 -28.75 90.03  
 90.00 10 22 49 3117.20 -27.59 100.20 260.21 83.55 11 14 46 2117.2 -27.51 73.19  
 100.00 11 53 53 2823.40 -29.36 78.81 260.42 84.29 12 40 57 1823.4 -28.75 51.40  
 110.00 13 23 26 2543.14 -33.98 57.98 260.87 86.28 14 5 49 1543.1 -31.95 29.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6582 TRA-2.3896 TC3-1.8664 BAU 1.0912 SGT 3323.7 SGR 1332.3 SG3 1327.1 ST 46.0 SR 26.2 SS 23.1  
 RDE -.5617 RRA -.2646 RC3 -.9639 FAU .50524 RRT .8337 RRF .8792 RTF .9075 CRT .7640 CRS .2618 CST -.4110  
 FDE .9325 FRA-6.4404 FC-11.2568 BSP 5713 SGB 3580.8 R23 .1589 R13 .9207 LSA 51.1 HSA 26.7 SSA 2.4  
 BDE .8653 BRA 2.4043 BC3 2.1006 FSP 2277 SG1 3512.5 SG2 696.3 THA 19.27 EL1 50.6 EL2 15.3 ALF 26.07

LAUNCH DATE SEP 12 1973 FLIGHT TIME 210.00 ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC DISTANCE 446.383 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.816 GAL 8.66 AZL 87.81 HCA 128.34 SMA 193.42 ECC .26584 INC 2.1883 V1 29.896  
 RP 243.86 LAP 1.72 LOP 117.45 VP 20.057 GAP 3.05 AZP 91.36 TAL 43.16 TAP 171.50 RCA 142.00 APO 244.83 V2 22.499  
 RC 268.570 GL 11.49 GP -16.21 ZAL 29.75 ZAP 82.62 ETS 179.53 ZAE 114.62 ETE 189.93 ZAC 72.17 ETC 264.84 LVI -6.16

PLANETOCENTRIC CONIC  
 C3 38.662 VHL 6.218 DLA 17.15 RAL 10.82 RAD 6650.2 VEL 12.591 PTH 7.45 VHP 2.564 DPA -7.96 RAP 25.13 ECC 1.6363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 32 53 3643.29 -47.53 141.68 261.29 92.32 8 33 36 2643.3 -41.07 108.67  
 60.00 7 52 41 3590.57 -40.29 137.04 261.39 88.76 8 52 32 2590.6 -36.37 106.64  
 70.00 8 22 6 3503.97 -33.94 129.66 261.02 85.93 9 20 30 2504.0 -32.07 101.08  
 80.00 9 8 36 3358.27 -29.29 118.13 260.54 83.94 10 4 34 2358.3 -28.84 90.71  
 90.00 10 20 7 3127.40 -27.51 100.93 260.31 83.19 11 12 14 2127.4 -27.59 73.93  
 100.00 11 51 27 2832.75 -29.29 79.49 260.54 83.94 12 38 40 1832.7 -28.84 52.08  
 110.00 13 21 33 2550.79 -33.94 58.57 261.02 85.93 14 4 3 1550.8 -32.07 30.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6581 TRA-2.4475 TC3-1.9530 BAU 1.1298 SGT 3440.4 SGR 1347.5 SG3 1326.7 ST 46.8 SR 25.6 SS 23.4  
 RDE -.5478 RRA -.2751 RC3 -.9818 FAU .50384 RRT .8407 RRF .8845 RTF .9201 CRT .7622 CRS .2804 CST -.3960  
 FDE 1.0019 FRA-6.3999 FC-11.2823 BSP 5934 SGB 3694.9 R23 .1805 R13 .9226 LSA 51.6 HSA 26.9 SSA 2.4  
 BDE .8562 BRA 2.4627 BC3 2.1859 FSP 2276 SG1 3629.6 SG2 691.7 THA 18.94 EL1 51.1 EL2 15.2 ALF 25.02

LAUNCH DATE SEP 12 1973 FLIGHT TIME 212.00 ARRIVAL DATE APR 12 1974

HELIOCENTRIC CONIC DISTANCE 450.184 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.821 GAL 8.61 AZL 87.77 HCA 129.25 SMA 193.51 ECC .26569 INC 2.2303 V1 29.896  
 RP 244.10 LAP 1.73 LOP 118.36 VP 20.039 GAP 2.82 AZP 91.41 TAL 42.90 TAP 172.13 RCA 142.10 APO 244.93 V2 22.475  
 RC 271.273 GL 11.75 GP -16.40 ZAL 30.02 ZAP 81.42 ETS 179.13 ZAE 113.15 ETE 189.45 ZAC 72.06 ETC 264.86 LVI -6.02

PLANETOCENTRIC CONIC  
 C3 38.469 VHL 6.202 DLA 17.47 RAL 10.90 RAD 6650.1 VEL 12.584 PTH 7.45 VHP 2.566 DPA -8.26 RAP 24.90 ECC 1.6331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 31 53 3648.51 -47.55 142.19 261.57 91.93 8 32 42 2648.5 -41.23 109.27  
 60.00 7 51 16 3596.93 -40.27 137.58 261.60 88.40 8 51 13 2596.9 -36.51 107.12  
 70.00 8 20 9 3511.91 -33.90 130.27 261.18 85.57 9 18 41 2511.9 -32.18 101.67  
 80.00 9 6 4 3367.98 -29.22 118.84 260.66 83.57 10 2 12 2368.0 -28.93 91.42  
 90.00 10 17 19 3138.01 -27.43 101.70 260.41 82.81 11 9 37 2138.0 -27.67 74.69  
 100.00 11 48 56 2842.45 -29.22 80.21 260.66 83.57 12 36 18 1842.5 -28.93 52.79  
 110.00 13 19 35 2558.72 -33.90 59.19 261.18 85.57 14 2 14 1558.7 -32.18 30.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6571 TRA-2.5046 TC3-2.0402 BAU 1.1685 SGT 3557.6 SGR 1362.8 SG3 1325.3 ST 47.5 SR 25.1 SS 23.7  
 RDE -.5335 RRA -.2854 RC3 -.9997 FAU .50207 RRT .8473 RRF .8895 RTF .9125 CRT .7605 CRS .2980 CST -.3813  
 FDE 1.0712 FRA-6.3529 FC-11.2991 BSP 6153 SGB 3809.7 R23 .1624 R13 .9243 LSA 52.1 HSA 27.0 SSA 2.4  
 BDE .8464 BRA 2.5208 BC3 2.2720 FSP 2272 SG1 3747.2 SG2 687.1 THA 18.63 EL1 51.6 EL2 15.0 ALF 24.00

LAUNCH DATE SEP 12 1973

FLIGHT TIME 214.00

ARRIVAL DATE APR 14 1974

HELIOCENTRIC CONIC

DISTANCE 453.984

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.827 GAL 8.56 AZL 87.73 HCA 130.16 SMA 193.62 ECC .26555 INC 2.2734 V1 29.596
RP 244.34 LAP 1.74 LOP 119.27 VP 20.022 GAP 2.59 AZP 91.47 TAL 42.64 TAP 172.79 RCA 142.20 APO 245.03 V2 22.452
RC 273.957 GL 12.01 GP -16.59 ZAL 30.30 ZAP 80.24 ETS 178.74 ZAE 111.70 ETE 188.98 ZAC 71.95 ETC 284.87 LVI -5.88

PLANETOCENTRIC CONIC

C3 38.279 VHL 6.187 DLA 17.79 RAL 10.98 RAD 6650.1 VEL 12.576 PTH 7.44 VHP 2.570 DPA -8.56 RAP 24.69 ECC 1.6300
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 30 52 3653.91 -47.56 142.71 261.86 91.53 8 31 45 2653.9 -41.39 109.69
60.00 7 49 47 3603.52 -40.26 138.14 261.82 88.02 8 49 51 2603.5 -36.65 107.63
70.00 8 18 7 3520.13 -33.85 130.91 261.34 85.19 9 16 47 2520.1 -32.30 102.28
80.00 9 3 26 3378.07 -29.14 119.58 260.78 83.19 9 59 44 2378.1 -29.02 92.15
90.00 10 14 23 3149.06 -27.33 102.49 260.52 82.43 11 6 52 2149.1 -27.75 75.49
100.00 11 46 18 2852.54 -29.14 80.95 260.78 83.19 12 33 51 1852.5 -29.02 53.52
110.00 13 17 33 2566.95 -33.65 59.83 261.34 85.19 14 0 20 1567.0 -32.30 31.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6553 TRA-2.5817 TC3-2.1279 BAU 1.2071 SGT 3675.4 SGR 1377.9 SG3 1322.5 ST 48.3 SR 24.5 SS 24.0
RDE -.5187 RRA -.2956 RC3-1.0175 FAU .49980 RRT .8536 RRF .8944 RTF .9145 CRT .7591 CRS .3156 CST -.3661
FDE 1.1427 FRA-6.2988 FC-11.3038 B8P 6375 SGB 3925.2 R23 .1645 R13 .9257 LSA 52.5 MSA 27.2 SSA 2.4
BDE .8357 BRA 2.5787 BC3 2.3587 F8P 2267 SG1 3865.4 SG2 682.5 THA 18.34 EL1 52.1 EL2 14.8 ALF 23.00

LAUNCH DATE SEP 12 1973

FLIGHT TIME 216.00

ARRIVAL DATE APR 16 1974

HELIOCENTRIC CONIC

DISTANCE 457.783

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.832 GAL 8.51 AZL 87.68 HCA 131.06 SMA 193.72 ECC .26543 INC 2.3175 V1 29.598
RP 244.56 LAP 1.75 LOP 120.18 VP 20.006 GAP 2.36 AZP 91.52 TAL 42.37 TAP 173.43 RCA 142.30 APO 245.14 V2 22.430
RC 276.623 GL 12.28 GP -16.78 ZAL 30.59 ZAP 79.09 ETS 178.34 ZAE 110.28 ETE 188.52 ZAC 71.83 ETC 284.89 LVI -5.73

PLANETOCENTRIC CONIC

C3 38.092 VHL 6.172 DLA 18.11 RAL 11.06 RAD 6650.0 VEL 12.569 PTH 7.44 VHP 2.574 DPA -8.86 RAP 24.50 ECC 1.6269
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 29 47 3659.51 -47.57 143.25 262.15 91.11 8 30 47 2659.5 -41.56 110.13
60.00 7 48 15 3610.35 -40.24 138.72 262.04 87.62 8 48 25 2610.3 -36.79 108.15
70.00 8 16 0 3528.67 -33.80 131.57 261.51 84.81 9 14 48 2528.7 -32.41 102.92
80.00 9 0 42 3388.56 -29.05 120.35 260.90 82.80 9 57 10 2388.6 -29.11 92.92
90.00 10 11 20 3160.57 -27.22 103.32 260.63 82.03 11 4 0 2160.6 -27.82 76.32
100.00 11 43 34 2863.03 -29.05 81.71 260.90 82.80 12 31 17 1863.0 -29.11 54.29
110.00 13 15 26 2575.49 -33.80 60.49 261.51 84.81 13 58 22 1575.5 -32.41 31.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6524 TRA-2.6186 TC3-2.2158 BAU 1.2455 SGT 3793.4 SGR 1393.4 SG3 1318.8 ST 49.0 SR 23.9 SS 24.3
RDE -.5038 RRA -.3059 RC3-1.0354 FAU .49719 RRT .8595 RRF .8991 RTF .9164 CRT .7579 CRS .3313 CST -.3524
FDE 1.2118 FRA-6.2409 FC-11.2999 B8P 6597 SGB 4041.2 R23 .1669 R13 .9271 LSA 53.0 MSA 27.4 SSA 2.4
BDE .8243 BRA 2.6364 BC3 2.4458 F8P 2258 SG1 3983.9 SG2 878.1 THA 18.06 EL1 52.8 EL2 14.5 ALF 22.03

LAUNCH DATE SEP 12 1973

FLIGHT TIME 218.00

ARRIVAL DATE APR 18 1974

HELIOCENTRIC CONIC

DISTANCE 461.580

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.838 GAL 8.45 AZL 87.64 HCA 131.97 SMA 193.83 ECC .26531 INC 2.3628 V1 29.596
RP 244.79 LAP 1.76 LOP 121.08 VP 19.991 GAP 2.13 AZP 91.58 TAL 42.10 TAP 174.07 RCA 142.41 APO 245.26 V2 22.407
RC 279.268 GL 12.56 GP -16.98 ZAL 30.88 ZAP 77.97 ETS 177.94 ZAE 108.87 ETE 188.07 ZAC 71.70 ETC 284.91 LVI -5.57

PLANETOCENTRIC CONIC

C3 37.907 VHL 6.157 DLA 18.45 RAL 11.13 RAD 6649.9 VEL 12.561 PTH 7.43 VHP 2.579 DPA -9.15 RAP 24.33 ECC 1.6239
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 28 41 3665.31 -47.57 143.81 262.46 90.68 8 29 46 2665.3 -41.73 110.58
60.00 7 46 40 3617.42 -40.22 139.32 262.27 87.22 8 46 57 2617.4 -36.93 108.69
70.00 8 13 48 3537.53 -33.75 132.26 261.68 84.40 9 12 45 2537.5 -32.53 103.58
80.00 8 57 50 3399.48 -28.96 121.14 261.03 82.39 9 54 30 2399.5 -29.20 93.72
90.00 10 6 8 3172.57 -27.11 104.17 260.73 81.61 11 1 1 2172.6 -27.89 77.19
100.00 11 40 42 2873.95 -28.96 82.51 261.03 82.39 12 28 36 1874.0 -29.20 55.09
110.00 13 13 14 2584.35 -33.75 61.17 261.68 84.40 13 56 18 1584.3 -32.53 32.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6485 TRA-2.6753 TC3-2.3041 BAU 1.2639 SGT 3911.8 SGR 1408.7 SG3 1313.8 ST 49.8 SR 23.3 SS 24.7
RDE -.4883 RRA -.3180 RC3-1.0532 FAU .49411 RRT .8651 RRF .9038 RTF .9.80 CRT .7569 CRS .3466 CST -.3384
FDE 1.2830 FRA-6.1762 FC-11.2847 B8P 6819 SGB 4157.8 R23 .1695 R13 .9282 LSA 53.5 MSA 27.6 SSA 2.4
BDE .8118 BRA 2.4939 BC3 2.5334 F8P 2249 SG1 4102.8 SG2 673.6 THA 17.80 EL1 53.1 EL2 14.3 ALF 21.08

LAUNCH DATE SEP 12 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 20 1974

HELIOCENTRIC CONIC

DISTANCE 465.377

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.844 GAL 8.40 AZL 87.59 HCA 132.87 SMA 193.95 ECC .26521 INC 2.4093 V1 29.596
RP 245.01 LAP 1.77 LOP 121.99 VP 19.977 GAP 1.91 AZP 91.84 TAL 41.82 TAP 174.69 RCA 142.51 APO 245.39 V2 22.388
RC 281.693 GL 12.85 GP -17.18 ZAL 31.18 ZAP 76.88 ETS 177.54 ZAE 107.49 ETE 187.63 ZAC 71.56 ETC 284.92 LVI -5.41

PLANETOCENTRIC CONIC

C3 37.726 VHL 6.142 DLA 18.80 RAL 11.21 RAD 6649.9 VEL 12.554 PTH 7.43 VHP 2.586 DPA -9.43 RAP 24.19 ECC 1.6209
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 27 31 3671.33 -47.58 144.40 262.78 90.23 8 28 42 2671.3 -41.90 111.05
60.00 7 45 0 3624.77 -40.19 139.94 262.51 86.80 8 45 25 2624.8 -37.08 109.26
70.00 8 11 30 3546.74 -33.68 132.97 261.85 83.99 9 10 37 2546.7 -32.65 104.28
80.00 8 54 51 3410.87 -28.85 121.97 261.16 81.96 9 51 42 2410.9 -29.28 94.56
90.00 10 4 47 3185.11 -26.98 105.07 260.84 81.18 10 57 52 2185.1 -27.96 78.11
100.00 11 37 43 2885.34 -28.85 83.34 261.16 81.96 12 25 48 1885.3 -29.28 55.92
110.00 13 10 57 2593.56 -33.68 61.88 261.85 83.99 13 54 10 1593.6 -32.65 33.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6437 TRA-2.7318 TC3-2.3929 BAU 1.3223 SGT 4030.8 SGR 1424.7 SG3 1308.3 ST 50.5 SR 22.7 SS 25.0
RDE -.4727 RRA -.3264 RC3-1.0713 FAU .49083 RRT .8705 RRF .9080 RTF .9195 CRT .7563 CRS .3598 CST -.3258
FDE 1.3520 FRA-6.1101 FC-11.2636 B8P 7038 SGB 4275.2 R23 .1723 R13 .9293 LSA 54.0 MSA 27.8 SSA 2.3
BDE .7986 BRA 2.7512 BC3 2.6218 F8P 2235 SG1 4222.5 SG2 669.3 THA 17.56 EL1 53.6 EL2 14.0 ALF 20.17



LAUNCH DATE SEP 12 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 22 1974

HELIOCENTRIC CONIC

DISTANCE 469.173

EARTH TO MARS

RL 150.58 LAL -.00 LOL 349.09 VL 32.851 GAL 8.35 AZL 87.54 HCA 133.77 SMA 194.07 ECC .26511 INC 2.4571 V1 29.596  
 RP 245.22 LAP 1.77 LOP 122.89 VP 19.964 GAP 1.66 AZP 91.70 TAL 41.54 TAP 175.32 RCA 142.82 APO 245.52 V2 22.365  
 RC 284.197 GL 13.14 GP -17.39 ZAL 31.48 ZAP 75.02 ETS 177.13 ZAE 106.13 ZAC 71.41 ETC 284.94 LVI -5.23

PLANETOCENTRIC CONIC

C3 37.148 VHL 6.128 DLA 19.15 RAL 11.29 RAD 6649.8 VEL 12.547 PTH 7.42 VHP 2.593 DPA -9.71 RAP 24.07 ECC 1.6179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 26 18 3677.57 -47.58 145.00 263.10 89.77 8 27 36 2677.6 -42.08 111.54  
 60.00 7 43 17 3632.39 -40.16 140.59 262.76 86.36 8 43 49 2632.4 -37.23 109.85  
 70.00 8 9 7 3556.31 -33.61 133.71 262.03 83.56 9 8 23 2556.3 -32.77 105.00  
 80.00 8 51 43 3422.75 -26.74 122.84 261.29 81.52 9 48 46 2422.7 -29.36 95.43  
 90.00 10 1 17 3198.21 -26.84 106.00 260.95 80.74 10 54 35 2198.2 -28.03 79.06  
 100.00 11 34 35 2897.22 -28.74 84.20 261.29 81.52 12 22 52 1897.2 -29.36 56.80  
 110.00 13 8 33 2603.13 -33.61 62.82 262.03 83.56 13 51 58 1603.1 -32.77 33.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3376 TRA-2.7875 TC3-2.4815 BAU 1.3604 SGT 4149.3 SGR 1440.3 SG3 1301.3 ST 51.2 SR 22.0 SS 25.4  
 RDE -.4564 RRA -.3365 RC3-1.0891 FAU .48702 RRT .8755 RRF .9123 RTF .9207 CRT .7560 CRS .3728 CST -.3128  
 FDE 1.4237 FRA-6.0348 FC-11.2291 BSP 7264 SGB 4392.2 R23 .1755 R13 .9302 LSA 54.4 MSA 28.0 S8A 2.3  
 BDE .7841 BRA 2.8077 BC3 2.7100 FSP 2223 SGI 4341.6 SG2 665.1 THA 17.32 EL1 54.0 EL2 13.6 ALF 19.28

LAUNCH DATE SEP 12 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 472.967

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.857 GAL 8.29 AZL 87.49 HCA 134.67 SMA 194.19 ECC .26503 INC 2.5062 V1 29.596  
 RP 245.43 LAP 1.78 LOP 123.79 VP 19.951 GAP 1.46 AZP 91.76 TAL 41.26 TAP 175.93 RCA 142.72 APO 245.65 V2 22.344  
 RC 287.079 GL 13.45 GP -17.60 ZAL 31.80 ZAP 74.78 ETS 176.71 ZAE 104.79 ZAC 71.25 ETC 284.96 LVI -5.05

PLANETOCENTRIC CONIC

C3 37.373 VHL 6.113 DLA 19.52 RAL 11.37 RAD 6649.7 VEL 12.540 PTH 7.42 VHP 2.601 DPA -9.99 RAP 23.97 ECC 1.6151  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 25 3 3684.05 -47.57 145.63 263.44 89.28 8 26 27 2684.1 -42.26 112.06  
 60.00 7 41 29 3640.30 -40.13 141.26 263.01 85.90 8 42 9 2640.3 -37.39 110.47  
 70.00 8 6 37 3566.27 -33.53 134.47 262.21 83.11 9 6 3 2566.3 -32.88 105.75  
 80.00 8 48 27 3435.15 -26.61 123.74 261.42 81.07 9 45 42 2435.2 -29.44 96.34  
 90.00 9 57 35 3211.94 -26.68 106.98 261.06 80.27 10 51 7 2211.9 -28.09 80.06  
 100.00 11 31 18 2909.62 -28.61 85.10 261.42 81.07 12 19 48 1909.6 -29.44 57.71  
 110.00 13 6 3 2613.09 -33.53 63.39 262.21 83.11 13 49 36 1613.1 -32.88 34.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6304 TRA-2.8434 TC3-2.5703 BAU 1.3984 SGT 4268.5 SGR 1456.6 SG3 1293.8 ST 51.9 SR 21.3 SS 25.8  
 RDE -.4398 RRA -.3470 RC3-1.1072 FAU .48300 RRT .8804 RRF .9164 RTF .9219 CRT .7563 CRS .3834 CST -.3013  
 FDE 1.4940 FRA-5.9600 FC-11.1885 BSP 7487 SGB 4510.2 R23 .1787 R13 .9310 LSA 54.9 MSA 28.2 S8A 2.3  
 BDE .7687 BRA 2.8645 BC3 2.7988 FSP 2207 SGI 4461.5 SG2 660.9 THA 17.11 EL1 54.5 EL2 13.3 ALF 18.42

LAUNCH DATE SEP 12 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 476.761

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.864 GAL 8.24 AZL 87.44 HCA 135.57 SMA 194.31 ECC .26495 INC 2.5568 V1 29.596  
 RP 245.63 LAP 1.79 LOP 124.69 VP 19.940 GAP 1.24 AZP 91.83 TAL 40.97 TAP 176.55 RCA 142.83 APO 245.79 V2 22.324  
 RC 289.637 GL 13.76 GP -17.81 ZAL 32.12 ZAP 73.77 ETS 176.29 ZAE 103.47 ZAC 71.08 ETC 284.98 LVI -4.86

PLANETOCENTRIC CONIC

C3 37.203 VHL 6.099 DLA 19.89 RAL 11.45 RAD 6649.7 VEL 12.534 PTH 7.41 VHP 2.609 DPA -10.26 RAP 23.90 ECC 1.6123  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 23 44 3690.78 -47.56 146.28 263.79 88.78 8 25 14 2690.8 -42.45 112.60  
 60.00 7 39 36 3646.52 -40.09 141.95 263.26 85.43 8 40 24 2646.5 -37.54 111.11  
 70.00 8 4 0 3576.65 -33.45 135.27 262.40 82.65 9 3 37 2576.7 -33.00 106.54  
 80.00 8 45 0 3448.13 -26.47 124.67 261.54 80.59 9 42 28 2448.1 -29.52 97.30  
 90.00 9 53 42 3226.34 -26.51 108.00 261.16 79.79 10 47 28 2226.3 -28.14 81.11  
 100.00 11 27 52 2922.60 -28.47 86.04 261.54 80.59 12 16 34 1922.6 -29.52 58.67  
 110.00 13 3 26 2623.47 -33.45 64.19 262.40 82.65 13 47 10 1623.5 -33.00 35.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6222 TRA-2.8985 TC3-2.6594 BAU 1.4362 SGT 4387.5 SGR 1472.9 SG3 1285.0 ST 52.6 SR 20.7 SS 26.3  
 RDE -.4229 RRA -.3573 RC3-1.1252 FAU .47857 RRT .8850 RRF .9203 RTF .9228 CRT .7572 CRS .3927 CST -.2902  
 FDE 1.5646 FRA-5.8785 FC-11.1388 BSP 7709 SGB 4628.1 R23 .1822 R13 .9316 LSA 55.4 MSA 28.4 S8A 2.3  
 BDE .7523 BRA 2.9205 BC3 2.8676 FSP 2190 SGI 4581.2 SG2 656.9 THA 16.90 EL1 55.0 EL2 12.9 ALF 17.58

LAUNCH DATE SEP 12 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 480.554

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.871 GAL 8.18 AZL 87.39 HCA 136.47 SMA 194.44 ECC .26488 INC 2.6091 V1 29.596  
 RP 245.83 LAP 1.80 LOP 125.59 VP 19.929 GAP 1.02 AZP 91.89 TAL 40.68 TAP 177.15 RCA 142.93 APO 245.94 V2 22.305  
 RC 292.172 GL 14.09 GP -18.04 ZAL 32.45 ZAP 72.79 ETS 175.87 ZAE 102.18 ZAC 70.89 ETC 285.00 LVI -4.86

PLANETOCENTRIC CONIC

C3 37.036 VHL 6.086 DLA 20.28 RAL 11.53 RAD 6649.6 VEL 12.527 PTH 7.41 VHP 2.619 DPA -10.52 RAP 23.85 ECC 1.6095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 22 21 3697.77 -47.55 146.95 264.15 88.26 8 23 58 2697.8 -42.64 113.16  
 60.00 7 37 37 3657.07 -40.04 142.67 263.53 84.95 8 38 35 2657.1 -37.70 111.78  
 70.00 8 1 16 3587.47 -33.35 136.10 262.59 82.16 9 1 3 2587.5 -33.12 107.36  
 80.00 8 41 22 3461.73 -26.31 125.65 261.67 80.10 9 39 4 2461.7 -29.59 98.30  
 90.00 9 49 38 3241.47 -26.33 109.07 261.27 79.28 10 43 37 2241.5 -28.19 82.21  
 100.00 11 24 14 2936.20 -28.31 87.02 261.67 80.10 12 13 10 1936.2 -29.59 59.67  
 110.00 13 0 42 2634.29 -33.35 65.02 262.59 82.16 13 44 36 1634.3 -33.12 36.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6124 TRA-2.9533 TC3-2.7482 BAU 1.4738 SGT 4506.3 SGR 1489.7 SG3 1275.7 ST 53.2 SR 20.0 SS 26.7  
 RDE -.4033 RRA -.3678 RC3-1.1435 FAU .47392 RRT .8893 RRF .9241 RTF .9236 CRT .7587 CRS .4002 CST -.2799  
 FDE 1.6362 FRA-5.7943 FC-11.0780 BSP 7937 SGB 4746.2 R23 .1860 R13 .9322 LSA 55.8 MSA 28.7 S8A 2.2  
 BDE .7343 BRA 2.9761 BC3 2.9766 FSP 2174 SGI 4701.0 SG2 653.1 THA 16.71 EL1 55.5 EL2 12.5 ALF 16.77

LAUNCH DATE SEP 12 1973

FLIGHT TIME 230.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.877 GAL 8.13 AZL 87.34 HCA 137.37 SMA 194.56 ECC .26482 INC 2.6629 V1 29.596  
 RP 246.02 LAP 1.80 LOP 126.49 VP 19.919 GAP .81 AZP 91.96 TAL 40.39 TAP 177.76 RCA 143.04 APO 246.09 V2 22.286  
 RC 294.682 GL 14.42 GP -18.27 ZAL 32.79 ZAP 71.83 ETS 175.44 ZAE 100.91 ETE 185.49 ZAC 70.70 ETC 285.02 LVI -4.45

DISTANCE 484.345

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.874 VHL 6.072 DLA 20.67 RAL 11.60 RAD 6649.6 VEL 12.920 PTH 7.40 VHP 2.629 DPA -10.79 RAP 23.82 ECC 1.6089  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 54 3705.04 -47.53 147.65 264.52 87.72 8 22 39 2705.0 -42.84 113.75  
 60.00 7 35 34 3665.97 -39.98 143.43 263.80 84.44 8 36 40 2666.0 -37.86 112.49  
 70.00 7 58 23 3598.76 -33.24 136.96 262.78 81.66 8 58 22 2598.8 -33.23 108.22  
 80.00 8 37 33 3475.99 -28.14 126.68 261.80 79.59 9 35 29 2476.0 -29.66 99.36  
 90.00 9 45 15 3257.40 -26.12 110.19 261.36 78.76 10 39 32 2257.4 -28.23 83.37  
 100.00 11 20 24 2950.46 -26.14 88.05 261.80 79.59 12 9 35 1950.5 -29.66 60.73  
 110.00 12 57 49 2645.58 -33.24 65.88 262.78 81.66 13 41 55 1645.6 -33.23 37.14

DIFFERENTIAL CORRECTIONS

TDE -.6020 TRA-3.0078 TC3-2.8374 BAU 1.5115  
 RDE -.3877 RRA -.3786 RC3-1.1622 FAU .46909  
 FDE 1.7034 FRA-5.7089 FC-11.0134 B8P 8154  
 BDE .7161 BRA 3.0315 BC3 3.0662 F8P 2150

MID-COURSE EXECUTION ACCURACY

SGT 4825.8 SGR 1507.3 SG3 1265.8  
 RRT .8935 RRF .9279 RTF .9243  
 SGB 4865.2 R23 .1900 R13 .9327  
 SGI 4821.6 S22 649.4 THA 16.54

ORBIT DETERMINATION ACCURACY

ST 53.9 SR 19.3 S8 27.2  
 CRT .7613 CRS .4043 CST -.2715  
 LSA 56.3 MSA 28.9 S8A 2.2  
 EL1 55.9 EL2 12.0 ALF 16.00

LAUNCH DATE SEP 12 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.884 GAL 8.07 AZL 87.28 HCA 138.26 SMA 194.70 ECC .26477 INC 2.7185 V1 29.596  
 RP 246.21 LAP 1.81 LOP 127.38 VP 19.910 GAP .59 AZP 92.03 TAL 40.10 TAP 178.36 RCA 143.15 APO 246.25 V2 22.267  
 RC 297.167 GL 14.76 GP -18.31 ZAL 33.13 ZAP 70.91 ETS 175.01 ZAE 99.66 ETE 185.07 ZAC 70.49 ETC 285.04 LVI -4.22

DISTANCE 488.136

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.717 VHL 6.059 DLA 21.08 RAL 11.67 RAD 6649.5 VEL 12.514 PTH 7.40 VHP 2.640 DPA -11.05 RAP 23.82 ECC 1.6043  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 19 22 3712.60 -47.51 148.39 264.90 87.16 8 21 15 2712.6 -43.04 114.36  
 60.00 7 33 24 3675.25 -39.92 144.21 264.08 83.91 8 34 39 2675.2 -38.02 113.22  
 70.00 7 55 22 3610.56 -33.12 137.86 262.97 81.14 8 55 32 2610.6 -33.35 109.12  
 80.00 8 33 30 3490.98 -27.95 127.75 261.92 79.05 9 31 41 2491.0 -29.72 100.47  
 90.00 9 40 38 3274.22 -25.89 111.36 261.46 78.21 10 35 13 2274.2 -28.26 84.60  
 100.00 11 16 22 2965.46 -27.95 89.12 261.92 79.05 12 5 47 1965.5 -29.72 61.84  
 110.00 12 54 48 2657.38 -33.12 66.78 262.97 81.14 13 39 5 1657.4 -33.35 38.04

DIFFERENTIAL CORRECTIONS

TDE -.5899 TRA-3.0620 TC3-2.9265 BAU 1.5491  
 RDE -.3693 RRA -.3894 RC3-1.1810 FAU .46396  
 FDE 1.7739 FRA-5.6200 FC-10.9395 B8P 8378  
 BDE .6959 BRA 3.0867 BC3 3.1559 F8P 2130

MID-COURSE EXECUTION ACCURACY

SGT 4745.3 SGR 1525.2 SG3 1255.1  
 RRT .8975 RRF .9315 RTF .9249  
 SGB 4904.4 R23 .1942 R13 .9331  
 SGI 4942.4 S22 645.9 THA 16.38

ORBIT DETERMINATION ACCURACY

ST 54.5 SR 18.6 S8 27.7  
 CRT .7647 CRS .4087 CST -.2635  
 LSA 56.8 MSA 29.2 S8A 2.2  
 EL1 56.4 EL2 11.6 ALF 15.25

LAUNCH DATE SEP 12 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.891 GAL 8.01 AZL 87.22 HCA 139.15 SMA 194.83 ECC .26473 INC 2.7761 V1 29.596  
 RP 246.39 LAP 1.82 LOP 128.27 VP 19.902 GAP .38 AZP 92.10 TAL 39.80 TAP 178.95 RCA 143.25 APO 246.41 V2 22.249  
 RC 299.628 GL 15.12 GP -18.76 ZAL 33.49 ZAP 70.01 ETS 174.57 ZAE 98.43 ETE 184.65 ZAC 70.27 ETC 285.06 LVI -3.99

DISTANCE 491.926

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.565 VHL 6.047 DLA 21.50 RAL 11.74 RAD 6649.5 VEL 12.508 PTH 7.39 VHP 2.652 DPA -11.32 RAP 23.84 ECC 1.6018  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 46 3720.48 -47.48 149.14 265.29 86.58 8 19 47 2720.5 -43.24 115.01  
 60.00 7 31 7 3684.92 -39.84 145.02 264.36 83.37 8 32 32 2684.9 -38.18 113.99  
 70.00 7 52 10 3622.91 -32.99 138.80 263.16 80.60 8 52 33 2622.9 -33.46 110.07  
 80.00 8 29 13 3506.78 -27.74 128.88 262.04 78.49 9 27 39 2506.8 -29.77 101.64  
 90.00 9 35 44 3292.02 -25.64 112.61 261.54 77.64 10 30 36 2292.0 -28.28 85.91  
 100.00 11 12 4 2981.25 -27.74 90.25 262.04 78.49 12 1 46 1981.2 -29.77 63.01  
 110.00 12 51 37 2669.73 -32.99 67.72 263.16 80.60 13 36 6 1669.7 -33.46 38.99

DIFFERENTIAL CORRECTIONS

TDE -.5782 TRA-3.1153 TC3-3.0148 BAU 1.5862  
 RDE -.3305 RRA -.4004 RC3-1.1999 FAU .45849  
 FDE 1.8432 FRA-5.5278 FC-10.8536 B8P 8606  
 BDE .6745 BRA 3.1409 BC3 3.2448 F8P 2108

MID-COURSE EXECUTION ACCURACY

SGT 4863.8 SGR 1543.5 SG3 1243.4  
 RRT .9012 RRF .9349 RTF .5.54  
 SGB 5102.8 R23 .1985 R13 .9334  
 SGI 5062.2 S22 642.6 THA 16.23

ORBIT DETERMINATION ACCURACY

ST 55.1 SR 17.8 S8 28.2  
 CRT .7693 CRS .4060 CST -.2568  
 LSA 57.3 MSA 29.4 S8A 2.1  
 EL1 56.9 EL2 11.0 ALF 14.53

LAUNCH DATE SEP 12 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 32.899 GAL 7.96 AZL 87.16 HCA 140.04 SMA 194.98 ECC .26469 INC 2.8356 V1 29.596  
 RP 246.57 LAP 1.82 LOP 129.17 VP 19.894 GAP .17 AZP 92.17 TAL 39.50 TAP 179.54 RCA 143.36 APO 246.57 V2 22.232  
 RC 302.065 GL 15.49 GP -19.02 ZAL 33.85 ZAP 69.14 ETS 174.12 ZAE 97.22 ETE 184.24 ZAC 70.03 ETC 285.08 LVI -3.74

DISTANCE 495.714

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 36.419 VHL 6.035 DLA 21.93 RAL 11.81 RAD 6649.4 VEL 12.502 PTH 7.39 VHP 2.665 DPA -11.58 RAP 23.89 ECC 1.5994  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 16 5 3728.69 -47.45 149.94 265.69 85.97 8 18 14 2728.7 -43.45 115.69  
 60.00 7 28 44 3695.01 -39.76 145.86 264.65 82.80 8 30 19 2695.0 -38.34 114.80  
 70.00 7 48 49 3635.85 -32.84 139.78 263.35 80.04 8 49 24 2635.9 -33.57 111.06  
 80.00 8 24 39 3523.45 -27.51 130.07 262.15 77.91 9 23 23 2523.5 -29.81 102.88  
 90.00 9 30 29 3310.92 -25.36 113.92 261.62 77.04 10 25 40 2310.9 -28.28 87.29  
 100.00 11 7 31 2997.92 -27.51 91.43 262.15 77.91 11 57 29 1997.9 -29.81 64.24  
 110.00 12 48 15 2682.67 -32.84 68.70 263.35 80.04 13 32 58 1682.7 -33.57 39.98

DIFFERENTIAL CORRECTIONS

TDE -.5612 TRA-3.1685 TC3-3.1034 BAU 1.6234  
 RDE -.3311 RRA -.4116 RC3-1.2192 FAU .45288  
 FDE 1.9131 FRA-5.4338 FC-10.7657 B8P 8828  
 BDE .6516 BRA 3.1951 BC3 3.3343 F8P 2084

MID-COURSE EXECUTION ACCURACY

SGT 4983.0 SGR 1562.6 SG3 1231.2  
 RRT .9049 RRF .9383 RTF .9258  
 SGB 5222.2 R23 .2032 R13 .9336  
 SGI 5182.9 S22 639.5 THA 16.09

ORBIT DETERMINATION ACCURACY

ST 55.7 SR 17.1 S8 28.7  
 CRT .7755 CRS .4020 CST -.2511  
 LSA 57.8 MSA 29.7 S8A 2.1  
 EL1 57.4 EL2 10.5 ALF 13.64

LAUNCH DATE SEP 12 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

DISTANCE 499.500

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.906 GAL 7.90 AZL 87.10 HCA 140.93 SMA 195.10 ECC .26466 INC 2.8973 V1 29.596  
 RP 246.74 LAP 1.83 LOP 130.06 VP 19.888 GAP -.04 AZP 92.25 TAL 39.19 TAP 180.12 RCA 143.47 APO 246.74 V2 22.215  
 RC 304.476 GL 15.87 GP -19.28 ZAL 34.22 ZAP 68.29 ETS 173.68 ZAE 96.04 ETE 183.83 ZAC 69.78 ETC 205.11 LVI -3.48

PLANETOCENTRIC CONIC

C3 36.278 VHL 6.023 DLA 22.37 RAL 11.88 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 2.678 DPA -11.84 RAP 23.96 ECC 1.5971  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 14 18 3737.26 -47.40 150.76 266.10 85.34 8 16 35 2737.3 -43.66 116.40  
 60.00 7 26 12 3705.55 -39.67 146.74 264.94 82.21 8 27 58 2705.6 -38.51 115.65  
 70.00 7 45 15 3649.43 -32.68 140.81 263.54 79.46 8 46 5 2649.4 -33.67 112.11  
 80.00 8 19 48 3541.10 -27.25 131.31 262.25 77.31 9 18 49 2541.1 -29.84 104.19  
 90.00 9 24 51 3331.05 -25.04 115.31 261.68 76.41 10 20 22 2331.1 -28.27 88.76  
 100.00 11 2 40 3015.57 -27.25 92.68 262.25 77.31 11 52 55 2015.6 -29.84 65.56  
 110.00 12 44 42 2696.25 -32.68 69.72 263.94 79.46 13 29 38 1696.3 -33.67 41.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5451 TRA-3.2213 TC3-3.1916 BAU 1.6605 SGT 5102.1 SGR 1582.4 SG3 1218.3 ST 56.4 SR 16.3 SS 29.3  
 RDE -.3113 RRA -.4231 RC3-1.2387 FAU .44702 RRT .9083 RRF .9415 RTF .9260 CRT .7835 CRS .3938 CST -.2468  
 FDE 1.9817 FRA-5.3377 FC-10.6876 BSP 9052 SGB 5341.9 R23 .2080 R13 .9337 LSA 58.3 HSA 30.0 SSA 2.1  
 BDE .6277 BRA 3.2490 BC3 3.4236 FSP 2061 SG1 5303.8 SGT 636.8 THA 15.97 EL1 57.8 EL2 9.9 ALF 13.10

LAUNCH DATE SEP 12 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

DISTANCE 503.288

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.913 GAL 7.84 AZL 87.04 HCA 141.82 SMA 195.24 ECC .26464 INC 2.9613 V1 29.596  
 RP 246.90 LAP 1.83 LOP 130.95 VP 19.882 GAP -.25 AZP 92.33 TAL 38.88 TAP 180.71 RCA 143.57 APO 246.91 V2 22.199  
 RC 306.863 GL 16.27 GP -19.56 ZAL 34.61 ZAP 67.47 ETS 173.19 ZAE 94.88 ETE 183.41 ZAC 69.52 ETC 285.13 LVI -3.21

PLANETOCENTRIC CONIC

C3 36.145 VHL 6.012 DLA 22.83 RAL 11.94 RAD 6649.3 VEL 12.492 PTH 7.38 VHP 2.692 DPA -12.11 RAP 24.05 ECC 1.5949  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 12 25 3746.20 -47.35 151.82 266.53 84.68 8 14 51 2746.2 -43.88 117.15  
 60.00 7 23 32 3716.58 -39.56 147.66 265.23 81.59 8 25 29 2716.6 -38.67 116.54  
 70.00 7 41 29 3663.71 -32.49 141.88 263.73 78.85 8 42 33 2663.7 -33.77 113.21  
 80.00 8 14 36 3559.84 -26.97 132.83 262.35 76.67 9 13 56 2559.8 -29.86 105.58  
 90.00 9 18 47 3352.59 -24.69 116.79 261.73 75.75 10 14 40 2352.6 -28.23 90.33  
 100.00 10 57 28 3034.31 -26.97 94.00 262.35 76.67 11 48 2 2034.3 -29.86 66.95  
 110.00 12 40 55 2710.53 -32.49 70.80 263.73 78.85 13 26 8 1710.5 -33.77 42.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5271 TRA-3.2737 TC3-3.2793 BAU 1.6974 SGT 5221.1 SGR 1603.0 SG3 1205.0 ST 57.0 SR 15.6 SS 29.9  
 RDE -.2909 RRA -.4351 RC3-1.2586 FAU .44099 RRT .9116 RRF .9446 RTF .9263 CRT .7935 CRS .3803 CST -.2443  
 FDE 2.0497 FRA-5.2419 FC-10.5825 BSP 9273 SGB 5461.7 R23 .2129 R13 .9339 LSA 58.8 HSA 30.4 SSA 2.0  
 BDE .6021 BRA 3.3025 BC3 3.5128 FSP 2034 SG1 5424.7 SGT 634.2 THA 15.86 EL1 58.3 EL2 9.3 ALF 12.57

LAUNCH DATE SEP 12 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 507.074

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.921 GAL 7.78 AZL 86.97 HCA 142.71 SMA 195.38 ECC .26463 INC 3.0278 V1 29.596  
 RP 247.06 LAP 1.83 LOP 131.84 VP 19.877 GAP -.46 AZP 92.41 TAL 38.57 TAP 181.28 RCA 143.68 APO 247.09 V2 22.183  
 RC 309.224 GL 16.68 GP -19.88 ZAL 35.00 ZAP 66.68 ETS 172.72 ZAE 93.74 ETE 183.00 ZAC 69.24 ETC 285.16 LVI -2.92

PLANETOCENTRIC CONIC

C3 36.019 VHL 6.002 DLA 23.31 RAL 11.99 RAD 6649.3 VEL 12.487 PTH 7.38 VHP 2.707 DPA -12.38 RAP 24.17 ECC 1.5928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 10 26 3755.54 -47.29 152.51 266.96 83.99 8 13 1 2755.5 -44.10 117.94  
 60.00 7 20 43 3726.14 -39.44 148.82 265.54 80.95 8 22 51 2726.1 -38.84 117.48  
 70.00 7 37 29 3678.74 -32.29 143.00 263.91 78.21 8 38 48 2678.7 -33.86 114.38  
 80.00 8 9 2 3579.80 -26.64 134.03 262.43 76.00 9 8 41 2579.8 -29.86 107.06  
 90.00 9 12 13 3373.74 -24.29 118.36 261.76 75.06 10 8 29 2373.7 -28.17 92.02  
 100.00 10 51 53 3054.27 -26.64 95.39 262.43 76.00 11 42 48 2054.3 -29.86 68.43  
 110.00 12 36 55 2725.56 -32.29 71.92 263.91 78.21 13 22 21 1725.6 -33.86 43.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5080 TRA-3.3256 TC3-3.3669 BAU 1.7343 SGT 5340.2 SGR 1624.6 SG3 1191.0 ST 57.6 SR 14.8 SS 30.5  
 RDE -.2699 RRA -.4472 RC3-1.2790 FAU .43478 RRT .9148 RRF .9476 RTF .9264 CRT .8059 CRS .3618 CST -.2428  
 FDE 2.1169 FRA-5.1431 FC-10.4504 BSP 9496 SGB 5581.9 R23 .2181 R13 .9339 LSA 59.3 HSA 30.7 SSA 2.0  
 BDE .5752 BRA 3.3555 BC3 3.6016 FSP 2007 SG1 5546.0 SGT 632.0 THA 15.76 EL1 58.8 EL2 8.6 ALF 11.99

LAUNCH DATE SEP 12 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

DISTANCE 510.859

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.928 GAL 7.73 AZL 86.90 HCA 143.60 SMA 195.53 ECC .26462 INC 3.0970 V1 29.596  
 RP 247.22 LAP 1.84 LOP 132.73 VP 19.872 GAP -.67 AZP 92.49 TAL 38.26 TAP 181.86 RCA 143.79 APO 247.27 V2 22.168  
 RC 311.559 GL 17.11 GP -20.16 ZAL 35.40 ZAP 65.92 ETS 172.23 ZAE 92.63 ETE 182.58 ZAC 68.94 ETC 285.19 LVI -2.61

PLANETOCENTRIC CONIC

C3 35.900 VHL 5.992 DLA 23.80 RAL 12.04 RAD 6649.2 VEL 12.482 PTH 7.37 VHP 2.723 DPA -12.65 RAP 24.31 ECC 1.5908  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 8 19 3785.32 -47.21 153.45 267.41 83.27 8 11 4 2785.3 -44.33 118.78  
 60.00 7 17 44 3740.25 -39.31 149.63 265.84 80.28 8 20 4 2740.3 -39.00 118.47  
 70.00 7 33 13 3694.61 -32.06 144.19 264.09 77.55 8 34 48 2694.6 -33.94 115.61  
 80.00 8 3 1 3601.14 -26.28 135.51 262.50 75.30 9 3 2 2601.1 -29.83 108.65  
 90.00 9 5 4 3400.78 -23.84 120.06 261.76 74.32 10 1 44 2400.8 -28.09 93.85  
 100.00 10 45 53 3075.61 -26.28 96.88 262.50 75.30 11 37 8 2075.6 -29.83 70.02  
 110.00 12 32 39 2741.43 -32.06 73.10 264.09 77.55 13 18 21 1741.4 -33.94 44.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4873 TRA-3.3772 TC3-3.4539 BAU 1.7712 SGT 5459.4 SGR 1647.4 SG3 1176.6 ST 58.2 SR 14.1 SS 31.1  
 RDE -.2485 RRA -.4599 RC3-1.2999 FAU .42845 RRT .9178 RRF .9505 RTF .9265 CRT .8209 CRS .3359 CST -.2433  
 FDE 2.1822 FRA-5.0450 FC-10.3321 BSP 9713 SGB 5702.6 R23 .2234 R13 .9339 LSA 59.9 HSA 31.1 SSA 1.9  
 BDE .5470 BRA 3.4084 BC3 3.6904 FSP 1977 SG1 5667.6 SGT 630.1 THA 15.68 EL1 59.3 EL2 7.9 ALF 11.45

LAUNCH DATE SEP 12 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC DISTANCE 514.643 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.936 GAL 7.67 AZL 86.83 HCA 144.40 SMA 195.67 ECC .26461 INC 3.1691 V1 29.596  
 RP 247.37 LAP 1.84 LOP 133.61 VP 19.869 GAP -.87 AZP 92.58 TAL 37.95 TAP 182.43 RCA 143.89 APO 247.45 V2 22.134  
 RC 313.869 GL 17.56 GP -20.48 ZAL 35.81 ZAP 65.19 ETS 171.73 ZAE 91.53 ETE 182.16 ZAC 68.62 ETC 285.23 LVI -2.29

PLANETOCENTRIC CONIC  
 C3 35.791 VHL 5.983 DLA 24.30 RAL 12.09 RAD 6649.2 VEL 12.477 PTH 7.37 VHP 2.739 DPA -12.93 RAP 24.47 ECC 1.5890  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 6 5 3775.56 -47.13 154.42 267.06 82.53 8 9 0 2775.6 -44.55 119.66  
 60.00 7 14 33 3752.98 -39.16 150.67 266.14 79.59 8 17 6 2753.0 -39.16 119.51  
 70.00 7 28 40 3711.39 -31.81 145.43 264.26 76.85 8 30 31 2711.4 -34.01 116.91  
 80.00 7 56 30 3624.08 -25.88 137.09 262.54 74.56 8 56 54 2624.1 -29.79 110.35  
 90.00 8 57 11 3428.07 -23.33 121.90 261.74 73.54 9 54 19 2428.1 -27.96 95.84  
 100.00 10 39 22 3098.55 -25.88 98.46 262.54 74.56 11 31 0 2098.6 -29.79 71.72  
 110.00 12 28 6 2758.21 -31.81 74.35 264.26 76.85 13 14 4 1758.2 -34.01 45.83

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4640 TRA-3.4277 TC3-3.5392 BAU 1.8076 SGT 5577.1 SGR 1670.5 SG3 1161.1 ST 58.8 SR 13.3 SS 31.8  
 RDE -.2259 RRA -.4726 RC3-1.3207 FAU .42174 RRT .9206 RRF .9533 RTF .9264 CRT .8388 CRS .3027 CST -.2447  
 FDE 2.2506 FRA-4.9414 FC-10.2013 BSP 9943 SGB 5821.9 R23 .2290 R13 .9338 LSA 60.4 MSA 31.4 SSA 1.9  
 BDE .5161 BRA 3.4601 BC3 3.7776 FSP 1950 SG1 5787.9 SG2 628.6 THA 15.60 EL1 59.8 EL2 7.1 ALF 10.94

LAUNCH DATE SEP 12 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 18 1974

HELIOCENTRIC CONIC DISTANCE 518.425 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.944 GAL 7.61 AZL 86.76 HCA 145.37 SMA 195.82 ECC .26462 INC 3.2443 V1 29.596  
 RP 247.51 LAP 1.84 LOP 134.50 VP 19.866 GAP -1.08 AZP 92.67 TAL 37.63 TAP 183.00 RCA 144.00 APO 247.63 V2 22.140  
 RC 316.151 GL 18.02 GP -20.82 ZAL 36.24 ZAP 64.48 ETS 171.23 ZAE 90.46 ETE 181.74 ZAC 68.28 ETC 285.26 LVI -1.95

PLANETOCENTRIC CONIC  
 C3 35.691 VHL 5.974 DLA 24.82 RAL 12.13 RAD 6649.1 VEL 12.473 PTH 7.37 VHP 2.757 DPA -13.21 RAP 24.66 ECC 1.5874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 3 42 3786.31 -47.03 155.44 268.33 81.75 8 6 48 2786.3 -44.79 120.59  
 60.00 7 11 11 3766.36 -38.99 151.77 266.45 78.86 8 13 57 2766.4 -39.32 120.61  
 70.00 7 23 47 3729.19 -31.53 146.74 264.43 76.12 8 25 56 2729.2 -34.08 118.30  
 80.00 7 49 23 3648.87 -25.42 138.79 262.56 73.78 8 50 12 2648.9 -29.71 112.19  
 90.00 8 48 27 3458.10 -22.73 123.90 261.67 72.71 9 46 5 2458.1 -27.78 98.01  
 100.00 10 32 15 3123.34 -25.42 100.16 262.56 73.78 11 24 18 2123.3 -29.71 73.56  
 110.00 12 23 14 2776.01 -31.53 75.66 264.43 76.12 13 9 30 1776.0 -34.08 47.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4397 TRA-3.4786 TC3-3.6242 BAU 1.8441 SGT 5695.7 SGR 1695.1 SG3 1145.3 ST 59.4 SR 12.6 SS 32.4  
 RDE -.2029 RRA -.4861 RC3-1.3421 FAU .41495 RRT .9233 RRF .9560 RTF .9264 CRT .8599 CRS .2591 CST -.2480  
 FDE 2.3157 FRA-4.8405 FC-10.0652 BSP 10164 SGB 5942.6 R23 .2346 R13 .9337 LSA 61.0 MSA 31.8 SSA 1.8  
 BDE .4843 BRA 3.5124 BC3 3.8648 FSP 1920 SG1 5909.4 SG2 627.5 THA 15.54 EL1 60.4 EL2 6.3 ALF 10.49

LAUNCH DATE SEP 12 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC DISTANCE 522.210 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.951 GAL 7.55 AZL 86.68 HCA 146.25 SMA 195.98 ECC .26463 INC 3.3228 V1 29.596  
 RP 247.65 LAP 1.85 LOP 135.39 VP 19.864 GAP -1.28 AZP 92.78 TAL 37.31 TAP 183.56 RCA 144.11 APO 247.82 V2 22.126  
 RC 318.408 GL 18.50 GP -21.17 ZAL 36.87 ZAP 63.79 ETS 170.70 ZAE 89.40 ETE 181.31 ZAC 67.93 ETC 285.30 LVI -1.60

PLANETOCENTRIC CONIC  
 C3 35.603 VHL 5.967 DLA 25.36 RAL 12.16 RAD 6649.1 VEL 12.470 PTH 7.36 VHP 2.775 DPA -13.50 RAP 24.87 ECC 1.5859  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 1 9 3797.57 -46.91 156.50 268.80 80.94 8 4 27 2797.6 -45.02 121.57  
 60.00 7 7 35 3780.45 -38.79 152.92 266.76 78.10 8 10 35 2780.5 -39.47 121.78  
 70.00 7 18 33 3748.10 -31.21 148.12 264.57 75.36 8 21 1 2748.1 -34.12 119.78  
 80.00 7 41 35 3675.81 -24.89 140.62 262.55 72.96 8 42 51 2675.6 -29.59 114.18  
 90.00 8 30 38 3491.53 -22.04 126.10 261.56 71.82 9 36 50 2491.5 -27.54 100.43  
 100.00 10 24 27 3150.28 -24.89 101.99 262.55 72.96 11 16 57 2150.3 -29.59 75.55  
 110.00 12 17 59 2794.92 -31.21 77.04 264.57 75.36 13 4 34 1794.9 -34.12 48.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4228 TRA-3.5372 TC3-3.7175 BAU 1.8862 SGT 5828.8 SGR 1733.8 SG3 1137.4 ST 60.3 SR 12.3 SS 32.7  
 RDE -.1864 RRA -.5073 RC3-1.3725 FAU .41109 RRT .9268 RRF .9593 RTF .9280 CRT .8811 CRS .1981 CST -.2654  
 FDE 2.3168 FRA-4.8038 FC3-9.9981 BSP 10247 SGB 6081.2 R23 .2372 R13 .9352 LSA 62.0 MSA 31.7 SSA 1.8  
 BDE .4619 BRA 3.5734 BC3 3.9620 FSP 1821 SG1 6048.7 SG2 627.3 THA 15.58 EL1 61.3 EL2 5.7 ALF 10.29

LAUNCH DATE SEP 12 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC DISTANCE 525.991 EARTH TO MARS  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.959 GAL 7.49 AZL 86.60 HCA 147.13 SMA 196.11 ECC .26464 INC 3.4049 V1 29.596  
 RP 247.78 LAP 1.85 LOP 136.27 VP 19.862 GAP -1.48 AZP 92.86 TAL 36.99 TAP 184.12 RCA 144.21 APO 248.01 V2 22.113  
 RC 320.632 GL 19.00 GP -21.54 ZAL 37.12 ZAP 63.14 ETS 170.17 ZAE 88.38 ETE 180.87 ZAC 67.55 ETC 285.34 LVI -1.22

PLANETOCENTRIC CONIC  
 C3 35.524 VHL 5.960 DLA 25.92 RAL 12.18 RAD 6649.1 VEL 12.467 PTH 7.36 VHP 2.794 DPA -13.80 RAP 25.11 ECC 1.5846  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 26 3809.43 -46.78 157.62 269.29 80.09 8 1 56 2809.4 -45.25 122.62  
 60.00 7 3 44 3795.34 -38.58 154.13 267.06 77.31 8 6 59 2795.3 -39.62 123.02  
 70.00 7 12 54 3768.31 -30.85 149.59 264.71 74.56 8 15 42 2768.3 -34.15 121.35  
 80.00 7 32 55 3705.44 -24.29 142.61 262.49 72.08 8 34 41 2705.4 -29.43 116.37  
 90.00 8 27 23 3529.54 -21.21 128.58 261.37 70.85 9 26 12 2529.5 -27.21 103.16  
 100.00 10 15 47 3179.91 -24.29 103.98 262.49 72.08 11 8 47 2179.9 -29.43 77.74  
 110.00 12 12 20 2815.13 -30.85 78.51 264.71 74.56 12 59 15 1815.1 -34.15 50.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3919 TRA-3.5848 TC3-3.7980 BAU 1.9213 SGT 5943.2 SGR 1757.7 SG3 1118.3 ST 60.9 SR 11.6 SS 33.5  
 RDE -.1598 RRA -.5199 RC3-1.3929 FAU .40316 RRT .9290 RRF .9615 RTF .9273 CRT .9071 CRS .1340 CST -.2682  
 FDE 2.3983 FRA-4.6830 FC3-9.8252 BSP 10506 SGB 6197.6 R23 .2439 R13 .9346 LSA 62.6 MSA 32.3 SSA 1.7  
 BDE .4232 BRA 3.6223 BC3 4.0454 FSP 1807 SG1 6165.9 SG2 626.9 THA 15.53 EL1 61.8 EL2 4.8 ALF 9.87

LAUNCH DATE SEP 12 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

DISTANCE 529.771

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.967 GAL 7.43 AZL 86.51 HCA 148.02 SMA 196.26 ECC .26466 INC 3.4910 V1 29.598  
 RP 247.91 LAP 1.85 LOP 137.15 VP 19.861 GAP -1.68 AZP 92.96 TAL 36.67 TAP 184.68 RCA 144.32 APO 248.20 V2 22.101  
 RC 322.829 GL 19.53 GP -21.92 ZAL 37.58 ZAP 62.52 ETS 169.62 ZAE 87.37 ETE 180.43 ZAC 67.14 ETC 285.38 LVI -.82

PLANETOCENTRIC CONIC

C3 35.459 VHL 5.955 DLA 26.51 RAL 12.19 RAD 6649.1 VEL 12.464 PTH 7.36 VHP 2.814 DPA -14.11 RAP 25.38 ECC 1.5836  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 32 3821.92 -46.62 158.79 269.78 79.20 7 59 14 2821.9 -45.49 123.73  
 60.00 6 59 36 3811.09 -38.34 155.39 267.36 76.48 8 3 7 2811.1 -39.77 124.33  
 70.00 7 6 46 3789.96 -30.45 151.14 264.82 73.72 8 9 56 2790.0 -34.15 123.04  
 80.00 7 23 12 3738.37 -23.58 144.80 262.38 71.13 8 25 30 2738.4 -29.20 118.79  
 90.00 8 14 6 3573.92 -20.19 131.43 261.08 69.77 9 13 40 2573.9 -26.74 106.32  
 100.00 10 6 4 3212.84 -23.58 106.17 262.38 71.13 10 59 37 2212.8 -29.20 80.16  
 110.00 12 6 13 2836.78 -30.45 80.06 264.82 73.72 12 53 29 1836.8 -34.15 51.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3596 TRA-3.6324 TC3-3.8774 BAW 1.9565 SGT 6057.8 SGR 1783.8 SG3 1099.1 ST 61.5 SR 11.0 SS 34.3  
 RDE -.1327 RRA -.5335 RC3-1.4141 FAU .39523 RRT .9312 RRF .9636 RTF .9267 CRT .9340 CRS .0533 CST -.2737  
 FDE 2.4748 FRA-4.5655 FC3-9.6496 BSP 10755 SGB 6315.0 R23 .2505 R13 .9340 LSA 63.2 MSA 32.8 SSA 1.7  
 BDE .3833 BRA 3.6714 BC3 4.1272 FSP 1788 SG1 6283.8 SGT 627.0 THA 15.49 EL1 62.3 EL2 3.9 ALF 9.53

LAUNCH DATE SEP 12 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

DISTANCE 533.550

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.975 GAL 7.37 AZL 86.42 HCA 148.90 SMA 196.41 ECC .26469 INC 3.5813 V1 29.596  
 RP 248.03 LAP 1.85 LOP 138.03 VP 19.861 GAP -1.88 AZP 93.07 TAL 36.34 TAP 185.24 RCA 144.42 APO 248.40 V2 22.089  
 RC 324.997 GL 20.08 GP -22.33 ZAL 38.06 ZAP 61.93 ETS 169.05 ZAE 86.39 ETE 179.98 ZAC 66.72 ETC 285.43 LVI -.40

PLANETOCENTRIC CONIC

C3 35.407 VHL 5.950 DLA 27.11 RAL 12.19 RAD 6649.0 VEL 12.462 PTH 7.36 VHP 2.835 DPA -14.43 RAP 25.66 ECC 1.5827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 26 3835.09 -46.45 160.01 270.28 78.27 7 56 21 2835.1 -45.73 124.91  
 60.00 6 55 10 3827.79 -38.06 156.73 267.65 75.61 7 58 58 2827.8 -39.90 125.73  
 70.00 7 0 6 3813.26 -29.99 152.81 264.90 72.84 8 3 39 2813.3 -34.13 124.86  
 80.00 7 12 6 3775.57 -22.74 147.24 262.19 70.11 8 15 1 2775.6 -28.68 121.51  
 90.00 7 57 39 3628.34 -18.88 134.88 260.64 68.54 8 58 8 2628.3 -26.07 110.17  
 100.00 9 54 58 3250.04 -22.74 108.61 262.19 70.11 10 49 8 2250.0 -28.68 82.88  
 110.00 11 59 32 2860.08 -29.99 81.72 264.90 72.84 12 47 12 1860.1 -34.13 53.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3259 TRA-3.6799 TC3-3.9559 BAW 1.9921 SGT 6173.1 SGR 1811.7 SG3 1079.6 ST 62.1 SR 10.5 SS 35.1  
 RDE -.1048 RRA -.5478 RC3-1.4361 FAU .38722 RRT .9332 RRF .9657 RTF .9260 CRT .9591 CRS -.0436 CST -.2812  
 FDE 2.5479 FRA-4.4481 FC3-9.4678 BSP 10998 SGB 6433.5 R23 .2573 R13 .9334 LSA 64.0 MSA 33.3 SSA 1.6  
 BDE .3424 BRA 3.7204 BC3 4.2085 FSP 1768 SG1 6402.8 SGT 627.8 THA 15.47 EL1 63.0 EL2 2.9 ALF 9.26

LAUNCH DATE SEP 12 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC

DISTANCE 537.328

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.983 GAL 7.31 AZL 86.32 HCA 149.78 SMA 196.56 ECC .26472 INC 3.6762 V1 29.598  
 RP 248.14 LAP 1.85 LOP 138.92 VP 19.862 GAP -2.08 AZP 93.18 TAL 36.02 TAP 185.79 RCA 144.53 APO 248.60 V2 22.078  
 RC 327.134 GL 20.65 GP -22.76 ZAL 38.55 ZAP 61.37 ETS 168.47 ZAE 85.43 ETE 179.92 ZAC 66.27 ETC 285.49 LVI .04

PLANETOCENTRIC CONIC

C3 35.371 VHL 5.947 DLA 27.74 RAL 12.18 RAD 6649.0 VEL 12.461 PTH 7.36 VHP 2.856 DPA -14.77 RAP 25.98 ECC 1.5821  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 6 3849.00 -46.25 161.29 270.78 77.30 7 53 15 2849.0 -45.96 126.17  
 60.00 6 50 24 3845.53 -37.75 158.13 267.93 74.70 7 54 29 2845.5 -40.02 127.23  
 70.00 6 52 47 3838.46 -29.47 154.58 264.96 71.91 7 56 46 2838.5 -34.07 126.83  
 80.00 6 59 6 3818.62 -21.71 150.03 261.90 68.99 8 2 45 2818.6 -28.43 124.63  
 90.00 7 34 54 3702.88 -16.96 139.51 259.87 67.02 8 36 37 2702.9 -24.97 115.34  
 100.00 9 41 58 3293.10 -21.71 111.40 261.90 68.99 10 36 51 2293.1 -28.43 86.00  
 110.00 11 52 14 2885.28 -29.47 83.50 264.96 71.91 12 40 19 1885.3 -34.07 55.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2904 TRA-3.7281 TC3-4.0329 BAW 2.0281 SGT 6289.3 SGR 1842.3 SG3 1060.2 ST 62.9 SR 10.2 SS 35.9  
 RDE -.0763 RRA -.5637 RC3-1.4591 FAU .37928 RRT .9352 RRF .9677 RTF .9255 CRT .9785 CRS -.1556 CST -.2917  
 FDE 2.6155 FRA-4.3381 FC3-9.2831 BSP 11234 SGB 6593.6 R23 .2638 R13 .9329 LSA 64.8 MSA 33.8 SSA 1.6  
 BDE .3003 BRA 3.7705 BC3 4.2888 FSP 1738 SG1 6523.4 SGT 629.1 THA 15.47 EL1 63.7 EL2 2.1 ALF 9.07

LAUNCH DATE SEP 12 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

DISTANCE 541.106

EARTH TO MARS

RL 150.55 LAL -.00 LOL 349.09 VL 32.991 GAL 7.24 AZL 86.22 HCA 150.65 SMA 196.72 ECC .26475 INC 3.7762 V1 29.598  
 RP 248.25 LAP 1.85 LOP 139.80 VP 19.863 GAP -2.27 AZP 93.29 TAL 35.69 TAP 186.34 RCA 144.64 APO 248.80 V2 22.067  
 RC 329.241 GL 21.25 GP -23.22 ZAL 39.06 ZAP 60.83 ETS 167.87 ZAE 84.49 ETE 179.08 ZAC 65.79 ETC 285.54 LVI .51

PLANETOCENTRIC CONIC

C3 35.353 VHL 5.948 DLA 28.39 RAL 12.15 RAD 6649.0 VEL 12.460 PTH 7.36 VHP 2.879 DPA -15.12 RAP 26.32 ECC 1.5818  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 45 30 3863.72 -46.02 162.64 271.29 76.29 7 49 54 2863.7 -46.20 127.51  
 60.00 6 45 14 3864.43 -37.40 159.62 268.20 73.75 7 49 38 2864.4 -40.12 128.82  
 70.00 6 44 44 3865.91 -28.88 156.50 264.96 70.92 7 49 10 2865.9 -33.96 128.96  
 80.00 6 43 15 3870.56 -20.41 153.34 261.45 67.72 7 47 46 2870.6 -27.79 128.35  
 87.41 6 24 27 3931.35 -12.57 154.16 257.82 64.33 7 29 59 2931.3 -22.08 131.14  
 100.00 9 26 7 3345.03 -20.41 114.70 261.45 67.72 10 21 52 2345.0 -27.79 89.72  
 110.00 11 44 10 2912.73 -28.88 85.42 264.96 70.92 12 32 43 1912.7 -33.96 57.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2523 TRA-3.7751 TC3-4.1070 BAW 2.0636 SGT 6404.0 SGR 1873.9 SG3 1039.7 ST 63.6 SR 10.1 SS 36.7  
 RDE -.0463 RRA -.5799 RC3-1.4821 FAU .37099 RRT .9370 RRF .9696 RTF .9248 CRT .9884 CRS -.2776 CST -.3036  
 FDE 2.6836 FRA-4.2237 FC3-9.0850 BSP 11473 SGB 6672.5 R23 .2705 R13 .9322 LSA 65.7 MSA 34.3 SSA 1.5  
 BDE .2565 BRA 3.8194 BC3 4.3663 FSP 1710 SG1 6642.6 SGT 631.0 THA 15.48 EL1 64.4 EL2 1.5 ALF 8.95

LAUNCH DATE SEP 12 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 32.999 GAL 7.18 AZL 86.12 HCA 151.53 SMA 196.87 ECC .26479 INC 3.8817 V1 29.596  
 RP 248.35 LAP 1.85 LOP 140.68 VP 19.865 GAP -2.47 AZP 93.41 TAL 35.36 TAP 186.89 RCA 144.74 APO 249.00 V2 22.057  
 RC 331.317 GL 21.89 GP -23.70 ZAL 39.58 ZAP 60.33 ETS 167.26 ZAE 83.58 ETE 178.58 ZAC 65.29 ETC 285.60 LVI 1.01

PLANETOCENTRIC CONIC  
 C3 35.354 VHL 5.946 DLA 29.07 RAL 12.11 RAD 6649.0 VEL 12.466 PTH 7.36 VHP 2.904 DPA -15.48 RAP 26.69 ECC 1.5818  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 41 37 3879.33 -45.76 164.05 271.80 75.22 7 46 16 2879.3 -46.43 128.95  
 60.00 6 39 38 3884.63 -37.01 161.19 268.45 72.75 7 44 22 2884.6 -40.21 130.53  
 70.00 6 35 45 3896.06 -28.19 158.57 264.92 69.87 7 40 41 2896.1 -33.80 131.30  
 80.00 6 22 13 3938.70 -18.59 157.58 260.71 66.21 7 27 51 2938.7 -26.78 133.16  
 82.99 5 47 57 4048.77 -12.84 162.92 257.92 63.70 8 55 26 3048.8 -22.58 139.95  
 100.00 9 5 5 3413.17 -18.59 118.95 260.71 66.21 10 1 58 2413.2 -26.78 94.53  
 110.00 11 35 12 2942.88 -28.19 87.49 264.92 69.87 12 24 15 1942.9 -33.80 60.22

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2120 TRA-3.8224 TC3-4.1789 BAU 2.0995 SGT 6518.8 SGR 1908.6 SG3 1019.3 ST 64.5 SR 10.3 SS 37.5  
 RDE -.0157 RRA -.5976 RC3-1.5063 FAU .36278 RRT .9388 RRF .9714 RTF .9242 CRT .9856 CRS -.4006 CST -.3182  
 FDE 2.7451 FRA-4.1145 FC3-8.8837 B8P 11715 SGB 6792.5 R23 .2771 R13 .9317 LSA 66.8 MSA 34.7 S3A 1.4  
 BDE .2126 BRA 3.8688 BC3 4.4421 FSP 1678 SG1 6762.9 SG2 633.6 THA 15.51 EL1 65.3 EL2 1.7 ALF 8.93

LAUNCH DATE SEP 12 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 33.007 GAL 7.12 AZL 86.01 HCA 152.41 SMA 197.02 ECC .26484 INC 3.8932 V1 29.596  
 RP 248.45 LAP 1.85 LOP 141.56 VP 19.868 GAP -2.66 AZP 93.54 TAL 35.02 TAP 187.43 RCA 144.84 APO 249.20 V2 22.048  
 RC 333.364 GL 22.55 GP -24.21 ZAL 40.12 ZAP 59.86 ETS 166.62 ZAE 82.69 ETE 178.08 ZAC 64.75 ETC 285.67 LVI 1.54

PLANETOCENTRIC CONIC  
 C3 35.376 VHL 5.948 DLA 29.77 RAL 12.05 RAD 6649.0 VEL 12.461 PTH 7.36 VHP 2.929 DPA -15.87 RAP 27.08 ECC 1.5822  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 37 25 3895.91 -45.46 165.54 272.30 74.11 7 42 21 2895.9 -46.65 130.49  
 60.00 6 33 31 3906.30 -36.56 162.85 268.67 71.70 7 38 38 2906.3 -40.27 132.66  
 70.00 6 25 39 3929.52 -27.38 160.84 264.79 68.74 7 31 9 2929.5 -33.57 133.89  
 80.00 5 43 5 4064.03 -14.99 165.14 258.97 63.87 6 50 49 3064.0 -24.47 141.75  
 80.28 5 26 27 4117.13 -13.13 168.12 258.02 63.04 6 35 5 3117.1 -23.11 145.20  
 100.00 8 25 56 3538.50 -14.99 126.50 258.97 63.87 9 24 55 2538.5 -24.47 103.12  
 110.00 11 25 6 2976.34 -27.38 89.76 264.79 68.74 12 14 42 1976.3 -33.57 62.80

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1709 TRA-3.8711 TC3-4.2502 BAU 2.1367 SGT 6636.7 SGR 1946.4 SG3 998.7 ST 65.4 SR 10.7 SS 38.3  
 RDE .0181 RRA -.6168 RC3-1.5316 FAU .35457 RRT .9406 RRF .9731 RTF .9236 CRT .9702 CRS -.5158 CST -.3339  
 FDE 2.8027 FRA-4.0083 FC3-8.6771 B8P 11930 SGB 6916.3 R23 .2835 R13 .9312 LSA 68.0 MSA 35.2 S3A 1.4  
 BDE .1717 BRA 3.9199 BC3 4.5178 FSP 1640 SG1 6886.9 SG2 636.9 THA 15.56 EL1 66.2 EL2 2.5 ALF 8.99

LAUNCH DATE SEP 12 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 33.015 GAL 7.06 AZL 85.89 HCA 153.29 SMA 197.18 ECC .26489 INC 4.1114 V1 29.596  
 RP 248.54 LAP 1.85 LOP 142.43 VP 19.871 GAP -2.85 AZP 93.67 TAL 34.69 TAP 187.97 RCA 144.95 APO 249.41 V2 22.039  
 RC 335.380 GL 23.25 GP -24.74 ZAL 40.69 ZAP 59.43 ETS 165.96 ZAE 81.83 ETE 177.58 ZAC 64.18 ETC 285.74 LVI 2.10

PLANETOCENTRIC CONIC  
 C3 35.423 VHL 5.952 DLA 30.51 RAL 11.97 RAD 6649.0 VEL 12.463 PTH 7.36 VHP 2.957 DPA -16.27 RAP 27.50 ECC 1.5830  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 32 51 3913.57 -45.12 167.10 272.79 72.95 7 38 5 2913.6 -46.86 132.14  
 60.00 6 28 50 3929.63 -36.04 164.62 268.86 70.60 7 32 20 2929.6 -40.30 134.36  
 70.00 6 14 6 3967.23 -26.43 163.35 264.57 67.53 7 20 14 2967.2 -33.23 136.78  
 78.04 5 9 21 4170.95 -13.42 172.29 258.12 62.34 6 18 52 3170.9 -23.65 149.42  
 78.04 5 9 21 4170.95 -13.42 172.29 258.12 62.34 6 18 52 3170.9 -23.65 149.42  
 78.04 5 9 21 4170.95 -13.42 172.29 258.12 62.34 6 18 52 3170.9 -23.65 149.42  
 110.00 11 13 33 3014.05 -26.43 92.27 264.57 67.53 12 3 47 2014.0 -33.23 65.69

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1255 TRA-3.9177 TC3-4.3156 BAU 2.1728 SGT 6750.4 SGR 1985.0 SG3 976.8 ST 66.4 SR 11.3 SS 39.1  
 RDE .0499 RRA -.6365 RC3-1.5584 FAU .34588 RRT .9422 RRF .9746 RTF .9228 CRT .9444 CRS -.6190 CST -.3514  
 FDE 2.8618 FRA-3.8978 FC3-8.4533 B8P 12173 SGB 7036.2 R23 .2901 R13 .9305 LSA 69.2 MSA 35.6 S3A 1.3  
 BDE .1351 BRA 3.9690 BC3 4.5877 FSP 1606 SG1 7006.9 SG2 640.9 THA 15.62 EL1 67.2 EL2 3.7 ALF 9.15

LAUNCH DATE SEP 12 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 33.023 GAL 6.99 AZL 85.78 HCA 154.18 SMA 197.34 ECC .26494 INC 4.2369 V1 29.596  
 RP 248.63 LAP 1.85 LOP 143.31 VP 19.878 GAP -3.04 AZP 93.81 TAL 34.35 TAP 188.51 RCA 145.05 APO 249.62 V2 22.030  
 RC 337.366 GL 23.98 GP -25.31 ZAL 41.27 ZAP 59.03 ETS 165.28 ZAE 81.00 ETE 177.06 ZAC 63.57 ETC 285.82 LVI 2.69

PLANETOCENTRIC CONIC  
 C3 35.498 VHL 5.958 DLA 31.28 RAL 11.87 RAD 6649.1 VEL 12.466 PTH 7.36 VHP 2.985 DPA -16.70 RAP 27.96 ECC 1.5842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 27 53 3932.42 -44.73 168.75 273.28 71.73 7 33 26 2932.4 -47.05 133.92  
 60.00 6 19 29 3954.86 -35.45 166.50 269.01 69.43 7 25 24 2954.9 -40.29 136.51  
 70.00 6 0 37 4010.63 -25.27 166.19 264.21 66.22 7 2 28 3010.6 -32.75 140.07  
 76.04 4 54 34 4216.89 -13.71 175.90 258.22 61.60 6 4 51 3216.9 -24.21 153.10  
 76.04 4 54 34 4216.89 -13.71 175.90 258.22 61.60 6 4 51 3216.9 -24.21 153.10  
 76.04 4 54 34 4216.89 -13.71 175.90 258.22 61.60 6 4 51 3216.9 -24.21 153.10  
 110.00 11 0 3 3057.45 -25.27 95.11 264.21 66.22 11 51 1 2057.4 -32.75 68.99

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0796 TRA-3.9663 TC3-4.3798 BAU 2.2101 SGT 6867.5 SGR 2027.6 SG3 954.8 ST 67.5 SR 12.2 SS 39.9  
 RDE .0847 RRA -.6583 RC3-1.5825 FAU .33725 RRT .9437 RRF .9761 RTF .9221 CRT .9135 CRS -.7030 CST -.3698  
 FDE 2.9141 FRA-3.7921 FC3-8.2249 B8P 12389 SGB 7160.6 R23 .2965 R13 .9300 LSA 70.7 MSA 36.0 S3A 1.3  
 BDE .1163 BRA 4.0206 BC3 4.6569 FSP 1566 SG1 7131.4 SG2 645.7 THA 15.70 EL1 68.4 EL2 4.9 ALF 9.40

LAUNCH DATE SEP 12 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC										DISTANCE 559.985										EARTH TO MARS																																																																																																																																												
RL	150.55	LAL	-.00	LOL	349.09	VL	33.031	GAL	6.93	AZL	85.63	HCA	155.04	SMA	197.49	ECC	.26500	INC	4.3705	V1	29.596	RP	248.71	LAP	1.84	LOP	144.19	VP	19.880	GAP	-3.23	AZP	93.96	TAL	34.02	TAP	189.03	RCA	145.16	APO	249.83	V2	22.023	RC	339.321	GL	24.76	GP	-25.92	ZAL	41.88	ZAP	58.67	ETS	164.58	ZAE	80.19	ETE	176.52	ZAC	62.93	ETC	285.91	LVI	3.33																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	35.604	VHL	5.967	DLA	32.09	RAL	11.74	RAD	6649.1	VEL	12.470	PTH	7.36	VHP	3.016	DPA	-17.15	RAP	28.44	ECC	1.5860	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		6	22	28	3952.60		-44.28	170.49		273.74		70.45		7	28	20	2952.6		-47.23		139.84		60.00		6	11	20	3982.32		-34.78	168.52		269.10		68.21		7	17	42	2982.3		-40.23		138.84		70.00		5	44	17	4062.37		-23.80	169.50		263.63		64.75		6	51	59	3062.4		-32.05		143.95		74.17		4	41	15	4257.78		-14.01	179.17		258.32		60.83		5	52	13	3257.8		-24.79		156.44		74.17		4	41	15	4257.78		-14.01	179.17		258.32		60.83		5	52	13	3257.8		-24.79		156.44		74.17		4	41	15	4257.78		-14.01	179.17		258.32		60.83		5	52	13	3257.8		-24.79		156.44		110.00		10	43	43	3109.19		-23.80	98.42		263.63		64.75		11	35	32	2109.2		-32.05		72.86
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	-.0290	TRA	-4.0131	TC3	-4.4377	BAU	2.2467	SGT	6981.0	SGR	2071.5	SG3	931.4	ST	68.7	SR	13.3	SS	40.7	RDE	.1223	RRA	-.6807	RC3	-1.6079	FAU	.32814	RRT	.9451	RRF	.9774	RTF	.9212	CRT	.6807	CRS	-.7711	CST	-.3896	FDE	2.9686	FRA	-3.6810	FC3	-7.9790	BSP	12628	SGB	7281.9	R23	.3032	R13	.9292	LSA	72.3	MSA	36.4	SSA	1.2	BDE	.1257	BRA	4.0704	BC3	4.7201	FSP	1528	SG1	7252.7	SG2	651.3	THA	15.80	EL1	69.7	EL2	6.2	ALF	9.75																																																																																	

LAUNCH DATE SEP 12 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC										DISTANCE 563.759										EARTH TO MARS																																																																																																																																												
RL	150.55	LAL	-.00	LOL	349.09	VL	33.039	GAL	6.87	AZL	85.49	HCA	155.91	SMA	197.65	ECC	.26506	INC	4.5130	V1	29.596	RP	248.78	LAP	1.84	LOP	145.07	VP	19.886	GAP	-3.42	AZP	94.12	TAL	33.68	TAP	189.59	RCA	145.26	APO	250.04	V2	22.015	RC	341.246	GL	25.58	GP	-26.56	ZAL	42.51	ZAP	58.34	ETS	163.85	ZAE	79.42	ETE	175.97	ZAC	62.25	ETC	286.00	LVI	4.00																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	35.746	VHL	5.979	DLA	32.93	RAL	11.59	RAD	6649.2	VEL	12.476	PTH	7.37	VHP	3.049	DPA	-17.63	RAP	28.95	ECC	1.5883	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		6	16	31	3974.27		-43.77	172.33		274.17		69.11		7	22	45	2974.3		-47.38		137.91		60.00		6	2	14	4012.38		-34.00	170.68		269.11		66.91		7	9	7	3012.4		-40.10		141.39		70.00		5	23	7	4128.33		-21.83	173.60		262.70		63.06		6	31	55	3128.3		-30.98		148.78		72.38		4	28	55	4295.17		-14.31	182.21		258.42		60.02		5	40	30	3295.2		-25.38		159.56		72.38		4	28	55	4295.17		-14.31	182.21		258.42		60.02		5	40	30	3295.2		-25.38		159.56		72.38		4	28	55	4295.17		-14.31	182.21		258.42		60.02		5	40	30	3295.2		-25.38		159.56		110.00		10	22	33	3175.15		-21.83	102.52		262.70		63.06		11	15	28	2175.1		-30.98		77.70
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	.0217	TRA	-4.0631	TC3	-4.4936	BAU	2.2851	SGT	7098.9	SGR	2120.0	SG3	907.8	ST	70.1	SR	14.6	SS	41.5	RDE	.1610	RRA	-.7059	RC3	-1.6347	FAU	.31903	RRT	.9466	RRF	.9786	RTF	.9204	CRT	.8311	CRS	-.8221	CST	-.4099	FDE	3.0153	FRA	-3.5767	FC3	-7.7268	BSP	12833	SGB	7408.7	R23	.3094	R13	.9286	LSA	74.1	MSA	36.8	SSA	1.1	BDE	.1625	BRA	4.1240	BC3	4.7817	FSP	1483	SG1	7379.5	SG2	657.7	THA	15.91	EL1	71.2	EL2	7.6	ALF	10.20																																																																																	

LAUNCH DATE SEP 12 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC										DISTANCE 567.534										EARTH TO MARS																																																																																																																																												
RL	150.55	LAL	-.00	LOL	349.09	VL	33.047	GAL	6.80	AZL	85.33	HCA	156.78	SMA	197.81	ECC	.26513	INC	4.6656	V1	29.596	RP	248.85	LAP	1.84	LOP	145.94	VP	19.892	GAP	-3.61	AZP	94.29	TAL	33.34	TAP	190.12	RCA	145.36	APO	250.25	V2	22.009	RC	343.139	GL	26.44	GP	-27.24	ZAL	43.17	ZAP	58.06	ETS	163.10	ZAE	78.67	ETE	175.39	ZAC	61.52	ETC	286.10	LVI	4.71																																																																																															
PLANETOCENTRIC CONIC																																																																																																																																																																
C3	35.929	VHL	5.994	DLA	33.82	RAL	11.39	RAD	6649.2	VEL	12.483	PTH	7.37	VHP	3.084	DPA	-18.14	RAP	29.50	ECC	1.5913	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																	
	50.00		6	9	57	3997.59		-43.19	174.26		274.56		67.71		7	16	35	2997.6		-47.49		140.16		60.00		5	52	0	4045.57		-33.09	173.02		269.02		65.54		6	59	25	3045.6		-39.89		144.19		70.00		4	49	41	4230.87		-18.54	179.73		260.88		60.79		6	0	12	3230.9		-28.93		156.06		70.64		4	17	16	4329.92		-14.61	185.08		258.52		59.16		5	29	26	3329.9		-25.99		162.52		70.64		4	17	16	4329.92		-14.61	185.08		258.52		59.16		5	29	26	3329.9		-25.99		162.52		70.64		4	17	16	4329.92		-14.61	185.08		258.52		59.16		5	29	26	3329.9		-25.99		162.52		110.00		9	49	7	3277.69		-18.54	108.65		260.88		60.79		10	43	45	2277.7		-28.93		84.98
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																												
TDE	.0686	TRA	-4.1185	TC3	-4.5499	BAU	2.3277	SGT	7225.5	SGR	2180.3	SG3	887.0	ST	71.6	SR	16.1	SS	41.9	RDE	.1966	RRA	-.7382	RC3	-1.6677	FAU	.31114	RRT	.9485	RRF	.9800	RTF	.9209	CRT	.8327	CRS	-.8557	CST	-.4330	FDE	3.0273	FRA	-3.5023	FC3	-7.4972	BSP	12948	SGB	7547.3	R23	.3128	R13	.9291	LSA	76.1	MSA	36.8	SSA	1.1	BDE	.2082	BRA	4.1841	BC3	4.8459	FSP	1405	SG1	7518.0	SG2	664.1	THA	16.10	EL1	72.9	EL2	8.8	ALF	10.77																																																																																	

LAUNCH DATE SEP 12 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 15 1974

HELIOCENTRIC CONIC										DISTANCE 571.306										EARTH TO MARS																																																																																																																																																																			
RL	150.55	LAL	-.00	LOL	349.09	VL	33.055	GAL	6.74	AZL	85.17	HCA	157.68	SMA	197.98	ECC	.26520	INC	4.8292	V1	29.596	RP	248.92	LAP	1.83	LOP	146.82	VP	19.898	GAP	-3.79	AZP	94.47	TAL	33.00	TAP	190.65	RCA	145.46	APO	250.46	V2	22.003	RC	343.001	GL	27.38	GP	-27.97	ZAL	43.86	ZAP	57.83	ETS	162.32	ZAE	77.98	ETE	174.80	ZAC	60.75	ETC	286.22	LVI	5.47																																																																																																																						
PLANETOCENTRIC CONIC																																																																																																																																																																																							
C3	36.157	VHL	6.013	DLA	34.75	RAL	11.16	RAD	6649.3	VEL	12.492	PTH	7.38	VHP	3.121	DPA	-18.69	RAP	30.09	ECC	1.5951	LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG																																																																																																																																								
	50.00		6	2	42	4022.84		-42.52	176.32		274.90		66.24		7	9	44	3022.8		-47.56		142.60		60.00		5	40	19	4082.68		-32.01	175.58		268.81		64.08		6	48	21	3082.7		-39.57		147.29		68.92		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38		68.92		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38		68.92		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38		68.92		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38		68.92		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38		110.00		4	6	6	4362.72		-14.91	187.83		258.61		58.25		5	18	49	3362.7		-26.63		165.38
DIFFERENTIAL CORRECTIONS										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																																																																																																																																																			
TDE	.1323	TRA	-4.1612	TC3	-4.5855	BAU	2.3621	SGT	7328.9	SGR	2226.9	SG3	857.8	ST	73.1	SR	17.9	SS	42.9	RDE	.2451	RRA	-.7621	RC3	-1.6885	FAU	.30004	RRT	.9492	RRF	.9807	RTF	.9188	CRT	.8074	CRS	-.8893	CST	-.4533																																																																																																																																																

LAUNCH DATE SEP 12 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 33.063 GAL 6.67 AZL 84.99 HCA 158.53 SMA 198.12 ECC .26528 INC 5.0055 V1 29.586
RP 248.97 LAP 1.83 LOP 147.69 VP 19.906 GAP -3.98 AZP 94.66 TAL 32.65 TAP 191.18 RCA 145.56 APO 250.68 V2 21.997
RC 346.831 GL 28.34 GP -28.75 ZAL 44.58 ZAP 57.64 ETS 161.51 ZAE 77.29 ETE 174.19 ZAC 59.92 ETC 286.34 LVI 6.28

PLANETOCENTRIC CONIC

C3 36.440 VHL 6.037 DLA 35.72 RAL 10.89 RAD 6649.4 VEL 12.503 PTH 7.39 VHP 3.162 DPA -19.27 RAP 30.71 ECC 1.9997
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 54 36 4050.26 -41.74 178.49 275.16 64.71 7 2 7 3050.3 -47.57 145.25
60.00 5 26 45 4124.75 -30.72 178.40 268.41 62.52 6 35 30 3124.8 -39.10 150.77
67.20 3 55 16 4393.98 -15.21 190.50 258.69 57.28 5 8 30 3394.0 -27.27 168.18
67.20 3 55 16 4393.98 -15.21 190.50 258.69 57.28 5 8 30 3394.0 -27.27 168.18
67.20 3 55 16 4393.98 -15.21 190.50 258.69 57.28 5 8 30 3394.0 -27.27 168.18
67.20 3 55 16 4393.98 -15.21 190.50 258.69 57.28 5 8 30 3394.0 -27.27 168.18

DIFFERENTIAL CORRECTIONS

TDE .1918 TRA-4.2106 TC3-4.6210 BAU 2.4012
RDE .2916 RRA -.7930 RC3-1.7148 FAU .28997
FDE 3.1298 FRA-3.2562 FC3-6.8889 BSP 13490
BDE .3490 BRA 4.2846 BC3 4.9289 FSP 1338

MID-COURSE EXECUTION ACCURACY

SGT 7442.5 SGR 2285.3 SG3 830.9
RRR .9504 RRF .9815 RTF .9177
SGB 7785.4 R23 .3277 R13 .9264
SG1 7755.5 SG2 682.0 THA 16.40

ORBIT DETERMINATION ACCURACY

ST 74.9 SR 19.9 SS 43.6
CRT .7927 CRS -.9110 CST -.4747
LSA 80.5 MSA 37.7 S8A 1.0
EL1 76.5 EL2 11.8 ALF 12.17

LAUNCH DATE SEP 12 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 33.071 GAL 6.81 AZL 84.80 HCA 159.40 SMA 198.28 ECC .26536 INC 5.1957 V1 29.586
RP 249.02 LAP 1.83 LOP 148.37 VP 19.914 GAP -4.16 AZP 94.87 TAL 32.31 TAP 191.71 RCA 145.66 APO 250.90 V2 21.992
RC 348.628 GL 29.37 GP -29.58 ZAL 45.34 ZAP 57.50 ETS 160.68 ZAE 76.68 ETE 173.55 ZAC 59.05 ETC 286.49 LVI 7.15

PLANETOCENTRIC CONIC

C3 36.787 VHL 6.065 DLA 36.75 RAL 10.56 RAD 6649.5 VEL 12.517 PTH 7.40 VHP 3.206 DPA -19.89 RAP 31.38 ECC 1.6054
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 45 33 4080.20 -40.85 180.80 275.33 63.10 6 53 33 3080.2 -47.51 148.14
60.00 5 10 39 4173.82 -29.15 181.58 267.75 60.84 6 20 13 3173.6 -38.41 154.74
65.48 3 44 39 4424.01 -15.51 193.11 258.77 56.26 4 58 23 3424.0 -27.94 170.93
65.48 3 44 39 4424.01 -15.51 193.11 258.77 56.26 4 58 23 3424.0 -27.94 170.93
65.48 3 44 39 4424.01 -15.51 193.11 258.77 56.26 4 58 23 3424.0 -27.94 170.93
65.48 3 44 39 4424.01 -15.51 193.11 258.77 56.26 4 58 23 3424.0 -27.94 170.93

DIFFERENTIAL CORRECTIONS

TDE .2552 TRA-4.2594 TC3-4.6484 BAU 2.4398
RDE .3429 RRA -.8251 RC3-1.7386 FAU .27909
FDE 3.1679 FRA-3.1374 FC3-6.5681 BSP 13744
BDE .4274 BRA 4.3386 BC3 4.9810 FSP 1297

MID-COURSE EXECUTION ACCURACY

SGT 7552.7 SGR 2345.0 SG3 801.8
RRR .9514 RRF .9820 RTF .9160
SGB 7908.4 R23 .3348 R13 .9251
SG1 7878.0 SG2 692.5 THA 16.59

ORBIT DETERMINATION ACCURACY

ST 76.8 SR 22.0 SS 44.3
CRT .7814 CRS -.9278 CST -.4953
LSA 83.0 MSA 38.0 S8A .9
EL1 78.7 EL2 13.4 ALF 13.02

LAUNCH DATE SEP 12 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 33.079 GAL 6.54 AZL 84.80 HCA 160.27 SMA 198.44 ECC .26544 INC 5.4020 V1 29.586
RP 249.07 LAP 1.82 LOP 149.44 VP 19.922 GAP -4.34 AZP 95.09 TAL 31.98 TAP 192.24 RCA 145.76 APO 251.11 V2 21.988
RC 350.392 GL 30.48 GP -30.46 ZAL 46.14 ZAP 57.43 ETS 159.83 ZAE 76.06 ETE 172.89 ZAC 58.11 ETC 286.64 LVI 8.07

PLANETOCENTRIC CONIC

C3 37.207 VHL 6.100 DLA 37.83 RAL 10.18 RAD 6649.7 VEL 12.534 PTH 7.41 VHP 3.293 DPA -20.56 RAP 32.09 ECC 1.6123
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 35 18 4113.11 -39.80 183.27 275.36 61.42 6 43 52 3113.1 -47.35 151.31
60.00 4 50 44 4232.63 -27.13 185.27 266.70 58.98 6 1 17 3232.6 -37.38 159.41
63.75 3 34 9 4453.16 -15.79 195.69 258.83 55.16 4 48 22 3453.2 -28.62 173.67
63.75 3 34 9 4453.16 -15.79 195.69 258.83 55.16 4 48 22 3453.2 -28.62 173.67
63.75 3 34 9 4453.16 -15.79 195.69 258.83 55.16 4 48 22 3453.2 -28.62 173.67
63.75 3 34 9 4453.16 -15.79 195.69 258.83 55.16 4 48 22 3453.2 -28.62 173.67

DIFFERENTIAL CORRECTIONS

TDE .3248 TRA-4.3051 TC3-4.6588 BAU 2.4789
RDE .4002 RRA -.8576 RC3-1.7588 FAU .26734
FDE 3.2104 FRA-3.0058 FC3-6.2205 BSP 14047
BDE .5133 BRA 4.3897 BC3 4.9796 FSP 1284

MID-COURSE EXECUTION ACCURACY

SGT 7655.6 SGR 2405.3 SG3 770.2
RRR .9521 RRF .9823 RTF .9137
SGB 8024.6 R23 .3433 R13 .9231
SG1 7993.6 SG2 704.6 THA 16.79

ORBIT DETERMINATION ACCURACY

ST 78.8 SR 24.4 SS 45.1
CRT .7733 CRS -.9410 CST -.5155
LSA 85.6 MSA 38.5 S8A .8
EL1 81.1 EL2 15.1 ALF 13.89

LAUNCH DATE SEP 12 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 23 1974

HELIOCENTRIC CONIC

RL 150.55 LAL -.00 LOL 349.09 VL 33.087 GAL 6.48 AZL 84.37 HCA 161.14 SMA 198.60 ECC .26553 INC 5.6265 V1 29.586
RP 249.11 LAP 1.82 LOP 150.32 VP 19.932 GAP -4.53 AZP 95.33 TAL 31.62 TAP 192.76 RCA 145.86 APO 251.33 V2 21.984
RC 352.122 GL 31.88 GP -31.41 ZAL 46.98 ZAP 57.40 ETS 158.94 ZAE 75.52 ETE 172.20 ZAC 57.10 ETC 286.82 LVI 9.06

PLANETOCENTRIC CONIC

C3 37.715 VHL 6.141 DLA 38.98 RAL 9.72 RAD 6649.9 VEL 12.554 PTH 7.43 VHP 3.306 DPA -21.27 RAP 32.84 ECC 1.6207
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 23 38 4149.52 -38.58 185.90 275.22 59.66 6 32 48 3149.5 -47.06 154.78
60.00 4 23 59 4309.89 -24.33 189.90 264.94 56.83 5 35 49 3309.9 -35.74 165.31
61.98 3 23 40 4481.54 -16.07 198.24 258.88 54.00 4 38 22 3481.5 -29.31 176.41
61.98 3 23 40 4481.54 -16.07 198.24 258.88 54.00 4 38 22 3481.5 -29.31 176.41
61.98 3 23 40 4481.54 -16.07 198.24 258.88 54.00 4 38 22 3481.5 -29.31 176.41
61.98 3 23 40 4481.54 -16.07 198.24 258.88 54.00 4 38 22 3481.5 -29.31 176.41

DIFFERENTIAL CORRECTIONS

TDE .3858 TRA-4.3610 TC3-4.6690 BAU 2.5203
RDE .4547 RRA -.9007 RC3-1.7849 FAU .25655
FDE 3.2157 FRA-2.9043 FC3-5.8891 BSP 14224
BDE .5964 BRA 4.4531 BC3 4.9985 FSP 1198

MID-COURSE EXECUTION ACCURACY

SGT 7772.2 SGR 2480.8 SG3 740.6
RRR .9533 RRF .9828 RTF .9127
SGB 8158.6 R23 .3484 R13 .9224
SG1 8127.1 SG2 716.2 THA 17.06

ORBIT DETERMINATION ACCURACY

ST 81.0 SR 26.9 SS 45.5
CRT .7724 CRS -.9491 CST -.5348
LSA 88.6 MSA 38.7 S8A .8
EL1 83.7 EL2 16.5 ALF 14.98



LAUNCH DATE SEP 12 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC  
 RL 150.58 LAL -.00 LOL 349.09 VL 33.088 GAL 6.41 AZL 84.13 HCA 162.01 SMA 198.78 ECC .26362 INC 5.8718 V1 29.596  
 RP 249.14 LAP 1.81 LOP 151.19 VP 19.941 GAP -4.71 AZP 95.59 TAL 31.27 TAP 193.29 RCA 145.98 APO 251.55 V2 21.981  
 RC 353.817 GL 32.92 GP -32.43 ZAL 47.87 ZAP 57.45 ETS 158.04 ZAE 75.02 ETE 171.49 ZAC 56.03 ETC 287.02 LVI 10.12

DISTANCE 590.160 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.326 VHL 6.191 DLA 40.18 RAL 9.18 RAD 6650.1 VEL 12.578 PTH 7.44 VHP 3.384 DPA -22.04 RAP 33.68 ECC 1.6308  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 10 10 4190.27 -37.14 188.73 274.85 57.81 8 20 0 3190.3 -46.61 158.61  
 60.00 3 33 6 4453.26 -18.76 197.92 280.80 53.65 4 47 20 3453.3 -31.91 175.53  
 60.17 3 13 7 4509.47 -16.33 200.79 258.90 52.76 4 28 16 3509.5 -30.02 179.18  
 60.17 3 13 7 4509.47 -16.33 200.79 258.90 52.76 4 28 16 3509.5 -30.02 179.18  
 60.17 3 13 7 4509.47 -16.33 200.79 258.90 52.76 4 28 16 3509.5 -30.02 179.18  
 60.17 3 13 7 4509.47 -16.33 200.79 258.90 52.76 4 28 16 3509.5 -30.02 179.18

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4909 TRA-4.4156 TC3-4.6648 BAU 2.5632 SGT 7883.3 SGR 2558.4 SG3 708.2 ST 83.4 SR 29.6 SS 45.9  
 RDE .5160 RRA -.9455 RC3-1.8070 FAU .24480 RRT .9544 RRF .9829 RTF .9109 CRT .7722 CRS -.9556 CST -.5522  
 FDE 3.2238 FRA-2.7887 FC3-5.5297 BSP 14446 SGB 8288.1 R23 .3550 R13 .9210 LSA 91.7 MSA 39.0 SSA .7  
 BDE .6852 BRA 4.5157 BC3 5.0026 FSP 1141 SGI 8255.9 SG2 729.7 THA 17.35 EL1 86.6 EL2 18.1 ALF 16.06

LAUNCH DATE SEP 12 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 27 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 33.104 GAL 6.35 AZL 83.86 HCA 162.88 SMA 198.92 ECC .26572 INC 6.1410 V1 29.596  
 RP 249.17 LAP 1.80 LOP 152.06 VP 19.952 GAP -4.89 AZP 95.87 TAL 30.92 TAP 193.81 RCA 146.06 APO 251.77 V2 21.978  
 RC 355.478 GL 34.27 GP -33.52 ZAL 48.81 ZAP 57.57 ETS 157.11 ZAE 74.59 ETE 170.75 ZAC 54.88 ETC 287.24 LVI 11.26

DISTANCE 593.929 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.062 VHL 6.250 DLA 41.46 RAL 8.54 RAD 6650.3 VEL 12.607 PTH 7.46 VHP 3.428 DPA -22.87 RAP 34.52 ECC 1.6429  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 54 23 4236.47 -35.42 191.81 274.16 55.88 6 4 59 3236.5 -45.93 162.86  
 58.32 3 2 22 4537.12 -16.57 203.35 258.88 51.43 4 18 0 3537.1 -30.73 182.00  
 58.32 3 2 22 4537.12 -16.57 203.35 258.88 51.43 4 18 0 3537.1 -30.73 182.00  
 58.32 3 2 22 4537.12 -16.57 203.35 258.88 51.43 4 18 0 3537.1 -30.73 182.00  
 58.32 3 2 22 4537.12 -16.57 203.35 258.88 51.43 4 18 0 3537.1 -30.73 182.00  
 58.32 3 2 22 4537.12 -16.57 203.35 258.88 51.43 4 18 0 3537.1 -30.73 182.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5132 TRA-4.4736 TC3-4.6483 BAU 2.6084 SGT 7995.5 SGR 2643.4 SG3 674.5 ST 85.8 SR 32.5 SS 46.1  
 RDE .5807 RRA -.9960 RC3-1.8277 FAU .23266 RRT .9554 RRF .9828 RTF .9089 CRT .7737 CRS -.9602 CST -.5670  
 FDE 3.2181 FRA-2.6731 FC3-5.1564 BSP 14639 SGB 8421.2 R23 .3615 R13 .9195 LSA 94.9 MSA 39.3 SSA .7  
 BDE .7750 BRA 4.5831 BC3 4.9948 FSP 1077 SGI 8388.2 SG2 744.1 THA 17.67 EL1 89.6 EL2 19.7 ALF 17.17

LAUNCH DATE SEP 12 1973

FLIGHT TIME 290.00

ARRIVAL DATE JUN 29 1974

HELIOCENTRIC CONIC  
 RL 150.55 LAL -.00 LOL 349.09 VL 33.112 GAL 6.28 AZL 83.56 HCA 163.75 SMA 199.08 ECC .26582 INC 6.4383 V1 29.596  
 RP 249.19 LAP 1.80 LOP 152.94 VP 19.963 GAP -5.06 AZP 96.18 TAL 30.58 TAP 194.33 RCA 146.16 APO 251.99 V2 21.976  
 RC 357.105 GL 35.73 GP -34.69 ZAL 49.81 ZAP 57.77 ETS 156.16 ZAE 74.21 ETE 169.99 ZAC 53.65 ETC 287.49 LVI 12.47

DISTANCE 597.697 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.950 VHL 6.321 DLA 42.81 RAL 7.79 RAD 6650.6 VEL 12.642 PTH 7.49 VHP 3.500 DPA -23.76 RAP 35.45 ECC 1.6575  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 35 26 4289.95 -33.33 195.19 273.02 53.84 5 46 56 3290.0 -44.93 167.63  
 56.41 2 51 21 4564.67 -16.77 205.94 258.82 50.01 4 7 26 3564.7 -31.43 184.89  
 56.41 2 51 21 4564.67 -16.77 205.94 258.82 50.01 4 7 26 3564.7 -31.43 184.89  
 56.41 2 51 21 4564.67 -16.77 205.94 258.82 50.01 4 7 26 3564.7 -31.43 184.89  
 56.41 2 51 21 4564.67 -16.77 205.94 258.82 50.01 4 7 26 3564.7 -31.43 184.89  
 56.41 2 51 21 4564.67 -16.77 205.94 258.82 50.01 4 7 26 3564.7 -31.43 184.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5763 TRA-4.5305 TC3-4.6126 BAU 2.6531 SGT 8100.0 SGR 2733.0 SG3 636.3 ST 86.4 SR 35.6 SS 46.3  
 RDE .6516 RRA -1.0311 RC3-1.8440 FAU .21970 RRT .9563 RRF .9824 RTF .9065 CRT .7759 CRS -.9636 CST -.5799  
 FDE 3.2041 FRA-2.5494 FC3-4.7610 BSP 14885 SGB 8548.7 R23 .3688 R13 .9176 LSA 98.2 MSA 39.7 SSA .6  
 BDE .8699 BRA 4.6509 BC3 4.9676 FSP 1016 SGI 8514.8 SG2 759.8 THA 18.03 EL1 92.8 EL2 21.4 ALF 18.34

LAUNCH DATE SEP 13 1973      FLIGHT TIME 210.00      ARRIVAL DATE APR 11 1974

Heliocentric Conic      DISTANCE 445.334      EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.810 GAL 8.89 AZL 87.82 HCA 127.82 SMA 193.19 ECC .26741 INC 2.1798 V1 29.603  
 RP 243.98 LAP 1.72 LOP 117.90 VP 20.023 GAP 2.89 AZP 91.34 TAL 44.19 TAP 172.01 RCA 141.53 APO 244.85 V2 22.487  
 RC 269.924 GL 11.26 GP -15.78 ZAL 28.90 ZAP 81.73 ETS 179.32 ZAE 113.69 ETE 189.36 ZAC 72.69 ETC 284.81 LVI -6.85

PLANETOCENTRIC CONIC

C3 39.905 VHL 6.317 DLA 16.99 RAL 11.05 RAD 6650.6 VEL 12.640 PTH 7.49 VHP 2.584 DPA -7.74 RAP 24.55 ECC 1.6567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 30 33 3647.91 -47.54 142.13 262.16 91.98 8 31 21 2647.9 -41.21 109.23  
 60.00 7 50 34 3594.60 -40.28 137.38 262.20 88.53 8 50 29 2594.6 -36.46 106.95  
 70.00 8 20 16 3507.20 -33.92 129.91 261.81 85.78 9 18 43 2507.2 -32.11 101.32  
 80.00 9 7 2 3360.59 -29.28 118.30 261.31 83.85 10 3 3 2360.6 -28.86 90.88  
 90.00 10 18 42 3129.26 -27.50 101.07 261.08 83.12 11 10 52 2129.3 -27.60 74.06  
 100.00 11 49 54 2835.06 -29.28 79.66 261.31 83.85 12 37 9 1835.1 -28.86 52.25  
 110.00 13 19 42 2554.01 -33.92 58.82 261.81 85.78 14 2 16 1554.0 -32.11 30.24

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.6931 TRA-2.5335 TC3-1.9494 BAU 1.1527      SGT 3497.7 SGR 1309.4 SG3 1295.9      ST 48.0 SR 26.2 SS 22.8  
 RDE -.5696 RRA -.2618 RC3 -.9318 FAU .49982      RRT .8343 RRF .8755 RTF .9101      CRT .7593 CRS .2667 CST -.4133  
 FDE .9275 FRA-6.3772 FC-10.8436 BSP 6008      SGB 3734.8 R23 .1553 R13 .9212      LSA 52.9 MSA 26.5 S8A 2.4  
 BDE .8971 BRA 2.5470 BC3 2.1606 F8P 2220      SG1 3670.9 SG2 687.9 THA 18.00      EL1 52.4 EL2 15.6 ALF 24.85

LAUNCH DATE SEP 13 1973      FLIGHT TIME 212.00      ARRIVAL DATE APR 13 1974

Heliocentric Conic      DISTANCE 449.135      EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.816 GAL 8.84 AZL 87.78 HCA 128.73 SMA 193.29 ECC .26725 INC 2.2207 V1 29.603  
 RP 244.22 LAP 1.73 LOP 118.81 VP 20.006 GAP 2.66 AZP 91.39 TAL 43.92 TAP 172.65 RCA 141.63 APO 244.95 V2 22.464  
 RC 272.618 GL 11.50 GP -15.95 ZAL 29.17 ZAP 80.54 ETS 178.94 ZAE 112.24 ETE 188.90 ZAC 72.59 ETC 284.82 LVI -6.52

PLANETOCENTRIC CONIC

C3 39.699 VHL 6.301 DLA 17.30 RAL 11.13 RAD 6650.6 VEL 12.632 PTH 7.48 VHP 2.587 DPA -8.03 RAP 24.33 ECC 1.6533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 29 36 3652.92 -47.56 142.62 262.43 91.60 8 30 29 2652.9 -41.36 109.62  
 60.00 7 49 13 3600.72 -40.27 137.90 262.41 88.18 8 49 13 2600.7 -36.59 107.41  
 70.00 8 18 23 3514.84 -33.88 130.50 261.96 85.43 9 16 58 2514.8 -32.22 101.89  
 80.00 9 4 37 3369.94 -29.21 118.98 261.43 83.50 10 0 47 2369.9 -28.95 91.56  
 90.00 10 16 1 3139.48 -27.41 101.80 261.19 82.76 11 8 20 2139.5 -27.68 74.80  
 100.00 11 47 29 2844.41 -29.21 80.35 261.43 83.50 12 34 53 1844.4 -28.95 52.93  
 110.00 13 17 49 2561.66 -33.88 59.42 261.96 85.43 14 0 31 1561.7 -32.22 30.80

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.6931 TRA-2.5917 TC3-2.0341 BAU 1.1912      SGT 3613.9 SGR 1323.2 SG3 1294.2      ST 48.8 SR 25.6 SS 23.1  
 RDE -.5555 RRA -.2719 RC3 -.9485 FAU .49789      RRT .8409 RRF .8808 RTF .9122      CRT .7577 CRS .2659 CST -.3973  
 FDE .9959 FRA-6.3283 FC-10.8580 BSP 6226      SGB 3848.5 R23 .1573 R13 .9228      LSA 53.4 MSA 26.7 S8A 2.4  
 BDE .8882 BRA 2.6059 BC3 2.2444 F8P 2216      SG1 3787.4 SG2 683.2 THA 17.71      EL1 52.9 EL2 15.6 ALF 23.85

LAUNCH DATE SEP 13 1973      FLIGHT TIME 214.00      ARRIVAL DATE APR 15 1974

Heliocentric Conic      DISTANCE 452.935      EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.822 GAL 8.78 AZL 87.74 HCA 129.64 SMA 193.40 ECC .26711 INC 2.2627 V1 29.603  
 RP 244.45 LAP 1.74 LOP 119.72 VP 19.990 GAP 2.43 AZP 91.44 TAL 43.65 TAP 173.29 RCA 141.74 APO 245.06 V2 22.441  
 RC 275.292 GL 11.76 GP -16.13 ZAL 29.45 ZAP 79.39 ETS 178.56 ZAE 110.81 ETE 188.45 ZAC 72.48 ETC 284.84 LVI -6.39

PLANETOCENTRIC CONIC

C3 39.495 VHL 6.284 DLA 17.61 RAL 11.22 RAD 6650.5 VEL 12.624 PTH 7.48 VHP 2.591 DPA -8.31 RAP 24.13 ECC 1.6500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 28 38 3659.11 -47.56 143.17 262.71 91.22 8 29 36 2658.1 -41.52 110.02  
 60.00 7 47 48 3607.06 -40.25 138.44 262.62 87.81 8 47 55 2607.1 -36.72 107.90  
 70.00 8 16 26 3522.78 -33.84 131.11 262.12 85.07 9 15 9 2522.8 -32.33 102.48  
 80.00 9 2 6 3379.65 -29.13 119.69 261.55 83.13 9 58 26 2379.7 -29.03 92.27  
 90.00 10 13 13 3150.11 -27.32 102.57 261.29 82.39 11 5 43 2150.1 -27.75 75.57  
 100.00 11 44 58 2854.12 -29.13 81.06 261.55 83.13 12 32 32 1854.1 -29.03 53.64  
 110.00 13 15 53 2569.58 -33.84 60.03 262.12 85.07 13 58 42 1569.6 -32.33 31.40

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.6919 TRA-2.6492 TC3-2.1190 BAU 1.2295      SGT 3730.0 SGR 1337.0 SG3 1291.1      ST 49.6 SR 25.1 SS 23.3  
 RDE -.5411 RRA -.2818 RC3 -.9651 FAU .49351      RRT .8472 RRF .8859 RTF .9141      CRT .7560 CRS .3046 CST -.3816  
 FDE 1.0644 FRA-6.2711 FC-10.8616 BSP 6445      SGB 3982.4 R23 .1596 R13 .9242      LSA 53.9 MSA 26.9 S8A 2.4  
 BDE .8783 BRA 2.6642 BC3 2.3285 F8P 2211      SG1 3903.8 SG2 678.6 THA 17.44      EL1 53.4 EL2 15.2 ALF 22.89

LAUNCH DATE SEP 13 1973      FLIGHT TIME 216.00      ARRIVAL DATE APR 17 1974

Heliocentric Conic      DISTANCE 456.734      EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.828 GAL 8.73 AZL 87.69 HCA 130.54 SMA 193.51 ECC .26698 INC 2.3057 V1 29.603  
 RP 244.68 LAP 1.75 LOP 120.63 VP 19.975 GAP 2.20 AZP 91.50 TAL 43.38 TAP 173.92 RCA 141.85 APO 245.18 V2 22.418  
 RC 277.948 GL 12.02 GP -16.32 ZAL 29.73 ZAP 78.26 ETS 178.17 ZAE 109.40 ETE 188.01 ZAC 72.37 ETC 284.85 LVI -6.24

PLANETOCENTRIC CONIC

C3 39.294 VHL 6.268 DLA 17.93 RAL 11.30 RAD 6650.4 VEL 12.616 PTH 7.47 VHP 2.595 DPA -8.59 RAP 23.96 ECC 1.6467  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 27 37 3663.48 -47.57 143.64 263.00 90.82 8 28 41 2663.5 -41.67 110.44  
 60.00 7 46 21 3613.62 -40.23 139.00 262.84 87.44 8 46 34 2613.6 -36.86 108.40  
 70.00 8 14 25 3530.97 -33.79 131.75 262.29 84.70 9 13 16 2531.0 -32.44 103.09  
 80.00 8 59 29 3389.75 -29.04 120.43 261.67 82.75 9 55 59 2389.7 -29.12 93.01  
 90.00 10 10 17 3161.18 -27.22 103.36 261.40 82.01 11 2 59 2161.2 -27.82 76.37  
 100.00 11 42 21 2864.22 -29.04 81.80 261.67 82.75 12 30 5 1864.2 -29.12 54.38  
 110.00 13 13 52 2577.79 -33.79 60.67 262.29 84.70 13 56 49 1577.8 -32.44 32.01

DIFFERENTIAL CORRECTIONS      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY

TDE -.6899 TRA-2.7067 TC3-2.2045 BAU 1.2677      SGT 3846.8 SGR 1350.8 SG3 1287.1      ST 50.3 SR 24.5 SS 23.6  
 RDE -.5263 RRA -.2917 RC3 -.9817 FAU .49275      RRT .8532 RRF .8908 RTF .9157      CRT .7547 CRS .3225 CST -.3660  
 FDE 1.1338 FRA-6.2102 FC-10.8564 BSP 6667      SGB 4077.1 R23 .1622 R13 .9254      LSA 54.4 MSA 27.0 S8A 2.4  
 BDE .8677 BRA 2.7224 BC3 2.4132 F8P 2204      SG1 4021.0 SG2 674.0 THA 17.18      EL1 53.9 EL2 15.0 ALF 21.95

LAUNCH DATE SEP 13 1973

FLIGHT TIME 210.00

ARRIVAL DATE APR 10 1974

HELIOCENTRIC CONIC										DISTANCE 460.532										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	32.834	GAL	8.68	AZL	87.65	HCA	131.45	SMA	193.63	ECC	.26666	INC	2.3498	V1	29.603	RP	244.90	LAP	1.76	LOP	121.53	VP	19.961	GAP	1.98	AZP	91.56	TAL	43.10	TAP	174.55	RCA	141.96	APO	245.30	V2	22.397	RC	280.584	GL	12.29	GP	-16.50	ZAL	30.02	ZAP	77.16	ETS	177.78	ZAE	108.01	ETE	187.57	ZAC	72.24	ETC	284.87	LVI	-6.09
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	39.095	VHL	6.253	DLA	18.26	RAL	11.39	RAD	6850.3	VEL	12.608	PTH	7.47	VHP	2.601	DPA	-8.86	RAP	23.80	ECC	1.6434	SGT	3964.3	SGR	1365.3	SG3	1282.5	ST	51.1	SR	23.9	SS	23.9	CRT	.7537	CRS	.3379	CST	-.3521	LSA	54.9	MSA	27.2	SSA	2.4																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG8	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																						
50.00	7	26	34	3689.05	-47.57	144.17	263.29	90.40	8	27	43	2669.0	-41.84	110.87	SG9	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
60.00	7	44	50	3620.42	-40.21	139.57	263.07	87.04	8	45	10	2620.4	-37.00	108.93	SG10	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
70.00	8	12	19	3539.49	-33.73	132.41	262.45	84.31	9	11	19	2539.5	-32.56	103.73	SG11	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
80.00	8	56	45	3400.25	-28.95	121.20	261.80	82.36	9	53	25	2400.2	-29.20	93.78	SG12	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
90.00	10	7	14	3172.71	-27.11	104.18	261.51	81.61	11	0	7	2172.7	-27.89	77.20	SG13	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
100.00	11	39	37	2874.72	-28.95	82.57	261.80	82.36	12	27	31	1874.7	-29.20	55.14	SG14	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	
110.00	13	11	46	2586.31	-33.73	61.33	262.45	84.31	13	54	52	1586.3	-32.56	32.65	SG15	4192.8	R23	.1649	R13	.9265	LSA	54.9	MSA	27.2	SSA	2.4	EL1	54.5	EL2	14.7	ALF	21.04																																	

LAUNCH DATE SEP 13 1973

FLIGHT TIME 220.00

ARRIVAL DATE APR 21 1974

HELIOCENTRIC CONIC										DISTANCE 464.329										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	32.841	GAL	8.62	AZL	87.60	HCA	132.35	SMA	193.75	ECC	.26674	INC	2.3950	V1	29.603	RP	245.11	LAP	1.77	LOP	122.44	VP	19.947	GAP	1.75	AZP	91.61	TAL	42.82	TAP	175.17	RCA	142.07	APO	245.43	V2	22.375	RC	283.198	GL	12.57	GP	-16.69	ZAL	30.32	ZAP	76.08	ETS	177.39	ZAE	106.64	ETE	187.15	ZAC	72.11	ETC	284.88	LVI	-5.93
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	38.900	VHL	6.237	DLA	18.59	RAL	11.47	RAD	6650.3	VEL	12.601	PTH	7.46	VHP	2.607	DPA	-9.13	RAP	23.67	ECC	1.6402	SGT	4081.4	SGR	1379.6	SG3	1276.7	ST	51.8	SR	23.3	SS	24.3	CRT	.7528	CRS	.3539	CST	-.3374	LSA	55.4	MSA	27.4	SSA	2.3																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG8	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																						
50.00	7	25	29	3674.82	-47.58	144.73	263.60	89.97	8	26	43	2674.8	-42.00	111.33	SG9	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
60.00	7	43	15	3627.47	-40.18	140.17	263.30	86.64	8	43	43	2627.5	-37.14	109.47	SG10	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
70.00	8	10	8	3548.34	-33.67	133.09	262.63	83.91	9	9	16	2548.3	-32.67	104.40	SG11	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
80.00	8	53	54	3411.18	-28.85	121.99	261.93	81.95	9	50	45	2411.2	-29.28	94.58	SG12	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
90.00	10	4	3	3184.73	-26.98	105.04	261.61	81.20	10	57	7	2184.7	-27.96	78.08	SG13	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
100.00	11	36	45	2885.65	-28.85	83.36	261.93	81.95	12	24	51	1885.7	-29.28	55.95	SG14	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	
110.00	13	9	34	2595.16	-33.67	62.01	262.63	83.91	13	52	50	1595.2	-32.67	33.31	SG15	4308.3	R23	.1678	R13	.9275	LSA	55.4	MSA	27.4	SSA	2.3	EL1	55.0	EL2	14.5	ALF	20.15																																	

LAUNCH DATE SEP 13 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 23 1974

HELIOCENTRIC CONIC										DISTANCE 468.125										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	32.847	GAL	8.57	AZL	87.56	HCA	133.25	SMA	193.87	ECC	.26664	INC	2.4415	V1	29.603	RP	245.32	LAP	1.78	LOP	123.34	VP	19.935	GAP	1.53	AZP	91.67	TAL	42.53	TAP	175.78	RCA	142.18	APO	245.57	V2	22.354	RC	288.791	GL	12.85	GP	-16.89	ZAL	30.63	ZAP	75.03	ETS	177.00	ZAE	105.30	ETE	186.72	ZAC	71.96	ETC	284.90	LVI	-5.77
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	38.708	VHL	6.222	DLA	18.94	RAL	11.56	RAD	6650.2	VEL	12.593	PTH	7.45	VHP	2.614	DPA	-9.39	RAP	23.57	ECC	1.6370	SGT	4199.6	SGR	1394.3	SG3	1270.3	ST	52.8	SR	22.7	SS	24.6	CRT	.7524	CRS	.3678	CST	-.3237	LSA	55.9	MSA	27.5	SSA	2.3																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG8	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																						
50.00	7	24	20	3680.80	-47.57	145.31	263.92	89.53	8	25	41	2680.8	-42.17	111.80	SG9	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
60.00	7	41	37	3634.78	-40.15	140.79	263.54	86.22	8	42	12	2634.8	-37.28	110.04	SG10	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
70.00	8	7	51	3557.53	-33.60	133.80	262.80	83.50	9	7	9	2557.5	-32.78	105.09	SG11	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
80.00	8	50	55	3422.57	-28.74	122.82	262.05	81.53	9	47	57	2422.6	-29.36	95.42	SG12	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
90.00	10	0	42	3197.30	-26.85	105.94	261.72	80.77	10	53	59	2197.3	-28.02	78.99	SG13	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
100.00	11	33	46	2897.05	-28.74	84.19	262.05	81.53	12	22	3	1897.0	-29.36	56.78	SG14	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	
110.00	13	7	18	2604.35	-33.60	62.72	262.80	83.50	13	50	42	1304.3	-32.78	34.01	SG15	4425.0	R23	.1711	R13	.9283	LSA	55.9	MSA	27.5	SSA	2.3	EL1	55.5	EL2	14.2	ALF	19.29																																	

LAUNCH DATE SEP 13 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 25 1974

HELIOCENTRIC CONIC										DISTANCE 471.920										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	32.854	GAL	8.51	AZL	87.51	HCA	134.15	SMA	194.00	ECC	.26655	INC	2.4893	V1	29.603	RP	245.53	LAP	1.79	LOP	124.24	VP	19.923	GAP	1.31	AZP	91.73	TAL	42.24	TAP	176.39	RCA	142.29	APO	245.71	V2	22.334	RC	288.361	GL	13.14	GP	-17.09	ZAL	30.94	ZAP	74.01	ETS	176.60	ZAE	103.97	ETE	186.31	ZAC	71.81	ETC	284.91	LVI	-5.59
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	38.519	VHL	6.206	DLA	19.29	RAL	11.64	RAD	6650.1	VEL	12.586	PTH	7.45	VHP	2.622	DPA	-9.64	RAP	23.48	ECC	1.6339	SGT	4316.7	SGR	1408.9	SG3	1262.5	ST	53.3	SR	22.0	SS	25.0	CRT	.7522	CRS	.3814	CST	-.3099	LSA	56.3	MSA	27.7	SSA	2.3																				
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	SG8																																							

LAUNCH DATE SEP 13 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 27 1974

HELIOCENTRIC CONIC  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.861 GAL 8.46 AZL 87.46 HCA 135.05 SMA 194.13 ECC .26647 INC 2.5385 V1 29.603  
 RP 245.73 LAP 1.79 LOP 125.14 VP 19.913 GAP 1.09 AZP 91.80 TAL 41.95 TAP 177.00 RCA 142.40 APO 245.85 V2 22.314  
 RC 290.907 GL 13.45 GP -17.30 ZAL 31.26 ZAP 73.02 ETS 176.19 ZAE 102.67 ETE 185.90 ZAC 71.64 ETC 284.93 LVI -5.41

DISTANCE 475.713 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.334 VHL 6.191 DLA 19.66 RAL 11.72 RAD 6650.1 VEL 12.578 PTH 7.44 VHP 2.631 DPA -9.90 RAP 23.42 ECC 1.6309  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 21 54 3693.44 -47.56 146.53 264.58 88.59 8 23 28 2693.4 -42.52 112.81  
 60.00 7 38 7 3650.25 -40.08 142.10 264.03 85.34 8 38 57 2650.3 -37.57 111.25  
 70.00 8 2 59 3577.04 -33.44 135.30 263.16 82.63 9 2 36 2577.0 -33.01 106.57  
 80.00 8 44 30 3446.89 -28.48 124.58 262.31 80.64 9 41 57 2446.9 -29.51 97.21  
 90.00 9 53 29 3224.20 -26.54 107.85 261.94 79.86 10 47 13 2224.2 -28.13 80.95  
 100.00 11 27 22 2921.36 -28.48 85.95 262.31 80.64 12 16 3 1921.4 -29.51 58.58  
 110.00 13 2 25 2623.85 -33.44 64.22 263.16 82.63 13 46 9 1623.9 -33.01 35.48

DIFFERENTIAL CORRECTIONS  
 TDE -.6653 TRA-2.9896 TC3-2.6364 BAU 1.4575 SGT 4434.8 SGR 1424.3 SG3 1234.4 ST 54.0 SR 21.4 SS 25.4  
 RDE -.4474 RRA -.3423 RC3-1.0665 FAU .47429 RRT .8794 RRF .9132 RTF .9216 CRT .7526 CRS .3924 CST -.2978  
 FDE 1.4740 FRA-5.8460 FC-10.7113 BSP 7765 SGB 4657.9 R23 .1782 R13 .9296 LSA 56.8 MSA 27.9 SSA 2.3  
 BDE .8018 BRA 3.0091 BC3 2.8440 FSP 2135 SG1 4612.1 SG2 652.1 THA 16.10 EL1 56.5 EL2 13.5 ALF 17.65

LAUNCH DATE SEP 13 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 29 1974

HELIOCENTRIC CONIC  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.868 GAL 8.40 AZL 87.41 HCA 135.95 SMA 194.26 ECC .26639 INC 2.5891 V1 29.603  
 RP 245.93 LAP 1.80 LOP 126.04 VP 19.903 GAP .87 AZP 91.86 TAL 41.66 TAP 177.60 RCA 142.51 APO 246.00 V2 22.295  
 RC 293.430 GL 13.76 GP -17.51 ZAL 31.58 ZAP 72.05 ETS 175.79 ZAE 101.39 ETE 185.49 ZAC 71.47 ETC 284.95 LVI -5.22

DISTANCE 479.506 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.153 VHL 6.177 DLA 20.03 RAL 11.81 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 2.640 DPA -10.15 RAP 23.39 ECC 1.6279  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 36 3700.13 -47.55 147.18 264.93 88.09 8 22 16 2700.1 -42.70 113.35  
 60.00 7 36 15 3658.44 -40.03 142.79 264.29 84.87 8 37 14 2658.4 -37.72 111.89  
 70.00 8 0 23 3597.40 -33.35 136.09 263.35 82.17 9 0 10 2587.4 -33.12 107.35  
 80.00 8 41 3 3459.88 -28.33 125.52 262.44 80.17 9 38 43 2459.9 -29.58 98.17  
 90.00 9 49 35 3238.65 -26.36 108.87 262.04 79.38 10 43 34 2238.6 -28.18 82.01  
 100.00 11 23 55 2934.36 -28.33 86.89 262.44 80.17 12 12 49 1934.4 -29.58 59.54  
 110.00 12 59 49 2634.22 -33.35 65.01 263.35 82.17 13 43 43 1634.2 -33.12 36.27

DIFFERENTIAL CORRECTIONS  
 TDE -.6567 TRA-3.0448 TC3-2.7230 BAU 1.4949 SGT 4552.4 SGR 1439.7 SG3 1245.3 ST 54.6 SR 20.7 SS 25.8  
 RDE -.4303 RRA -.3525 RC3-1.0837 FAU .46967 RRT .8839 RRF .9173 RTF .9223 CRT .7534 CRS .4025 CST -.2858  
 FDE 1.5436 FRA-5.7615 FC-10.6572 BSP 7990 SGB 4774.6 R23 .1821 R13 .9301 LSA 57.3 MSA 28.1 SSA 2.2  
 BDE .7851 BRA 3.0652 BC3 2.9307 FSP 2118 SG1 4730.4 SG2 648.1 THA 15.92 EL1 57.0 EL2 13.1 ALF 16.86

LAUNCH DATE SEP 13 1973

FLIGHT TIME 230.00

ARRIVAL DATE MAY 1 1974

HELIOCENTRIC CONIC  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.875 GAL 8.34 AZL 87.36 HCA 136.84 SMA 194.39 ECC .26632 INC 2.6414 V1 29.603  
 RP 246.12 LAP 1.81 LOP 126.93 VP 19.893 GAP .65 AZP 91.93 TAL 41.36 TAP 178.20 RCA 142.62 APO 246.16 V2 22.276  
 RC 295.928 GL 14.08 GP -17.73 ZAL 31.92 ZAP 71.11 ETS 175.37 ZAE 100.13 ETE 185.09 ZAC 71.28 ETC 284.97 LVI -5.01

DISTANCE 483.298 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.977 VHL 6.163 DLA 20.42 RAL 11.89 RAD 6650.0 VEL 12.564 PTH 7.43 VHP 2.650 DPA -10.40 RAP 23.37 ECC 1.6250  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 19 14 3707.08 -47.53 147.85 265.29 87.57 8 21 1 2707.1 -42.89 113.91  
 60.00 7 34 18 3666.97 -39.97 143.51 264.56 84.38 8 35 25 2667.0 -37.88 112.57  
 70.00 7 57 39 3598.21 -33.25 136.92 263.53 81.69 8 57 37 2598.2 -33.23 108.18  
 80.00 8 37 25 3473.50 -28.17 126.50 262.56 79.68 9 35 19 2473.5 -29.65 99.17  
 90.00 9 45 28 3253.83 -26.17 109.93 262.14 78.88 10 39 42 2253.8 -28.22 83.11  
 100.00 11 20 17 2947.98 -26.17 87.87 262.56 79.68 12 9 25 1948.0 -29.65 60.54  
 110.00 12 57 5 2645.02 -33.25 65.84 263.53 81.69 13 41 10 1645.0 -33.23 37.10

DIFFERENTIAL CORRECTIONS  
 TDE -.6472 TRA-3.0999 TC3-2.8099 BAU 1.5323 SGT 4670.4 SGR 1455.8 SG3 1235.6 ST 55.3 SR 20.0 SS 26.2  
 RDE -.4129 RRA -.3630 RC3-1.1013 FAU .46485 RRT .8882 RRF .9212 RTF .9229 CRT .7591 CRS .4103 CST -.2749  
 FDE 1.6122 FRA-5.6750 FC-10.5970 BSP 8208 SGB 4892.1 R23 .1862 R13 .9305 LSA 57.8 MSA 28.4 SSA 2.2  
 BDE .7876 BRA 3.1210 BC3 3.0180 FSP 2099 SG1 4849.5 SG2 644.2 THA 15.76 EL1 57.5 EL2 12.6 ALF 16.10

LAUNCH DATE SEP 13 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAY 3 1974

HELIOCENTRIC CONIC  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.882 GAL 8.29 AZL 87.30 HCA 137.73 SMA 194.53 ECC .26627 INC 2.6954 V1 29.603  
 RP 246.30 LAP 1.81 LOP 127.83 VP 19.885 GAP .44 AZP 92.00 TAL 41.06 TAP 178.79 RCA 142.73 APO 246.32 V2 22.258  
 RC 298.401 GL 14.41 GP -17.96 ZAL 32.26 ZAP 70.20 ETS 174.95 ZAE 98.90 ETE 184.68 ZAC 71.08 ETC 284.98 LVI -4.80

DISTANCE 487.089 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.804 VHL 6.149 DLA 20.81 RAL 11.97 RAD 6649.9 VEL 12.557 PTH 7.43 VHP 2.661 DPA -10.64 RAP 23.38 ECC 1.6222  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 17 48 3714.31 -47.51 148.55 265.66 87.03 8 19 42 2714.3 -43.08 114.50  
 60.00 7 32 15 3675.84 -39.91 144.26 264.82 83.88 8 33 31 2675.8 -38.03 113.27  
 70.00 7 54 46 3609.49 -33.13 137.78 263.72 81.19 8 54 56 2609.5 -33.34 109.04  
 80.00 8 33 35 3487.80 -27.99 127.53 262.69 79.16 9 31 43 2487.8 -29.71 100.23  
 90.00 9 41 6 3269.83 -25.95 111.06 262.23 78.35 10 35 36 2269.8 -28.25 84.28  
 100.00 11 16 27 2962.27 -27.99 88.89 262.69 79.16 12 5 49 1962.3 -29.71 61.60  
 110.00 12 54 13 2656.31 -33.13 66.70 263.72 81.19 13 38 29 1656.3 -33.34 37.96

DIFFERENTIAL CORRECTIONS  
 TDE -.6362 TRA-3.1541 TC3-2.8965 BAU 1.5694 SGT 4788.0 SGR 1472.3 SG3 1225.1 ST 56.0 SR 19.5 SS 26.7  
 RDE -.3950 RRA -.3735 RC3-1.1190 FAU .45975 RRT .8923 RRF .9250 RTF .9234 CRT .7575 CRS .4161 CST -.2649  
 FDE 1.6804 FRA-5.5844 FC-10.5284 BSP 8432 SGB 5009.3 R23 .1906 R13 .9308 LSA 58.3 MSA 28.6 SSA 2.2  
 BDE .7489 BRA 3.1761 BC3 3.1051 FSP 2079 SG1 4968.1 SG2 640.5 THA 15.61 EL1 57.9 EL2 12.2 ALF 15.37

LAUNCH DATE SEP 13 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 5 1974

HELIOCENTRIC CONIC				DISTANCE 490.879				EARTH TO MARS			
RL 150.51 LAL	-00 LOL 350.06 VL	32.890 GAL	8.23 AZL 87.25 HCA	136.83 SMA 194.66 ECC	.26621 INC 2.7511 V1	29.603					
RP 246.48 LAP	1.82 LOP 128.72 VP	19.878 GAP	.23 AZP 92.07 TAL	40.75 TAP 179.38 RCA	142.84 APO 246.49 V2	22.241					
RC 300.850 GL	14.75 GP -18.19 ZAL	32.61 ZAP	69.31 ETS 174.52 ZAE	97.69 ETE 184.28 ZAC	70.86 ETC 285.01 LVI	-4.57					
PLANETOCENTRIC CONIC											
C3 37.637 VHL	6.135 DLA 21.22 RAL	12.04 RAD 6646.8 VEL	12.551 PTH 7.42 VHP	2.673 DPA -10.89 RAP	23.41 ECC 1.6104						
LNCH AZMTH LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG		
50.00 7 16 17	3721.84	-47.48	149.28	268.04	86.48	8 18 19	2721.8	-43.28	115.12		
60.00 7 30 5	3685.08	-39.84	145.03	265.10	83.36	8 31 30	2685.1	-38.18	114.01		
70.00 7 51 45	3621.28	-33.01	138.68	263.91	80.68	8 52 6	2621.3	-33.44	109.84		
80.00 8 29 32	3502.83	-27.80	129.60	262.81	78.63	9 27 55	2502.8	-29.76	101.35		
90.00 9 36 28	3286.73	-25.72	112.24	262.32	77.81	10 31 15	2286.7	-28.27	85.52		
100.00 11 12 24	2977.31	-27.80	89.97	262.81	78.63	12 2 1	1977.3	-29.76	62.71		
110.00 12 51 11	2668.10	-33.01	67.59	263.91	80.68	13 35 40	1668.1	-33.44	38.86		
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY			
TDE -.6243 TRA-3.2085 TC3-2.9834	BAU 1.8065		SGT 4906.4 SGR 1489.8 SG3 1214.3		ST 56.6 SR 18.8 SS 27.2						
RDE -.3768 RRA -.3845 RC3-1.1371	FAU .45452		RRT .8963 RRF .9288 RTF .9238		CRT .7611 CR8 .4187 CST -.2564						
FDE 1.7476 FRA-5.4952 FC-10.4348	BSP 8651		SG8 5127.5 R23 .1951 R13 .9311		LSA 58.8 MSA 28.8 SSA 2.2						
BDE .7291 BRA 3.2314 BC3 3.1928	FSP 2056		SG1 5087.8 SG2 636.9 THA 15.47		EL1 58.4 EL2 11.7 ALF 14.67						

LAUNCH DATE SEP 13 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 7 1974

HELIOCENTRIC CONIC				DISTANCE 494.676				EARTH TO MARS			
RL 150.51 LAL	-00 LOL 350.06 VL	32.897 GAL	8.17 AZL 87.19 HCA	139.52 SMA 194.80 ECC	.26617 INC 2.8087 V1	29.603					
RP 246.65 LAP	1.82 LOP 129.61 VP	19.871 GAP	.01 AZP 92.14 TAL	40.45 TAP 179.96 RCA	142.95 APO 246.63 V2	22.224					
RC 303.274 GL	15.11 GP -18.44 ZAL	32.97 ZAP	68.45 ETS 174.09 ZAE	96.49 ETE 183.89 ZAC	70.64 ETC 285.03 LVI	-4.34					
PLANETOCENTRIC CONIC											
C3 37.476 VHL	6.122 DLA 21.64 RAL	12.12 RAD 6649.8 VEL	12.544 PTH 7.42 VHP	2.686 DPA -11.13 RAP	23.47 ECC 1.6168						
LNCH AZMTH LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG		
50.00 7 14 42	3729.68	-47.44	150.03	266.43	85.90	8 16 52	2729.7	-43.47	115.77		
60.00 7 27 49	3694.72	-39.76	145.84	265.38	82.82	8 29 24	2694.7	-38.34	114.78		
70.00 7 48 34	3633.63	-32.87	139.61	264.10	80.14	8 49 8	2633.6	-33.55	110.89		
80.00 8 25 13	3518.68	-27.58	129.73	262.92	78.08	9 23 52	2518.7	-29.80	102.52		
90.00 9 31 31	3304.62	-25.45	113.48	262.40	77.24	10 26 36	2304.6	-28.28	86.83		
100.00 11 8 5	2993.15	-27.58	91.09	262.92	78.08	11 57 58	1993.1	-29.80	63.89		
110.00 12 48 0	2680.44	-32.87	68.53	264.10	80.14	13 32 41	1680.4	-33.55	39.81		
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY			
TDE -.6109 TRA-3.2823 TC3-3.0701	BAU 1.6435		SGT 5024.5 SGR 1507.5 SG3 1202.8		ST 57.2 SR 17.9 SS 27.7						
RDE -.3581 RRA -.3957 RC3-1.1555	FAU .44906		RRT .9002 RRF .9324 RTF .9241		CRT .7658 CR8 .4185 CST -.2492						
FDE 1.8140 FRA-5.4029 FC-10.3739	BSP 8866		SG8 5245.8 R23 .1998 R13 .9313		LSA 59.3 MSA 29.1 SSA 2.1						
BDE .7081 BRA 3.2862 BC3 3.2804	FSP 2032		SG1 5207.4 SG2 633.6 THA 15.35		EL1 58.9 EL2 11.2 ALF 14.00						

LAUNCH DATE SEP 13 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 9 1974

HELIOCENTRIC CONIC				DISTANCE 498.455				EARTH TO MARS			
RL 150.51 LAL	-00 LOL 350.06 VL	32.905 GAL	8.11 AZL 87.13 HCA	140.41 SMA 194.94 ECC	.26613 INC 2.8685 V1	29.603					
RP 246.82 LAP	1.83 LOP 130.50 VP	19.865 GAP	-.20 AZP 92.21 TAL	40.14 TAP 180.54 RCA	143.06 APO 246.83 V2	22.207					
RC 305.673 GL	15.48 GP -18.70 ZAL	33.34 ZAP	67.62 ETS 173.65 ZAE	95.32 ETE 183.49 ZAC	70.40 ETC 285.05 LVI	-4.09					
PLANETOCENTRIC CONIC											
C3 37.320 VHL	6.109 DLA 22.07 RAL	12.19 RAD 6649.7 VEL	12.538 PTH 7.41 VHP	2.699 DPA -11.38 RAP	23.55 ECC 1.6142						
LNCH AZMTH LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG		
50.00 7 13 1	3737.85	-47.40	150.82	266.83	85.29	8 15 19	2737.9	-43.68	116.45		
60.00 7 25 26	3704.78	-39.67	146.68	265.66	82.25	8 27 11	2704.8	-38.50	115.59		
70.00 7 45 12	3646.57	-32.71	140.59	264.29	79.58	8 45 59	2646.6	-33.65	111.89		
80.00 8 20 39	3535.41	-27.34	130.91	263.03	77.50	9 19 34	2535.4	-29.83	103.76		
90.00 9 26 14	3323.64	-25.16	114.80	262.47	76.64	10 21 38	2323.6	-28.27	88.22		
100.00 11 3 31	3009.88	-27.34	92.28	263.03	77.50	11 53 41	2009.9	-29.83	65.13		
110.00 12 44 38	2693.38	-32.71	69.51	264.29	79.58	13 29 32	1693.4	-33.65	40.81		
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY			
TDE -.5980 TRA-3.3152 TC3-3.1569	BAU 1.6803		SGT 5142.3 SGR 1526.1 SG3 1190.6		ST 57.9 SR 17.2 SS 28.2						
RDE -.3388 RRA -.4070 RC3-1.1742	FAU .44340		RRT .9038 RRF .9359 RTF .9244		CRT .7720 CR8 .4154 CST -.2426						
FDE 1.8814 FRA-5.3079 FC-10.2859	BSP 9088		SG8 5363.9 R23 .2048 R13 .9314		LSA 59.8 MSA 29.4 SSA 2.1						
BDE .6856 BRA 3.3401 BC3 3.3678	FSP 2008		SG1 5326.8 SG2 630.5 THA 15.23		EL1 59.4 EL2 10.6 ALF 13.35						

LAUNCH DATE SEP 13 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 11 1974

HELIOCENTRIC CONIC				DISTANCE 502.242				EARTH TO MARS			
RL 150.51 LAL	-00 LOL 350.06 VL	32.912 GAL	8.05 AZL 87.07 HCA	141.30 SMA 195.09 ECC	.26610 INC 2.9304 V1	29.603					
RP 246.98 LAP	1.83 LOP 131.39 VP	19.860 GAP	-.41 AZP 92.29 TAL	39.82 TAP 181.12 RCA	143.18 APO 247.00 V2	22.191					
RC 308.046 GL	15.86 GP -18.96 ZAL	33.71 ZAP	66.81 ETS 173.20 ZAE	94.18 ETE 183.09 ZAC	70.14 ETC 285.08 LVI	-3.82					
PLANETOCENTRIC CONIC											
C3 37.170 VHL	6.097 DLA 22.51 RAL	12.26 RAD 6649.7 VEL	12.532 PTH 7.41 VHP	2.712 DPA -11.63 RAP	23.65 ECC 1.6117						
LNCH AZMTH LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG		
50.00 7 11 15	3746.38	-47.35	151.63	267.24	84.66	8 13 42	2746.4	-43.88	117.17		
60.00 7 22 55	3715.30	-39.57	147.56	265.95	81.66	8 24 50	2715.3	-38.65	116.44		
70.00 7 41 38	3660.13	-32.54	141.61	264.47	79.00	8 42 39	2660.2	-33.74	112.94		
80.00 8 15 46	3553.14	-27.07	132.16	263.13	76.90	9 14 59	2553.1	-29.85	105.08		
90.00 9 20 34	3343.91	-24.83	116.19	262.53	76.02	10 16 18	2343.9	-28.25	89.70		
100.00 10 58 38	3027.61	-27.07	93.53	263.13	76.90	11 49 5	2027.6	-29.85	66.45		
110.00 12 41 5	2706.97	-32.54	70.53	264.47	79.00	13 26 12	1707.0	-33.74	41.86		
DIFFERENTIAL CORRECTIONS				MID-COURSE EXECUTION ACCURACY				ORBIT DETERMINATION ACCURACY			
TDE -.5796 TRA-3.3677 TC3-3.2423	BAU 1.7168		SGT 5259.7 SGR 1545.2 SG3 1177.7		ST 58.5 SR 16.4 SS 28.7						
RDE -.3190 RRA -.4185 RC3-1.1931	FAU .43747		RRT .9073 RRF .9392 RTF .9245		CRT .7797 CR8 .4086 CST -.2375						
FDE 1.9483 FRA-5.2102 FC-10.1892	BSP 9312		SG8 5482.0 R23 .2100 R13 .9315		LSA 60.3 MSA 29.7 SSA 2.0						
BDE .6616 BRA 3.3936 BC3 3.4549	FSP 1985		SG1 5445.9 SG2 627.6 THA 15.13		EL1 59.9 EL2 10.0 ALF 12.73						

LAUNCH DATE SEP 13 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 13 1974

HELIOCENTRIC CONIC

DISTANCE 506.028

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.920 GAL 7.99 AZL 87.01 HCA 142.18 SMA 195.23 ECC .26608 INC 2.9947 V1 29.603
RP 247.14 LAP 1.84 LOP 132.28 VP 19.855 GAP -.61 AZP 92.37 TAL 39.51 TAP 181.69 RCA 143.29 APO 247.18 V2 22.176
RC 310.395 GL 16.25 GP -19.24 ZAL 34.10 ZAP 66.03 ETS 172.74 ZAE 93.05 ETE 182.69 ZAC 69.87 ETC 285.10 LVI -3.55

PLANETOCENTRIC CONIC

C3 37.028 VHL 6.085 DLA 22.97 RAL 12.32 RAD 6649.6 VEL 12.527 PTH 7.41 VHP 2.727 DPA -11.88 RAP 23.78 ECC 1.6094
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 9 23 3755.28 -47.29 152.49 267.66 84.01 8 11 58 2755.3 -44.09 117.92
60.00 7 20 15 3726.31 -39.46 148.47 266.25 81.05 8 22 22 2726.3 -38.81 117.33
70.00 7 37 52 3674.44 -32.35 142.68 264.66 78.39 8 39 6 2674.4 -33.83 114.04
80.00 8 10 32 3571.97 -26.77 133.48 263.21 76.26 9 10 4 2572.0 -29.86 106.48
90.00 9 14 27 3365.62 -24.47 117.68 262.57 75.36 10 10 32 2365.6 -28.20 91.29
100.00 10 53 24 3046.44 -26.77 94.85 263.21 76.26 11 44 10 2046.4 -29.86 67.85
110.00 12 37 18 2721.26 -32.35 71.60 264.66 78.39 13 22 39 1721.3 -33.83 42.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5613 TRA-3.4194 TC3-3.3275 BAU 1.7531 SGT 5376.6 SGR 1565.2 SG3 1164.3 ST 59.0 SR 15.7 SS 29.3
RDE -.2986 RRA -.4303 RC3-1.2124 FAU .43139 RRT .9106 RRF .9425 RTF .9245 CRT .7893 CRS .3971 CST -.2338
FDE 2.0148 FRA-5.1117 FC-10.0864 BSP 9539 SGB 5599.8 R23 .2154 R13 .9315 LSA 60.7 MSA 30.0 SSA 2.0
BDE .6358 BRA 3.4464 BC3 3.5415 FSP 1959 SG1 5564.8 SG2 625.1 THA 15.04 EL1 60.4 EL2 9.4 ALF 12.14

LAUNCH DATE SEP 13 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC

DISTANCE 509.813

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.928 GAL 7.94 AZL 86.94 HCA 143.07 SMA 195.38 ECC .26606 INC 3.0615 V1 29.603
RP 247.29 LAP 1.84 LOP 133.17 VP 19.851 GAP -.82 AZP 92.45 TAL 39.19 TAP 182.26 RCA 143.40 APO 247.36 V2 22.161
RC 312.717 GL 16.66 GP -19.53 ZAL 34.49 ZAP 65.28 ETS 172.26 ZAE 91.94 ETE 182.28 ZAC 69.58 ETC 285.13 LVI -3.25

PLANETOCENTRIC CONIC

C3 36.892 VHL 6.074 DLA 23.45 RAL 12.38 RAD 6649.6 VEL 12.521 PTH 7.40 VHP 2.742 DPA -12.13 RAP 23.92 ECC 1.6072
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 7 24 3764.60 -47.22 153.38 268.09 83.33 8 10 8 2764.6 -44.31 118.71
60.00 7 17 26 3737.84 -39.33 149.43 266.54 80.42 8 19 44 2737.8 -38.97 118.27
70.00 7 33 51 3689.49 -32.14 143.81 264.84 77.76 8 35 21 2689.5 -33.92 115.21
80.00 8 4 55 3592.05 -26.44 134.88 263.29 75.60 9 4 47 2592.1 -29.85 107.97
90.00 9 7 46 3389.00 -24.06 119.26 262.59 74.67 10 4 17 2389.0 -28.13 92.99
100.00 10 47 47 3066.52 -26.44 96.25 263.29 75.60 11 38 53 2066.5 -29.85 69.34
110.00 12 33 17 2736.31 -32.14 72.72 264.84 77.76 13 18 54 1736.3 -33.92 44.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5423 TRA-3.4717 TC3-3.4133 BAU 1.7899 SGT 5495.1 SGR 1586.5 SG3 1150.7 ST 59.7 SR 14.9 SS 29.9
RDE -.2779 RRA -.4427 RC3-1.2323 FAU .42525 RRT .9138 RRF .9456 RTF .9246 CRT .8015 CRS .3797 CST -.2318
FDE 2.0793 FRA-5.0146 FC3-9.9791 BSP 9752 SGB 5719.5 R23 .2209 R13 .9314 LSA 61.3 MSA 30.3 SSA 2.0
BDE .6093 BRA 3.4998 BC3 3.6290 FSP 1931 SG1 5685.5 SG2 622.9 THA 14.96 EL1 60.9 EL2 8.8 ALF 11.60

LAUNCH DATE SEP 13 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC

DISTANCE 513.597

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.936 GAL 7.88 AZL 86.87 HCA 143.95 SMA 195.53 ECC .26605 INC 3.1311 V1 29.603
RP 247.44 LAP 1.84 LOP 134.06 VP 19.848 GAP -1.02 AZP 92.53 TAL 38.87 TAP 182.83 RCA 143.51 APO 247.55 V2 22.147
RC 315.013 GL 17.09 GP -19.84 ZAL 34.90 ZAP 64.55 ETS 171.78 ZAE 90.86 ETE 181.88 ZAC 69.27 ETC 285.16 LVI -2.94

PLANETOCENTRIC CONIC

C3 36.766 VHL 6.063 DLA 23.93 RAL 12.44 RAD 6649.5 VEL 12.516 PTH 7.40 VHP 2.758 DPA -12.39 RAP 24.10 ECC 1.6051
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 5 18 3774.34 -47.14 154.30 268.53 82.62 8 8 12 2774.3 -44.53 119.55
60.00 7 14 27 3749.94 -39.19 150.42 266.84 79.75 8 16 57 2749.9 -39.12 119.26
70.00 7 29 34 3705.39 -31.90 144.99 265.01 77.10 8 31 20 2705.4 -33.99 116.45
80.00 7 58 51 3613.55 -26.07 136.37 263.35 74.90 8 59 4 2613.6 -29.81 109.57
90.00 9 0 33 3414.32 -23.59 120.97 262.59 73.93 9 57 27 2414.3 -28.03 94.84
100.00 10 41 43 3088.02 -26.07 97.74 263.35 74.90 11 33 11 2088.0 -29.81 70.94
110.00 12 29 1 2752.21 -31.90 73.90 265.01 77.10 13 14 53 1752.2 -33.99 45.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5212 TRA-3.5230 TC3-3.4980 BAU 1.8262 SGT 5612.7 SGR 1608.7 SG3 1136.4 ST 60.3 SR 14.2 SS 30.5
RDE -.2563 RRA -.4555 RC3-1.2526 FAU .41889 RRT .9168 RRF .9486 RTF .9245 CRT .8162 CRS .3561 CST -.2311
FDE 2.1445 FRA-4.9152 FC3-9.8637 BSP 9971 SGB 5838.7 R23 .2266 R13 .9313 LSA 61.8 MSA 30.7 SSA 1.9
BDE .5808 BRA 3.5523 BC3 3.7155 FSP 1903 SG1 5805.5 SG2 621.0 THA 14.90 EL1 61.4 EL2 8.1 ALF 11.08

LAUNCH DATE SEP 13 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC

DISTANCE 517.380

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.943 GAL 7.81 AZL 86.80 HCA 144.84 SMA 195.68 ECC .26604 INC 3.2036 V1 29.603
RP 247.58 LAP 1.84 LOP 134.94 VP 19.846 GAP -1.23 AZP 92.62 TAL 38.55 TAP 183.39 RCA 143.62 APO 247.74 V2 22.133
RC 317.282 GL 17.53 GP -20.16 ZAL 35.32 ZAP 63.85 ETS 171.29 ZAE 89.80 ETE 181.46 ZAC 68.94 ETC 285.19 LVI -2.82

PLANETOCENTRIC CONIC

C3 36.648 VHL 6.054 DLA 24.44 RAL 12.48 RAD 6649.5 VEL 12.511 PTH 7.39 VHP 2.775 DPA -12.66 RAP 24.29 ECC 1.6031
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 3 3 3784.56 -47.04 155.27 268.98 81.88 8 6 8 2784.6 -44.75 120.43
60.00 7 11 16 3762.66 -39.03 151.47 267.14 79.06 8 13 59 2762.7 -39.28 120.31
70.00 7 25 0 3722.22 -31.64 146.23 265.17 76.41 8 27 2 2722.2 -34.05 117.76
80.00 7 52 16 3636.68 -25.65 137.96 263.38 74.16 8 52 52 2636.7 -29.75 111.29
90.00 8 52 33 3441.98 -23.06 122.82 262.55 73.16 9 49 55 2442.0 -27.88 96.84
100.00 10 35 7 3111.15 -25.65 99.33 263.38 74.16 11 26 59 2111.2 -29.75 72.65
110.00 12 24 26 2769.04 -31.64 75.14 265.17 76.41 13 10 35 1769.0 -34.05 46.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4978 TRA-3.5733 TC3-3.5808 BAU 1.8620 SGT 5728.7 SGR 1631.2 SG3 1121.2 ST 60.8 SR 13.5 SS 31.2
RDE -.2338 RRA -.4683 RC3-1.2728 FAU .41218 RRT .9197 RRF .9485 RTF .9243 CRT .8336 CRS .3252 CST -.2317
FDE 2.2110 FRA-4.8128 FC3-9.7370 BSP 10201 SGB 5956.5 R23 .2326 R13 .9311 LSA 62.3 MSA 31.0 SSA 1.9
BDE .5500 BRA 3.6039 BC3 3.8003 FSP 1877 SG1 5924.2 SG2 619.4 THA 14.84 EL1 61.9 EL2 7.3 ALF 10.60

LAUNCH DATE SEP 13 1973 FLIGHT TIME 250.00 ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC DISTANCE 521.165 EARTH TO MARS  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.951 GAL 7.75 AZL 86.72 HCA 145.72 SMA 195.83 ECC .26604 INC 3.2792 V1 29.603  
 RP 247.71 LAP 1.85 LOP 135.83 VP 19.845 GAP -1.43 AZP 92.71 TAL 38.23 TAP 183.95 RCA 143.73 APO 247.93 V2 22.120  
 RC 319.522 GL 18.00 GP -20.49 ZAL 35.74 ZAP 63.18 ETS 170.79 ZAE 88.75 ETE 181.05 ZAC 68.60 ETC 285.23 LVI -2.20

PLANETOCENTRIC CONIC  
 C3 36.541 VHL 6.045 DLA 24.96 RAL 12.52 RAD 6649.4 VEL 12.507 PTH 7.39 VHP 2.792 DPA -12.93 RAP 24.50 ECC 1.6014  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 0 41 3795.26 -46.94 158.29 269.44 81.10 8 3 56 2795.3 -44.97 121.37  
 60.00 7 7 54 3776.03 -38.86 152.56 267.44 78.34 8 10 50 2776.0 -39.43 121.41  
 70.00 7 20 6 3740.06 -31.35 147.53 265.33 75.69 8 22 26 2740.1 -34.10 119.15  
 80.00 7 45 5 3661.68 -25.17 139.66 263.39 73.39 8 46 6 2661.7 -29.66 113.14  
 90.00 8 43 40 3472.45 -22.44 124.84 262.47 72.33 9 41 33 2472.4 -27.68 99.05  
 100.00 10 27 56 3136.15 -25.17 101.03 263.39 73.39 11 20 13 2136.2 -29.66 74.51  
 110.00 12 19 32 2786.87 -31.35 76.45 265.33 75.69 13 5 59 1786.9 -34.10 48.07

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4826 TRA-3.6324 TC3-3.6735 BAU 1.9039 SGT 5861.3 SGR 1667.6 SG3 1114.0 ST 61.7 SR 13.1 SS 31.4  
 RDE -.2178 RRA -.4889 RC3-1.3018 FAU .40850 RRT .9234 RRF .9550 RTF .9258 CRT .8530 CRS .2746 CST -.2471  
 FDE 2.2129 FRA-4.7758 FC3-9.6782 BSP 10282 SGB 6093.9 R23 .2357 R13 .9326 LSA 63.3 MSA 31.0 SSA 1.8  
 BDE .5295 BRA 3.6652 BC3 3.8973 FSP 1781 SGI 6062.4 SG2 619.0 THA 14.88 EL1 62.8 EL2 6.7 ALF 10.36

LAUNCH DATE SEP 13 1973 FLIGHT TIME 252.00 ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC DISTANCE 524.946 EARTH TO MARS  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.959 GAL 7.69 AZL 86.64 HCA 146.60 SMA 195.98 ECC .26605 INC 3.3582 V1 29.603  
 RP 247.84 LAP 1.85 LOP 136.71 VP 19.844 GAP -1.63 AZP 92.80 TAL 37.90 TAP 184.51 RCA 143.84 APO 248.12 V2 22.107  
 RC 321.734 GL 18.48 GP -20.85 ZAL 36.18 ZAP 62.53 ETS 170.27 ZAE 87.73 ETE 180.63 ZAC 68.23 ETC 285.27 LVI -1.92

PLANETOCENTRIC CONIC  
 C3 36.443 VHL 6.037 DLA 25.50 RAL 12.56 RAD 6649.4 VEL 12.503 PTH 7.39 VHP 2.811 DPA -13.21 RAP 24.75 ECC 1.5998  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 58 8 3806.52 -46.81 157.35 269.91 80.30 8 1 35 2806.5 -45.20 122.36  
 60.00 7 4 17 3790.14 -38.66 153.70 267.74 77.59 8 7 27 2790.1 -39.57 122.58  
 70.00 7 14 49 3759.07 -31.02 148.92 265.47 74.93 8 17 29 2759.1 -34.14 120.63  
 80.00 7 37 9 3688.99 -24.63 141.51 263.36 72.56 8 38 38 2689.0 -29.52 115.16  
 90.00 8 33 37 3506.59 -21.72 127.09 262.34 71.43 9 32 4 2506.6 -27.41 101.51  
 100.00 10 20 1 3163.46 -24.63 102.88 263.36 72.56 11 12 45 2163.5 -29.52 76.53  
 110.00 12 14 16 2805.89 -31.02 77.84 265.47 74.93 13 1 2 1805.9 -34.14 49.55

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4541 TRA-3.6803 TC3-3.7532 BAU 1.9386 SGT 5974.7 SGR 1690.2 SG3 1095.9 ST 62.3 SR 12.3 SS 32.1  
 RDE -.1924 RRA -.5013 RC3-1.3214 FAU .40081 RRT .9258 RRF .9575 RTF .9252 CRT .8762 CRS .2276 CST -.2471  
 FDE 2.2923 FRA-4.6575 FC3-9.5215 BSP 10537 SGB 6209.2 R23 .2425 R13 .9319 LSA 63.8 MSA 31.5 SSA 1.8  
 BDE .4932 BRA 3.7143 BC3 3.9790 FSP 1769 SGI 6178.4 SG2 618.0 THA 14.83 EL1 63.2 EL2 5.8 ALF 9.91

LAUNCH DATE SEP 13 1973 FLIGHT TIME 254.00 ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC DISTANCE 528.726 EARTH TO MARS  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.967 GAL 7.63 AZL 86.56 HCA 147.48 SMA 196.14 ECC .26606 INC 3.4410 V1 29.603  
 RP 247.97 LAP 1.85 LOP 137.59 VP 19.844 GAP -1.83 AZP 92.90 TAL 37.58 TAP 185.06 RCA 143.95 APO 248.32 V2 22.095  
 RC 323.917 GL 18.98 GP -21.22 ZAL 36.64 ZAP 61.91 ETS 169.74 ZAE 86.73 ETE 180.20 ZAC 67.85 ETC 285.31 LVI -1.53

PLANETOCENTRIC CONIC  
 C3 36.358 VHL 6.030 DLA 26.06 RAL 12.58 RAD 6649.4 VEL 12.500 PTH 7.39 VHP 2.830 DPA -13.50 RAP 25.01 ECC 1.5984  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 25 3818.37 -46.67 158.45 270.39 79.45 7 59 4 2818.4 -45.43 123.41  
 60.00 7 0 25 3805.04 -38.43 154.91 268.04 76.80 8 3 50 2805.0 -39.71 123.83  
 70.00 7 9 8 3779.38 -30.65 150.39 265.59 74.13 8 12 7 2779.4 -34.15 122.22  
 80.00 7 28 21 3719.04 -24.00 143.52 263.29 71.68 8 30 20 2719.0 -29.34 117.37  
 90.00 8 22 3 3545.56 -20.85 129.61 262.12 70.45 9 21 9 2545.6 -27.05 104.31  
 100.00 10 11 13 3193.52 -24.00 104.89 263.29 71.68 11 4 26 2193.5 -29.34 76.74  
 110.00 12 8 34 2826.20 -30.65 79.30 265.59 74.13 12 55 40 1826.2 -34.15 51.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4239 TRA-3.7292 TC3-3.8323 BAU 1.9737 SGT 6088.8 SGR 1714.7 SG3 1077.7 ST 62.9 SR 11.6 SS 32.9  
 RDE -.1663 RRA -.5145 RC3-1.3420 FAU .39315 RRT .9280 RRF .9598 RTF .9244 CRT .9020 CRS .1662 CST -.2495  
 FDE 2.3686 FRA-4.5404 FC3-9.3615 BSP 10781 SGB 6325.6 R23 .2495 R13 .9312 LSA 64.4 MSA 32.0 SSA 1.7  
 BDE .4553 BRA 3.7635 BC3 4.0605 FSP 1751 SGI 6295.4 SG2 617.7 THA 14.79 EL1 63.7 EL2 4.9 ALF 9.52

LAUNCH DATE SEP 13 1973 FLIGHT TIME 256.00 ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC DISTANCE 532.506 EARTH TO MARS  
 RL 150.51 LAL -.00 LOL 350.06 VL 32.975 GAL 7.57 AZL 86.47 HCA 148.36 SMA 196.29 ECC .26607 INC 3.5277 V1 29.603  
 RP 248.09 LAP 1.85 LOP 138.48 VP 19.844 GAP -2.03 AZP 93.00 TAL 37.25 TAP 185.61 RCA 144.06 APO 248.52 V2 22.084  
 RC 326.069 GL 19.51 GP -21.61 ZAL 37.10 ZAP 61.32 ETS 169.19 ZAE 85.76 ETE 179.78 ZAC 67.44 ETC 285.35 LVI -1.13

PLANETOCENTRIC CONIC  
 C3 36.285 VHL 6.024 DLA 26.65 RAL 12.60 RAD 6649.4 VEL 12.497 PTH 7.38 VHP 2.850 DPA -13.80 RAP 25.31 ECC 1.5972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 31 3830.85 -46.51 159.62 270.87 78.57 7 56 22 2830.8 -45.65 124.53  
 60.00 6 56 17 3820.82 -38.18 156.17 268.33 75.97 7 59 58 2820.8 -39.84 125.15  
 70.00 7 2 57 3801.16 -30.23 151.95 265.69 73.30 8 6 18 2801.2 -34.14 123.92  
 80.00 7 18 26 3752.55 -23.26 143.74 263.16 70.74 8 20 58 2752.5 -29.08 119.83  
 90.00 8 8 17 3591.44 -19.78 132.55 261.80 69.37 9 8 9 2591.4 -26.54 107.57  
 100.00 10 1 17 3227.02 -23.26 107.10 263.16 70.74 10 55 4 2227.0 -29.08 81.20  
 110.00 12 2 23 2847.98 -30.23 80.86 265.69 73.30 12 49 51 1848.0 -34.14 52.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3920 TRA-3.7760 TC3-3.9103 BAU 2.0088 SGT 6203.1 SGR 1741.2 SG3 1059.4 ST 63.5 SR 11.0 SS 33.7  
 RDE -.1397 RRA -.5286 RC3-1.3633 FAU .38546 RRT .9303 RRF .9621 RTF .9238 CRT .9290 CRS .0887 CST -.2547  
 FDE 2.4400 FRA-4.4271 FC3-9.1967 BSP 11027 SGB 6442.8 R23 .2564 R13 .9306 LSA 65.0 MSA 32.5 SSA 1.7  
 BDE .4162 BRA 3.8128 BC3 4.1411 FSP 1731 SGI 6413.1 SG2 617.9 THA 14.77 EL1 64.3 EL2 4.0 ALF 9.20

LAUNCH DATE SEP 13 1973

FLIGHT TIME 290.00

ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC

DISTANCE 536.284

EARTH TO MARS

RL 150.51 LAL -.00 LOL 380.06 VL 32.984 GAL 7.51 AZL 86.38 HCA 149.24 SMA 196.44 ECC .26609 INC 3.6188 V1 29.603  
 RP 248.20 LAP 1.85 LOP 139.36 VP 19.846 GAP -2.22 AZP 93.11 TAL 36.91 TAP 186.16 RCA 144.17 APO 248.72 V2 22.073  
 RC 328.191 GL 20.06 GP -22.02 ZAL 37.58 ZAP 60.76 ETS 169.62 ZAE 84.80 ETE 179.32 ZAC 67.00 ETC 285.40 LVI -.70

PLANETOCENTRIC CONIC

C3 36.227 VHL 6.019 DLA 27.25 RAL 12.60 RAD 6649.3 VEL 12.495 PTH 7.38 VHP 2.871 DPA -14.11 RAP 25.62 ECC 1.5962  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 24 3844.02 -46.32 160.83 271.36 77.65 7 53 28 2844.0 -45.88 125.71  
 60.00 6 51 49 3837.55 -37.89 157.50 268.61 75.11 7 55 47 2837.6 -39.97 126.55  
 70.00 6 56 12 3824.63 -29.76 153.61 265.77 72.42 7 59 57 2824.6 -34.11 125.75  
 80.00 7 7 3 3790.56 -22.39 148.22 262.95 69.71 8 10 14 2790.6 -28.73 122.60  
 90.00 7 50 58 3648.62 -18.37 136.15 261.30 68.11 8 51 46 2648.6 -25.79 111.58  
 100.00 9 49 55 3265.03 -22.39 109.59 262.95 69.71 10 44 20 2265.0 -28.73 83.97  
 110.00 11 55 39 2871.45 -29.76 82.53 265.77 72.42 12 43 30 1871.4 -34.11 54.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3582 TRA-3.8237 TC3-3.9869 BAU 2.0442 SGT 6317.6 SGR 1769.5 SG3 1040.8 ST 64.1 SR 10.5 SS 34.5  
 RDE -.1121 RRA -.5436 RC3-1.3853 FAU .37770 RRT .9324 RRF .9642 RTF .9231 CRT .9549 CRS -.0057 CST -.2620  
 FDE 2.5098 FRA-4.3152 FC3-9.0261 BSP 11264 SGB 6560.8 R23 .2634 R13 .9299 LSA 65.7 MSA 33.0 SSA 1.6  
 BDE .3753 BRA 3.8621 BC3 4.2207 FSP 1706 SG1 6531.5 S62 618.8 THA 14.77 EL1 64.9 EL2 3.1 ALF 8.93

LAUNCH DATE SEP 13 1973

FLIGHT TIME 260.00

ARRIVAL DATE MAY 31 1974

HELIOCENTRIC CONIC

DISTANCE 540.063

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 32.992 GAL 7.44 AZL 86.29 HCA 150.12 SMA 196.60 ECC .26612 INC 3.7146 V1 29.603  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.848 GAP -2.42 AZP 93.22 TAL 36.58 TAP 186.70 RCA 144.28 APO 248.92 V2 22.062  
 RC 330.283 GL 20.63 GP -22.45 ZAL 38.08 ZAP 60.23 ETS 168.04 ZAE 83.87 ETE 178.86 ZAC 66.54 ETC 285.45 LVI -.25

PLANETOCENTRIC CONIC

C3 36.185 VHL 6.015 DLA 27.88 RAL 12.59 RAD 6649.3 VEL 12.493 PTH 7.38 VHP 2.893 DPA -14.43 RAP 25.96 ECC 1.5955  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 46 3 3857.94 -46.11 162.11 271.86 76.68 7 50 21 2857.9 -46.11 126.98  
 60.00 6 47 1 3855.35 -37.57 158.91 268.89 74.21 7 51 16 2855.3 -40.08 128.06  
 70.00 6 48 49 3850.05 -29.23 155.39 265.80 71.48 7 52 59 2850.1 -34.03 127.73  
 80.00 6 53 39 3834.87 -21.31 151.07 262.63 68.58 7 57 34 2834.9 -28.24 125.80  
 90.00 7 25 50 3730.73 -16.21 141.21 260.40 66.50 8 28 1 2730.7 -24.50 117.25  
 100.00 9 36 30 3309.34 -21.31 112.44 262.63 68.58 10 31 40 2309.3 -28.24 87.17  
 110.00 11 48 15 2896.87 -29.23 84.31 265.80 71.48 12 36 32 1896.9 -34.03 56.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3224 TRA-3.8712 TC3-4.0619 BAU 2.0797 SGT 6432.3 SGR 1800.3 SG3 1022.1 ST 64.8 SR 10.2 SS 35.3  
 RDE -.0839 RRA -.5598 RC3-1.4083 FAU .36994 RRT .9344 RRF .9663 RTF .9224 CRT .9757 CRS -.1151 CST -.2721  
 FDE 2.5744 FRA-4.2071 FC3-8.8510 BSP 11499 SGB 6679.5 R23 .2703 R13 .9294 LSA 66.5 MSA 33.5 SSA 1.5  
 BDE .3331 BRA 3.9114 BC3 4.2991 FSP 1678 SG1 6650.6 S62 620.1 THA 14.79 EL1 65.6 EL2 2.2 ALF 8.75

LAUNCH DATE SEP 13 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 2 1974

HELIOCENTRIC CONIC

DISTANCE 543.840

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 33.000 GAL 7.38 AZL 86.18 HCA 151.00 SMA 196.76 ECC .26615 INC 3.8156 V1 29.603  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.850 GAP -2.61 AZP 93.34 TAL 36.25 TAP 187.25 RCA 144.39 APO 249.12 V2 22.052  
 RC 332.344 GL 21.23 GP -22.91 ZAL 38.59 ZAP 59.73 ETS 167.44 ZAE 82.97 ETE 178.39 ZAC 66.05 ETC 285.51 LVI .23

PLANETOCENTRIC CONIC

C3 36.161 VHL 6.013 DLA 28.53 RAL 12.56 RAD 6649.3 VEL 12.492 PTH 7.38 VHP 2.916 DPA -14.78 RAP 26.33 ECC 1.5951  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 42 26 3872.68 -45.87 163.45 272.36 75.68 7 46 59 2872.7 -46.33 128.33  
 60.00 6 41 49 3874.33 -37.21 160.39 269.14 73.26 7 46 23 2874.3 -40.17 129.66  
 70.00 6 40 38 3877.79 -28.61 157.32 265.80 70.50 7 45 16 2877.8 -33.91 129.89  
 80.00 6 37 5 3888.97 -19.93 154.49 262.13 67.30 7 41 54 2889.0 -27.53 129.66  
 86.07 6 10 36 3973.44 -12.45 137.19 258.62 64.12 7 17 9 2973.4 -22.06 134.22  
 100.00 9 19 57 3363.44 -19.93 115.86 262.13 67.30 10 16 1 2363.4 -27.33 91.03  
 110.00 11 40 5 2924.61 -28.61 86.24 265.80 70.50 12 28 49 1924.6 -33.91 58.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2845 TRA-3.9184 TC3-4.1348 BAU 2.1154 SGT 6546.8 SGR 1832.7 SG3 1002.8 ST 65.6 SR 10.1 SS 36.1  
 RDE -.0544 RRA -.5787 RC3-1.4317 FAU .36198 RRT .9363 RRF .9683 RTF .9217 CRT .9877 CRS -.2359 CST -.2835  
 FDE 2.6383 FRA-4.0976 FC3-8.6882 BSP 11735 SGB 6798.5 R23 .2773 R13 .9287 LSA 67.4 MSA 34.1 SSA 1.5  
 BDE .2897 BRA 3.9608 BC3 4.3756 FSP 1649 SG1 6770.0 S62 622.2 THA 14.82 EL1 66.3 EL2 1.6 ALF 8.83

LAUNCH DATE SEP 13 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 4 1974

HELIOCENTRIC CONIC

DISTANCE 547.617

EARTH TO MARS

RL 150.51 LAL -.00 LOL 350.06 VL 33.000 GAL 7.32 AZL 86.08 HCA 151.88 SMA 196.91 ECC .26618 INC 3.9223 V1 29.603  
 RP 248.50 LAP 1.85 LOP 141.99 VP 19.854 GAP -2.80 AZP 93.46 TAL 35.91 TAP 187.79 RCA 144.50 APO 249.33 V2 22.043  
 RC 334.376 GL 21.87 GP -23.39 ZAL 39.12 ZAP 59.26 ETS 166.82 ZAE 82.08 ETE 177.92 ZAC 65.54 ETC 285.57 LVI .74

PLANETOCENTRIC CONIC

C3 36.158 VHL 6.013 DLA 29.21 RAL 12.52 RAD 6649.3 VEL 12.492 PTH 7.38 VHP 2.940 DPA -15.13 RAP 26.72 ECC 1.5951  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 38 32 3888.32 -45.60 164.86 272.85 74.62 7 43 20 2888.3 -46.55 129.78  
 60.00 6 36 10 3894.63 -36.80 161.96 269.38 72.26 7 41 4 2894.6 -40.24 131.38  
 70.00 6 31 32 3908.32 -27.90 159.41 265.73 69.45 7 36 40 2908.3 -33.72 132.25  
 80.00 6 14 27 3962.12 -17.94 159.02 261.28 65.73 7 20 29 2962.1 -26.39 134.80  
 82.37 5 40 41 4070.43 -12.73 164.46 258.71 63.49 6 48 32 3070.4 -22.56 141.54  
 100.00 8 57 18 3436.60 -17.94 120.38 261.28 65.73 9 54 35 2436.6 -26.39 96.16  
 110.00 11 30 58 2955.14 -27.90 88.33 265.73 69.45 12 20 13 1935.1 -33.72 61.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2448 TRA-3.9662 TC3-4.2060 BAU 2.1515 SGT 6662.3 SGR 1867.8 SG3 983.2 ST 66.4 SR 10.2 SS 36.8  
 RDE -.0239 RRA -.5950 RC3-1.4560 FAU .35399 RRT .9382 RRF .9702 RTF .9210 CRT .9874 CRS -.3602 CST -.2971  
 FDE 2.6983 FRA-3.9912 FC3-8.4757 BSP 11960 SGB 6919.2 R23 .2843 R13 .9281 LSA 68.4 MSA 34.5 SSA 1.4  
 BDE .2460 BRA 4.0105 BC3 4.4509 FSP 1616 SG1 6890.9 S62 625.0 THA 14.86 EL1 67.2 EL2 1.6 ALF 8.59



LAUNCH DATE SEP 13 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 6 1974

HELIOCENTRIC CONIC										DISTANCE 551.394										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	33.016	GAL	7.25	AZL	85.96	HCA	152.79	SMA	197.07	ECC	.26622	INC	4.0351	V1	29.603	RP	248.59	LAP	1.85	LOP	142.87	VP	19.888	GAP	-3.00	AZP	93.59	TAL	35.57	TAP	188.32	RCA	144.61	APO	249.54	V2	22.034	RC	336.377	GL	22.53	GP	-23.91	ZAL	39.67	ZAP	58.82	ETS	166.18	ZAE	81.22	ETE	177.42	ZAC	64.99	ETC	285.63	LVI	1.27
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.176	VHL	6.015	DLA	29.92	RAL	12.47	RAD	6649.3	VEL	12.493	PTH	7.38	VHP	2.966	DPA	-15.51	RAP	27.14	ECC	1.5954	SGT	6778.6	SGR	1905.4	SG3	963.1	ST	67.3	SR	10.5	SS	37.6																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9400	RRF	.9719	RTF	.9203	CRT	.9740	CRS	-.4790	CST	-.3121																												
50.00	6	34	18	3904.98	-45.29	166.34	273.34	73.51	7	39	23	2905.0	-46.76	131.33	SG8	7041.3	R23	.2911	R13	.9275	LSA	69.5	MSA	35.0	SSA	1.4																																							
60.00	6	30	0	3916.43	-36.34	163.62	269.59	71.22	7	35	16	2916.4	-40.29	133.24	SG1	7013.2	S22	620.4	THA	14.92	EL1	68.1	EL2	2.3	ALF	8.63																																							
70.00	6	21	14	3942.30	-27.06	161.70	265.58	68.33	7	26	56	2942.3	-33.46	134.87																																																			
79.00	5	20	33	4134.36	-13.01	169.34	258.81	62.82	6	29	27	3134.4	-23.09	146.47																																																			
79.80	5	20	33	4134.36	-13.01	169.34	258.81	62.82	6	29	27	3134.4	-23.09	146.47																																																			
79.80	5	20	33	4134.36	-13.01	169.34	258.81	62.82	6	29	27	3134.4	-23.09	146.47																																																			
110.00	11	20	40	2989.12	-27.06	90.62	265.58	68.33	12	10	30	1989.1	-33.46	63.79																																																			

LAUNCH DATE SEP 13 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC										DISTANCE 555.169										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	33.024	GAL	7.19	AZL	85.85	HCA	153.63	SMA	197.23	ECC	.26626	INC	4.1548	V1	29.603	RP	248.67	LAP	1.84	LOP	143.75	VP	19.862	GAP	-3.19	AZP	93.72	TAL	35.23	TAP	188.86	RCA	144.72	APO	249.75	V2	22.026	RC	338.347	GL	23.23	GP	-24.45	ZAL	40.24	ZAP	58.41	ETS	165.52	ZAE	80.39	ETE	176.92	ZAC	64.41	ETC	285.71	LVI	1.84
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.220	VHL	6.018	DLA	30.66	RAL	12.39	RAD	6649.3	VEL	12.495	PTH	7.38	VHP	2.994	DPA	-15.91	RAP	27.59	ECC	1.5961	SGT	6892.1	SGR	1944.8	SG3	942.2	ST	68.3	SR	11.1	SS	38.4																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9416	RRF	.9735	RTF	.9195	CRT	.9494	CRS	-.5868	CST	-.3291																												
50.00	6	29	42	3922.69	-44.93	167.91	273.83	72.35	7	35	5	2922.7	-46.95	133.00	SG8	7161.2	R23	.2980	R13	.9268	LSA	70.7	MSA	35.5	SSA	1.3																																							
60.00	6	23	14	3939.93	-35.81	165.39	269.76	70.12	7	28	54	2939.9	-40.30	135.24	SG1	7133.2	S22	632.6	THA	15.00	EL1	69.1	EL2	3.4	ALF	8.77																																							
70.00	6	9	26	3980.73	-26.07	164.24	265.33	67.11	7	15	46	2980.7	-33.09	137.81																																																			
77.63	5	4	6	4185.95	-13.30	173.35	258.91	62.12	6	13	52	3186.0	-23.63	150.54																																																			
77.63	5	4	6	4185.95	-13.30	173.35	258.91	62.12	6	13	52	3186.0	-23.63	150.54																																																			
77.63	5	4	6	4185.95	-13.30	173.35	258.91	62.12	6	13	52	3186.0	-23.63	150.54																																																			
110.00	11	8	52	3027.55	-26.07	93.16	265.33	67.11	11	59	19	2027.6	-33.09	66.72																																																			

LAUNCH DATE SEP 13 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC										DISTANCE 558.944										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	33.033	GAL	7.13	AZL	85.72	HCA	154.50	SMA	197.39	ECC	.26631	INC	4.2820	V1	29.603	RP	248.75	LAP	1.84	LOP	144.63	VP	19.868	GAP	-3.37	AZP	93.87	TAL	34.89	TAP	189.39	RCA	144.82	APO	249.96	V2	22.019	RC	340.287	GL	23.97	GP	-25.03	ZAL	40.83	ZAP	58.04	ETS	164.84	ZAE	79.58	ETE	176.39	ZAC	63.79	ETC	285.78	LVI	2.45
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.293	VHL	6.024	DLA	31.43	RAL	12.28	RAD	6649.4	VEL	12.497	PTH	7.38	VHP	3.022	DPA	-16.34	RAP	28.06	ECC	1.5973	SGT	7007.0	SGR	1987.2	SG3	920.7	ST	69.4	SR	11.9	SS	39.2																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9432	RRF	.9750	RTF	.9186	CRT	.9181	CRS	-.6770	CST	-.3472																												
50.00	6	24	41	3941.64	-44.53	169.55	274.29	71.14	7	30	23	2941.6	-47.14	134.80	SG8	7283.3	R23	.3049	R13	.9261	LSA	72.1	MSA	36.0	SSA	1.2																																							
60.00	6	15	47	3965.39	-39.20	167.28	269.89	68.96	7	21	53	2965.4	-40.27	137.40	SG1	7255.4	S22	637.5	THA	15.09	EL1	70.2	EL2	4.7	ALF	8.99																																							
70.00	5	55	33	4025.22	-24.86	167.13	264.92	65.79	7	2	38	3025.2	-32.57	141.17																																																			
75.67	4	49	44	4230.50	-13.59	176.86	259.01	61.38	6	0	14	3230.5	-24.19	154.12																																																			
75.67	4	49	44	4230.50	-13.59	176.86	259.01	61.38	6	0	14	3230.5	-24.19	154.12																																																			
75.67	4	49	44	4230.50	-13.59	176.86	259.01	61.38	6	0	14	3230.5	-24.19	154.12																																																			
110.00	10	54	59	3072.04	-24.86	96.05	264.92	65.79	11	46	11	2072.0	-32.57	70.09																																																			

LAUNCH DATE SEP 13 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 12 1974

HELIOCENTRIC CONIC										DISTANCE 562.719										EARTH TO MARS																																													
RL	150.51	LAL	-0.00	LOL	350.06	VL	33.041	GAL	7.06	AZL	85.58	HCA	155.38	SMA	197.55	ECC	.26636	INC	4.4176	V1	29.603	RP	248.82	LAP	1.84	LOP	145.50	VP	19.874	GAP	-3.56	AZP	94.02	TAL	34.55	TAP	189.93	RCA	144.93	APO	250.17	V2	22.012	RC	342.196	GL	24.75	GP	-25.64	ZAL	41.44	ZAP	57.71	ETS	164.13	ZAE	78.81	ETE	175.85	ZAC	63.13	ETC	285.87	LVI	3.09
PLANETOCENTRIC CONIC										MID-COURSE EXECUTION ACCURACY										ORBIT DETERMINATION ACCURACY																																													
C3	36.398	VHL	6.033	DLA	32.24	RAL	12.15	RAD	6649.4	VEL	12.502	PTH	7.39	VHP	3.053	DPA	-16.79	RAP	28.57	ECC	1.5990	SGT	7120.6	SGR	2031.9	SG3	898.3	ST	70.5	SR	13.0	SS	40.0																																
LNCH	AZMTH	LNCH	TIME	L-I	TIME	INJ	LAT	INJ	LONG	INJ	RT	ASC	INJ	AZMTH	INJ	TIME	PO	CST	TIM	INJ	2	LAT	INJ	2	LONG	RRT	.9447	RRF	.9763	RTF	.9177	CRT	.8846	CRS	-.7493	CST	-.3663																												
50.00	6	19	12	3961.94	-44.07	171.29	274.74	69.87	7	25	14	2961.9	-47.30	136.73	SG8	7404.8	R23	.3118	R13	.9253	LSA	73.6	MSA	36.4	SSA	1.2																																							
60.00	6	7	31	3993.13	-34.50	169.30	269.96	67.74	7	14	4	2993.1	-40.19	139.76	SG1	7376.8	S22	643.4	THA	15.20	EL1	71.5	EL2	6.0	ALF	9.31																																							
70.00	5	38	35	4078.75	-23.32	170.53	264.29	64.31	6	46	34	3078.7	-31.81	145.16																																																			
73.83	4	36	41	4270.45	-13.88	180.06	259.10	60.60	5	47	51	3270.4	-24.76	157.39																																																			
73.83	4	36	41	4270.45	-13.88	180.06	259.10	60.60	5	47	51	3270.4	-24.76	157.39																																																			
73.83	4	36	41	4270.45	-13.88	180.06	259.10	60.60	5	47	51	3270.4	-24.76	157.39																																																			
110.00	10	38	2	3125.57	-23.32	99.45	264.29	64.31	11	30	7	2125.6	-31.81	74.08																																																			

LAUNCH DATE SEP 13 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC

RL 150.51 LAL -.00 LOL 350.06 VL 33.049 GAL 7.00 AZL 85.44 HCA 156.25 SMA 197.71 ECC .26642 INC 4.5623 V1 29.603
RP 248.88 LAP 1.84 LOP 146.38 VP 19.880 GAP -3.75 AZP 94.16 TAL 34.21 TAP 190.46 RCA 145.04 APO 250.39 V2 22.006
RC 344.074 GL 25.57 GP -26.29 ZAL 42.06 ZAP 57.42 ETS 163.39 ZAE 78.06 ETE 175.29 ZAC 62.44 ETC 285.96 LVI 3.77

PLANETOCENTRIC CONIC

C3 36.541 VHL 6.045 DLA 33.09 RAL 11.99 RAD 6649.4 VEL 12.507 PTH 7.39 VHP 3.086 DPA -17.27 RAP 29.11 ECC 1.6014
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 13 11 3983.75 -43.54 173.12 275.15 68.54 7 19 34 2983.8 -47.43 138.82
60.00 5 58 16 4023.55 -33.70 171.48 269.94 66.44 7 5 20 3023.6 -40.04 142.33
70.00 5 16 11 4148.33 -21.21 174.82 263.25 62.58 6 25 19 3148.3 -30.62 150.23
72.06 4 24 32 4307.09 -14.18 183.05 259.20 59.78 5 36 19 3307.1 -25.35 160.46
72.06 4 24 32 4307.09 -14.18 183.05 259.20 59.78 5 36 19 3307.1 -25.35 160.46
72.06 4 24 32 4307.09 -14.18 183.05 259.20 59.78 5 36 19 3307.1 -25.35 160.46
110.00 10 15 37 3195.15 -21.21 103.74 263.25 62.58 11 8 52 2195.2 -30.62 79.15

DIFFERENTIAL CORRECTIONS

TDE -.0180 TRA-4.2121 TC3-4.5188 BAU 2.3403
RDE .1469 RRA -.7111 RC3-1.5906 FAU .31255
FDE 2.9320 FRA-3.4958 FC3-7.4049 B8P 12968
BDE .1480 BRA 4.2717 BC3 4.7906 F8P 1393

MID-COURSE EXECUTION ACCURACY

SGT 7249.5 SGR 2089.1 SG3 879.0
RRT .9466 RRF .9779 RTF .9180
SGB 7544.5 R23 .3158 R13 .9258
SG1 7516.5 SG2 649.5 THA 15.38

ORBIT DETERMINATION ACCURACY

ST 72.0 SR 14.2 SS 40.4
CRT .8599 CRS -.7980 CST -.3878
LSA 75.4 MSA 36.5 S8A 1.1
EL1 73.0 EL2 7.2 ALF 9.74

LAUNCH DATE SEP 13 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC

RL 150.51 LAL -.00 LOL 350.06 VL 33.057 GAL 6.93 AZL 85.28 HCA 157.12 SMA 197.87 ECC .26648 INC 4.7174 V1 29.603
RP 248.94 LAP 1.83 LOP 147.26 VP 19.887 GAP -3.93 AZP 94.35 TAL 33.86 TAP 190.98 RCA 145.14 APO 250.60 V2 22.000
RC 345.920 GL 26.45 GP -26.99 ZAL 42.75 ZAP 57.17 ETS 162.64 ZAE 77.34 ETE 174.71 ZAC 61.69 ETC 286.07 LVI 4.50

PLANETOCENTRIC CONIC

C3 36.725 VHL 6.060 DLA 33.98 RAL 11.80 RAD 6649.5 VEL 12.515 PTH 7.40 VHP 3.121 DPA -17.78 RAP 29.68 ECC 1.6044
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 6 31 4007.31 -42.94 175.06 275.52 67.14 7 13 19 3007.3 -47.52 141.09
60.00 5 47 49 4057.27 -32.75 173.84 269.82 65.07 6 55 27 3057.3 -39.80 145.17
70.00 4 36 57 4268.32 -17.28 181.91 261.01 60.07 5 48 5 3268.3 -28.07 158.63
70.32 4 13 1 4341.33 -14.48 185.88 259.29 58.92 5 25 23 3341.3 -25.97 163.40
70.32 4 13 1 4341.33 -14.48 185.88 259.29 58.92 5 25 23 3341.3 -25.97 163.40
70.32 4 13 1 4341.33 -14.48 185.88 259.29 58.92 5 25 23 3341.3 -25.97 163.40
110.00 9 36 23 3315.14 -17.28 110.82 261.01 60.07 10 31 38 2315.1 -28.07 87.55

DIFFERENTIAL CORRECTIONS

TDE .0455 TRA-4.2517 TC3-4.5568 BAU 2.3729
RDE .1940 RRA -.7320 RC3-1.6106 FAU .30158
FDE 3.0093 FRA-3.3534 FC3-7.1093 B8P 13312
BDE .1993 BRA 4.3143 BC3 4.8331 F8P 1385

MID-COURSE EXECUTION ACCURACY

SGT 7348.9 SGR 2130.9 SG3 850.8
RRT .9473 RRF .9786 RTF .9155
SGB 7651.6 R23 .3256 R13 .9235
SG1 7623.2 SG2 657.8 THA 15.48

ORBIT DETERMINATION ACCURACY

ST 73.2 SR 15.8 SS 41.5
CRT .8253 CRS -.8476 CST -.4067
LSA 77.1 MSA 37.3 S8A 1.1
EL1 74.4 EL2 8.8 ALF 10.24

LAUNCH DATE SEP 13 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 18 1974

HELIOCENTRIC CONIC

RL 150.51 LAL -.00 LOL 350.06 VL 33.066 GAL 6.85 AZL 85.12 HCA 158.00 SMA 198.03 ECC .26645 INC 4.8841 V1 29.603
RP 249.00 LAP 1.83 LOP 148.13 VP 19.895 GAP -4.10 AZP 94.53 TAL 33.46 TAP 191.45 RCA 145.27 APO 250.80 V2 21.995
RC 347.734 GL 27.40 GP -27.77 ZAL 43.51 ZAP 57.07 ETS 161.90 ZAE 76.77 ETE 174.16 ZAC 60.83 ETC 286.19 LVI 5.34

PLANETOCENTRIC CONIC

C3 36.897 VHL 6.074 DLA 34.96 RAL 11.60 RAD 6649.6 VEL 12.521 PTH 7.40 VHP 3.155 DPA -18.32 RAP 30.41 ECC 1.6072
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 59 0 4033.53 -42.22 177.17 275.86 65.64 7 6 13 3033.5 -47.57 143.63
60.00 5 35 29 4096.39 -31.60 176.51 269.57 63.56 6 43 45 3096.4 -39.43 145.43
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33
68.53 4 1 40 4374.62 -14.81 188.70 259.40 57.96 5 14 35 3374.6 -26.64 166.33

DIFFERENTIAL CORRECTIONS

TDE .7150 TRA-3.7165 TC3-3.9821 BAU 2.0500
RDE .6332 RRA -.3472 RC3-1.1891 FAU .18970
FDE 5.1113 FRA-1.0249 FC3-4.4511 B8P 22359
BDE .9551 BRA 3.7327 BC3 4.1558 F8P 3541

MID-COURSE EXECUTION ACCURACY

SGT 6492.7 SGR 1613.4 SG3 634.2
RRT .8687 RRF .9425 RTF .9330
SGB 6690.2 R23 .6160 R13 .7391
SG1 6644.4 SG2 780.9 THA 12.35

ORBIT DETERMINATION ACCURACY

ST 72.8 SR 30.5 SS 65.9
CRT .6327 CRS -.9915 CST -.5292
LSA 90.5 MSA 49.0 S8A .7
EL1 75.6 EL2 22.8 ALF 16.38

LAUNCH DATE SEP 13 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 20 1974

HELIOCENTRIC CONIC

RL 150.51 LAL -.00 LOL 350.06 VL 33.074 GAL 6.80 AZL 84.94 HCA 158.87 SMA 198.19 ECC .26662 INC 5.0637 V1 29.603
RP 249.05 LAP 1.82 LOP 149.01 VP 19.904 GAP -4.30 AZP 94.72 TAL 33.17 TAP 192.03 RCA 145.35 APO 251.04 V2 21.990
RC 349.513 GL 28.36 GP -28.52 ZAL 44.18 ZAP 56.80 ETS 161.03 ZAE 76.01 ETE 173.48 ZAC 60.06 ETC 286.31 LVI 6.11

PLANETOCENTRIC CONIC

C3 37.248 VHL 6.103 DLA 35.90 RAL 11.28 RAD 6649.7 VEL 12.535 PTH 7.41 VHP 3.200 DPA -18.91 RAP 30.94 ECC 1.6130
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 50 55 4060.55 -41.44 179.29 276.07 64.15 6 58 36 3060.5 -47.56 146.24
60.00 5 21 57 4138.04 -30.30 179.28 269.12 62.05 6 30 55 3138.0 -38.93 151.85
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00
66.90 3 51 13 4404.53 -15.08 191.25 259.46 57.02 5 4 38 3404.5 -27.25 169.00

DIFFERENTIAL CORRECTIONS

TDE .1634 TRA-4.3485 TC3-4.6298 BAU 2.4498
RDE .2849 RRA -.7928 RC3-1.6634 FAU .28201
FDE 3.0856 FRA-3.1390 FC3-6.5546 B8P 13774
BDE .3284 BRA 4.4201 BC3 4.9195 F8P 1294

MID-COURSE EXECUTION ACCURACY

SGT 7573.5 SGR 2244.7 SG3 799.5
RRT .9498 RRF .9803 RTF .9131
SGB 7899.2 R23 .3390 R13 .9216
SG1 7870.2 SG2 675.9 THA 15.84

ORBIT DETERMINATION ACCURACY

ST 76.5 SR 19.4 SS 42.9
CRT .7873 CRS -.9029 CST -.4498
LSA 81.4 MSA 38.0 S8A .9
EL1 78.0 EL2 11.8 ALF 11.59



LAUNCH DATE SEP 13 1973

FLIGHT TIME 290.00

ARRIVAL DATE JUN 30 1974

HELIOCENTRIC CONIC

RL 150.51 LAL -.00 LOL 350.08 VL 33.118 GAL 6.47 AZL 83.77 HCA 163.22 SMA 199.00 ECC .26702 INC 6.2271 V1 29.603  
 RP 249.20 LAP 1.79 LOP 153.38 VP 19.956 GAP -5.20 AZP 95.96 TAL 31.41 TAP 194.63 RCA 145.86 APO 252.14 V2 21.975  
 RC 357.905 GL 34.37 GP -33.39 ZAL 48.49 ZAP 56.91 ETS 156.56 ZAE 73.48 ETE 169.97 ZAC 54.90 ETC 287.21 LVI 11.20

DISTANCE 596.665

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 39.968 VML 6.322 DLA 41.70 RAL 8.86 RAD 6650.7 VEL 12.643 PTH 7.49 VMP 3.472 DPA -22.57 RAP 34.87 ECC 1.6578  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 4 49 3 4250.48 -34.88 192.71 274.77 55.32 5 59 53 3250.5 -45.69 164.13  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84  
 57.98 2 58 14 4547.02 -16.40 204.07 259.59 51.10 4 14 1 3547.0 -30.69 182.84

DIFFERENTIAL CORRECTIONS

TDE .4808 TRA-4.6089 TC3-4.6438 BAW 2.6573  
 RDE .5742 RRA-1.0020 RC3-1.7794 FAU .22553  
 FDE 3.1660 FRA-2.5685 FC3-4.8856 BSP 14923  
 BDE .7489 BRA 4.7165 BC3 4.9731 FSP 1034

MID-COURSE EXECUTION ACCURACY

SGT 8121.8 SGR 2610.0 SC3 647.2  
 RRT .9549 RRF .9812 RTF .9034  
 SGB 8530.9 R23 .3746 R13 .9139  
 SC1 8498.7 SC2 740.8 THA 17.19

ORBIT DETERMINATION ACCURACY

ST 87.1 SR 32.0 SS 45.3  
 CRT .7639 CRS -.9557 CST -.5413  
 LSA 95.3 MSA 39.9 SSA .7  
 EL1 90.7 EL2 19.8 ALF 16.46

LAUNCH DATE SEP 14 1973

FLIGHT TIME 222.00

ARRIVAL DATE APR 24 1974

HELIOCENTRIC CONIC

DISTANCE 467.073

EARTH TO MARS

RL 150.47 LAL -.00 LOL 381.04 VL 32.844 GAL 8.78 AZL 87.57 HCA 132.73 SMA 193.67 ECC .56822 INC 2.4262 V1 29.611  
 RP 245.43 LAP 1.78 LOP 123.79 VP 19.908 GAP 1.37 AZP 91.65 TAL 43.52 TAP 176.25 RCA 141.73 APO 245.62 V2 22.344  
 RC 287.079 GL 12.58 GP -16.40 ZAL 29.79 ZAP 74.28 ETS 176.89 ZAE 104.47 ETE 186.28 ZAC 72.51 ETC 284.85 LVI -6.30

PLANETOCENTRIC CONIC

C3 39.905 VHL 6.317 DLA 18.74 RAL 11.83 RAD 6650.6 VEL 12.640 PTH 7.49 VHP 2.637 DPA -9.06 RAP 23.08 ECC 1.6567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 22 22 3684.32 -47.37 145.65 264.76 89.27 8 23 46 2684.3 -42.27 112.08  
 60.00 7 39 56 3637.33 -40.14 141.02 264.34 86.06 8 40 33 2637.5 -37.33 110.25  
 70.00 8 6 32 3559.19 -33.59 133.93 263.59 83.43 9 5 51 2559.2 -32.80 105.22  
 80.00 8 50 0 3422.95 -28.73 122.85 262.84 81.52 9 47 3 2423.0 -29.37 95.44  
 90.00 10 0 0 3197.00 -26.85 105.92 262.51 80.78 10 53 17 2197.0 -28.02 78.97  
 100.00 11 32 52 2897.43 -28.73 84.22 262.84 81.52 12 21 9 1897.4 -29.37 56.81  
 110.00 13 5 58 2606.01 -33.59 62.85 263.59 83.43 13 49 25 1606.0 -32.80 34.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7197 TRA-2.9684 TC3-2.4436 BAU 1.4042 SGT 4247.4 SGR 1349.9 SG3 1238.8 ST 53.9 SR 23.3 SS 23.9  
 RDE -.5033 RRA -.3067 RC3 -.9782 FAU .47802 RRT .8631 RRF .8965 RTF .9186 CRT .7490 CRS .3630 CST -.3338  
 FDE 1.2563 FRA-3.9620 FC-10.3707 BSP 7381 SGB 4456.7 R23 .1665 R13 .9264 LSA 57.3 MSA 27.1 SSA 2.3  
 BDE .8783 BRA 2.9842 BC3 2.6321 FSP 2108 SG1 4408.1 SG2 656.8 THA 15.70 EL1 56.9 EL2 14.6 ALF 19.28

LAUNCH DATE SEP 14 1973

FLIGHT TIME 224.00

ARRIVAL DATE APR 26 1974

HELIOCENTRIC CONIC

DISTANCE 470.868

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.851 GAL 8.73 AZL 87.53 HCA 133.63 SMA 193.80 ECC .26812 INC 2.4726 V1 29.611  
 RP 245.63 LAP 1.79 LOP 124.69 VP 19.895 GAP 1.15 AZP 91.71 TAL 43.23 TAP 176.85 RCA 141.84 APO 245.77 V2 22.324  
 RC 289.637 GL 12.85 GP -16.59 ZAL 30.10 ZAP 73.25 ETS 176.50 ZAE 103.16 ETE 185.89 ZAC 72.36 ETC 284.87 LVI -6.13

PLANETOCENTRIC CONIC

C3 39.701 VHL 6.301 DLA 19.09 RAL 11.92 RAD 6650.6 VEL 12.632 PTH 7.48 VHP 2.645 DPA -9.30 RAP 23.01 ECC 1.6534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 21 14 3690.26 -47.56 146.23 265.08 88.82 8 22 44 2690.3 -42.43 112.56  
 60.00 7 38 18 3644.81 -40.10 141.64 264.85 85.65 8 39 3 2644.8 -37.47 110.82  
 70.00 8 4 16 3568.36 -33.52 134.63 263.77 83.02 9 3 44 2568.4 -32.91 105.91  
 80.00 8 47 1 3434.36 -28.62 123.68 262.97 81.10 9 44 15 2434.4 -29.44 96.20  
 90.00 9 56 39 3209.59 -26.71 106.81 262.62 80.35 10 50 8 2209.6 -28.08 79.89  
 100.00 11 29 53 2908.83 -28.62 85.05 262.97 81.10 12 18 22 1908.8 -29.44 57.65  
 110.00 13 3 42 2615.18 -33.52 63.55 263.77 83.02 13 47 18 1615.2 -32.91 34.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7146 TRA-3.0249 TC3-2.5276 BAU 1.4416 SGT 4363.4 SGR 1363.2 SG3 1231.3 ST 54.6 SR 22.7 SS 24.2  
 RDE -.4874 RRA -.3165 RC3 -.9941 FAU .47392 RRT .8682 RRF .9010 RTF .9194 CRT .7485 CRS .3783 CST -.3188  
 FDE 1.3240 FRA-5.8821 FC-10.3344 BSP 7604 SGB 4571.4 R23 .1701 R13 .9270 LSA 57.8 MSA 27.3 SSA 2.3  
 BDE .8650 BRA 3.0414 BC3 2.7161 FSP 2095 SG1 4524.6 SG2 652.3 THA 15.51 EL1 57.4 EL2 14.3 ALF 18.47

LAUNCH DATE SEP 14 1973

FLIGHT TIME 226.00

ARRIVAL DATE APR 28 1974

HELIOCENTRIC CONIC

DISTANCE 474.662

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.858 GAL 8.68 AZL 87.48 HCA 134.53 SMA 193.94 ECC .26803 INC 2.5204 V1 29.611  
 RP 245.83 LAP 1.80 LOP 125.59 VP 19.885 GAP .93 AZP 91.77 TAL 42.93 TAP 177.45 RCA 141.96 APO 245.92 V2 22.305  
 RC 292.172 GL 13.14 GP -16.78 ZAL 30.41 ZAP 72.27 ETS 176.11 ZAE 101.87 ETE 185.49 ZAC 72.20 ETC 284.88 LVI -5.95

PLANETOCENTRIC CONIC

C3 39.502 VHL 6.285 DLA 19.44 RAL 12.01 RAD 6650.5 VEL 12.624 PTH 7.48 VHP 2.653 DPA -9.54 RAP 22.96 ECC 1.6501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 20 4 3696.42 -47.55 146.82 265.41 88.36 8 21 40 2696.4 -42.60 113.05  
 60.00 7 36 36 3652.37 -40.06 142.28 264.83 85.22 8 37 29 2652.4 -37.61 111.41  
 70.00 8 1 54 3577.90 -33.44 135.37 263.95 82.59 9 1 32 2577.9 -33.02 106.63  
 80.00 8 43 54 3448.26 -28.49 124.54 263.10 80.66 9 41 20 2446.3 -29.51 97.16  
 90.00 9 53 8 3222.76 -26.56 107.74 262.72 79.91 10 46 50 2222.8 -28.13 80.85  
 100.00 11 26 45 2920.73 -28.49 85.91 263.10 80.66 12 15 26 1920.7 -29.51 58.53  
 110.00 13 1 20 2624.72 -33.44 64.28 263.95 82.59 13 45 5 1624.7 -33.02 35.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7086 TRA-3.0813 TC3-2.6122 BAU 1.4791 SGT 4480.2 SGR 1377.3 SG3 1223.4 ST 55.4 SR 22.1 SS 24.6  
 RDE -.4712 RRA -.3268 RC3 -1.0103 FAU .48967 RRT .8731 RRF .9035 RTF .9202 CRT .7485 CRS .3916 CST -.3049  
 FDE 1.3907 FRA-5.8021 FC-10.2934 BSP 7820 SGB 4687.1 R23 .1739 R13 .9275 LSA 58.3 MSA 27.5 SSA 2.3  
 BDE .8510 BRA 3.0986 BC3 2.8007 FSP 2079 SG1 4642.1 SG2 648.0 THA 15.33 EL1 57.9 EL2 14.0 ALF 17.89

LAUNCH DATE SEP 14 1973

FLIGHT TIME 228.00

ARRIVAL DATE APR 30 1974

HELIOCENTRIC CONIC

DISTANCE 478.455

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.865 GAL 8.62 AZL 87.43 HCA 135.42 SMA 194.07 ECC .26795 INC 2.5696 V1 29.611  
 RP 246.02 LAP 1.80 LOP 126.49 VP 19.876 GAP .71 AZP 91.83 TAL 42.63 TAP 178.05 RCA 142.07 APO 246.07 V2 22.286  
 RC 294.682 GL 13.44 GP -16.99 ZAL 30.74 ZAP 71.32 ETS 175.71 ZAE 100.61 ETE 185.10 ZAC 72.03 ETC 284.90 LVI -5.77

PLANETOCENTRIC CONIC

C3 39.308 VHL 6.269 DLA 19.80 RAL 12.10 RAD 6650.4 VEL 12.617 PTH 7.47 VHP 2.663 DPA -9.77 RAP 22.94 ECC 1.6469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 18 50 3702.82 -47.54 147.44 265.75 87.89 8 20 33 2702.8 -42.78 113.57  
 60.00 7 34 50 3660.21 -40.02 142.94 265.08 84.77 8 35 50 2660.2 -37.76 112.03  
 70.00 7 59 25 3587.83 -33.35 136.13 264.13 82.15 8 59 13 2587.8 -33.12 107.39  
 80.00 8 40 37 3458.69 -28.35 125.44 263.22 80.21 9 38 15 2458.7 -29.58 98.08  
 90.00 9 49 25 3236.56 -26.39 108.72 262.83 79.45 10 43 22 2236.6 -28.17 81.83  
 100.00 11 23 28 2933.17 -28.35 86.80 263.22 80.21 12 12 22 1933.2 -29.58 59.45  
 110.00 12 58 51 2634.65 -33.35 65.04 264.13 82.15 13 42 46 1634.7 -33.12 36.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7015 TRA-3.1373 TC3-2.6967 BAU 1.5163 SGT 4596.8 SGR 1391.7 SG3 1214.7 ST 56.1 SR 21.4 SS 24.9  
 RDE -.4547 RRA -.3368 RC3 -1.0266 FAU .46515 RRT .8779 RRF .9098 RTF .9209 CRT .7490 CRS .4033 CST -.2918  
 FDE 1.4569 FRA-5.7190 FC-10.2451 BSP 8037 SGB 4802.8 R23 .1779 R13 .9280 LSA 58.8 MSA 27.6 SSA 2.2  
 BDE .8359 BRA 3.1553 BC3 2.8855 FSP 2061 SG1 4759.5 SG2 643.7 THA 15.17 EL1 58.5 EL2 13.6 ALF 16.93

LAUNCH DATE SEP 14 1973

FLIGHT TIME 230.00

ARRIVAL DATE MAY 2 1974

HELIOCENTRIC CONIC

RL 150.47 LAL -.00 LOL 351.04 VL 32.873 GAL 8.56 AZL 87.38 HCA 136.32 SMA 194.21 ECC .26787 INC 2.6203 V1 29.611
RP 246.21 LAP 1.81 LOP 127.38 VP 19.867 GAP .30 AZP 91.90 TAL 42.32 TAP 178.84 RCA 142.19 APO 246.23 V2 22.267
RC 297.167 GL 13.75 GP -17.20 ZAL 31.07 ZAP 70.40 ETS 175.31 ZAE 99.37 ETE 184.71 ZAC 71.85 ETC 284.92 LVI -5.57

PLANETOCENTRIC CONIC

C3 39.114 VHL 6.254 DLA 20.18 RAL 12.19 RAD 6650.4 VEL 12.609 PTH 7.47 VHP 2.673 DPA -10.01 RAP 22.93 ECC 1.6437
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 17 33 3709.47 -47.52 148.08 266.09 87.39 8 19 22 2709.5 -42.95 114.11
60.00 7 32 59 3668.37 -39.96 143.63 265.34 84.30 8 34 7 2668.4 -37.90 112.68
70.00 7 56 49 3598.18 -33.25 136.92 264.31 81.69 8 56 47 2598.2 -33.23 108.18
80.00 8 37 10 3471.71 -28.19 126.37 263.35 79.74 9 35 1 2471.7 -29.64 99.04
90.00 9 45 31 3251.05 -26.20 109.74 262.93 78.97 10 39 42 2251.1 -28.21 82.91
100.00 11 20 1 2946.18 -26.19 87.74 263.35 79.74 12 9 8 1946.2 -29.64 60.41
110.00 12 56 15 2645.00 -33.25 65.84 264.31 81.69 13 40 20 1645.0 -33.23 37.09

DIFFERENTIAL CORRECTIONS

TDE -.6931 TRA-3.1927 TC3-2.7813 BAU 1.5534 SGT 4713.5 SGR 1406.5 SG3 1205.4 ST 56.7 SR 20.8 SS 25.3
RDE -.4377 RRA -.3471 RC3-1.0432 FAU .46041 RRT .8824 RRF .9140 RTF .9214 CRT .7501 CRS .4137 CST -.2792
FDE 1.5237 FRA-5.6324 FC-10.1904 BSP 8255 SGB 4918.9 R23 .1821 R13 .9283 LSA 59.3 MSA 27.8 SSA 2.2
BDE .8197 BRA 3.2115 BC3 2.9706 FSP 2042 SG1 4877.1 SG2 639.6 THA 15.02 EL1 59.0 EL2 13.2 ALF 16.19

LAUNCH DATE SEP 14 1973

FLIGHT TIME 232.00

ARRIVAL DATE MAY 4 1974

HELIOCENTRIC CONIC

RL 150.47 LAL -.00 LOL 351.04 VL 32.880 GAL 8.50 AZL 87.33 HCA 137.21 SMA 194.35 ECC .26780 INC 2.6726 V1 29.611
RP 246.39 LAP 1.82 LOP 128.28 VP 19.860 GAP .28 AZP 91.96 TAL 42.02 TAP 179.22 RCA 142.30 APO 246.40 V2 22.249
RC 299.628 GL 14.07 GP -17.41 ZAL 31.40 ZAP 69.50 ETS 174.91 ZAE 98.15 ETE 184.32 ZAC 71.66 ETC 284.93 LVI -5.37

PLANETOCENTRIC CONIC

C3 38.927 VHL 6.239 DLA 20.56 RAL 12.27 RAD 6650.3 VEL 12.602 PTH 7.46 VHP 2.684 DPA -10.23 RAP 22.95 ECC 1.6406
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 16 12 3716.38 -47.50 148.75 266.45 86.88 8 18 8 2716.4 -43.13 114.67
60.00 7 31 2 3676.86 -39.90 144.34 265.60 83.82 8 32 19 2676.9 -38.05 113.35
70.00 7 54 5 3608.97 -33.14 137.74 264.49 81.21 8 54 14 2609.0 -33.33 109.00
80.00 8 33 31 3485.35 -28.02 127.35 263.47 79.25 9 31 37 2485.4 -29.70 100.05
90.00 9 41 23 3266.29 -26.00 110.81 263.02 78.47 10 35 49 2266.3 -28.25 84.02
100.00 11 16 23 2959.82 -28.02 88.72 263.47 79.25 12 5 43 1959.8 -29.70 61.42
110.00 12 53 32 2655.79 -33.14 66.66 264.49 81.21 13 37 48 1655.8 -33.33 37.92

DIFFERENTIAL CORRECTIONS

TDE -.6834 TRA-3.2475 TC3-2.8861 BAU 1.5903 SGT 4830.1 SGR 1421.8 SG3 1195.5 ST 57.4 SR 20.1 SS 25.8
RDE -.4203 RRA -.3575 RC3-1.0601 FAU .45544 RRT .8867 RRF .9181 RTF .9218 CRT .7517 CRS .4220 CST -.2677
FDE 1.5901 FRA-5.5433 FC-10.1289 BSP 8474 SGB 5035.0 R23 .1821 R13 .9286 LSA 59.8 MSA 28.0 SSA 2.2
BDE .8023 BRA 3.2671 BC3 3.0558 FSP 2023 SG1 4994.7 SG2 635.6 THA 14.88 EL1 59.5 EL2 12.8 ALF 15.48

LAUNCH DATE SEP 14 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 6 1974

HELIOCENTRIC CONIC

RL 150.47 LAL -.00 LOL 351.04 VL 32.888 GAL 8.44 AZL 87.27 HCA 138.10 SMA 194.49 ECC .26774 INC 2.7267 V1 29.611
RP 246.57 LAP 1.82 LOP 129.17 VP 19.853 GAP .07 AZP 92.03 TAL 41.71 TAP 179.81 RCA 142.42 APO 246.57 V2 22.232
RC 302.065 GL 14.40 GP -17.64 ZAL 31.75 ZAP 68.63 ETS 174.50 ZAE 96.95 ETE 183.94 ZAC 71.45 ETC 284.95 LVI -5.15

PLANETOCENTRIC CONIC

C3 38.745 VHL 6.225 DLA 20.96 RAL 12.36 RAD 6650.2 VEL 12.594 PTH 7.46 VHP 2.695 DPA -10.46 RAP 23.00 ECC 1.6376
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 14 47 3723.57 -47.47 149.44 266.82 86.35 8 16 30 2723.6 -43.32 115.27
60.00 7 29 0 3685.70 -39.84 145.08 265.87 83.32 8 30 26 2685.7 -38.19 114.05
70.00 7 51 13 3620.24 -33.02 138.60 264.68 80.72 8 51 34 2620.2 -33.43 109.87
80.00 8 29 41 3499.68 -27.84 128.37 263.59 78.74 9 28 0 2499.7 -29.75 101.11
90.00 9 36 59 3282.35 -25.78 111.93 263.12 77.95 10 31 42 2282.4 -28.27 85.20
100.00 11 12 32 2974.15 -27.84 89.74 263.59 78.74 12 2 6 1974.2 -29.75 62.48
110.00 12 50 40 2667.06 -33.02 67.52 264.68 80.72 13 35 7 1667.1 -33.43 38.78

DIFFERENTIAL CORRECTIONS

TDE -.8727 TRA-3.3021 TC3-2.9509 BAU 1.6272 SGT 4947.0 SGR 1437.9 SG3 1185.0 ST 58.1 SR 19.4 SS 26.2
RDE -.4026 RRA -.3682 RC3-1.0773 FAU .45031 RRT .8909 RRF .9221 RTF .9221 CRT .7543 CRS .4278 CST -.2574
FDE 1.6550 FRA-5.4533 FC-10.0621 BSP 8692 SGB 5151.8 R23 .1813 R13 .9289 LSA 60.3 MSA 28.3 SSA 2.2
BDE .7840 BRA 3.3226 BC3 3.1414 FSP 2002 SG1 5112.9 SG2 631.8 THA 14.75 EL1 60.0 EL2 12.3 ALF 14.79

LAUNCH DATE SEP 14 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 8 1974

HELIOCENTRIC CONIC

RL 150.47 LAL -.00 LOL 351.04 VL 32.895 GAL 8.39 AZL 87.22 HCA 138.99 SMA 194.64 ECC .26769 INC 2.7825 V1 29.611
RP 246.74 LAP 1.83 LOP 130.06 VP 19.847 GAP -.14 AZP 92.10 TAL 41.39 TAP 180.38 RCA 142.54 APO 246.74 V2 22.215
RC 304.476 GL 14.74 GP -17.87 ZAL 32.10 ZAP 67.78 ETS 174.08 ZAE 95.77 ETE 183.55 ZAC 71.23 ETC 284.97 LVI -4.92

PLANETOCENTRIC CONIC

C3 38.567 VHL 6.210 DLA 21.36 RAL 12.44 RAD 6650.2 VEL 12.587 PTH 7.45 VHP 2.707 DPA -10.69 RAP 23.06 ECC 1.6347
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 13 17 3731.05 -47.43 150.16 267.20 85.79 8 15 28 2731.1 -43.51 115.89
60.00 7 26 51 3694.91 -39.76 145.85 266.14 82.81 8 29 26 2694.9 -38.34 114.79
70.00 7 48 12 3632.02 -32.88 139.49 264.86 80.21 8 48 44 2632.0 -33.53 110.77
80.00 8 25 36 3514.75 -27.63 129.45 263.71 78.22 9 24 11 2514.8 -29.79 102.23
90.00 9 32 20 3299.33 -25.53 113.11 263.20 77.41 10 27 19 2299.3 -28.28 86.44
100.00 11 8 28 2989.22 -27.63 90.82 263.71 78.22 11 58 17 1989.2 -29.79 63.60
110.00 12 47 39 2678.84 -32.88 68.41 264.86 80.21 13 32 17 1678.8 -33.53 39.69

DIFFERENTIAL CORRECTIONS

TDE -.6603 TRA-3.3560 TC3-3.0353 BAU 1.6637 SGT 5063.4 SGR 1454.4 SG3 1174.0 ST 58.7 SR 18.7 SS 26.7
RDE -.3842 RRA -.3791 RC3-1.0947 FAU .44496 RRT .8949 RRF .9259 RTF .9224 CRT .7577 CRS .4317 CST -.2479
FDE 1.7214 FRA-5.3606 FC3-9.9882 BSP 8913 SGB 5268.1 R23 .1962 R13 .9290 LSA 60.8 MSA 28.5 SSA 2.1
BDE .7639 BRA 3.3774 BC3 3.2267 FSP 1980 SG1 5230.5 SG2 628.3 THA 14.63 EL1 60.5 EL2 11.9 ALF 14.13

LAUNCH DATE SEP 14 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 10 1974

HELIOCENTRIC CONIC

DISTANCE 497.404

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.903 GAL 8.33 AZL 87.16 HCA 139.88 SMA 194.78 ECC .26764 INC 2.8403 V1 29.611  
 RP 248.90 LAP 1.83 LOP 130.95 VP 19.842 GAP -.35 AZP 92.17 TAL 41.08 TAP 180.96 RCA 142.65 APO 246.92 V2 22.199  
 RC 308.863 GL 15.09 GP -10.12 ZAL 32.47 ZAP 68.98 ETS 173.65 ZAE 94.61 ETE 183.17 ZAC 71.00 ETC 285.00 LVI -4.68

PLANETOCENTRIC CONIC

C3 38.396 VHL 6.196 DLA 21.78 RAL 12.52 RAD 6650.1 VEL 12.581 PTH 7.45 VHP 2.720 DPA -10.92 RAP 23.15 ECC 1.6319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 11 42 3738.85 -47.39 150.91 267.58 85.22 8 14 1 2738.9 -43.70 116.54  
 60.00 7 24 36 3704.51 -39.68 146.66 266.42 82.27 8 26 20 2704.5 -38.49 115.56  
 70.00 7 45 1 3644.36 -32.74 140.42 265.05 79.67 8 45 45 2644.4 -33.63 111.72  
 80.00 8 21 17 3530.64 -27.41 130.57 263.82 77.66 9 20 8 2530.6 -29.82 103.41  
 90.00 9 27 21 3317.32 -25.26 114.36 263.27 76.84 10 22 39 2317.3 -28.28 87.76  
 100.00 11 4 9 3005.12 -27.41 91.94 263.82 77.66 11 54 14 2005.1 -29.82 64.78  
 110.00 12 44 27 2691.18 -32.74 69.34 265.05 79.67 13 29 19 1691.2 -33.63 40.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6470 TRA-3.4098 TC3-3.1201 BAU 1.7003 SGT 5180.4 SGR 1471.8 SG3 1162.5 ST 59.3 SR 18.0 SS 27.1  
 RDE -.3656 RRA -.3903 RC3-1.1125 FAU .43945 RRT .8988 RRF .9297 RTF .9225 CRT .7625 CRS .4323 CST -.2398  
 FDE 1.7858 FRA-5.2677 FC3-9.9086 BSP 9130 SGB 5385.4 R23 .2013 R13 .9291 LSA 61.3 MSA 28.7 SSA 2.1  
 BDE .7432 BRA 3.4320 BC3 3.3125 FSP 1956 SGI 5349.0 SG2 624.9 THA 14.53 EL1 61.0 EL2 11.3 ALF 13.90

LAUNCH DATE SEP 14 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 12 1974

HELIOCENTRIC CONIC

DISTANCE 501.191

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.911 GAL 8.27 AZL 87.10 HCA 140.77 SMA 194.93 ECC .26760 INC 2.9003 V1 29.611  
 RP 247.06 LAP 1.83 LOP 131.84 VP 19.837 GAP -.56 AZP 92.25 TAL 40.76 TAP 181.53 RCA 142.77 APO 247.10 V2 22.183  
 RC 309.224 GL 15.48 GP -10.37 ZAL 32.84 ZAP 66.16 ETS 173.21 ZAE 93.48 ETE 182.78 ZAC 70.75 ETC 285.02 LVI -4.43

PLANETOCENTRIC CONIC

C3 38.230 VHL 6.183 DLA 22.21 RAL 12.59 RAD 6650.0 VEL 12.574 PTH 7.44 VHP 2.734 DPA -11.15 RAP 23.26 ECC 1.6292  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 10 2 3746.98 -47.34 151.69 267.98 84.62 8 12 29 2747.0 -43.90 117.22  
 60.00 7 22 13 3714.55 -39.58 147.49 266.70 81.71 8 24 8 2714.5 -38.64 116.37  
 70.00 7 41 39 3657.30 -32.58 141.40 265.23 79.12 8 42 36 2657.3 -33.72 112.72  
 80.00 8 16 41 3547.44 -27.16 131.76 263.92 77.09 9 15 48 2547.4 -29.85 104.66  
 90.00 9 22 2 3336.45 -24.96 115.68 263.34 76.25 10 17 38 2336.5 -28.26 89.15  
 100.00 10 59 33 3021.91 -27.16 93.13 263.92 77.09 11 49 55 2021.9 -29.85 66.03  
 110.00 12 41 5 2704.12 -32.58 70.32 265.23 79.12 13 26 10 1704.1 -33.72 41.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6318 TRA-3.4823 TC3-3.2040 BAU 1.7365 SGT 5296.3 SGR 1489.5 SG3 1150.2 ST 60.0 SR 17.3 SS 27.7  
 RDE -.3463 RRA -.4015 RC3-1.1304 FAU .43368 RRT .9024 RRF .9333 RTF .9226 CRT .7684 CRS .4304 CST -.2324  
 FDE 1.8519 FRA-5.1705 FC3-9.8209 BSP 9350 SGB 5501.8 R23 .2067 R13 .9290 LSA 61.7 MSA 29.0 SSA 2.1  
 BDE .7205 BRA 3.4855 BC3 3.3975 FSP 1933 SGI 5466.5 SG2 621.7 THA 14.43 EL1 61.5 EL2 10.8 ALF 12.88

LAUNCH DATE SEP 14 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 14 1974

HELIOCENTRIC CONIC

DISTANCE 504.977

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.919 GAL 8.21 AZL 87.04 HCA 141.65 SMA 195.08 ECC .26757 INC 2.9623 V1 29.611  
 RP 247.22 LAP 1.84 LOP 132.73 VP 19.833 GAP -.77 AZP 92.32 TAL 40.44 TAP 182.10 RCA 142.88 APO 247.46 V2 22.168  
 RC 311.559 GL 15.84 GP -10.64 ZAL 33.22 ZAP 65.39 ETS 172.77 ZAE 92.36 ETE 182.39 ZAC 70.49 ETC 285.04 LVI -4.16

PLANETOCENTRIC CONIC

C3 38.071 VHL 6.170 DLA 22.65 RAL 12.68 RAD 6650.0 VEL 12.568 PTH 7.44 VHP 2.748 DPA -11.38 RAP 23.39 ECC 1.6265  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 8 17 3755.47 -47.29 152.31 268.39 84.00 8 10 52 2755.5 -44.10 117.94  
 60.00 7 19 42 3725.04 -39.47 148.37 266.98 81.12 8 21 47 2725.0 -38.79 117.23  
 70.00 7 38 5 3670.89 -32.40 142.42 265.42 78.54 8 39 16 2670.9 -33.81 113.77  
 80.00 8 11 46 3565.25 -26.88 133.01 263.92 76.49 9 11 12 2565.2 -29.86 105.98  
 90.00 9 16 18 3356.87 -24.62 117.08 263.39 75.62 10 12 15 2356.9 -28.22 90.65  
 100.00 10 54 38 3039.72 -26.88 94.38 264.01 76.49 11 45 18 2039.7 -29.86 67.35  
 110.00 12 37 32 2717.71 -32.40 71.34 265.42 78.54 13 22 49 1717.7 -33.81 42.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6159 TRA-3.5155 TC3-3.2888 BAU 1.7730 SGT 5413.8 SGR 1508.8 SG3 1137.8 ST 60.6 SR 16.5 SS 28.2  
 RDE -.3268 RRA -.4135 RC3-1.1491 FAU .42788 RRT .9060 RRF .9368 RTF .9226 CRT .7763 CRS .4239 CST -.2268  
 FDE 1.9154 FRA-5.0763 FC3-9.7297 BSP 9563 SGB 5820.1 R23 .2121 R13 .9290 LSA 62.3 MSA 29.3 SSA 2.0  
 BDE .6972 BRA 3.5398 BC3 3.4833 FSP 1908 SGI 5585.9 SG2 618.8 THA 14.35 EL1 62.0 EL2 10.2 ALF 12.31

LAUNCH DATE SEP 14 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 16 1974

HELIOCENTRIC CONIC

DISTANCE 508.763

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.927 GAL 8.14 AZL 86.97 HCA 142.54 SMA 195.23 ECC .26754 INC 3.0269 V1 29.611  
 RP 247.37 LAP 1.84 LOP 133.61 VP 19.830 GAP -.97 AZP 92.40 TAL 40.12 TAP 182.66 RCA 143.00 APO 247.46 V2 22.154  
 RC 313.869 GL 16.23 GP -18.92 ZAL 33.61 ZAP 64.65 ETS 172.31 ZAE 91.27 ETE 182.00 ZAC 70.20 ETC 285.07 LVI -3.88

PLANETOCENTRIC CONIC

C3 37.919 VHL 6.158 DLA 23.11 RAL 12.73 RAD 6649.9 VEL 12.562 PTH 7.43 VHP 2.762 DPA -11.62 RAP 23.55 ECC 1.6240  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 6 25 3764.34 -47.22 153.35 268.80 83.35 8 9 9 2764.3 -44.30 118.69  
 60.00 7 17 3 3736.02 -39.36 149.28 267.27 80.52 8 19 19 2736.0 -38.94 118.12  
 70.00 7 34 18 3685.18 -32.20 143.49 265.60 77.94 8 35 43 2685.2 -33.89 114.88  
 80.00 8 6 30 3584.18 -26.57 134.33 264.09 75.86 9 6 15 2584.2 -29.85 107.39  
 90.00 9 10 7 3378.77 -24.24 118.57 263.42 74.97 10 6 26 2378.8 -28.17 92.24  
 100.00 10 49 22 3058.65 -26.57 95.70 264.09 75.86 11 40 21 2058.7 -29.85 68.76  
 110.00 12 33 45 2732.00 -32.20 72.40 265.60 77.94 13 19 17 1732.0 -33.89 43.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5977 TRA-3.5872 TC3-3.3719 BAU 1.8090 SGT 5529.8 SGR 1528.0 SG3 1124.5 ST 61.2 SR 15.8 SS 28.8  
 RDE -.3063 RRA -.4253 RC3-1.1678 FAU .42177 RRT .9094 RRF .9402 RTF .9225 CRT .7857 CRS .4141 CST -.2218  
 FDE 1.9817 FRA-4.9765 FC3-9.6296 BSP 9787 SGB 5737.0 R23 .2180 R13 .9288 LSA 62.8 MSA 29.6 SSA 2.0  
 BDE .6716 BRA 3.5925 BC3 3.5685 FSP 1884 SGI 5703.8 SG2 616.2 THA 14.28 EL1 62.5 EL2 9.6 ALF 11.75

LAUNCH DATE SEP 14 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 18 1974

Heliocentric Conic: RL 150.47 LAL -0.00 LOL 351.04 VL 32.933 GAL 8.08 AZL 86.91 HCA 143.42 SMA 195.38 ECC .26752 INC 3.0940 V1 29.811  
 RP 247.51 LAP 1.84 LOP 134.50 VP 19.828 GAP -1.18 AZP 92.49 TAL 39.80 TAP 183.22 RCA 143.12 APO 247.65 V2 22.140  
 RC 316.151 GL 16.64 GP -19.21 ZAL 34.01 ZAP 63.93 ETS 171.85 ZAE 90.19 ETE 181.61 ZAC 69.91 ETC 285.10 LVI -3.59

Planeto-centric Conic: C3 37.775 VHL 6.146 DLA 23.59 RAL 12.79 RAD 6649.9 VEL 12.556 PTH 7.43 VHP 2.778 DPA -11.86 RAP 23.73 ECC 1.6217  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 4 27 3773.62 -47.14 154.24 269.23 82.67 8 7 20 2773.6 -44.51 119.49  
 60.00 7 14 14 3747.53 -39.22 150.23 267.56 79.88 8 16 41 2747.5 -39.09 119.06  
 70.00 7 30 17 3700.26 -31.98 144.61 265.77 77.31 8 31 57 2700.3 -33.97 116.05  
 80.00 8 0 50 3604.38 -26.23 135.73 264.16 75.20 9 0 55 2604.4 -29.83 108.89  
 90.00 9 3 24 3402.38 -23.81 120.17 263.43 74.28 10 0 6 2402.4 -28.08 93.97  
 100.00 10 43 42 3078.86 -26.23 97.10 264.16 75.20 11 35 1 2078.9 -29.83 70.26  
 110.00 12 29 43 2747.08 -31.98 73.52 265.77 77.31 13 15 30 1747.1 -33.97 44.97

Differential Corrections: TDE -.5777 TRA-3.6183 TC3-3.4549 BAU 1.8449 SGT 5645.5 SGR 1548.5 SG3 1110.8 ST 61.8 SR 15.0 SS 29.3  
 RDE -.2853 RRA -.4376 RC3-1.1870 FAU .41555 RRT .9126 RRF .9434 RTF .9223 CRT .7974 CRS .3989 CST -.2187  
 FDE 2.0467 FRA-4.8765 FC3-9.5238 BSP 10010 SGB 5854.1 R23 .2240 R13 .9287 LSA 63.3 MSA 29.9 SSA 1.9  
 BDE .6443 BRA 3.6447 BC3 3.6531 FSP 1859 SG1 5821.8 SG2 614.0 THA 14.21 EL1 62.9 EL2 8.9 ALF 11.22

Mid-course Execution Accuracy: SGT 5645.5 SGR 1548.5 SG3 1110.8 ST 61.8 SR 15.0 SS 29.3  
 RRT .9126 RRF .9434 RTF .9223 CRT .7974 CRS .3989 CST -.2187  
 SGB 5854.1 R23 .2240 R13 .9287 LSA 63.3 MSA 29.9 SSA 1.9  
 SG1 5821.8 SG2 614.0 THA 14.21 EL1 62.9 EL2 8.9 ALF 11.22

Orbit Determination Accuracy: ST 61.8 SR 15.0 SS 29.3  
 CRT .7974 CRS .3989 CST -.2187  
 LSA 63.3 MSA 29.9 SSA 1.9  
 EL1 62.9 EL2 8.9 ALF 11.22

LAUNCH DATE SEP 14 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 20 1974

Heliocentric Conic: RL 150.47 LAL -0.00 LOL 351.04 VL 32.943 GAL 8.02 AZL 86.84 HCA 144.31 SMA 195.54 ECC .26750 INC 3.1639 V1 29.611  
 RP 247.65 LAP 1.85 LOP 135.39 VP 19.826 GAP -1.38 AZP 92.57 TAL 39.47 TAP 183.78 RCA 143.23 APO 247.84 V2 22.126  
 RC 318.406 GL 17.07 GP -19.51 ZAL 34.42 ZAP 63.24 ETS 171.37 ZAE 89.14 ETE 181.21 ZAC 69.59 ETC 285.13 LVI -3.27

Planeto-centric Conic: C3 37.639 VHL 6.135 DLA 24.07 RAL 12.85 RAD 6649.8 VEL 12.551 PTH 7.42 VHP 2.794 DPA -12.11 RAP 23.93 ECC 1.6194  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 2 21 3783.33 -47.05 155.16 269.67 81.96 8 5 24 2783.3 -44.72 120.33  
 60.00 7 11 15 3759.62 -39.07 151.22 267.86 79.23 8 13 54 2759.6 -39.24 120.06  
 70.00 7 25 59 3716.19 -31.73 145.78 265.94 76.65 8 27 55 2716.2 -34.03 117.29  
 80.00 7 54 43 3626.04 -25.84 137.23 264.21 74.50 8 55 9 2626.0 -29.78 110.50  
 90.00 8 56 3 3428.00 -23.33 121.89 263.42 73.55 9 53 11 2428.0 -27.96 95.83  
 100.00 10 37 35 3100.51 -25.84 98.60 264.21 74.50 11 29 15 2100.5 -29.78 71.87  
 110.00 12 25 25 2763.01 -31.73 74.70 265.94 76.65 13 11 28 1763.0 -34.03 46.21

Differential Corrections: TDE -.5566 TRA-3.6697 TC3-3.5378 BAU 1.8808 SGT 5762.1 SGR 1570.3 SG3 1096.8 ST 62.4 SR 14.3 SS 29.9  
 RDE -.2639 RRA -.4505 RC3-1.2068 FAU .40921 RRT .9157 RRF .9465 RTF .9221 CRT .8117 CRS .3770 CST -.2172  
 FDE 2.1100 FRA-4.7781 FC3-9.4124 BSP 10224 SGB 5972.3 R23 .2301 R13 .9284 LSA 63.8 MSA 30.3 SSA 1.9  
 BDE .8159 BRA 3.6973 BC3 3.7378 FSP 1831 SG1 5940.8 SG2 612.1 THA 14.17 EL1 63.4 EL2 8.2 ALF 10.73

Mid-course Execution Accuracy: SGT 5762.1 SGR 1570.3 SG3 1096.8 ST 62.4 SR 14.3 SS 29.9  
 RRT .9157 RRF .9465 RTF .9221 CRT .8117 CRS .3770 CST -.2172  
 SGB 5972.3 R23 .2301 R13 .9284 LSA 63.8 MSA 30.3 SSA 1.9  
 SG1 5940.8 SG2 612.1 THA 14.17 EL1 63.4 EL2 8.2 ALF 10.73

Orbit Determination Accuracy: ST 62.4 SR 14.3 SS 29.9  
 CRT .8117 CRS .3770 CST -.2172  
 LSA 63.8 MSA 30.3 SSA 1.9  
 EL1 63.4 EL2 8.2 ALF 10.73

LAUNCH DATE SEP 14 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 22 1974

Heliocentric Conic: RL 150.47 LAL -0.00 LOL 351.04 VL 32.951 GAL 7.96 AZL 86.76 HCA 145.19 SMA 195.69 ECC .26749 INC 3.2367 V1 29.611  
 RP 247.78 LAP 1.85 LOP 136.27 VP 19.826 GAP -1.58 AZP 92.66 TAL 39.14 TAP 184.34 RCA 143.35 APO 248.04 V2 22.113  
 RC 320.632 GL 17.51 GP -19.83 ZAL 34.83 ZAP 62.57 ETS 170.88 ZAE 88.10 ETE 180.81 ZAC 69.26 ETC 285.16 LVI -2.94

Planeto-centric Conic: C3 37.514 VHL 6.125 DLA 24.58 RAL 12.90 RAD 6649.8 VEL 12.546 PTH 7.42 VHP 2.811 DPA -12.36 RAP 24.15 ECC 1.6174  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 0 7 3793.51 -46.95 156.12 270.11 81.23 8 3 20 2793.5 -44.94 121.22  
 60.00 7 8 4 3772.31 -38.91 152.26 268.15 78.54 8 10 56 2772.3 -39.39 121.10  
 70.00 7 21 24 3733.04 -31.46 147.02 266.09 75.97 8 23 37 2733.0 -34.09 118.60  
 80.00 7 48 4 3649.34 -25.41 138.82 264.23 73.77 8 48 53 2649.3 -29.71 112.23  
 90.00 8 47 56 3456.01 -22.78 123.76 263.37 72.77 9 45 32 2456.0 -27.79 97.86  
 100.00 10 30 56 3123.81 -25.41 100.19 264.23 73.77 11 23 0 2123.8 -29.71 73.59  
 110.00 12 20 50 2779.86 -31.46 75.94 266.09 75.97 13 7 10 1779.9 -34.09 47.52

Differential Corrections: TDE -.5433 TRA-3.7293 TC3-3.8288 BAU 1.9223 SGT 5893.6 SGR 1604.2 SG3 1090.0 ST 63.3 SR 13.9 SS 30.2  
 RDE -.2482 RRA -.4704 RC3-1.2341 FAU .40561 RRT .9196 RRF .9304 RTF .9236 CRT .8290 CRS .3352 CST -.2307  
 FDE 2.1133 FRA-4.7408 FC3-9.3805 BSP 10308 SGB 6108.0 R23 .2337 R13 .9298 LSA 64.7 MSA 30.2 SSA 1.9  
 BDE .5973 BRA 3.7588 BC3 3.8330 FSP 1740 SG1 6077.4 SG2 611.2 THA 14.20 EL1 64.3 EL2 7.6 ALF 10.46

Mid-course Execution Accuracy: SGT 5893.6 SGR 1604.2 SG3 1090.0 ST 63.3 SR 13.9 SS 30.2  
 RRT .9196 RRF .9304 RTF .9236 CRT .8290 CRS .3352 CST -.2307  
 SGB 6108.0 R23 .2337 R13 .9298 LSA 64.7 MSA 30.2 SSA 1.9  
 SG1 6077.4 SG2 611.2 THA 14.20 EL1 64.3 EL2 7.6 ALF 10.46

Orbit Determination Accuracy: ST 63.3 SR 13.9 SS 30.2  
 CRT .8290 CRS .3352 CST -.2307  
 LSA 64.7 MSA 30.2 SSA 1.9  
 EL1 64.3 EL2 7.6 ALF 10.46

LAUNCH DATE SEP 14 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 24 1974

Heliocentric Conic: RL 150.47 LAL -0.00 LOL 351.04 VL 32.959 GAL 7.90 AZL 86.69 HCA 146.07 SMA 195.85 ECC .26749 INC 3.3128 V1 29.611  
 RP 247.91 LAP 1.85 LOP 137.15 VP 19.825 GAP -1.78 AZP 92.75 TAL 38.81 TAP 184.89 RCA 143.46 APO 248.24 V2 22.101  
 RC 322.829 GL 17.97 GP -20.17 ZAL 35.27 ZAP 61.93 ETS 170.38 ZAE 87.09 ETE 180.40 ZAC 68.91 ETC 285.20 LVI -2.80

Planeto-centric Conic: C3 37.397 VHL 6.115 DLA 25.10 RAL 12.94 RAD 6649.8 VEL 12.541 PTH 7.42 VHP 2.829 DPA -12.62 RAP 24.40 ECC 1.6159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 57 44 3804.20 -46.84 157.13 270.57 80.46 8 1 8 2804.2 -45.15 122.15  
 60.00 7 4 41 3785.69 -38.72 153.34 268.45 77.82 8 7 46 2785.7 -39.53 122.21  
 70.00 7 16 28 3750.96 -31.16 148.33 266.24 75.25 8 18 59 2751.0 -34.13 120.00  
 80.00 7 40 47 3674.64 -24.92 140.54 264.23 72.99 8 42 1 2674.6 -29.60 114.10  
 90.00 8 38 52 3487.04 -22.14 125.81 263.27 71.94 9 36 59 2487.0 -27.57 100.11  
 100.00 10 23 39 3149.11 -24.92 101.91 264.23 72.99 11 16 8 2149.1 -29.60 75.47  
 110.00 12 15 54 2797.78 -31.16 77.25 266.24 75.25 13 2 32 1797.8 -34.13 48.92

Differential Corrections: TDE -.5164 TRA-3.7772 TC3-3.7079 BAU 1.9568 SGT 6006.0 SGR 1625.6 SG3 1073.0 ST 63.8 SR 13.1 SS 30.9  
 RDE -.2238 RRA -.4825 RC3-1.2532 FAU .39823 RRT .9222 RRF .9530 RTF .9228 CRT .8485 CRS .3023 CST -.2280  
 FDE 2.1914 FRA-4.6234 FC3-9.2189 BSP 10561 SGB 6222.1 R23 .2407 R13 .9291 LSA 65.2 MSA 30.7 SSA 1.8  
 BDE .5628 BRA 3.8079 BC3 3.9140 FSP 1729 SG1 6192.2 SG2 609.9 THA 14.15 EL1 64.7 EL2 6.8 ALF 9.99

Mid-course Execution Accuracy: SGT 6006.0 SGR 1625.6 SG3 1073.0 ST 63.8 SR 13.1 SS 30.9  
 RRT .9222 RRF .9530 RTF .9228 CRT .8485 CRS .3023 CST -.2280  
 SGB 6222.1 R23 .2407 R13 .9291 LSA 65.2 MSA 30.7 SSA 1.8  
 SG1 6192.2 SG2 609.9 THA 14.15 EL1 64.7 EL2 6.8 ALF 9.99

Orbit Determination Accuracy: ST 63.8 SR 13.1 SS 30.9  
 CRT .8485 CRS .3023 CST -.2280  
 LSA 65.2 MSA 30.7 SSA 1.8  
 EL1 64.7 EL2 6.8 ALF 9.99



LAUNCH DATE SEP 14 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC DISTANCE 527.677 EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.988 GAL 7.84 AZL 86.61 HCA 146.95 SMA 196.01 ECC .26749 INC 3.3924 V1 29.611  
 RP 248.03 LAP 1.85 LOP 138.03 VP 19.826 GAP -1.98 AZP 92.84 TAL 38.48 TAP 185.43 RCA 143.58 APO 248.43 V2 22.089  
 RC 324.997 GL 18.45 GP -20.52 ZAL 35.71 ZAP 61.31 ETS 169.86 ZAE 86.10 ETE 179.98 ZAC 68.53 ETC 285.23 LVI -2.23

PLANETOCENTRIC CONIC

C3 37.291 VHL 6.107 DLA 25.84 RAL 12.98 RAD 6649.7 VEL 12.537 PTH 7.41 VHP 2.847 DPA -12.89 RAP 24.67 ECC 1.6137  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 55 12 3815.44 -46.71 158.18 271.03 79.66 7 58 47 2815.4 -45.37 123.15  
 60.00 7 1 3 3799.80 -38.51 154.49 268.74 77.07 8 4 23 2799.8 -39.67 123.39  
 70.00 7 11 9 3770.05 -30.82 149.71 266.37 74.50 8 13 59 2770.1 -34.15 121.49  
 80.00 7 32 45 3702.28 -24.35 142.40 264.19 72.17 8 34 27 2702.3 -29.45 116.14  
 90.00 8 28 35 3521.91 -21.38 128.08 263.12 71.04 9 27 17 2521.9 -27.28 102.61  
 100.00 10 15 36 3176.75 -24.35 103.77 264.19 72.17 11 8 33 2176.8 -29.45 77.51  
 110.00 12 10 35 2816.87 -30.82 78.63 266.37 74.50 12 57 32 1816.9 -34.15 50.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4881 TRA-3.8254 TC3-3.7863 BAU 1.9915 SGT 6119.3 SGR 1648.7 SG3 1055.9 ST 64.3 SR 12.3 SS 31.6  
 RDE -.1988 RRA -.4955 RC3-1.2730 FAU .39083 RRT .9247 RRF .9556 RTF .9221 CRT .8713 CR8 .2571 CST -.2280  
 FDE 2.2658 FRA-4.5097 FC3-9.0734 BSP 10804 SGB 6337.5 R23 .2479 R13 .9284 LSA 65.7 MSA 31.2 SSA 1.8  
 BDE .5270 BRA 3.8574 BC3 3.9946 FSP 1712 SG1 6308.1 SG2 609.0 THA 14.12 EL1 65.2 EL2 6.0 ALF 9.57

LAUNCH DATE SEP 14 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC DISTANCE 531.457 EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.978 GAL 7.77 AZL 86.52 HCA 147.83 SMA 196.16 ECC .26749 INC 3.4757 V1 29.611  
 RP 248.14 LAP 1.85 LOP 138.92 VP 19.827 GAP -2.17 AZP 92.94 TAL 38.15 TAP 185.98 RCA 143.69 APO 248.64 V2 22.078  
 RC 327.134 GL 18.95 GP -20.89 ZAL 36.17 ZAP 60.73 ETS 169.33 ZAE 85.13 ETE 179.56 ZAC 68.14 ETC 285.27 LVI -1.84

PLANETOCENTRIC CONIC

C3 37.198 VHL 6.099 DLA 26.20 RAL 13.01 RAD 6649.7 VEL 12.533 PTH 7.41 VHP 2.866 DPA -13.17 RAP 24.96 ECC 1.6122  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 29 3827.26 -46.56 159.28 271.50 78.82 7 56 16 2827.3 -45.59 124.20  
 60.00 6 57 11 3814.72 -38.28 155.68 269.03 76.29 8 0 46 2814.7 -39.80 124.64  
 70.00 7 5 25 3790.46 -30.44 151.18 266.49 73.70 8 8 35 2790.5 -34.15 123.08  
 80.00 7 23 47 3732.78 -23.70 144.43 264.10 71.29 8 26 0 2732.8 -29.24 118.38  
 90.00 8 16 40 3561.93 -20.48 130.67 262.88 70.06 9 16 2 2561.9 -26.88 105.47  
 100.00 10 6 39 3207.26 -23.70 105.80 264.10 71.29 11 0 6 2207.3 -29.24 79.75  
 110.00 12 4 51 2837.28 -30.44 80.10 266.49 73.70 12 52 8 1837.3 -34.15 52.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4576 TRA-3.8730 TC3-3.8633 BAU 2.0260 SGT 6231.9 SGR 1673.3 SG3 1038.5 ST 64.9 SR 11.6 SS 32.4  
 RDE -.1730 RRA -.5092 RC3-1.2935 FAU .38336 RRT .9270 RRF .9581 RTF .9214 CRT .8969 CR8 .1981 CST -.2305  
 FDE 2.3381 FRA-4.3974 FC3-8.9222 BSP 11049 SGB 6452.6 R23 .2551 R13 .9277 LSA 66.2 MSA 31.7 SSA 1.7  
 BDE .4892 BRA 3.9064 BC3 4.0741 FSP 1694 SG1 6423.8 SG2 608.7 THA 14.11 EL1 65.7 EL2 5.1 ALF 9.20

LAUNCH DATE SEP 14 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC DISTANCE 535.236 EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.984 GAL 7.71 AZL 86.44 HCA 148.71 SMA 196.32 ECC .26750 INC 3.5632 V1 29.611  
 RP 248.25 LAP 1.85 LOP 139.80 VP 19.829 GAP -2.37 AZP 93.05 TAL 37.81 TAP 186.52 RCA 143.81 APO 248.84 V2 22.087  
 RC 329.241 GL 19.48 GP -21.29 ZAL 36.64 ZAP 60.17 ETS 168.79 ZAE 84.18 ETE 179.13 ZAC 67.72 ETC 285.32 LVI -1.43

PLANETOCENTRIC CONIC

C3 37.118 VHL 6.092 DLA 26.79 RAL 13.02 RAD 6649.7 VEL 12.530 PTH 7.41 VHP 2.887 DPA -13.46 RAP 25.28 ECC 1.6109  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 34 3839.73 -46.38 160.44 271.98 77.95 7 53 34 2839.7 -45.81 125.33  
 60.00 6 53 1 3830.52 -38.01 156.94 269.31 75.47 7 56 52 2830.5 -39.92 125.96  
 70.00 6 59 10 3812.38 -30.01 152.74 266.58 72.87 8 2 43 2812.4 -34.13 124.79  
 80.00 7 13 39 3766.90 -22.94 146.68 263.95 70.34 8 16 26 2766.9 -28.96 120.88  
 90.00 8 2 22 3609.51 -19.34 133.69 262.52 68.96 9 2 31 2609.5 -26.32 108.84  
 100.00 9 56 31 3241.37 -22.94 108.05 263.95 70.34 10 50 33 2241.4 -28.96 82.24  
 110.00 11 58 37 2859.20 -30.01 81.66 266.58 72.87 12 46 16 1859.2 -34.13 53.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.4259 TRA-3.9208 TC3-3.9400 BAU 2.0612 SGT 6345.9 SGR 1700.4 SG3 1021.2 ST 65.5 SR 11.0 SS 33.1  
 RDE -.1468 RRA -.5240 RC3-1.3150 FAU .37597 RRT .9294 RRF .9605 RTF .9207 CRT .9240 CR8 .1234 CST -.2355  
 FDE 2.4053 FRA-4.2891 FC3-8.7690 BSP 11285 SGB 6569.7 R23 .2623 R13 .9271 LSA 66.9 MSA 32.2 SSA 1.6  
 BDE .4505 BRA 3.9537 BC3 4.1537 FSP 1670 SG1 6541.4 SG2 609.0 THA 14.11 EL1 66.3 EL2 4.2 ALF 8.89

LAUNCH DATE SEP 14 1973

FLIGHT TIME 260.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC DISTANCE 539.015 EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 32.993 GAL 7.65 AZL 86.34 HCA 149.59 SMA 196.48 ECC .26752 INC 3.6550 V1 29.611  
 RP 248.35 LAP 1.85 LOP 140.60 VP 19.832 GAP -2.56 AZP 93.15 TAL 37.47 TAP 187.08 RCA 143.92 APO 249.04 V2 22.057  
 RC 331.317 GL 20.03 GP -21.70 ZAL 37.12 ZAP 59.64 ETS 168.22 ZAE 83.26 ETE 178.68 ZAC 67.28 ETC 285.37 LVI -1.00

PLANETOCENTRIC CONIC

C3 37.054 VHL 6.087 DLA 27.39 RAL 13.03 RAD 6649.6 VEL 12.528 PTH 7.41 VHP 2.908 DPA -13.76 RAP 25.62 ECC 1.6098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 46 26 3852.90 -46.19 161.65 272.46 77.03 7 50 39 2852.9 -46.03 126.52  
 60.00 6 48 33 3847.29 -37.72 158.27 269.59 74.61 7 52 40 2847.3 -40.03 127.37  
 70.00 6 52 22 3836.02 -29.52 154.41 266.64 71.99 7 56 18 2836.0 -34.08 126.64  
 80.00 7 1 59 3805.80 -22.03 149.21 263.72 69.32 8 5 25 2805.8 -28.57 123.70  
 90.00 7 44 0 3669.98 -17.82 137.48 261.96 67.67 8 45 10 2670.0 -25.48 113.07  
 100.00 9 44 51 3280.27 -22.03 110.57 263.72 69.32 10 39 31 2280.3 -28.57 85.07  
 110.00 11 51 48 2882.84 -29.52 83.33 266.64 71.99 12 39 51 1882.8 -34.08 55.55

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.3926 TRA-3.9687 TC3-4.0156 BAU 2.0967 SGT 6460.6 SGR 1729.5 SG3 1003.7 ST 66.2 SR 10.6 SS 33.9  
 RDE -.1198 RRA -.5397 RC3-1.3374 FAU .36855 RRT .9316 RRF .9627 RTF .9200 CRT .9503 CR8 .0326 CST -.2427  
 FDE 2.4697 FRA-4.1823 FC3-8.6109 BSP 11511 SGB 6688.0 R23 .2696 R13 .9284 LSA 67.5 MSA 32.7 SSA 1.6  
 BDE .4104 BRA 4.0052 BC3 4.2326 FSP 1642 SG1 6660.2 SG2 609.9 THA 14.12 EL1 66.9 EL2 3.2 ALF 8.64

LAUNCH DATE SEP 14 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

DISTANCE 542.793

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.001 GAL 7.58 AZL 86.25 HCA 150.47 SMA 196.64 ECC .26753 INC 3.7518 V1 29.611
RP 248.45 LAP 1.85 LOP 141.56 VP 19.833 GAP -2.78 AZP 93.27 TAL 37.14 TAP 187.60 RCA 144.03 APO 249.25 V2 22.048
RC 333.364 GL 20.60 GP -22.14 ZAL 37.62 ZAP 59.13 ETS 167.64 ZAE 82.35 ETE 178.23 ZAC 66.81 ETC 285.42 LVI -.54

PLANETOCENTRIC CONIC

C3 37.006 VHL 6.083 DLA 28.02 RAL 13.02 RAD 6649.6 VEL 12.526 PTH 7.41 VHP 2.930 DPA -14.08 RAP 25.98 ECC 1.6090
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 4 3866.83 -45.97 162.92 272.95 76.07 7 47 31 2866.8 -46.24 127.80
60.00 6 43 42 3865.14 -37.39 159.67 269.85 73.71 7 48 7 2865.1 -40.13 128.88
70.00 6 44 53 3861.67 -28.97 156.20 266.66 71.07 7 49 15 2861.7 -33.98 128.63
80.00 6 48 7 3851.50 -20.90 152.13 263.36 68.18 7 52 19 2851.5 -28.04 126.99
90.00 7 15 27 3763.06 -15.32 143.17 260.88 65.94 8 18 10 2763.1 -23.93 119.45
100.00 9 30 59 3325.97 -20.90 113.50 263.36 68.18 10 26 25 2326.0 -28.04 88.36
110.00 11 44 19 2908.49 -28.97 85.12 266.66 71.07 12 32 48 1908.5 -33.98 57.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3571 TRA-4.0164 TC3-4.0892 BAU 2.1321 SGT 6574.8 SGR 1760.1 SG3 985.6 ST 66.9 SR 10.2 SS 34.6
RDE -.0917 RRA -.5561 RC3-1.3602 FAU .36091 RRT .9337 RRF .9649 RTF .9192 CRT .9726 CRS -.0741 CST -.2515
FDE 2.5332 FRA-4.0754 FC3-8.4433 BSP 11744 SGB 6806.3 R23 .2770 R13 .9257 LSA 68.3 MSA 33.3 SSA 1.5
BDE .3687 BRA 4.0547 BC3 4.3095 FSP 1616 SG1 6778.8 SG2 611.4 THA 14.15 EL1 67.6 EL2 2.3 ALF 8.45

LAUNCH DATE SEP 14 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 5 1974

HELIOCENTRIC CONIC

DISTANCE 546.570

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.009 GAL 7.52 AZL 86.15 HCA 151.34 SMA 196.80 ECC .26756 INC 3.8538 V1 29.611
RP 248.54 LAP 1.85 LOP 142.43 VP 19.839 GAP -2.95 AZP 93.38 TAL 36.80 TAP 188.14 RCA 144.15 APO 249.46 V2 22.039
RC 333.380 GL 21.21 GP -22.60 ZAL 38.14 ZAP 58.66 ETS 167.04 ZAE 81.47 ETE 177.76 ZAC 66.31 ETC 285.47 LVI -.05

PLANETOCENTRIC CONIC

C3 36.976 VHL 6.081 DLA 28.67 RAL 13.00 RAD 6649.6 VEL 12.525 PTH 7.40 VHP 2.953 DPA -14.41 RAP 26.38 ECC 1.6085
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 39 26 3881.60 -45.72 164.26 273.43 75.07 7 44 8 2881.6 -46.46 129.16
60.00 6 38 28 3884.20 -37.01 161.15 270.10 72.77 7 43 12 2884.2 -40.21 130.50
70.00 6 38 36 3889.71 -28.34 158.14 266.64 70.08 7 41 25 2889.7 -33.84 130.81
80.00 6 30 45 3908.10 -19.42 155.69 262.80 66.87 7 35 53 2908.1 -27.26 131.02
85.06 6 0 25 4005.88 -12.34 159.51 259.43 63.91 7 7 11 3005.9 -22.04 136.59
100.00 9 13 37 3382.57 -19.42 117.06 262.80 66.87 10 9 59 2382.6 -27.26 92.38
110.00 11 36 2 2936.53 -28.34 87.06 266.64 70.08 12 24 59 1936.5 -33.84 59.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3193 TRA-4.0837 TC3-4.1608 BAU 2.1676 SGT 6689.0 SGR 1793.1 SG3 967.2 ST 67.6 SR 10.0 SS 35.4
RDE -.0626 RRA -.5737 RC3-1.3838 FAU .35320 RRT .9357 RRF .9869 RTF .9184 CRT .9866 CRS -.1934 CST -.2626
FDE 2.5939 FRA-3.9706 FC3-8.2696 BSP 11974 SGB 6925.2 R23 .2843 R13 .9250 LSA 69.1 MSA 33.8 SSA 1.5
BDE .3254 BRA 4.1040 BC3 4.3849 FSP 1586 SG1 6897.9 SG2 613.6 THA 14.20 EL1 68.3 EL2 1.6 ALF 8.33

LAUNCH DATE SEP 14 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC

DISTANCE 550.347

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.018 GAL 7.45 AZL 86.04 HCA 152.22 SMA 196.96 ECC .26759 INC 3.9616 V1 29.611
RP 248.63 LAP 1.85 LOP 143.31 VP 19.844 GAP -3.14 AZP 93.51 TAL 36.45 TAP 188.67 RCA 144.26 APO 249.67 V2 22.030
RC 337.366 GL 21.84 GP -23.09 ZAL 38.67 ZAP 58.22 ETS 166.42 ZAE 80.61 ETE 177.28 ZAC 65.78 ETC 285.53 LVI .46

PLANETOCENTRIC CONIC

C3 36.968 VHL 6.080 DLA 29.35 RAL 12.96 RAD 6649.6 VEL 12.524 PTH 7.40 VHP 2.978 DPA -14.77 RAP 26.79 ECC 1.6084
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 39 31 3897.27 -45.43 165.66 273.92 74.02 7 40 28 2897.3 -46.66 130.61
60.00 6 32 46 3904.61 -36.59 162.72 270.32 71.78 7 37 50 2904.6 -40.27 132.23
70.00 6 27 20 3920.64 -27.60 160.24 266.55 69.04 7 32 41 2920.6 -33.63 133.20
80.00 6 6 3 3987.71 -17.22 160.57 261.82 65.23 7 12 30 2987.7 -25.94 136.56
81.78 5 33 53 4090.80 -12.62 165.91 259.52 63.27 6 42 4 3090.8 -22.55 143.04
100.00 8 48 55 3482.18 -17.22 121.94 261.82 65.23 9 46 37 2462.2 -25.94 97.93
110.00 11 26 48 2967.46 -27.60 89.16 266.55 69.04 12 16 14 1967.5 -33.63 62.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2796 TRA-4.1113 TC3-4.2304 BAU 2.2036 SGT 6803.7 SGR 1828.8 SG3 948.6 ST 68.4 SR 10.1 SS 36.2
RDE -.0325 RRA -.5927 RC3-1.4083 FAU .34548 RRT .9376 RRF .9889 RTF .9577 CRT .9888 CRS -.3179 CST -.2760
FDE 2.6503 FRA-3.8694 FC3-8.0906 BSP 12197 SGB 7045.2 R23 .2914 R13 .9244 LSA 70.1 MSA 34.3 SSA 1.4
BDE .2813 BRA 4.1538 BC3 4.4587 FSP 1551 SG1 7018.2 SG2 616.4 THA 14.26 EL1 69.1 EL2 1.5 ALF 8.28

LAUNCH DATE SEP 14 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

DISTANCE 554.124

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.028 GAL 7.39 AZL 85.92 HCA 153.10 SMA 197.13 ECC .26762 INC 4.0758 V1 29.611
RP 248.71 LAP 1.84 LOP 144.19 VP 19.849 GAP -3.33 AZP 93.64 TAL 36.11 TAP 189.21 RCA 144.37 APO 249.88 V2 22.023
RC 339.321 GL 22.51 GP -23.61 ZAL 39.23 ZAP 57.81 ETS 165.78 ZAE 79.78 ETE 176.79 ZAC 65.22 ETC 285.60 LVI 1.01

PLANETOCENTRIC CONIC

C3 36.982 VHL 6.081 DLA 30.07 RAL 12.90 RAD 6649.6 VEL 12.525 PTH 7.40 VHP 3.004 DPA -15.14 RAP 27.23 ECC 1.6086
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 31 15 3913.96 -45.11 167.14 274.40 72.92 7 36 29 2914.0 -46.86 132.18
60.00 6 26 32 3926.54 -36.11 164.38 270.51 70.74 7 31 59 2926.5 -40.30 134.10
70.00 6 16 50 3955.17 -26.74 162.56 266.38 67.91 7 22 46 2955.2 -33.34 135.85
79.34 5 14 51 4151.05 -12.90 170.52 259.62 62.60 6 24 2 3151.1 -23.07 147.71
79.34 5 14 51 4151.05 -12.90 170.52 259.62 62.60 6 24 2 3151.1 -23.07 147.71
79.34 5 14 51 4151.05 -12.90 170.52 259.62 62.60 6 24 2 3151.1 -23.07 147.71
110.00 11 16 17 3001.98 -26.74 91.47 266.38 67.91 12 6 19 2002.0 -33.34 64.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2379 TRA-4.1588 TC3-4.2976 BAU 2.2399 SGT 6918.8 SGR 1866.7 SG3 929.3 ST 69.3 SR 10.3 SS 36.9
RDE -.0010 RRA -.6126 RC3-1.4335 FAU .33756 RRT .9394 RRF .9707 RTF .9169 CRT .9778 CRS -.4399 CST -.2904
FDE 2.7055 FRA-3.7665 FC3-7.9022 BSP 12409 SGB 7166.2 R23 .2986 R13 .9237 LSA 71.1 MSA 34.8 SSA 1.3
BDE .2379 BRA 4.2037 BC3 4.5304 FSP 1514 SG1 7139.3 SG2 620.1 THA 14.33 EL1 70.0 EL2 2.1 ALF 8.31



LAUNCH DATE SEP 14 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC

DISTANCE 572.095

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.088 GAL 7.06 AZL 85.23 HCA 157.46 SMA 197.94 ECC .26785 INC 4.7681 V1 29.611  
 RP 249.02 LAP 1.83 LOP 148.57 VP 19.885 GAP -4.26 AZP 94.41 TAL 34.37 TAP 191.83 RCA 144.92 APO 250.96 V2 21.992  
 RC 348.628 GL 26.44 GP -26.73 ZAL 42.35 ZAP 56.30 ETS 162.20 ZAE 76.03 ETE 174.05 ZAC 61.86 ETC 286.03 LVI 4.30

PLANETOCENTRIC CONIC

C3 37.526 VHL 6.126 DLA 34.15 RAL 12.22 RAD 6649.8 VEL 12.546 PTH 7.42 VHP 3.160 DPA -17.40 RAP 29.90 ECC 1.6176  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 3 9 4016.99 -42.68 175.84 276.49 66.58 7 10 6 3017.0 -47.55 142.03  
 60.00 5 43 41 4069.01 -32.41 174.65 270.63 64.61 6 51 30 3069.0 -39.70 146.15  
 70.00 4 12 59 4340.08 -14.80 185.98 260.36 58.86 5 25 19 3340.1 -26.28 163.45  
 70.01 4 8 54 4352.54 -14.35 186.68 260.08 58.67 5 21 26 3352.5 -25.94 164.26  
 70.01 4 8 54 4352.54 -14.35 186.68 260.08 58.67 5 21 26 3352.5 -25.94 164.26  
 70.01 4 8 54 4352.54 -14.35 186.68 260.08 58.67 5 21 26 3352.5 -25.94 164.26  
 110.00 9 12 25 3386.90 -14.80 114.90 260.36 58.86 10 8 52 2386.9 -26.28 92.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0210 TRA-4.3857 TC3-4.5625 BAU 2.4185 SGT 7470.9 SGR 2084.3 SG3 816.4 ST 74.8 SR 15.5 SS 41.1  
 RDE .1911 RRA -.7264 RC3-1.5568 FAU .29245 RRT .9463 RRF .9770 RTF .9098 CRT .8185 CRS -.8387 CST -.3803  
 FDE 2.9902 FRA-3.2077 FC3-6.7467 BSP 13672 SGB 7756.2 R23 .3386 R13 .9776 LSA 78.2 MSA 37.6 SSA 1.0  
 BDE .1923 BRA 4.4455 BC3 4.8208 FSP 1362 SG1 7728.8 SG2 651.5 THA 14.90 EL1 75.9 EL2 8.8 ALF 9.74

LAUNCH DATE SEP 14 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC

DISTANCE 576.769

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.076 GAL 6.99 AZL 85.06 HCA 158.33 SMA 198.11 ECC .26791 INC 4.9378 V1 29.611  
 RP 249.07 LAP 1.82 LOP 149.44 VP 19.894 GAP -4.44 AZP 94.59 TAL 34.02 TAP 192.36 RCA 145.03 APO 251.18 V2 21.988  
 RC 350.392 GL 27.38 GP -27.48 ZAL 43.05 ZAP 56.12 ETS 161.40 ZAE 75.38 ETE 173.44 ZAC 61.05 ETC 286.15 LVI 5.09

PLANETOCENTRIC CONIC

C3 37.765 VHL 6.145 DLA 35.09 RAL 11.98 RAD 6549.9 VEL 12.556 PTH 7.43 VHP 3.198 DPA -17.95 RAP 30.53 ECC 1.6215  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 55 40 4042.75 -41.96 177.90 276.78 65.12 7 3 2 3042.7 -47.58 144.52  
 60.00 5 31 27 4107.46 -31.26 177.25 270.33 63.15 6 39 55 3107.5 -39.31 149.34  
 68.30 3 57 56 4384.45 -14.64 189.37 260.16 57.75 5 11 1 3384.5 -26.57 167.07  
 68.30 3 57 56 4384.45 -14.64 189.37 260.16 57.75 5 11 1 3384.5 -26.57 167.07  
 68.30 3 57 56 4384.45 -14.64 189.37 260.16 57.75 5 11 1 3384.5 -26.57 167.07  
 68.30 3 57 56 4384.45 -14.64 189.37 260.16 57.75 5 11 1 3384.5 -26.57 167.07  
 68.30 3 57 56 4384.45 -14.64 189.37 260.16 57.75 5 11 1 3384.5 -26.57 167.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0715 TRA-4.4396 TC3-4.6072 BAU 2.4604 SGT 7593.3 SGR 2146.6 SG3 794.9 ST 76.4 SR 17.1 SS 41.6  
 RDE .2307 RRA -.7806 RC3-1.5882 FAU .28412 RRT .9480 RRF .9782 RTF .9096 CRT .8001 CRS -.8683 CST -.4023  
 FDE 3.0057 FRA-3.1277 FC3-6.5132 BSP 13809 SGB 7890.9 R23 .3434 R13 .9176 LSA 80.2 MSA 37.8 SSA 1.0  
 BDE .2415 BRA 4.5043 BC3 4.8732 FSP 1294 SG1 7863.3 SG2 659.8 THA 15.11 EL1 77.7 EL2 10.1 ALF 10.34

LAUNCH DATE SEP 14 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 23 1974

HELIOCENTRIC CONIC

DISTANCE 580.541

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.085 GAL 6.93 AZL 84.88 HCA 159.21 SMA 198.27 ECC .26797 INC 5.1209 V1 29.611  
 RP 249.11 LAP 1.82 LOP 150.32 VP 19.904 GAP -4.82 AZP 94.79 TAL 33.67 TAP 192.87 RCA 145.14 APO 251.40 V2 21.984  
 RC 352.122 GL 28.37 GP -28.29 ZAL 43.80 ZAP 56.00 ETS 160.58 ZAE 74.76 ETE 172.80 ZAC 60.19 ETC 286.27 LVI 5.94

PLANETOCENTRIC CONIC

C3 38.082 VHL 6.169 DLA 36.08 RAL 11.70 RAD 6650.0 VEL 12.568 PTH 7.44 VHP 3.239 DPA -18.55 RAP 31.20 ECC 1.6284  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 47 17 4070.84 -41.13 180.09 276.98 63.59 6 55 8 3070.8 -47.54 147.24  
 60.00 5 17 8 4151.49 -29.87 180.15 269.63 61.58 6 26 20 3151.5 -38.74 152.95  
 66.59 3 47 15 4415.02 -14.94 192.00 260.24 56.76 5 0 50 3415.0 -27.22 169.83  
 66.59 3 47 15 4415.02 -14.94 192.00 260.24 56.76 5 0 50 3415.0 -27.22 169.83  
 66.59 3 47 15 4415.02 -14.94 192.00 260.24 56.76 5 0 50 3415.0 -27.22 169.83  
 66.59 3 47 15 4415.02 -14.94 192.00 260.24 56.76 5 0 50 3415.0 -27.22 169.83  
 66.59 3 47 15 4415.02 -14.94 192.00 260.24 56.76 5 0 50 3415.0 -27.22 169.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1362 TRA-4.4836 TC3-4.6337 BAU 2.4983 SGT 7697.5 SGR 2201.0 SG3 767.6 ST 78.0 SR 19.1 SS 42.4  
 RDE .2809 RRA -.7896 RC3-1.6113 FAU .27353 RRT .9488 RRF .9787 RTF .9173 CRT .7790 CRS -.8958 CST -.4229  
 FDE 3.0573 FRA-3.0052 FC3-6.2217 BSP 14106 SGB 8006.0 R23 .3523 R13 .9156 LSA 82.3 MSA 38.4 SSA .9  
 BDE .3122 BRA 4.5526 BC3 4.9059 FSP 1266 SG1 7977.9 SG2 670.5 THA 15.29 EL1 79.5 EL2 11.8 ALF 11.03

LAUNCH DATE SEP 14 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC

DISTANCE 584.315

EARTH TO MARS

RL 150.47 LAL -.00 LOL 351.04 VL 33.093 GAL 6.86 AZL 84.68 HCA 160.08 SMA 198.43 ECC .26803 INC 5.3192 V1 29.611  
 RP 249.14 LAP 1.81 LOP 151.19 VP 19.914 GAP -4.80 AZP 95.00 TAL 33.32 TAP 193.39 RCA 145.25 APO 251.62 V2 21.981  
 RC 353.817 GL 29.43 GP -29.15 ZAL 44.58 ZAP 55.92 ETS 159.72 ZAE 74.19 ETE 172.13 ZAC 59.27 ETC 286.42 LVI 6.84

PLANETOCENTRIC CONIC

C3 38.429 VHL 6.199 DLA 37.13 RAL 11.35 RAD 6650.1 VEL 12.582 PTH 7.45 VHP 3.284 DPA -19.18 RAP 31.91 ECC 1.6324  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 37 51 4101.61 -40.17 182.41 277.07 61.99 6 46 13 3101.6 -47.42 150.20  
 60.00 4 59 55 4203.24 -28.15 183.45 269.02 59.88 6 9 58 3203.2 -37.92 157.10  
 64.87 3 36 42 4444.57 -15.22 194.58 260.30 55.72 4 50 47 3444.6 -27.88 172.56  
 64.87 3 36 42 4444.57 -15.22 194.58 260.30 55.72 4 50 47 3444.6 -27.88 172.56  
 64.87 3 36 42 4444.57 -15.22 194.58 260.30 55.72 4 50 47 3444.6 -27.88 172.56  
 64.87 3 36 42 4444.57 -15.22 194.58 260.30 55.72 4 50 47 3444.6 -27.88 172.56  
 64.87 3 36 42 4444.57 -15.22 194.58 260.30 55.72 4 50 47 3444.6 -27.88 172.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1884 TRA-4.5415 TC3-4.6654 BAU 2.5413 SGT 7823.5 SGR 2273.4 SG3 743.9 ST 79.9 SR 21.1 SS 42.8  
 RDE .3256 RRA -.8304 RC3-1.6433 FAU .26459 RRT .9505 RRF .9796 RTF .9070 CRT .7704 CRS -.9118 CST -.4436  
 FDE 3.0618 FRA-2.9255 FC3-5.9608 BSP 14198 SGB 8147.1 R23 .3567 R13 .9156 LSA 84.7 MSA 38.6 SSA .9  
 BDE .3762 BRA 4.6168 BC3 4.9464 FSP 1191 SG1 8118.6 SG2 680.7 THA 15.55 EL1 81.6 EL2 13.2 ALF 11.80

LAUNCH DATE SEP 14 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 27 1974

HELIOCENTRIC CONIC  
 RL 150.47 LAL -.00 LOL 351.04 VL 33.101 GAL 6.79 AZL 84.47 HCA 160.95 SMA 198.60 ECC .26810 INC 5.5349 V1 29.611  
 RP 249.17 LAP 1.80 LOP 152.06 VP 19.925 GAP -4.98 AZP 95.23 TAL 32.96 TAP 193.91 RCA 145.35 APO 251.84 V2 21.978  
 RC 355.478 GL 30.56 GP -30.07 ZAL 45.40 ZAP 55.91 ET8 158.84 ZAE 73.66 ETE 171.44 ZAC 58.29 ETC 286.37 LVI 7.81

PLANETOCENTRIC CONIC  
 CS 38.877 VHL 6.235 DLA 38.23 RAL 10.94 RAD 6650.3 VEL 12.600 PTH 7.46 VHP 3.334 DPA -19.87 RAP 32.67 ECC 1.6399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 27 9 4135.57 -39.06 184.90 277.02 60.32 6 36 4 3135.6 -47.19 153.45  
 60.00 4 38 5 4267.23 -25.90 187.37 267.74 57.97 5 49 12 3267.2 -36.69 162.09  
 63.12 3 26 14 4473.29 -15.50 197.13 260.35 54.60 4 40 47 3473.3 -28.56 175.29  
 63.12 3 26 14 4473.29 -15.50 197.13 260.35 54.60 4 40 47 3473.3 -28.56 175.29  
 63.12 3 26 14 4473.29 -15.50 197.13 260.35 54.60 4 40 47 3473.3 -28.56 175.29  
 63.12 3 26 14 4473.29 -15.50 197.13 260.35 54.60 4 40 47 3473.3 -28.56 175.29  
 63.12 3 26 14 4473.29 -15.50 197.13 260.35 54.60 4 40 47 3473.3 -28.56 175.29

DIFFERENTIAL CORRECTIONS  
 TDE .2518 TRA-4.5913 TC3-4.6782 BAU 2.5816  
 RDE .3791 RRA -.8692 RC3-1.6691 FAU .25403  
 FDE 3.0850 FRA-2.8172 FC3-5.6569 BSP 14430  
 BDE .4551 BRA 4.6728 BC3 4.9670 FSP 1141

MID-COURSE EXECUTION ACCURACY  
 SGT 7933.2 SGR 2342.5 SG3 715.9  
 RRT .9516 RRF .9799 RTF .9053  
 SGB 8271.9 R23 .3638 R13 .9142  
 SGI 8242.8 SG2 692.9 THA 15.81

ORBIT DETERMINATION ACCURACY  
 ST 81.9 SR 23.4 SS 43.3  
 CRT .7622 CRS -.9261 CST -.4639  
 LSA 87.2 MSA 39.0 SSA .8  
 EL1 83.8 EL2 14.8 ALF 12.67

LAUNCH DATE SEP 14 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 29 1974

HELIOCENTRIC CONIC  
 RL 150.47 LAL -.00 LOL 351.04 VL 33.110 GAL 6.72 AZL 84.23 HCA 161.82 SMA 198.76 ECC .26810 INC 5.7702 V1 29.611  
 RP 249.19 LAP 1.80 LOP 152.94 VP 19.937 GAP -5.16 AZP 95.48 TAL 32.61 TAP 194.42 RCA 145.46 APO 252.07 V2 21.976  
 RC 357.105 GL 31.77 GP -31.06 ZAL 46.28 ZAP 55.96 ETS 157.93 ZAE 73.18 ETE 170.72 ZAC 57.24 ETC 286.75 LVI 8.84

PLANETOCENTRIC CONIC  
 CS 39.423 VHL 6.279 DLA 39.40 RAL 10.46 RAD 6650.5 VEL 12.621 PTH 7.47 VHP 3.308 DPA -20.61 RAP 33.47 ECC 1.6488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 14 9 4173.39 -37.75 187.57 276.77 58.56 6 24 25 3173.4 -46.82 157.03  
 60.00 4 6 57 4356.26 -22.58 192.58 265.50 55.69 5 19 33 3356.3 -34.61 168.72  
 61.34 3 15 43 4501.44 -15.77 199.67 260.37 53.41 4 30 44 3501.4 -29.26 178.04  
 61.34 3 15 43 4501.44 -15.77 199.67 260.37 53.41 4 30 44 3501.4 -29.26 178.04  
 61.34 3 15 43 4501.44 -15.77 199.67 260.37 53.41 4 30 44 3501.4 -29.26 178.04  
 61.34 3 15 43 4501.44 -15.77 199.67 260.37 53.41 4 30 44 3501.4 -29.26 178.04  
 61.34 3 15 43 4501.44 -15.77 199.67 260.37 53.41 4 30 44 3501.4 -29.26 178.04

DIFFERENTIAL CORRECTIONS  
 TDE .3141 TRA-4.6441 TC3-4.6813 BAU 2.6237  
 RDE .4366 RRA -.9119 RC3-1.6935 FAU .24293  
 FDE 3.1020 FRA-2.7060 FC3-5.3347 BSP 14642  
 BDE .5378 BRA 4.7328 BC3 4.9782 FSP 1090

MID-COURSE EXECUTION ACCURACY  
 SGT 8044.8 SGR 2416.8 SG3 686.3  
 RRT .9526 RRF .9801 RTF .9032  
 SGB 8400.0 R23 .3713 R13 .9125  
 SGI 8370.2 SG2 706.4 THA 16.09

ORBIT DETERMINATION ACCURACY  
 ST 84.0 SR 25.8 SS 43.8  
 CRT .7569 CRS -.9367 CST -.4819  
 LSA 89.9 MSA 39.4 SSA .7  
 EL1 86.3 EL2 16.4 ALF 13.62

LAUNCH DATE SEP 15 1973

FLIGHT TIME 234.00

ARRIVAL DATE MAY 7 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 32.886 GAL 8.66 AZL 87.30 HCA 137.57 SMA 194.32 ECC .26931 INC 2.7028 V1 29.619  
 RP 246.65 LAP 1.82 LOP 129.81 VP 19.828 GAP -.09 AZP 92.00 TAL 42.66 TAP 180.23 RCA 141.99 APO 246.65 V2 22.224  
 RC 303.274 GL 14.05 GP -17.09 ZAL 30.91 ZAP 67.95 ETS 174.48 ZAE 96.21 ETE 183.61 ZAC 72.03 ETC 284.90 LVI -5.72

Distance 488.771 Earth to Mars

Planetocentric Conic: C3 39.887 VHL 6.316 DLA 20.71 RAL 12.68 RAD 6650.6 VEL 12.639 PTH 7.49 VHP 2.718 DPA -10.04 RAP 22.59 ECC 1.8564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 13 14 3725.86 -47.46 149.64 267.63 86.19 8 15 20 2725.7 -43.37 115.44  
 60.00 7 27 51 3686.74 -39.83 145.17 266.66 83.26 8 29 18 2686.7 -38.21 114.14  
 70.00 7 50 36 3619.75 -33.02 138.56 265.47 80.74 8 50 55 2619.8 -33.43 109.83  
 80.00 8 29 40 3497.26 -27.87 128.20 264.39 78.83 9 27 57 2497.3 -29.74 100.93  
 90.00 9 37 19 3278.83 -25.83 111.69 263.92 78.06 10 31 58 2278.8 -28.26 84.94  
 100.00 11 12 32 2971.73 -27.87 89.57 264.39 78.83 12 2 3 1971.7 -29.74 62.30  
 110.00 12 50 2 2666.57 -33.02 67.48 265.47 80.74 13 34 29 1666.6 -33.43 38.75

Differential Corrections: TDE -.7205 TRA-3.3960 TC3-2.9171 BAU 1.6479 SGT 4985.1 SGR 1388.0 SG3 1155.4 ST 59.5 SR 20.1 SS 25.3  
 RDE -.4273 RRA -.3513 RC3-1.0200 FAU .44579 RRT .8849 RRF .9147 RTF .9203 CRT .7484 CRS .4358 CST -.2581  
 FDE 1.5716 FRA-5.4005 FC3-9.6756 BSP 8743 SGB 5174.8 R23 .1873 R13 .9264 LSA 61.7 MSA 27.7 S3A 2.2  
 BDE .8377 BRA 3.4141 BC3 3.0907 FSP 1949 SG1 5136.6 SG2 627.4 THA 14.05 EL1 61.5 EL2 12.9 ALF 14.89

Mid-Course Execution Accuracy: SGT 4985.1 SGR 1388.0 SG3 1155.4  
 RRT .8849 RRF .9147 RTF .9203  
 SGB 5174.8 R23 .1873 R13 .9264  
 SG1 5136.6 SG2 627.4 THA 14.05

Orbit Determination Accuracy: ST 59.5 SR 20.1 SS 25.3  
 CRT .7484 CRS .4358 CST -.2581  
 LSA 61.7 MSA 27.7 S3A 2.2  
 EL1 61.5 EL2 12.9 ALF 14.89

LAUNCH DATE SEP 15 1973

FLIGHT TIME 236.00

ARRIVAL DATE MAY 9 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 32.894 GAL 8.60 AZL 87.24 HCA 138.46 SMA 194.47 ECC .26925 INC 2.7569 V1 29.619  
 RP 246.82 LAP 1.83 LOP 130.50 VP 19.823 GAP -.30 AZP 92.06 TAL 42.34 TAP 180.80 RCA 142.11 APO 246.83 V2 22.207  
 RC 305.673 GL 14.38 GP -17.31 ZAL 31.26 ZAP 67.12 ETS 174.08 ZAE 95.05 ETE 183.24 ZAC 71.82 ETC 284.92 LVI -5.50

Distance 492.561 Earth to Mars

Planetocentric Conic: C3 39.694 VHL 6.309 DLA 21.10 RAL 12.77 RAD 6650.6 VEL 12.632 PTH 7.48 VHP 2.730 DPA -10.25 RAP 22.67 ECC 1.6533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 11 50 3732.80 -47.43 150.33 267.99 85.67 8 14 3 2732.8 -43.55 116.03  
 60.00 7 25 49 3695.55 -39.76 145.91 266.92 82.77 8 27 25 2695.5 -38.35 114.84  
 70.00 7 47 44 3631.01 -32.90 139.41 265.65 80.25 8 48 15 2631.0 -33.53 110.69  
 80.00 8 25 49 3511.62 -27.68 129.22 264.51 78.33 9 24 20 2511.6 -29.78 102.00  
 90.00 9 32 55 3294.96 -25.60 112.81 264.01 77.55 10 27 50 2295.0 -28.28 86.12  
 100.00 11 8 40 2986.09 -27.68 90.59 264.51 77.33 11 58 27 1986.1 -29.78 63.37  
 110.00 12 47 10 2677.83 -32.90 68.33 265.65 80.25 13 31 48 1677.8 -33.53 39.61

Differential Corrections: TDE -.7100 TRA-3.4506 TC3-3.0000 BAU 1.6844 SGT 5101.0 SGR 1403.4 SG3 1145.0 ST 60.2 SR 19.5 SS 25.7  
 RDE -.4097 RRA -.3621 RC3-1.0367 FAU .44061 RRT .8892 RRF .9189 RTF .9205 CRT .7511 CRS .4420 CST -.2471  
 FDE 1.6345 FRA-5.3096 FC3-9.6097 BSP 8957 SGB 5290.6 R23 .1923 R13 .9265 LSA 62.2 MSA 27.9 S3A 2.1  
 BDE .8197 BRA 3.4696 BC3 3.1741 FSP 1927 SG1 5253.7 SG2 623.5 THA 13.95 EL1 62.0 EL2 12.5 ALF 14.25

Mid-Course Execution Accuracy: SGT 5101.0 SGR 1403.4 SG3 1145.0  
 RRT .8892 RRF .9189 RTF .9205  
 SGB 5290.6 R23 .1923 R13 .9265  
 SG1 5253.7 SG2 623.5 THA 13.95

Orbit Determination Accuracy: ST 60.2 SR 19.5 SS 25.7  
 CRT .7511 CRS .4420 CST -.2471  
 LSA 62.2 MSA 27.9 S3A 2.1  
 EL1 62.0 EL2 12.5 ALF 14.25

LAUNCH DATE SEP 15 1973

FLIGHT TIME 238.00

ARRIVAL DATE MAY 11 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 32.902 GAL 8.54 AZL 87.19 HCA 139.35 SMA 194.62 ECC .26919 INC 2.8129 V1 29.619  
 RP 246.98 LAP 1.83 LOP 131.39 VP 19.818 GAP -.51 AZP 92.13 TAL 42.02 TAP 181.37 RCA 142.23 APO 247.01 V2 22.191  
 RC 308.046 GL 14.72 GP -17.55 ZAL 31.62 ZAP 66.31 ETS 173.66 ZAE 93.90 ETE 182.86 ZAC 71.59 ETC 284.94 LVI -5.27

Distance 496.349 Earth to Mars

Planetocentric Conic: C3 39.506 VHL 6.285 DLA 21.51 RAL 12.85 RAD 6650.5 VEL 12.625 PTH 7.48 VHP 2.743 DPA -10.46 RAP 22.77 ECC 1.6502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 10 21 3740.24 -47.38 151.05 268.37 85.12 8 12 41 2740.2 -43.74 116.65  
 60.00 7 23 41 3704.72 -39.67 146.68 267.19 82.25 8 25 26 2704.7 -38.50 115.58  
 70.00 7 44 43 3642.78 -32.76 140.30 265.83 79.74 8 45 26 2642.8 -33.62 111.60  
 80.00 8 21 43 3526.73 -27.46 130.30 264.62 77.80 9 20 30 2526.7 -29.82 103.12  
 90.00 9 28 14 3312.02 -25.34 113.99 264.09 77.01 10 23 26 2312.0 -28.28 87.37  
 100.00 11 4 35 3001.20 -27.46 91.67 264.62 77.80 11 54 37 2001.2 -29.82 64.49  
 110.00 12 44 9 2689.60 -32.76 69.22 265.83 79.74 13 28 59 1689.6 -33.62 40.52

Differential Corrections: TDE -.6975 TRA-3.3041 TC3-3.0822 BAU 1.7203 SGT 5215.8 SGR 1419.1 SG3 1133.7 ST 60.8 SR 18.8 SS 26.2  
 RDE -.3913 RRA -.3728 RC3-1.0533 FAU .43510 RRT .8932 RRF .9229 RTF .9205 CRT .7545 CRS .4469 CST -.2388  
 FDE 1.6998 FRA-5.2145 FC3-9.5347 BSP 9178 SGB 5405.4 R23 .1976 R13 .9265 LSA 62.7 MSA 28.2 S3A 2.1  
 BDE .7997 BRA 3.5239 BC3 3.2572 FSP 1907 SG1 5369.7 SG2 619.8 THA 13.85 EL1 62.5 EL2 12.0 ALF 13.62

Mid-Course Execution Accuracy: SGT 5215.8 SGR 1419.1 SG3 1133.7  
 RRT .8932 RRF .9229 RTF .9205  
 SGB 5405.4 R23 .1976 R13 .9265  
 SG1 5369.7 SG2 619.8 THA 13.85

Orbit Determination Accuracy: ST 60.8 SR 18.8 SS 26.2  
 CRT .7545 CRS .4469 CST -.2388  
 LSA 62.7 MSA 28.2 S3A 2.1  
 EL1 62.5 EL2 12.0 ALF 13.62

LAUNCH DATE SEP 15 1973

FLIGHT TIME 240.00

ARRIVAL DATE MAY 13 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 32.910 GAL 8.48 AZL 87.13 HCA 140.24 SMA 194.77 ECC .26914 INC 2.8708 V1 29.619  
 RP 247.14 LAP 1.84 LOP 132.28 VP 19.815 GAP -.71 AZP 92.21 TAL 41.70 TAP 181.94 RCA 142.35 APO 247.19 V2 22.176  
 RC 310.395 GL 15.07 GP -17.79 ZAL 31.98 ZAP 65.52 ETS 173.24 ZAE 92.78 ETE 182.49 ZAC 71.35 ETC 284.96 LVI -5.03

Distance 500.138 Earth to Mars

Planetocentric Conic: C3 39.324 VHL 6.271 DLA 21.93 RAL 12.93 RAD 6650.4 VEL 12.617 PTH 7.47 VHP 2.756 DPA -10.68 RAP 22.89 ECC 1.6472  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 8 47 3748.00 -47.34 151.79 268.75 84.54 8 11 15 2748.0 -43.92 117.30  
 60.00 7 21 26 3714.29 -39.58 147.47 267.47 81.72 8 23 20 2714.3 -38.64 116.35  
 70.00 7 41 32 3655.11 -32.60 141.23 266.02 79.21 8 42 27 2655.1 -33.71 112.55  
 80.00 8 17 23 3542.87 -27.23 131.42 264.72 77.25 9 16 26 2542.7 -29.84 104.30  
 90.00 9 23 13 3330.11 -25.06 115.24 264.16 76.44 10 18 43 2330.1 -28.27 88.69  
 100.00 11 0 15 3017.14 -27.23 92.79 264.72 77.25 11 50 32 2017.1 -29.84 65.67  
 110.00 12 40 58 2701.93 -32.60 70.15 266.02 79.21 13 26 0 1701.9 -33.71 41.47

Differential Corrections: TDE -.6845 TRA-3.5581 TC3-3.1654 BAU 1.7568 SGT 5332.3 SGR 1436.3 SG3 1122.5 ST 61.5 SR 18.1 SS 26.6  
 RDE -.3729 RRA -.3843 RC3-1.0708 FAU .42968 RRT .8972 RRF .9268 RTF .9206 CRT .7593 CRS .4477 CST -.2281  
 FDE 1.7612 FRA-5.1228 FC3-9.4594 BSP 9386 SGB 5522.3 R23 .2030 R13 .9265 LSA 63.3 MSA 28.4 S3A 2.1  
 BDE .7795 BRA 3.5788 BC3 3.3416 FSP 1883 SG1 5487.8 SG2 616.4 THA 13.76 EL1 63.0 EL2 11.5 ALF 13.02

Mid-Course Execution Accuracy: SGT 5332.3 SGR 1436.3 SG3 1122.5  
 RRT .8972 RRF .9268 RTF .9206  
 SGB 5522.3 R23 .2030 R13 .9265  
 SG1 5487.8 SG2 616.4 THA 13.76

Orbit Determination Accuracy: ST 61.5 SR 18.1 SS 26.6  
 CRT .7593 CRS .4477 CST -.2281  
 LSA 63.3 MSA 28.4 S3A 2.1  
 EL1 63.0 EL2 11.5 ALF 13.02

LAUNCH DATE SEP 15 1973

FLIGHT TIME 242.00

ARRIVAL DATE MAY 15 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 32.918 GAL 8.42 AZL 87.07 HCA 141.12 SMA 194.93 ECC .26910 INC 2.9308 V1 29.619  
 RP 247.29 LAP 1.84 LOP 133.17 VP 19.811 GAP -1.92 AZP 92.28 TAL 41.38 TAP 182.50 RCA 142.47 APO 247.38 V2 22.161  
 RC 312.717 GL 15.43 GP -18.04 ZAL 32.35 ZAP 64.76 ETS 172.81 ZAE 91.67 ETE 182.12 ZAC 71.00 ETC 284.99 LVI -4.77

DISTANCE 503.923 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 39.149 VHL 6.257 DLA 22.36 RAL 13.01 RAD 6650.4 VEL 12.610 PTH 7.47 VHP 2.770 DPA -10.89 RAP 23.03 ECC 1.6443  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 7 8 3756.09 -47.28 152.56 269.14 83.95 8 9 44 2756.1 -44.11 117.99  
 60.00 7 19 4 3724.30 -39.48 148.30 267.74 81.16 8 21 8 2724.3 -38.78 117.17  
 70.00 7 38 10 3668.04 -32.43 142.20 266.20 78.66 8 39 18 2668.0 -33.79 113.55  
 80.00 8 12 46 3559.53 -26.97 132.61 264.82 76.68 9 12 5 2559.5 -29.86 105.56  
 90.00 9 17 51 3349.37 -24.74 116.57 264.22 75.85 10 13 41 2349.4 -28.24 90.10  
 100.00 10 55 38 3034.00 -26.97 93.98 264.82 76.68 11 46 12 2034.0 -29.86 66.92  
 110.00 12 37 36 2714.86 -32.43 71.12 266.20 78.66 13 22 51 1714.9 -33.79 42.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6692 TRA-3.6109 TC3-3.2476 BAU 1.7927 SGT 5447.5 SGR 1453.7 SG3 1110.5 ST 62.1 SR 17.3 SS 27.1  
 RDE -.3536 RRA -.3958 RC3-1.0884 FAU .42395 RRT .9009 RRF .9306 RTF .9205 CRT .7652 CRS .4465 CST -.2201  
 FDE 1.8255 FRA-5.0266 FC3-9.3753 BSP 9604 SGB 5638.1 R23 .2088 R13 .9264 LSA 63.8 MSA 28.7 SSA 2.0  
 BDE .7569 BRA 3.6326 BC3 3.4251 FSP 1859 SGI 5604.6 SG2 613.2 THA 13.69 EL1 63.5 EL2 10.9 ALF 12.44

LAUNCH DATE SEP 15 1973

FLIGHT TIME 244.00

ARRIVAL DATE MAY 17 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 32.926 GAL 8.36 AZL 87.01 HCA 142.01 SMA 195.08 ECC .26906 INC 2.9932 V1 29.619  
 RP 247.44 LAP 1.84 LOP 134.06 VP 19.809 GAP -1.12 AZP 92.36 TAL 41.05 TAP 183.06 RCA 142.59 APO 247.57 V2 22.147  
 RC 315.013 GL 15.81 GP -18.31 ZAL 32.74 ZAP 64.03 ETS 172.37 ZAE 90.59 ETE 181.74 ZAC 70.92 ETC 285.01 LVI -4.50

DISTANCE 507.708 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.980 VHL 6.243 DLA 22.80 RAL 13.09 RAD 6650.3 VEL 12.604 PTH 7.46 VHP 2.784 DPA -11.11 RAP 23.19 ECC 1.6415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 5 23 3764.53 -47.22 153.37 269.55 83.33 8 8 7 2764.5 -44.31 118.71  
 60.00 7 16 33 3734.76 -39.37 149.17 268.03 80.59 8 18 48 2734.8 -38.93 118.02  
 70.00 7 34 35 3681.63 -32.25 143.22 266.37 78.09 8 35 57 2681.6 -33.87 114.60  
 80.00 8 7 49 3577.42 -26.68 133.86 264.91 76.08 9 7 27 2577.4 -29.86 106.89  
 90.00 9 12 5 3369.94 -24.39 117.97 264.26 75.23 10 8 14 2369.9 -28.19 91.60  
 100.00 10 50 41 3051.89 -26.68 95.23 264.91 76.08 11 41 33 2051.9 -29.86 68.25  
 110.00 12 34 2 2728.45 -32.25 72.14 266.37 78.09 13 19 30 1728.5 -33.87 43.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6522 TRA-3.6628 TC3-3.3293 BAU 1.8282 SGT 5562.0 SGR 1471.8 SG3 1097.9 ST 62.7 SR 16.6 SS 27.7  
 RDE -.3337 RRA -.4074 RC3-1.1062 FAU .41801 RRT .9045 RRF .9342 RTF .9203 CRT .7726 CRS .4419 CST -.2133  
 FDE 1.8904 FRA-4.9289 FC3-9.2839 BSP 9826 SGB 5753.4 R23 .2147 R13 .9262 LSA 64.2 MSA 29.0 SSA 2.0  
 BDE .7326 BRA 3.6854 BC3 3.5083 FSP 1836 SGI 5721.0 SG2 610.2 THA 13.62 EL1 64.0 EL2 10.3 ALF 11.89

LAUNCH DATE SEP 15 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 19 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 32.934 GAL 8.29 AZL 86.94 HCA 142.89 SMA 195.24 ECC .26903 INC 3.0579 V1 29.619  
 RP 247.58 LAP 1.84 LOP 134.94 VP 19.807 GAP -1.33 AZP 92.44 TAL 40.72 TAP 183.61 RCA 142.71 APO 247.76 V2 22.133  
 RC 317.282 GL 16.20 GP -18.59 ZAL 33.13 ZAP 63.32 ETS 171.92 ZAE 89.52 ETE 181.36 ZAC 70.54 ETC 285.04 LVI -4.21

DISTANCE 511.493 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.818 VHL 6.230 DLA 23.26 RAL 13.16 RAD 6650.3 VEL 12.597 PTH 7.46 VHP 2.799 DPA -11.33 RAP 23.38 ECC 1.6388  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 3 32 3773.36 -47.15 154.21 269.96 82.69 8 6 25 2773.4 -44.51 119.47  
 60.00 7 13 54 3745.71 -39.24 150.08 268.31 79.98 8 16 20 2745.7 -39.07 118.91  
 70.00 7 30 48 3695.94 -32.04 144.28 266.55 77.49 8 32 24 2695.9 -33.95 115.71  
 80.00 8 2 31 3596.45 -26.36 135.18 264.98 75.45 9 2 26 2596.4 -29.84 108.30  
 90.00 9 5 49 3392.03 -24.00 119.47 264.28 74.58 10 2 21 2392.0 -28.12 93.21  
 100.00 10 45 23 3070.92 -26.36 96.55 264.98 75.45 11 36 34 2070.9 -29.84 69.67  
 110.00 12 30 14 2742.76 -32.04 73.20 266.55 77.49 13 15 57 1742.8 -33.95 44.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6345 TRA-3.7152 TC3-3.4118 BAU 1.8642 SGT 5678.1 SGR 1491.5 SG3 1085.4 ST 63.3 SR 15.9 SS 28.2  
 RDE -.3137 RRA -.4199 RC3-1.1249 FAU .41212 RRT .9080 RRF .9377 RTF .9202 CRT .7821 CRS .4320 CST -.2086  
 FDE 1.9514 FRA-4.8340 FC3-9.1913 BSP 10040 SGB 5870.7 R23 .2208 R13 .9260 LSA 64.8 MSA 29.2 SSA 2.0  
 BDE .7078 BRA 3.7389 BC3 3.5922 FSP 1810 SGI 5839.2 SG2 607.6 THA 13.56 EL1 64.5 EL2 9.7 ALF 11.37

LAUNCH DATE SEP 15 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 21 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 32.943 GAL 8.23 AZL 86.87 HCA 143.78 SMA 195.39 ECC .26900 INC 3.1253 V1 29.619  
 RP 247.71 LAP 1.85 LOP 135.83 VP 19.807 GAP -1.53 AZP 92.52 TAL 40.39 TAP 184.17 RCA 142.83 APO 247.96 V2 22.120  
 RC 319.522 GL 16.61 GP -18.88 ZAL 33.53 ZAP 62.63 ETS 171.46 ZAE 88.48 ETE 180.97 ZAC 70.23 ETC 285.07 LVI -3.91

DISTANCE 515.277 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.664 VHL 6.218 DLA 23.73 RAL 13.23 RAD 6650.2 VEL 12.591 PTH 7.45 VHP 2.815 DPA -11.56 RAP 23.58 ECC 1.6363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 7 1 34 3782.60 -47.06 155.09 270.38 82.02 8 4 36 2782.6 -44.71 120.26  
 60.00 7 11 5 3757.20 -39.10 151.02 268.60 79.36 8 13 43 2757.2 -39.21 119.86  
 70.00 7 26 46 3711.03 -31.81 145.40 266.72 76.87 8 28 37 2711.0 -34.01 116.89  
 80.00 7 56 48 3616.78 -26.01 136.59 265.04 74.80 8 57 5 2616.8 -29.80 109.81  
 90.00 8 59 1 3415.89 -23.56 121.08 264.29 73.89 9 55 57 2415.9 -28.02 94.95  
 100.00 10 39 40 3091.25 -26.01 97.96 265.04 74.80 11 31 11 2091.3 -29.80 71.18  
 110.00 12 26 12 2757.85 -31.81 74.32 266.72 76.87 13 12 10 1757.9 -34.01 45.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.6148 TRA-3.7665 TC3-3.4928 BAU 1.8998 SGT 5793.2 SGR 1511.7 SG3 1072.1 ST 63.9 SR 15.1 SS 28.8  
 RDE -.2928 RRA -.4324 RC3-1.1437 FAU .40596 RRT .9113 RRF .9411 RTF .9199 CRT .7936 CRS .4179 CST -.2048  
 FDE 2.0143 FRA-4.7362 FC3-9.0899 BSP 10254 SGB 5987.2 R23 .2271 R13 .9257 LSA 65.3 MSA 29.6 SSA 1.9  
 BDE .6810 BRA 3.7913 BC3 3.6753 FSP 1784 SGI 5956.5 SG2 605.3 THA 13.52 EL1 65.0 EL2 9.0 ALF 10.87

LAUNCH DATE SEP 15 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 23 1974

HELIOCENTRIC CONIC

RL 150.43 LAL -.00 LOL 352.01 VL 32.951 GAL 8.17 AZL 86.80 HCA 144.66 SMA 195.55 ECC .26898 INC 3.1955 V1 29.619
RP 247.84 LAP 1.85 LOP 136.71 VP 19.806 GAP -1.73 AZP 92.61 TAL 40.06 TAP 184.72 RCA 142.95 APO 248.15 V2 22.107
RC 321.734 GL 17.03 GP -19.18 ZAL 33.94 ZAP 61.97 ETS 170.99 ZAE 87.45 ETE 180.58 ZAC 69.91 ETC 285.10 LVI -3.60

DISTANCE 519.062

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.521 VHL 6.207 DLA 24.22 RAL 13.28 RAD 6650.1 VEL 12.586 PTH 7.45 VHP 2.831 DPA -11.80 RAP 23.81 ECC 1.6340
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 59 28 3792.27 -46.97 156.00 270.81 81.32 8 2 40 2792.3 -44.91 121.11
60.00 7 8 6 3769.26 -38.95 152.01 268.89 78.70 8 10 55 2769.3 -39.35 120.89
70.00 7 22 27 3726.97 -31.36 146.58 266.88 76.21 8 24 34 2727.0 -34.07 118.13
80.00 7 50 38 3638.58 -25.61 138.09 265.08 74.10 8 51 16 2638.6 -29.75 111.43
90.00 8 51 34 3441.79 -23.06 122.81 264.26 73.16 9 48 56 2441.8 -27.88 96.83
100.00 10 33 30 3113.05 -25.61 99.46 265.08 74.10 11 25 23 2113.0 -29.75 72.80
110.00 12 21 54 2773.79 -31.56 75.49 266.88 76.21 13 8 7 1773.8 -34.07 47.05

DIFFERENTIAL CORRECTIONS

TDE -.6023 TRA-3.8256 TC3-3.5820 BAU 1.9405
RDE -.2772 RRA -.4513 RC3-1.1692 FAU .40233
FDE 2.0220 FRA-4.6940 FC3-9.0422 BSP 10350
BDE .6631 BRA 3.8521 BC3 3.7680 FSP 1701

MID-COURSE EXECUTION ACCURACY

SGT 5922.4 SGR 1542.9 SG3 1065.3
RRT .9134 RRF .9452 RTF .9211
8GB 6120.1 R23 .2314 R13 .9269
SG1 6090.2 SG2 604.1 THA 13.55

ORBIT DETERMINATION ACCURACY

ST 64.7 SR 14.7 SS 29.0
CRT .8085 CRS .3843 CST -.2158
LSA 66.1 MSA 29.5 SSA 1.9
EL1 65.8 EL2 8.5 ALF 10.56

LAUNCH DATE SEP 15 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 25 1974

HELIOCENTRIC CONIC

RL 150.43 LAL -.00 LOL 352.01 VL 32.959 GAL 8.11 AZL 86.73 HCA 145.54 SMA 195.71 ECC .26896 INC 3.2688 V1 29.619
RP 247.97 LAP 1.85 LOP 137.59 VP 19.807 GAP -1.93 AZP 92.70 TAL 39.72 TAP 185.26 RCA 143.07 APO 248.35 V2 22.095
RC 323.917 GL 17.48 GP -19.50 ZAL 34.37 ZAP 61.33 ETS 170.50 ZAE 86.45 ETE 180.19 ZAC 69.57 ETC 285.13 LVI -3.26

DISTANCE 522.843

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.385 VHL 6.196 DLA 24.72 RAL 13.34 RAD 6650.1 VEL 12.580 PTH 7.45 VHP 2.848 DPA -12.04 RAP 24.06 ECC 1.6317
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 57 14 3802.42 -46.86 156.96 271.25 80.59 8 0 37 2802.4 -45.12 122.00
60.00 7 4 55 3781.95 -38.77 153.04 269.18 78.02 8 7 57 2782.0 -39.49 121.90
70.00 7 17 50 3743.89 -31.28 147.81 267.03 75.53 8 20 14 2743.9 -34.11 119.45
80.00 7 43 54 3662.12 -25.16 139.69 265.10 73.37 8 44 56 2662.1 -29.66 113.17
90.00 8 43 18 3470.25 -22.49 124.70 264.20 72.38 9 41 9 2470.2 -27.70 98.89
100.00 10 26 46 3136.59 -25.16 101.06 265.10 73.37 11 19 2 2136.6 -29.66 74.54
110.00 12 17 17 2790.71 -31.28 76.73 267.03 75.53 13 3 47 1790.7 -34.11 48.36

DIFFERENTIAL CORRECTIONS

TDE -.5774 TRA-3.8742 TC3-3.6605 BAU 1.9749
RDE -.2937 RRA -.4633 RC3-1.1877 FAU .39524
FDE 2.0973 FRA-4.5805 FC3-8.9143 BSP 10597
BDE .6307 BRA 3.9019 BC3 3.8483 FSP 1689

MID-COURSE EXECUTION ACCURACY

SGT 6034.5 SGR 1563.1 SG3 1049.4
RRT .9182 RRF .9481 RTF .9204
8GB 6233.7 R23 .2386 R13 .9262
SG1 6204.5 SG2 602.3 THA 13.51

ORBIT DETERMINATION ACCURACY

ST 65.3 SR 13.9 SS 29.7
CRT .8246 CRS .3619 CST -.2110
LSA 66.6 MSA 30.0 SSA 1.8
EL1 66.3 EL2 7.7 ALF 10.08

LAUNCH DATE SEP 15 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 27 1974

HELIOCENTRIC CONIC

RL 150.43 LAL -.00 LOL 352.01 VL 32.968 GAL 8.04 AZL 86.65 HCA 146.42 SMA 195.87 ECC .26895 INC 3.3453 V1 29.619
RP 248.09 LAP 1.85 LOP 138.48 VP 19.808 GAP -2.13 AZP 92.79 TAL 39.39 TAP 185.81 RCA 143.19 APO 248.55 V2 22.084
RC 326.069 GL 17.94 GP -19.84 ZAL 34.80 ZAP 60.73 ETS 170.01 ZAE 85.47 ETE 179.78 ZAC 69.21 ETC 285.16 LVI -2.91

DISTANCE 526.624

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.260 VHL 6.185 DLA 25.24 RAL 13.38 RAD 6650.1 VEL 12.575 PTH 7.44 VHP 2.866 DPA -12.29 RAP 24.33 ECC 1.6297
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 54 52 3813.09 -46.73 157.96 271.70 79.83 7 58 25 2813.1 -45.33 122.94
60.00 7 1 32 3795.32 -38.58 154.12 269.46 77.31 8 4 47 2795.3 -39.62 123.02
70.00 7 12 53 3761.87 -30.97 149.12 267.17 74.82 8 15 34 2761.9 -34.14 120.85
80.00 7 36 31 3687.69 -24.65 141.42 265.08 72.60 8 37 58 2687.7 -29.53 115.06
90.00 8 34 3 3501.84 -21.82 126.78 264.08 71.55 9 32 25 2501.8 -27.45 101.17
100.00 10 19 23 3162.16 -24.65 102.79 265.08 72.60 11 12 5 2162.2 -29.53 76.43
110.00 12 12 19 2808.69 -30.97 78.04 267.17 74.82 12 59 8 1808.7 -34.14 49.77

DIFFERENTIAL CORRECTIONS

TDE -.5505 TRA-3.9218 TC3-3.7378 BAU 2.0089
RDE -.2297 RRA -.4759 RC3-1.2087 FAU .38809
FDE 2.1703 FRA-4.4679 FC3-8.7815 BSP 10845
BDE .5965 BRA 3.9508 BC3 3.9276 FSP 1675

MID-COURSE EXECUTION ACCURACY

SGT 6145.7 SGR 1584.7 SG3 1033.2
RRT .9209 RRF .9509 RTF .9596
8GB 6346.7 R23 .2459 R13 .9254
SG1 6318.2 SG2 601.0 THA 13.48

ORBIT DETERMINATION ACCURACY

ST 65.8 SR 13.1 SS 30.4
CRT .8438 CRS .3301 CST -.2088
LSA 67.0 MSA 30.4 SSA 1.8
EL1 66.7 EL2 6.9 ALF 9.64

LAUNCH DATE SEP 15 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 29 1974

HELIOCENTRIC CONIC

RL 150.43 LAL -.00 LOL 352.01 VL 32.976 GAL 7.98 AZL 86.57 HCA 147.30 SMA 196.03 ECC .26895 INC 3.4253 V1 29.619
RP 248.20 LAP 1.85 LOP 139.36 VP 19.810 GAP -2.32 AZP 92.88 TAL 39.05 TAP 186.35 RCA 143.31 APO 248.76 V2 22.073
RC 328.191 GL 18.42 GP -20.19 ZAL 35.25 ZAP 60.14 ETS 169.49 ZAE 84.50 ETE 179.37 ZAC 68.83 ETC 285.20 LVI -2.54

DISTANCE 530.404

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.146 VHL 6.176 DLA 25.78 RAL 13.42 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 2.885 DPA -12.54 RAP 24.63 ECC 1.6278
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 52 19 3824.30 -46.59 159.01 272.16 79.03 7 56 4 2824.3 -45.54 123.94
60.00 6 57 54 3809.44 -38.36 155.26 269.75 76.57 8 1 23 2809.4 -39.75 124.19
70.00 7 7 32 3781.04 -30.62 150.50 267.29 74.07 8 10 33 2781.0 -34.15 122.35
80.00 7 25 21 3715.68 -24.07 143.30 265.03 71.78 8 30 17 2715.7 -29.36 117.12
90.00 8 23 31 3537.48 -21.03 129.09 263.91 70.65 9 22 29 2537.5 -27.13 103.73
100.00 10 11 13 3190.16 -24.07 104.66 265.03 71.78 11 4 23 2190.2 -29.36 78.49
110.00 12 6 58 2827.86 -30.62 79.42 267.29 74.07 12 54 6 1827.9 -34.15 51.26

DIFFERENTIAL CORRECTIONS

TDE -.5230 TRA-3.9706 TC3-3.8153 BAU 2.0438
RDE -.2052 RRA -.4896 RC3-1.2267 FAU .38099
FDE 2.2399 FRA-4.3595 FC3-8.6468 BSP 11080
BDE .5618 BRA 4.0007 BC3 4.0077 FSP 1656

MID-COURSE EXECUTION ACCURACY

SGT 6259.4 SGR 1608.3 SG3 1017.1
RRT .9235 RRF .9536 RTF .9188
8GB 6462.8 R23 .2534 R13 .9247
SG1 6434.8 SG2 600.2 THA 13.47

ORBIT DETERMINATION ACCURACY

ST 66.4 SR 12.4 SS 31.1
CRT .8665 CRS .2866 CST -.2084
LSA 67.6 MSA 30.9 SSA 1.7
EL1 67.2 EL2 6.1 ALF 9.25



LAUNCH DATE SEP 15 1973

FLIGHT TIME 258.00

ARRIVAL DATE MAY 31 1974

Heliocentric Conic: RL 150.43 LAL -0.00 LOL 352.01 VL 32.985 GAL 7.91 AZL 86.49 HCA 148.18 SMA 196.20 ECC .26895 INC 3.5093 V1 29.619  
 RP 248.30 LAP 1.85 LOP 140.24 VP 19.813 GAP -2.52 AZP 92.98 TAL 38.71 TAP 186.89 RCA 143.43 APO 248.96 V2 22.062  
 RC 330.283 GL 18.92 GP -20.57 ZAL 35.71 ZAP 59.59 ETS 168.96 ZAE 83.56 ETE 178.95 ZAC 68.42 ETC 285.24 LVI -2.14

Planetary Conic: C3 38.045 VHL 6.168 DLA 26.35 RAL 13.45 RAD 6650.0 VEL 12.567 PTH 7.44 VHP 2.904 DPA -12.81 RAP 24.95 ECC 1.6261  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 36 3836.11 -48.44 160.10 272.62 78.20 7 53 32 2836.1 -45.75 125.00  
 60.00 6 54 0 3824.37 -38.12 156.45 270.03 75.79 7 57 45 2824.4 -39.87 125.44  
 70.00 7 1 45 3801.56 -30.22 151.97 267.39 73.28 8 5 6 2801.6 -34.14 123.95  
 80.00 7 19 14 3746.66 -23.40 145.35 264.92 70.90 8 21 40 2746.7 -29.13 119.40  
 90.00 8 11 14 3576.66 -20.08 131.74 263.64 69.66 9 10 52 2578.7 -26.69 106.66  
 100.00 10 2 6 3221.13 -23.40 106.72 264.92 70.90 10 55 47 2221.1 -29.13 80.77  
 110.00 12 1 11 2648.38 -30.22 80.89 267.39 73.28 12 48 39 1848.4 -34.14 52.87

Differential Corrections: TDE -.4930 TRA-4.0183 TC3-3.8916 BAU 2.0786 SGT 6372.3 SGR 1633.5 SG3 1000.7 ST 66.9 SR 11.7 SS 31.8  
 RDE -.1799 RRA -.5038 RC3-1.2474 FAU .37384 RRT .9260 RRF .9562 RTF .9180 CRT .8918 CRS .2301 CST -.2107  
 FDE 2.3073 FRA-4.2517 FC3-8.5070 BSP 11311 SGB 6578.3 R23 .2609 R13 .9240 LSA 68.1 MSA 31.4 S3A 1.7  
 BDE .5248 BRA 4.0498 BC3 4.0866 FSP 1634 SG1 6550.9 SG2 599.9 THA 13.47 EL1 67.7 EL2 5.2 ALF 8.90

LAUNCH DATE SEP 15 1973

FLIGHT TIME 260.00

ARRIVAL DATE JUN 2 1974

Heliocentric Conic: RL 150.43 LAL -0.00 LOL 352.01 VL 32.993 GAL 7.85 AZL 86.40 HCA 149.06 SMA 196.36 ECC .26895 INC 3.5974 V1 29.619  
 RP 248.40 LAP 1.85 LOP 141.12 VP 19.816 GAP -2.71 AZP 93.09 TAL 38.37 TAP 187.42 RCA 143.55 APO 249.17 V2 22.052  
 RC 332.344 GL 19.44 GP -20.96 ZAL 36.19 ZAP 59.05 ETS 168.42 ZAE 82.64 ETE 178.52 ZAC 67.99 ETC 285.29 LVI -1.73

Planetary Conic: C3 37.958 VHL 6.161 DLA 26.93 RAL 13.47 RAD 6650.0 VEL 12.563 PTH 7.43 VHP 2.924 DPA -13.10 RAP 25.29 ECC 1.6247  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 46 41 3848.57 -48.26 161.25 273.09 77.33 7 50 50 2848.6 -45.96 126.13  
 60.00 6 49 50 3840.19 -37.85 157.71 270.31 74.98 7 53 50 2840.2 -39.98 126.78  
 70.00 6 55 27 3823.61 -29.78 153.54 267.47 72.45 7 59 11 2823.6 -34.11 125.67  
 80.00 7 8 53 3781.44 -22.60 147.63 264.75 69.95 8 11 54 2781.4 -28.82 121.93  
 90.00 7 56 18 3628.18 -18.88 134.87 263.24 68.55 8 56 46 2628.2 -26.07 110.15  
 100.00 9 51 45 3255.91 -22.60 109.00 264.75 69.95 10 46 0 2255.9 -28.82 83.30  
 110.00 11 54 53 2870.43 -29.78 82.46 267.47 72.45 12 42 44 1870.4 -34.11 54.59

Differential Corrections: TDE -.4618 TRA-4.0666 TC3-3.9670 BAU 2.1136 SGT 6486.3 SGR 1661.1 SG3 984.4 ST 67.6 SR 11.1 SS 32.5  
 RDE -.1542 RRA -.9193 RC3-1.2691 FAU .36673 RRT .9284 RRF .9588 RTF .9173 CRT .9188 CRS .1583 CST -.2158  
 FDE 2.3697 FRA-4.1493 FC3-8.3643 BSP 11536 SGB 6695.6 R23 .2684 R13 .9233 LSA 68.7 MSA 31.9 S3A 1.6  
 BDE .4869 BRA 4.0997 BC3 4.1651 FSP 1608 SG1 6668.6 SG2 600.3 THA 13.49 EL1 68.3 EL2 4.3 ALF 8.61

LAUNCH DATE SEP 15 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 4 1974

Heliocentric Conic: RL 150.43 LAL -0.00 LOL 352.01 VL 33.002 GAL 7.78 AZL 86.31 HCA 149.93 SMA 196.52 ECC .26896 INC 3.6901 V1 29.619  
 RP 248.50 LAP 1.85 LOP 142.00 VP 19.820 GAP -2.91 AZP 93.19 TAL 38.02 TAP 187.96 RCA 143.67 APO 249.38 V2 22.043  
 RC 334.378 GL 19.99 GP -21.38 ZAL 36.67 ZAP 58.55 ETS 167.85 ZAE 81.74 ETE 178.08 ZAC 67.54 ETC 285.33 LVI -1.29

Planetary Conic: C3 37.886 VHL 6.155 DLA 27.53 RAL 13.48 RAD 6649.9 VEL 12.561 PTH 7.43 VHP 2.945 DPA -13.39 RAP 25.66 ECC 1.6235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 43 33 3861.74 -48.05 162.46 273.57 76.42 7 47 55 2861.7 -46.17 127.33  
 60.00 6 45 20 3857.00 -37.54 159.03 270.57 74.12 7 49 37 2857.0 -40.09 128.19  
 70.00 6 48 34 3847.43 -29.28 155.21 267.52 71.58 7 52 42 2847.4 -34.04 127.53  
 80.00 6 56 53 3821.31 -21.65 150.20 264.49 68.92 8 0 34 2821.3 -28.40 124.82  
 90.00 7 36 40 3692.68 -17.23 138.88 262.60 67.22 8 38 13 2692.7 -25.13 114.64  
 100.00 9 39 45 3295.78 -21.65 111.57 264.49 68.92 10 34 41 2295.8 -28.40 86.19  
 110.00 11 48 1 2894.25 -29.28 84.13 267.52 71.58 12 36 15 1894.2 -34.04 56.44

Differential Corrections: TDE -.4277 TRA-4.1139 TC3-4.0408 BAU 2.1485 SGT 6599.2 SGR 1690.1 SG3 967.5 ST 68.2 SR 10.6 SS 33.3  
 RDE -.1272 RRA -.5354 RC3-1.2912 FAU .35942 RRT .9307 RRF .9611 RTF .5.65 CRT .9457 CRS .0703 CST -.2226  
 FDE 2.4332 FRA-4.0452 FC3-8.2132 BSP 11772 SGB 6812.2 R23 .2760 R13 .9226 LSA 69.4 MSA 32.4 S3A 1.6  
 BDE .4462 BRA 4.1486 BC3 4.2418 FSP 1582 SG1 6785.6 SG2 601.2 THA 13.51 EL1 68.9 EL2 3.4 ALF 8.36

LAUNCH DATE SEP 15 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 6 1974

Heliocentric Conic: RL 150.43 LAL -0.00 LOL 352.01 VL 33.010 GAL 7.72 AZL 86.21 HCA 150.81 SMA 196.69 ECC .26897 INC 3.7877 V1 29.619  
 RP 248.59 LAP 1.85 LOP 142.87 VP 19.824 GAP -3.10 AZP 93.31 TAL 37.68 TAP 188.49 RCA 143.78 APO 249.59 V2 22.034  
 RC 336.377 GL 20.57 GP -21.82 ZAL 37.18 ZAP 58.08 ETS 167.27 ZAE 80.86 ETE 177.63 ZAC 67.06 ETC 285.38 LVI -.82

Planetary Conic: C3 37.832 VHL 6.151 DLA 28.16 RAL 13.47 RAD 6649.9 VEL 12.558 PTH 7.43 VHP 2.968 DPA -13.70 RAP 26.05 ECC 1.6226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 40 10 3875.67 -45.82 163.72 274.04 75.47 7 44 46 2875.7 -46.37 128.61  
 60.00 6 40 27 3874.91 -37.20 160.43 270.82 73.23 7 45 2 2874.9 -40.17 129.71  
 70.00 6 41 0 3873.32 -28.71 157.01 267.53 70.65 7 45 33 2873.3 -33.93 129.54  
 80.00 6 42 31 3868.54 -20.46 153.21 264.09 67.77 7 46 59 2868.5 -27.82 128.21  
 90.00 7 2 16 3804.61 -14.15 145.66 261.22 65.26 8 5 40 2804.6 -23.15 122.24  
 100.00 9 25 23 3343.02 -20.46 114.58 264.09 67.77 10 21 6 2343.0 -27.82 89.58  
 110.00 11 40 26 2920.14 -28.71 85.93 267.53 70.65 12 29 6 1920.1 -33.93 58.46

Differential Corrections: TDE -.3925 TRA-4.1617 TC3-4.1132 BAU 2.1840 SGT 6713.5 SGR 1721.5 SG3 950.4 ST 68.9 SR 10.2 SS 34.0  
 RDE -.0996 RRA -.5526 RC3-1.3143 FAU .35212 RRT .9329 RRF .9634 RTF .9158 CRT .9691 CRS -.0334 CST -.2314  
 FDE 2.4920 FRA-3.9440 FC3-8.0578 BSP 11993 SGB 6930.7 R23 .2836 R13 .9219 LSA 70.1 MSA 32.9 S3A 1.9  
 BDE .4049 BRA 4.1982 BC3 4.3180 FSP 1552 SG1 6904.5 SG2 602.8 THA 13.56 EL1 69.6 EL2 2.5 ALF 8.18

LAUNCH DATE SEP 15 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 8 1974

HELIOCENTRIC CONIC

DISTANCE 549.297

EARTH TO MARS

RL 150.43 LAL -.00 LOL 352.01 VL 33.019 GAL 7.65 AZL 86.11 HCA 181.69 SMA 196.85 ECC .26099 INC 3.8907 V1 29.619  
 RP 248.67 LAP 1.84 LOP 143.75 VP 10.829 GAP -3.29 AZP 93.43 TAL 37.33 TAP 189.02 RCA 143.90 APO 249.80 V2 22.026  
 RC 338.347 GL 21.17 GP -22.29 ZAL 37.70 ZAP 57.63 ETS 166.67 ZAE 80.01 ETE 177.16 ZAC 66.56 ETC 285.44 LVI -.33

PLANETOCENTRIC CONIC

C3 37.797 VHL 6.148 DLA 28.82 RAL 13.45 RAD 6649.9 VEL 12.557 PTH 7.43 VHP 2.991 DPA -14.03 RAP 26.46 ECC 1.6220  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 36 31 3890.46 -45.56 165.05 274.52 74.48 7 41 22 2890.5 -46.58 129.98  
 60.00 6 35 11 3894.04 -36.81 161.91 271.06 72.29 7 40 5 2894.0 -40.24 131.33  
 70.00 6 32 35 3901.67 -28.06 158.95 267.49 69.67 7 37 37 2901.7 -33.77 131.74  
 80.00 6 24 12 3928.08 -18.88 156.93 263.46 66.43 7 29 40 2928.1 -26.95 132.42  
 84.22 5 51 24 4033.67 -12.25 161.50 260.26 63.70 6 58 38 3033.7 -22.03 138.63  
 100.00 9 7 4 3402.55 -18.88 118.29 263.46 66.43 10 3 46 2402.5 -26.95 93.79  
 110.00 11 32 2 2948.49 -28.06 87.87 267.49 69.67 12 21 10 1948.5 -33.77 60.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3545 TRA-4.2083 TC3-4.1832 BAU 2.2193 SGT 6828.6 SGR 1754.4 SG3 932.6 ST 69.6 SR 10.0 SS 34.8  
 RDE -.0704 RRA -.5702 RC3-1.3377 FAU .34455 RRT .9349 RRF .9655 RTF .9148 CRT .9851 CRS -.1511 CST -.2415  
 FDE 2.5523 FRA-3.8392 FC3-7.8920 BSP 12222 SGB 7048.5 R23 .2914 R13 .9211 LSA 70.9 MSA 33.5 SSA 1.5  
 BDE .3614 BRA 4.2468 BC3 4.3919 FSP 1523 SG1 7022.4 SG2 605.1 THA 13.61 EL1 70.3 EL2 1.7 ALF 8.05

LAUNCH DATE SEP 15 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 10 1974

HELIOCENTRIC CONIC

DISTANCE 553.074

EARTH TO MARS

RL 150.43 LAL -.00 LOL 352.01 VL 33.027 GAL 7.59 AZL 86.00 HCA 152.56 SMA 197.02 ECC .26901 INC 3.9996 V1 29.619  
 RP 248.75 LAP 1.84 LOP 144.63 VP 19.835 GAP -3.48 AZP 93.55 TAL 36.99 TAP 189.55 RCA 144.02 APO 250.02 V2 22.019  
 RC 340.287 GL 21.81 GP -22.78 ZAL 38.24 ZAP 57.22 ETS 166.04 ZAE 79.18 ETE 176.68 ZAC 66.02 ETC 285.50 LVI .20

PLANETOCENTRIC CONIC

C3 37.783 VHL 6.147 DLA 29.50 RAL 13.41 RAD 6649.9 VEL 12.557 PTH 7.43 VHP 3.018 DPA -14.38 RAP 26.90 ECC 1.6218  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 32 34 3906.17 -45.27 166.45 274.99 73.43 7 37 40 2906.2 -46.77 131.45  
 60.00 6 29 25 3914.55 -36.38 163.48 271.27 71.31 7 34 40 2914.6 -40.28 133.08  
 70.00 6 23 10 3933.02 -27.30 161.08 267.38 68.63 7 28 43 2933.0 -33.54 134.15  
 80.00 5 56 41 4016.51 -16.39 162.31 262.32 64.69 7 3 38 3016.5 -25.41 138.54  
 81.23 5 27 27 4110.11 -12.51 167.28 260.35 63.06 6 35 57 3110.1 -22.53 144.46  
 100.00 8 39 33 3490.98 -16.39 123.68 262.32 64.69 9 37 44 2491.0 -25.41 99.91  
 110.00 11 22 37 2979.83 -27.30 89.99 267.38 68.63 12 12 16 1979.8 -33.54 63.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3193 TRA-4.2561 TC3-4.2514 BAU 2.2550 SGT 6941.2 SGR 1790.0 SG3 914.5 ST 70.4 SR 10.0 SS 35.5  
 RDE -.0405 RRA -.5896 RC3-1.3621 FAU .33694 RRT .9369 RRF .9675 RTF .9140 CRT .9897 CRS -.2759 CST -.2538  
 FDE 2.6074 FRA-3.7401 FC3-7.7204 BSP 12436 SGB 7168.3 R23 .2990 R13 .9204 LSA 71.8 MSA 34.0 SSA 1.4  
 BDE .3178 BRA 4.2968 BC3 4.4643 FSP 1490 SG1 7142.5 SG2 608.0 THA 13.68 EL1 71.1 EL2 1.4 ALF 7.99

LAUNCH DATE SEP 15 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 12 1974

HELIOCENTRIC CONIC

DISTANCE 556.850

EARTH TO MARS

RL 150.43 LAL -.00 LOL 352.01 VL 33.036 GAL 7.52 AZL 85.88 HCA 153.44 SMA 197.18 ECC .26904 INC 4.1152 V1 29.619  
 RP 248.82 LAP 1.84 LOP 145.50 VP 19.842 GAP -3.66 AZP 93.68 TAL 36.64 TAP 190.07 RCA 144.13 APO 250.23 V2 22.012  
 RC 342.196 GL 22.48 GP -23.31 ZAL 38.80 ZAP 56.83 ETS 165.40 ZAE 78.37 ETE 176.19 ZAC 65.45 ETC 285.56 LVI .75

PLANETOCENTRIC CONIC

C3 37.794 VHL 6.148 DLA 30.21 RAL 13.35 RAD 6649.9 VEL 12.557 PTH 7.43 VHP 3.041 DPA -14.75 RAP 27.37 ECC 1.6220  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 28 16 3922.91 -44.93 167.92 275.46 72.34 7 33 39 2922.9 -46.96 133.02  
 60.00 6 23 6 3936.63 -35.88 165.14 271.45 70.27 7 28 45 2936.6 -40.30 134.95  
 70.00 6 12 28 3968.12 -26.40 163.41 267.18 67.51 7 18 36 2968.1 -33.22 136.84  
 78.90 5 9 23 4167.15 -12.78 171.66 260.44 62.39 6 18 50 3167.1 -23.05 148.90  
 78.90 5 9 23 4167.15 -12.78 171.66 260.44 62.39 6 18 50 3167.1 -23.05 148.90  
 78.90 5 9 23 4167.15 -12.78 171.66 260.44 62.39 6 18 50 3167.1 -23.05 148.90  
 110.00 11 11 54 3014.94 -26.40 92.33 267.18 67.51 12 2 9 2014.9 -33.22 65.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2738 TRA-4.3038 TC3-4.3178 BAU 2.2915 SGT 7036.3 SGR 1828.8 SG3 898.3 ST 71.2 SR 10.2 SS 36.2  
 RDE -.0094 RRA -.8103 RC3-1.3877 FAU .32934 RRT .9388 RRF .9694 RTF .532 CRT .9811 CRS -.3997 CST -.2680  
 FDE 2.6393 FRA-3.6422 FC3-7.5441 BSP 12648 SGB 7289.4 R23 .3065 R13 .9197 LSA 72.8 MSA 34.5 SSA 1.3  
 BDE .2738 BRA 4.3466 BC3 4.5353 FSP 1452 SG1 7263.7 SG2 611.8 THA 13.78 EL1 71.9 EL2 2.0 ALF 8.01

LAUNCH DATE SEP 15 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 14 1974

HELIOCENTRIC CONIC

DISTANCE 560.625

EARTH TO MARS

RL 150.43 LAL -.00 LOL 352.01 VL 33.044 GAL 7.46 AZL 85.76 HCA 154.31 SMA 197.35 ECC .26907 INC 4.2379 V1 29.619  
 RP 248.88 LAP 1.84 LOP 146.38 VP 19.849 GAP -3.85 AZP 93.82 TAL 36.29 TAP 190.60 RCA 144.25 APO 250.45 V2 22.006  
 RC 344.074 GL 23.18 GP -23.86 ZAL 39.38 ZAP 56.48 ETS 164.72 ZAE 77.59 ETE 175.67 ZAC 64.84 ETC 285.63 LVI 1.34

PLANETOCENTRIC CONIC

C3 37.831 VHL 6.151 DLA 30.98 RAL 13.27 RAD 6649.9 VEL 12.558 PTH 7.43 VHP 3.069 DPA -15.15 RAP 27.86 ECC 1.6226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 23 36 3940.79 -44.55 169.48 275.92 71.20 7 29 17 2940.8 -47.13 134.71  
 60.00 6 18 13 3960.49 -35.32 166.92 271.59 69.18 7 22 13 2960.5 -40.28 136.98  
 70.00 6 0 5 4008.16 -25.33 166.03 266.86 66.29 7 6 53 3008.2 -32.78 139.88  
 76.85 4 54 5 4214.92 -13.06 175.39 260.54 61.68 6 4 20 3214.9 -23.59 152.69  
 76.85 4 54 5 4214.92 -13.06 175.39 260.54 61.68 6 4 20 3214.9 -23.59 152.69  
 76.85 4 54 5 4214.92 -13.06 175.39 260.54 61.68 6 4 20 3214.9 -23.59 152.69  
 110.00 10 59 31 3054.98 -25.33 94.95 266.86 66.29 11 50 26 2055.0 -32.78 68.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2278 TRA-4.3493 TC3-4.3785 BAU 2.3268 SGT 7167.8 SGR 1867.9 SG3 876.3 ST 72.1 SR 10.7 SS 37.0  
 RDE .0242 RRA -.6311 RC3-1.4124 FAU .32110 RRT .9405 RRF .9710 RTF .9120 CRT .9591 CRS -.5172 CST -.2830  
 FDE 2.7162 FRA-3.5365 FC3-7.3482 BSP 12886 SGB 7407.2 R23 .3145 R13 .9187 LSA 73.8 MSA 35.1 SSA 1.3  
 BDE .2291 BRA 4.3948 BC3 4.8006 FSP 1422 SG1 7381.5 SG2 616.3 THA 13.87 EL1 72.8 EL2 3.0 ALF 8.09

LAUNCH DATE SEP 15 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 16 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 33.053 GAL 7.39 AZL 85.63 HCA 155.18 SMA 197.51 ECC .26910 INC 4.3685 V1 29.619  
 RP 248.94 LAP 1.83 LOP 147.26 VP 19.857 GAP -4.03 AZP 93.97 TAL 35.94 TAP 191.12 RCA 144.36 APO 250.67 V2 22.000  
 RC 345.920 GL 23.93 GP -24.45 ZAL 39.98 ZAP 56.17 ETS 164.03 ZAE 76.83 ETE 175.14 ZAC 64.20 ETC 285.71 LVI 1.97

DISTANCE 564.402 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 37.900 VHL 6.158 DLA 31.74 RAL 13.16 RAD 6649.9 VEL 12.561 PTH 7.43 VHP 3.098 DPA -15.57 RAP 28.38 ECC 1.6237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 18 29 3959.93 -44.12 171.12 276.35 69.99 7 24 29 2959.9 -47.28 136.54  
 60.00 6 8 34 3986.41 -34.68 168.81 271.67 68.03 7 15 0 2986.4 -40.22 139.19  
 70.00 5 45 21 4055.08 -24.02 169.04 266.37 64.95 6 52 56 3055.1 -32.16 143.40  
 74.95 4 40 27 4256.93 -13.35 178.73 260.63 60.93 5 51 24 3256.9 -24.14 156.10  
 74.95 4 40 27 4256.93 -13.35 178.73 260.63 60.93 5 51 24 3256.9 -24.14 156.10  
 74.95 4 40 27 4256.93 -13.35 178.73 260.63 60.93 5 51 24 3256.9 -24.14 156.10  
 110.00 10 44 47 3101.90 -24.02 97.96 266.37 64.95 11 36 29 2101.9 -32.16 72.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1865 TRA-4.4019 TC3-4.4430 BAU 2.3688 SGT 7291.2 SGR 1916.3 SG3 858.7 ST 73.2 SR 11.4 SS 37.6  
 RDE .0559 RRA -.6574 RC3-1.4419 FAU .31388 RRT .9425 RRF .9728 RTF .9110 CRT .9318 CRS -.6111 CST -.3011  
 FDE 2.7481 FRA-3.4571 FC3-7.1698 BSP 13023 SGB 7538.8 R23 .3205 R13 .9186 LSA 75.2 MSA 35.4 SSA 1.2  
 BDE .1947 BRA 4.4507 BC3 4.6711 FSP 1365 SG1 7513.1 SG2 621.5 THA 14.01 EL1 74.0 EL2 4.1 ALF 8.29

LAUNCH DATE SEP 15 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 18 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 33.062 GAL 7.32 AZL 85.49 HCA 156.06 SMA 197.68 ECC .26914 INC 4.5080 V1 29.619  
 RP 249.00 LAP 1.83 LOP 148.13 VP 19.865 GAP -4.22 AZP 94.12 TAL 35.59 TAP 191.64 RCA 144.48 APO 250.88 V2 21.995  
 RC 347.734 GL 24.71 GP -25.08 ZAL 40.61 ZAP 55.89 ETS 163.31 ZAE 76.11 ETE 174.58 ZAC 63.52 ETC 285.80 LVI 2.63

DISTANCE 568.176 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.003 VHL 6.165 DLA 32.56 RAL 13.03 RAD 6650.0 VEL 12.565 PTH 7.43 VHP 3.129 DPA -16.01 RAP 28.93 ECC 1.6254  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 12 53 3980.49 -43.62 172.85 276.76 68.73 7 19 13 2980.5 -47.41 138.51  
 60.00 6 0 3 4014.76 -33.93 170.85 271.70 66.81 7 6 57 3014.8 -40.09 141.59  
 70.00 5 26 55 4112.86 -22.30 172.65 265.60 63.44 6 35 28 3112.9 -31.25 147.66  
 73.16 4 27 53 4295.12 -13.64 181.80 260.72 60.15 5 39 29 3295.1 -24.71 159.26  
 73.16 4 27 53 4295.12 -13.64 181.80 260.72 60.15 5 39 29 3295.1 -24.71 159.26  
 73.16 4 27 53 4295.12 -13.64 181.80 260.72 60.15 5 39 29 3295.1 -24.71 159.26  
 110.00 10 26 21 3159.68 -22.30 101.57 265.60 63.44 11 19 1 2159.7 -31.25 76.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1342 TRA-4.4464 TC3-4.4945 BAU 2.4019 SGT 7400.2 SGR 1959.4 SG3 836.5 ST 74.3 SR 12.4 SS 38.5  
 RDE .0943 RRA -.6803 RC3-1.4664 FAU .30488 RRT .9439 RRF .9740 RTF .9101 CRT .8951 CRS -.6979 CST -.3181  
 FDE 2.8073 FRA-3.3446 FC3-6.9454 BSP 13282 SGB 7655.2 R23 .3291 R13 .9172 LSA 76.5 MSA 36.1 SSA 1.1  
 BDE .1640 BRA 4.4992 BC3 4.7277 FSP 1339 SG1 7629.4 SG2 627.9 THA 14.13 EL1 75.1 EL2 5.5 ALF 8.53

LAUNCH DATE SEP 15 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 20 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 33.070 GAL 7.25 AZL 85.34 HCA 156.93 SMA 197.85 ECC .26918 INC 4.6574 V1 29.619  
 RP 249.05 LAP 1.82 LOP 149.01 VP 19.874 GAP -4.40 AZP 94.29 TAL 35.23 TAP 192.16 RCA 144.59 APO 251.10 V2 21.990  
 RC 349.515 GL 25.55 GP -25.75 ZAL 41.26 ZAP 55.65 ETS 162.56 ZAE 75.41 ETE 174.01 ZAC 62.79 ETC 285.89 LVI 3.34

DISTANCE 571.949 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.145 VHL 6.176 DLA 33.41 RAL 12.87 RAD 6650.0 VEL 12.571 PTH 7.44 VHP 3.163 DPA -16.50 RAP 29.52 ECC 1.6278  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 6 42 4002.66 -43.06 174.68 277.14 67.41 7 13 24 3002.7 -47.51 140.65  
 60.00 5 50 28 4046.00 -33.07 173.05 271.63 65.52 6 57 54 3046.0 -39.89 144.22  
 70.00 5 1 10 4192.32 -19.80 177.46 264.28 61.59 6 11 2 3192.3 -29.75 153.36  
 71.41 4 16 7 4330.39 -13.93 184.69 260.81 59.32 5 28 18 3330.4 -25.31 162.24  
 71.41 4 16 7 4330.39 -13.93 184.69 260.81 59.32 5 28 18 3330.4 -25.31 162.24  
 71.41 4 16 7 4330.39 -13.93 184.69 260.81 59.32 5 28 18 3330.4 -25.31 162.24  
 110.00 10 0 36 3239.14 -19.80 106.38 264.28 61.59 10 34 35 2239.1 -29.75 82.28

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0767 TRA-4.4882 TC3-4.5388 BAU 2.4380 SGT 7504.4 SGR 2003.5 SG3 812.7 ST 75.4 SR 13.6 SS 39.4  
 RDE .1382 RRA -.7033 RC3-1.4899 FAU .29531 RRT .9450 RRF .9750 RTF .9101 CRT .8564 CRS -.7680 CST -.3361  
 FDE 2.8710 FRA-3.2239 FC3-6.7021 BSP 13576 SGB 7767.2 R23 .3383 R13 .9153 LSA 77.9 MSA 36.8 SSA 1.1  
 BDE .1583 BRA 4.5428 BC3 4.7769 FSP 1319 SG1 7741.2 SG2 635.4 THA 14.26 EL1 76.3 EL2 6.9 ALF 8.86

LAUNCH DATE SEP 15 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 22 1974

HELIOCENTRIC CONIC  
 RL 150.43 LAL -.00 LOL 352.01 VL 33.079 GAL 7.19 AZL 85.18 HCA 157.80 SMA 198.01 ECC .26923 INC 4.8178 V1 29.619  
 RP 249.09 LAP 1.82 LOP 149.88 VP 19.884 GAP -4.58 AZP 94.46 TAL 34.88 TAP 192.68 RCA 144.70 APO 251.32 V2 21.986  
 RC 351.261 GL 26.44 GP -26.47 ZAL 41.95 ZAP 55.46 ETS 161.78 ZAE 74.75 ETE 173.41 ZAC 62.02 ETC 285.99 LVI 4.10

DISTANCE 575.724 EARTH TO MARS

PLANETOCENTRIC CONIC  
 C3 38.335 VHL 6.192 DLA 34.32 RAL 12.67 RAD 6650.1 VEL 12.578 PTH 7.44 VHP 3.198 DPA -17.01 RAP 30.14 ECC 1.6309  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 59 51 4026.63 -42.41 176.62 277.46 66.03 7 6 58 3026.6 -47.57 142.96  
 60.00 5 39 36 4080.76 -32.07 175.45 271.44 64.16 6 47 36 3080.8 -39.59 147.13  
 69.70 4 4 53 4363.56 -14.22 187.46 260.89 58.44 5 17 36 3363.6 -25.92 165.11  
 69.70 4 4 53 4363.56 -14.22 187.46 260.89 58.44 5 17 36 3363.6 -25.92 165.11  
 69.70 4 4 53 4363.56 -14.22 187.46 260.89 58.44 5 17 36 3363.6 -25.92 165.11  
 69.70 4 4 53 4363.56 -14.22 187.46 260.89 58.44 5 17 36 3363.6 -25.92 165.11  
 69.70 4 4 53 4363.56 -14.22 187.46 260.89 58.44 5 17 36 3363.6 -25.92 165.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0234 TRA-4.5374 TC3-4.5841 BAU 2.4749 SGT 7620.3 SGR 2058.0 SG3 790.9 ST 76.7 SR 15.0 SS 40.1  
 RDE .1766 RRA -.7328 RC3-1.5182 FAU .28665 RRT .9464 RRF .9761 RTF .9070 CRT .8265 CRS -.8165 CST -.3565  
 FDE 2.9088 FRA-3.1291 FC3-6.4735 BSP 13767 SGB 7893.3 R23 .3453 R13 .9145 LSA 79.6 MSA 37.3 SSA 1.0  
 BDE .1781 BRA 4.5962 BC3 4.8290 FSP 1271 SG1 7867.0 SG2 643.6 THA 14.44 EL1 77.8 EL2 8.4 ALF 9.31

LAUNCH DATE SEP 15 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 24 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 392.01 VL 33.087 GAL 7.12 AZL 85.01 MCA 158.87 SMA 198.18 ECC .26928 INC 4.9906 V1 29.619  
 RP 249.12 LAP 1.81 LOP 150.75 VP 19.894 GAP -4.76 AZP 94.65 TAL 34.52 TAP 193.19 RCA 144.81 APO 251.55 V2 21.982  
 RC 352.974 GL 27.38 GP -27.24 ZAL 42.67 ZAP 55.31 ETS 160.97 ZAE 74.12 ETE 172.78 ZAC 61.20 ETC 286.11 LVI 4.91

Distance 379.498

Planetocentric Conic: C3 38.577 VHL 6.211 DLA 35.27 RAL 12.42 RAD 6650.2 VEL 12.588 PTH 7.45 VHP 3.237 DPA -17.57 RAP 30.79 ECC 1.6349  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 52 14 4052.68 -41.67 178.68 277.72 64.58 6 59 47 3052.7 -47.57 145.48  
 60.00 5 27 4 4119.98 -30.87 178.09 271.10 62.69 6 35 44 3120.0 -39.16 150.37  
 67.99 3 54 0 4395.10 -14.51 190.13 260.97 57.50 5 7 15 3395.1 -26.55 167.90  
 67.99 3 54 0 4395.10 -14.51 190.13 260.97 57.50 5 7 15 3395.1 -26.55 167.90  
 67.99 3 54 0 4395.10 -14.51 190.13 260.97 57.50 5 7 15 3395.1 -26.55 167.90  
 67.99 3 54 0 4395.10 -14.51 190.13 260.97 57.50 5 7 15 3395.1 -26.55 167.90  
 67.99 3 54 0 4395.10 -14.51 190.13 260.97 57.50 5 7 15 3395.1 -26.55 167.90

Differential Corrections: TDE .0428 TRA-4.5763 TC3-4.6124 BAU 2.5078 SGT 7717.7 SGR 2106.0 SG3 764.1 ST 78.1 SR 16.8 SS 41.0  
 RDE .2255 RRA -.7580 RC3-1.5398 FAU .27605 RRT .9472 RRF .9767 RTF .9042 CRT .7953 CRS -.8583 CST -.3764  
 FDE 2.9735 FRA-2.9984 FC3-6.1951 BSP 14120 SGB 7999.8 R23 .3556 R13 .9120 LSA 81.3 MSA 38.0 SSA 1.0  
 BDE .2296 BRA 4.6386 BC3 4.8626 FSP 1257 SG1 7973.1 SG2 653.6 THA 14.59 EL1 79.2 EL2 10.0 ALF 9.86

LAUNCH DATE SEP 15 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 26 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 33.098 GAL 7.05 AZL 84.82 HCA 159.54 SMA 198.35 ECC .26933 INC 5.1772 V1 29.619  
 RP 249.19 LAP 1.81 LOP 151.83 VP 19.905 GAP -4.94 AZP 94.85 TAL 34.16 TAP 193.71 RCA 144.93 APO 251.77 V2 21.979  
 RC 354.652 GL 28.38 GP -28.05 ZAL 43.42 ZAP 55.21 ETS 160.14 ZAE 73.53 ETE 172.13 ZAC 60.32 ETC 286.24 LVI 5.77

Distance 583.270

Planetocentric Conic: C3 38.882 VHL 6.236 DLA 36.27 RAL 12.13 RAD 6650.3 VEL 12.600 PTH 7.46 VHP 3.279 DPA -18.17 RAP 31.48 ECC 1.6399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 43 42 4081.10 -40.82 180.87 277.90 63.05 6 51 43 3081.1 -47.51 148.23  
 60.00 5 12 20 4165.04 -29.43 181.03 270.54 61.12 6 21 45 3165.0 -38.54 154.04  
 66.29 3 43 22 4425.38 -14.80 192.74 261.03 56.51 4 57 7 3425.4 -27.19 170.65  
 66.29 3 43 22 4425.38 -14.80 192.74 261.03 56.51 4 57 7 3425.4 -27.19 170.65  
 66.29 3 43 22 4425.38 -14.80 192.74 261.03 56.51 4 57 7 3425.4 -27.19 170.65  
 66.29 3 43 22 4425.38 -14.80 192.74 261.03 56.51 4 57 7 3425.4 -27.19 170.65  
 66.29 3 43 22 4425.38 -14.80 192.74 261.03 56.51 4 57 7 3425.4 -27.19 170.65

Differential Corrections: TDE .0930 TRA-4.6328 TC3-4.6506 BAU 2.5519 SGT 7843.4 SGR 2174.7 SG3 742.5 ST 79.8 SR 18.6 SS 41.4  
 RDE .2672 RRA -.7965 RC3-1.5723 FAU .28769 RRT .9489 RRF .9777 RTF .9039 CRT .7805 CRS -.8819 CST -.3673  
 FDE 2.9822 FRA-2.9925 FC3-5.9602 BSP 14220 SGB 8139.3 R23 .3604 R13 .9119 LSA 83.5 MSA 38.2 SSA .9  
 BDE .2829 BRA 4.7008 BC3 4.9092 FSP 1185 SG1 8112.3 SG2 663.3 THA 14.84 EL1 81.1 EL2 11.4 ALF 10.51

LAUNCH DATE SEP 15 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 28 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 33.104 GAL 6.98 AZL 84.62 HCA 160.41 SMA 198.51 ECC .26939 INC 5.3797 V1 29.619  
 RP 249.18 LAP 1.80 LOP 152.30 VP 19.917 GAP -5.12 AZP 95.07 TAL 33.81 TAP 194.22 RCA 145.04 APO 251.99 V2 21.977  
 RC 356.296 GL 29.45 GP -29.93 ZAL 44.21 ZAP 55.17 ETS 159.27 ZAE 72.98 ETE 171.45 ZAC 59.38 ETC 286.38 LVI 6.69

Distance 587.043

Planetocentric Conic: C3 39.260 VHL 6.266 DLA 37.32 RAL 11.77 RAD 6650.4 VEL 12.615 PTH 7.47 VHP 3.324 DPA -18.81 RAP 32.22 ECC 1.6461  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 34 4 4112.33 -39.83 183.21 277.95 61.46 6 42 37 3112.3 -47.36 151.23  
 60.00 4 54 27 4218.48 -27.62 184.40 269.65 59.40 6 4 48 3218.5 -37.65 158.30  
 64.56 3 32 52 4454.62 -15.09 195.30 261.09 55.45 4 47 7 3454.6 -27.86 173.37  
 64.56 3 32 52 4454.62 -15.09 195.30 261.09 55.45 4 47 7 3454.6 -27.86 173.37  
 64.56 3 32 52 4454.62 -15.09 195.30 261.09 55.45 4 47 7 3454.6 -27.86 173.37  
 64.56 3 32 52 4454.62 -15.09 195.30 261.09 55.45 4 47 7 3454.6 -27.86 173.37  
 64.56 3 32 52 4454.62 -15.09 195.30 261.09 55.45 4 47 7 3454.6 -27.86 173.37

Differential Corrections: TDE .1533 TRA-4.6824 TC3-4.6724 BAU 2.5920 SGT 7955.6 SGR 2239.8 SG3 716.5 ST 81.5 SR 20.6 SS 42.1  
 RDE .3173 RRA -.8328 RC3-1.5990 FAU .25763 RRT .9501 RRF .9781 RTF .9021 CRT .7656 CRS -.9028 CST -.4174  
 FDE 3.0121 FRA-2.8174 FC3-5.8812 BSP 14431 SGB 8264.9 R23 .3681 R13 .9104 LSA 85.7 MSA 38.7 SSA .8  
 BDE .3924 BRA 4.7559 BC3 4.9384 FSP 1139 SG1 8237.3 SG2 674.9 THA 15.08 EL1 83.1 EL2 13.0 ALF 11.24

LAUNCH DATE SEP 15 1973

FLIGHT TIME 288.00

ARRIVAL DATE JUN 30 1974

Heliocentric Conic: RL 150.43 LAL -.00 LOL 352.01 VL 33.113 GAL 6.91 AZL 84.40 HCA 161.28 SMA 198.68 ECC .26945 INC 5.6003 V1 29.619  
 RP 249.20 LAP 1.79 LOP 153.38 VP 19.929 GAP -5.29 AZP 95.31 TAL 33.45 TAP 194.73 RCA 145.15 APO 252.22 V2 21.975  
 RC 357.905 GL 30.60 GP -29.87 ZAL 45.05 ZAP 55.19 ETS 158.37 ZAE 72.48 ETE 170.75 ZAC 58.37 ETC 286.54 LVI 7.68

Distance 590.815

Planetocentric Conic: C3 39.723 VHL 6.303 DLA 38.44 RAL 11.38 RAD 6650.6 VEL 12.633 PTH 7.48 VHP 3.374 DPA -19.51 RAP 33.00 ECC 1.6537  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 23 7 4148.88 -38.67 185.71 277.85 59.78 6 32 14 3146.9 -47.09 154.53  
 60.00 4 31 29 4285.48 -25.24 188.46 268.23 57.47 5 42 54 3285.5 -36.30 163.48  
 62.80 3 22 24 4483.17 -15.36 197.84 261.12 54.32 4 37 7 3483.2 -28.54 176.09  
 62.80 3 22 24 4483.17 -15.36 197.84 261.12 54.32 4 37 7 3483.2 -28.54 176.09  
 62.80 3 22 24 4483.17 -15.36 197.84 261.12 54.32 4 37 7 3483.2 -28.54 176.09  
 62.80 3 22 24 4483.17 -15.36 197.84 261.12 54.32 4 37 7 3483.2 -28.54 176.09  
 62.80 3 22 24 4483.17 -15.36 197.84 261.12 54.32 4 37 7 3483.2 -28.54 176.09

Differential Corrections: TDE .2172 TRA-4.7309 TC3-4.6819 BAU 2.6317 SGT 8063.2 SGR 2308.2 SG3 688.6 ST 83.4 SR 22.9 SS 42.7  
 RDE .3720 RRA -.8715 RC3-1.6240 FAU .24694 RRT .9511 RRF .9783 RTF .8998 CRT .7549 CRS -.9188 CST -.4369  
 FDE 3.0399 FRA-2.7059 FC3-5.3819 BSP 14675 SGB 8387.1 R23 .3763 R13 .9085 LSA 88.1 MSA 39.3 SSA .8  
 BDE .4308 BRA 4.8105 BC3 4.9556 FSP 1095 SG1 8358.8 SG2 687.8 THA 15.34 EL1 85.3 EL2 14.7 ALF 12.08

LAUNCH DATE SEP 16 1973

FLIGHT TIME 246.00

ARRIVAL DATE MAY 20 1974

HELIOCENTRIC CONIC

DISTANCE 510.434

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.933 GAL 8.31 AZL 86.98 HCA 142.36 SMA 195.09 ECC .27057 INC 3.0227 V1 29.627
RP 247.65 LAP 1.85 LOP 135.39 VP 19.787 GAP -1.48 AZP 92.39 TAL 41.64 TAP 184.00 RCA 142.30 APO 247.87 V2 22.126
RC 318.406 GL 15.78 GP -17.97 ZAL 32.27 ZAP 62.71 ETS 172.01 ZAE 88.86 ETE 181.13 ZAC 71.15 ETC 284.98 LVI -4.83

PLANETOCENTRIC CONIC

C3 39.896 VHL 6.316 DLA 22.94 RAL 13.54 RAD 6650.6 VEL 12.640 PTH 7.49 VHP 2.821 DPA -10.81 RAP 23.04 ECC 1.6566
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 2 33 3773.55 -47.14 154.23 270.72 82.87 8 5 27 2773.6 -44.51 119.48
60.00 7 13 28 3744.45 -39.26 149.97 269.08 80.05 8 15 53 2744.5 -39.05 118.81
70.00 7 31 9 3692.38 -32.09 144.02 267.34 77.64 8 32 41 2692.4 -33.93 115.44
80.00 8 3 54 3589.64 -26.48 134.71 265.82 75.68 9 3 44 2589.6 -29.85 107.79
90.00 9 7 52 3383.11 -24.16 118.87 265.14 74.84 10 4 15 2383.1 -26.15 92.56
100.00 10 46 46 3064.11 -26.48 96.08 265.82 75.68 11 37 50 2064.1 -29.85 69.16
110.00 12 30 35 2739.20 -32.09 72.94 267.34 77.64 13 16 14 1739.2 -33.93 44.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6917 TRA-3.8128 TC3-3.3680 BAU 1.8841 SGT 5709.8 SGR 1436.5 SG3 1059.3 ST 64.8 SR 16.7 SS 27.2
RDE -.3410 RRA -.4016 RC3-1.0654 FAU .40833 RRT .9029 RRF .9314 RTF .9178 CRT .7697 CRS .4593 CST -.1988
FDE 1.8631 FRA-4.7801 FC3-8.8607 BSP 10065 SGB 5887.7 R23 .2173 R13 .9232 LSA 66.3 MSA 28.6 SSA 2.0
BDE .7712 BRA 3.8339 BC3 3.5325 FSP 1763 SG1 5856.8 SG2 601.8 THA 12.94 EL1 66.1 EL2 10.4 ALF 11.51

LAUNCH DATE SEP 16 1973

FLIGHT TIME 248.00

ARRIVAL DATE MAY 22 1974

HELIOCENTRIC CONIC

DISTANCE 514.218

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.942 GAL 8.44 AZL 86.91 HCA 143.25 SMA 195.25 ECC .27054 INC 3.0877 V1 29.627
RP 247.78 LAP 1.85 LOP 136.27 VP 19.787 GAP -1.68 AZP 92.47 TAL 41.31 TAP 184.55 RCA 142.43 APO 248.07 V2 22.113
RC 320.632 GL 16.17 GP -18.25 ZAL 32.67 ZAP 62.04 ETS 171.57 ZAE 87.83 ETE 180.75 ZAC 70.86 ETC 285.01 LVI -4.54

PLANETOCENTRIC CONIC

C3 39.725 VHL 6.303 DLA 23.40 RAL 13.61 RAD 6650.6 VEL 12.633 PTH 7.48 VHP 2.837 DPA -11.02 RAP 23.25 ECC 1.6538
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 7 0 42 3782.34 -47.06 155.06 271.13 82.04 8 3 45 2782.3 -44.70 120.24
60.00 7 10 49 3755.38 -39.13 150.87 269.36 79.46 8 13 25 2755.4 -39.19 119.71
70.00 7 27 21 3706.70 -31.88 145.08 267.51 77.04 8 29 8 2706.7 -34.00 116.55
80.00 7 58 34 3608.78 -26.15 136.04 265.88 75.05 8 58 43 2608.8 -29.82 109.22
90.00 9 1 33 3405.40 -23.76 120.37 265.16 74.19 9 58 18 2405.4 -28.07 94.19
100.00 10 41 26 3083.25 -26.15 97.41 265.88 75.05 11 32 49 2083.2 -29.82 70.58
110.00 12 26 47 2753.52 -31.88 74.00 267.51 77.04 13 12 41 1753.5 -34.00 45.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6736 TRA-3.8645 TC3-3.4480 BAU 1.9194 SGT 5824.0 SGR 1455.6 SG3 1046.9 ST 65.4 SR 16.0 SS 27.7
RDE -.3209 RRA -.4140 RC3-1.0835 FAU .40243 RRT .9065 RRF .9351 RTF .9175 CRT .7790 CRS .4508 CST -.1933
FDE 1.9234 FRA-4.6849 FC3-8.7704 BSP 10281 SGB 6003.1 R23 .2238 R13 .9229 LSA 66.8 MSA 28.9 SSA 1.9
BDE .7462 BRA 3.8866 BC3 3.6142 FSP 1738 SG1 5973.1 SG2 599.1 THA 12.90 EL1 66.6 EL2 9.8 ALF 11.01

LAUNCH DATE SEP 16 1973

FLIGHT TIME 250.00

ARRIVAL DATE MAY 24 1974

HELIOCENTRIC CONIC

DISTANCE 518.004

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.951 GAL 8.38 AZL 86.84 HCA 144.13 SMA 195.41 ECC .27051 INC 3.1553 V1 29.627
RP 247.91 LAP 1.85 LOP 137.15 VP 19.787 GAP -1.88 AZP 92.56 TAL 40.97 TAP 185.10 RCA 142.55 APO 248.27 V2 22.101
RC 322.829 GL 16.58 GP -18.54 ZAL 33.07 ZAP 61.38 ETS 171.11 ZAE 86.81 ETE 180.38 ZAC 70.55 ETC 285.04 LVI -4.24

PLANETOCENTRIC CONIC

C3 39.563 VHL 6.290 DLA 23.87 RAL 13.68 RAD 6650.5 VEL 12.627 PTH 7.48 VHP 2.852 DPA -11.24 RAP 23.48 ECC 1.6511
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 58 45 3791.53 -46.97 155.93 271.55 81.37 8 1 56 2791.5 -44.89 121.04
60.00 7 8 1 3766.83 -38.98 151.81 269.64 78.84 8 10 48 2766.8 -39.33 120.65
70.00 7 23 18 3721.79 -31.65 146.20 267.67 76.43 8 25 20 2721.8 -34.05 117.72
80.00 7 52 49 3629.22 -25.78 137.45 265.93 74.40 8 53 18 2629.2 -29.77 110.73
90.00 8 54 40 3429.48 -23.30 121.99 265.15 73.51 9 51 49 2429.5 -27.95 95.94
100.00 10 35 40 3103.69 -25.78 98.81 265.93 74.40 11 27 24 2103.7 -29.77 72.10
110.00 12 22 44 2768.61 -31.65 75.11 267.67 76.43 13 8 53 1768.6 -34.05 46.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6623 TRA-3.9235 TC3-3.5353 BAU 1.9595 SGT 5951.3 SGR 1484.6 SG3 1040.6 ST 66.3 SR 15.5 SS 27.9
RDE -.3056 RRA -.4323 RC3-1.1075 FAU .39888 RRT .9108 RRF .9396 RTF .9187 CRT .7917 CRS .4233 CST -.2028
FDE 1.9322 FRA-4.6426 FC3-8.7284 BSP 10376 SGB 6133.7 R23 .2284 R13 .9240 LSA 67.6 MSA 28.9 SSA 1.9
BDE .7294 BRA 3.9472 BC3 3.7047 FSP 1658 SG1 6104.5 SG2 597.6 THA 12.93 EL1 67.4 EL2 9.3 ALF 10.89

LAUNCH DATE SEP 16 1973

FLIGHT TIME 252.00

ARRIVAL DATE MAY 26 1974

HELIOCENTRIC CONIC

DISTANCE 521.785

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.959 GAL 8.31 AZL 86.77 HCA 145.01 SMA 195.57 ECC .27048 INC 3.2258 V1 29.627
RP 248.03 LAP 1.85 LOP 138.03 VP 19.788 GAP -2.08 AZP 92.64 TAL 40.63 TAP 185.64 RCA 142.68 APO 248.47 V2 22.089
RC 324.997 GL 17.00 GP -18.85 ZAL 33.49 ZAP 60.75 ETS 170.64 ZAE 85.81 ETE 179.99 ZAC 70.22 ETC 285.07 LVI -3.92

PLANETOCENTRIC CONIC

C3 39.408 VHL 6.278 DLA 24.36 RAL 13.74 RAD 6650.5 VEL 12.621 PTH 7.47 VHP 2.869 DPA -11.46 RAP 23.74 ECC 1.6488
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 56 39 3801.17 -46.87 156.84 271.97 80.68 8 0 1 2801.2 -45.09 121.89
60.00 7 5 2 3778.88 -38.82 152.79 269.92 78.19 8 8 0 2778.9 -39.46 121.65
70.00 7 18 58 3737.78 -31.38 147.37 267.83 75.78 8 21 16 2737.8 -34.10 118.97
80.00 7 46 34 3651.21 -25.37 138.95 265.96 73.71 8 47 25 2651.2 -29.70 112.36
90.00 8 47 5 3455.76 -22.78 123.74 265.11 72.78 9 44 41 2455.8 -27.80 97.84
100.00 10 29 26 3125.69 -25.37 100.32 265.96 73.71 11 21 31 2125.7 -29.70 73.73
110.00 12 18 25 2784.60 -31.38 76.29 267.83 75.78 13 4 49 1784.6 -34.10 47.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6390 TRA-3.9724 TC3-3.6129 BAU 1.9936 SGT 6062.6 SGR 1503.5 SG3 1025.5 ST 66.8 SR 14.7 SS 28.6
RDE -.2828 RRA -.4441 RC3-1.1252 FAU .39203 RRT .9138 RRF .9427 RTF .9178 CRT .8047 CRS .4097 CST -.1953
FDE 2.0073 FRA-4.5305 FC3-8.6123 BSP 10622 SGB 6246.2 R23 .2359 R13 .9232 LSA 68.1 MSA 29.3 SSA 1.9
BDE .6988 BRA 3.9971 BC3 3.7840 FSP 1648 SG1 6217.8 SG2 595.3 THA 12.89 EL1 67.8 EL2 8.6 ALF 10.20

LAUNCH DATE SEP 16 1973

FLIGHT TIME 254.00

ARRIVAL DATE MAY 28 1974

HELIOCENTRIC CONIC

DISTANCE 525.507

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.068 GAL 8.25 AZL 86.70 HCA 145.89 SMA 195.74 ECC .27046 INC 3.2895 V1 29.627  
 RP 246.14 LAP 1.85 LOP 138.92 VP 19.790 GAP -2.28 AZP 92.73 TAL 40.29 TAP 186.18 RCA 142.80 APO 248.68 V2 22.078  
 RC 327.134 GL 17.44 GP -19.17 ZAL 33.92 ZAP 60.15 ETS 170.16 ZAE 84.84 ETE 179.60 ZAC 69.87 ETC 285.10 LVI -3.58

PLANETOCENTRIC CONIC

C3 39.263 VHL 6.266 DLA 24.86 RAL 13.80 RAD 6650.4 VEL 12.615 PTH 7.47 VHP 2.886 DPA -11.69 RAP 24.02 ECC 1.6462  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 54 26 3811.29 -46.76 157.79 272.41 79.96 7 57 57 2811.3 -45.29 122.78  
 60.00 7 1 50 3791.56 -38.63 153.82 270.21 77.51 8 5 2 2791.6 -39.59 122.70  
 70.00 7 14 20 3754.74 -31.09 148.60 267.97 75.10 8 16 59 2754.7 -34.13 120.29  
 80.00 7 39 45 3674.98 -24.91 140.56 265.97 72.98 8 41 0 2675.0 -29.60 114.12  
 90.00 8 38 41 3484.66 -22.19 125.65 265.03 72.00 9 36 46 2484.7 -27.59 99.93  
 100.00 10 22 37 3149.45 -24.91 101.93 265.97 72.98 11 15 6 2149.5 -29.60 75.49  
 110.00 12 13 46 2801.56 -31.09 77.52 267.97 75.10 13 0 28 1801.6 -34.13 49.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6142 TRA-4.0208 TC3-3.6899 BAU 2.0278 SGT 6174.0 SGR 1523.8 SG3 1010.3 ST 67.3 SR 13.9 SS 29.2  
 RDE -.2597 RRA -.4565 RC3-1.1436 FAU .38516 RRT .9168 RRF .9457 RTF .9170 CRT .8206 CRS .3882 CST -.1903  
 FDE 2.0784 FRA-4.4205 FC3-8.4927 BSP 10863 SGB 6359.3 R23 .2434 R13 .9224 LSA 68.5 MSA 29.7 S8A 1.8  
 BDE .6669 BRA 4.0468 BC3 3.8630 FSP 1634 SG1 6331.5 SG2 593.6 THA 12.86 EL1 68.3 EL2 7.8 ALF 9.75

LAUNCH DATE SEP 16 1973

FLIGHT TIME 256.00

ARRIVAL DATE MAY 30 1974

HELIOCENTRIC CONIC

DISTANCE 529.347

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.976 GAL 8.18 AZL 86.62 HCA 146.77 SMA 195.90 ECC .27044 INC 3.3784 V1 29.627  
 RP 246.25 LAP 1.85 LOP 139.80 VP 19.793 GAP -2.48 AZP 92.83 TAL 39.95 TAP 186.72 RCA 142.92 APO 248.88 V2 22.067  
 RC 329.241 GL 17.90 GP -19.51 ZAL 34.35 ZAP 59.57 ETS 169.66 ZAE 83.88 ETE 179.20 ZAC 69.50 ETC 285.13 LVI -3.22

PLANETOCENTRIC CONIC

C3 39.129 VHL 6.255 DLA 25.39 RAL 13.85 RAD 6650.4 VEL 12.610 PTH 7.47 VHP 2.904 DPA -11.93 RAP 24.32 ECC 1.6440  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 52 4 3821.93 -46.62 158.79 272.85 79.20 7 55 45 2821.9 -45.49 123.73  
 60.00 6 58 26 3804.92 -38.43 154.90 270.49 76.80 8 1 51 2804.9 -39.71 123.82  
 70.00 7 9 21 3772.78 -30.77 149.91 268.10 74.39 8 12 14 2772.8 -34.15 121.70  
 80.00 7 32 16 3700.83 -24.38 142.30 265.94 72.21 8 33 57 2700.8 -29.46 116.03  
 90.00 8 29 14 3516.84 -21.49 127.75 264.90 71.17 9 27 51 2516.8 -27.32 102.25  
 100.00 10 15 8 3175.30 -24.38 103.67 265.94 72.21 11 8 3 2175.3 -29.46 77.40  
 110.00 12 8 47 2819.59 -30.77 78.83 268.10 74.39 12 55 47 1819.6 -34.15 50.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5882 TRA-4.0699 TC3-3.7670 BAU 2.0624 SGT 6287.1 SGR 1546.3 SG3 995.3 ST 67.9 SR 13.1 SS 29.9  
 RDE -.2361 RRA -.4701 RC3-1.1630 FAU .37839 RRT .9196 RRF .9487 RTF .9162 CRT .8396 CRS .3568 CST -.1885  
 FDE 2.1462 FRA-4.3162 FC3-8.3719 BSP 11090 SGB 6474.4 R23 .2510 R13 .9217 LSA 69.0 MSA 30.1 S8A 1.8  
 BDE .6338 BRA 4.0970 BC3 3.9425 FSP 1615 SG1 6447.3 SG2 592.2 THA 12.86 EL1 68.8 EL2 7.0 ALF 9.34

LAUNCH DATE SEP 16 1973

FLIGHT TIME 258.00

ARRIVAL DATE JUN 1 1974

HELIOCENTRIC CONIC

DISTANCE 533.127

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.985 GAL 8.12 AZL 86.54 HCA 147.65 SMA 196.07 ECC .27043 INC 3.4570 V1 29.627  
 RP 246.35 LAP 1.85 LOP 140.68 VP 19.796 GAP -2.67 AZP 92.92 TAL 39.60 TAP 187.25 RCA 143.05 APO 249.09 V2 22.057  
 RC 331.317 GL 18.38 GP -19.87 ZAL 34.81 ZAP 59.01 ETS 169.15 ZAE 82.94 ETE 178.80 ZAC 69.11 ETC 285.17 LVI -2.84

PLANETOCENTRIC CONIC

C3 39.007 VHL 6.246 DLA 25.93 RAL 13.89 RAD 6650.3 VEL 12.605 PTH 7.46 VHP 2.923 DPA -12.18 RAP 24.64 ECC 1.6420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 49 31 3833.12 -46.48 159.83 273.30 78.41 7 53 24 2833.1 -45.69 124.73  
 60.00 6 54 48 3819.04 -38.21 156.03 270.77 76.07 7 58 27 2819.0 -39.83 125.00  
 70.00 7 3 58 3792.03 -30.41 151.29 268.22 73.64 8 7 10 2792.0 -34.15 123.20  
 80.00 7 23 59 3729.20 -23.78 144.19 265.87 71.39 8 26 8 2729.2 -29.27 118.12  
 90.00 8 18 25 3553.33 -20.67 130.11 264.71 70.26 9 17 39 2553.3 -26.97 104.86  
 100.00 10 6 51 3203.67 -23.78 105.56 265.87 71.39 11 0 14 2203.7 -29.27 79.49  
 110.00 12 3 24 2838.85 -30.41 80.21 268.22 73.64 12 50 43 1838.8 -34.15 52.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5800 TRA-4.1177 TC3-3.8427 BAU 2.0967 SGT 6398.9 SGR 1570.1 SG3 980.0 ST 68.4 SR 12.4 SS 30.6  
 RDE -.2118 RRA -.4840 RC3-1.1830 FAU .37153 RRT .9223 RRF .9516 RTF .554 CRT .8618 CRS .3153 CST -.1887  
 FDE 2.2121 FRA-4.2109 FC3-8.2438 BSP 11328 SGB 6588.7 R23 .2588 R13 .9209 LSA 69.5 MSA 30.6 S8A 1.7  
 BDE .5987 BRA 4.1460 BC3 4.0208 FSP 1505 SG1 6562.0 SG2 591.5 THA 12.86 EL1 69.3 EL2 6.2 ALF 8.96

LAUNCH DATE SEP 16 1973

FLIGHT TIME 260.00

ARRIVAL DATE JUN 3 1974

HELIOCENTRIC CONIC

DISTANCE 536.907

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 32.994 GAL 8.05 AZL 86.48 HCA 148.52 SMA 196.23 ECC .27042 INC 3.5414 V1 29.627  
 RP 246.45 LAP 1.85 LOP 141.56 VP 19.800 GAP -2.86 AZP 93.02 TAL 39.26 TAP 187.78 RCA 143.17 APO 249.30 V2 22.048  
 RC 333.364 GL 18.88 GP -20.24 ZAL 35.27 ZAP 58.48 ETS 168.62 ZAE 82.03 ETE 178.38 ZAC 68.70 ETC 285.21 LVI -2.44

PLANETOCENTRIC CONIC

C3 38.898 VHL 6.237 DLA 26.49 RAL 13.92 RAD 6650.3 VEL 12.601 PTH 7.46 VHP 2.942 DPA -12.44 RAP 24.98 ECC 1.6402  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 46 48 3844.91 -46.31 160.92 273.76 77.59 7 50 53 2844.9 -45.90 125.79  
 60.00 6 50 54 3833.98 -37.96 157.22 271.04 75.29 7 54 48 2834.0 -39.94 126.25  
 70.00 6 58 8 3812.65 -30.00 152.76 268.31 72.86 8 1 41 2812.7 -34.13 124.81  
 80.00 7 14 41 3780.68 -23.08 146.27 265.75 70.51 8 17 22 2760.7 -29.01 120.42  
 90.00 8 5 43 3595.81 -19.67 132.83 264.41 69.27 9 5 38 2595.8 -26.49 107.88  
 100.00 9 57 33 3235.15 -23.08 107.64 265.75 70.51 10 51 28 2235.2 -29.01 81.79  
 110.00 11 57 34 2859.47 -30.00 81.68 268.31 72.86 12 45 14 1859.5 -34.13 53.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5308 TRA-4.1658 TC3-3.9180 BAU 2.1314 SGT 6511.9 SGR 1595.5 SG3 984.4 ST 69.0 SR 11.7 SS 31.3  
 RDE -.1868 RRA -.4987 RC3-1.2036 FAU .36457 RRT .9250 RRF .9543 RTF .9145 CRT .8870 CRS .2615 CST -.1903  
 FDE 2.2765 FRA-4.1068 FC3-8.1141 BSP 11548 SGB 6704.5 R23 .2668 R13 .9201 LSA 70.1 MSA 31.1 S8A 1.7  
 BDE .5627 BRA 4.1956 BC3 4.0987 FSP 1572 SG1 6678.4 SG2 591.3 THA 12.87 EL1 69.8 EL2 5.4 ALF 8.63

LAUNCH DATE SEP 16 1973

FLIGHT TIME 262.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

RL 150.39 LAL -.00 LOL 352.98 VL 33.002 GAL 7.99 AZL 86.37 HCA 149.40 SMA 196.40 ECC .27042 INC 3.6302 V1 29.627
RP 248.54 LAP 1.85 LOP 142.43 VP 19.804 GAP -3.06 AZP 93.13 TAL 38.91 TAP 188.31 RCA 143.29 APO 249.51 V2 22.039
RC 335.380 GL 19.40 GP -20.64 ZAL 35.75 ZAP 57.98 ETS 168.07 ZAE 81.13 ETE 177.95 ZAC 68.26 ETC 285.25 LVI -2.02

PLANETOCENTRIC CONIC

C3 38.803 VHL 6.229 DLA 27.07 RAL 13.94 RAD 6650.2 VEL 12.597 PTH 7.46 VHP 2.962 DPA -12.72 RAP 25.35 ECC 1.6386
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 43 32 3857.36 -46.12 162.06 274.22 76.72 7 48 10 2857.4 -46.10 126.93
60.00 6 46 42 3849.82 -37.67 158.47 271.31 74.49 7 50 52 2849.8 -40.04 127.59
70.00 6 51 47 3834.85 -29.55 154.33 268.38 72.04 7 55 42 2834.8 -34.08 126.55
80.00 7 4 6 3796.17 -22.26 148.58 265.56 69.57 8 7 22 2796.2 -28.67 123.00
90.00 7 50 4 3647.57 -18.39 138.08 263.96 68.13 8 50 52 2647.6 -25.81 111.51
100.00 9 46 57 3270.64 -22.26 109.95 265.56 69.57 10 41 28 2270.6 -28.67 84.37
110.00 11 31 13 2881.66 -29.55 83.25 268.38 72.04 12 39 15 1881.7 -34.08 55.46

DIFFERENTIAL CORRECTIONS

TDE -.4993 TRA-4.2137 TC3-3.9921 BAU 2.1865
RDE -.1613 RRA -.5145 RC3-1.2252 FAU .35765
FDE 2.3370 FRA-4.0064 FC3-7.5794 BSP 11774
BDE .5247 BRA 4.2450 BC3 4.1759 FSP 1546

MID-COURSE EXECUTION ACCURACY

SGT 6625.1 SGR 1623.1 SG3 948.7
RRF .9275 RRF .9569 RTF .9137
SGB 6821.0 R23 .2746 R13 .9193
SG1 6795.3 SG2 591.7 THA 12.90

ORBIT DETERMINATION ACCURACY

ST 69.6 SR 11.1 S3 32.0
CRT .9140 CR8 .1927 CST -.1949
LSA 70.7 MSA 31.6 S8A 1.6
EL1 70.4 EL2 4.5 ALF 8.35

LAUNCH DATE SEP 16 1973

FLIGHT TIME 264.00

ARRIVAL DATE JUN 7 1974

HELIOCENTRIC CONIC

RL 150.39 LAL -.00 LOL 352.98 VL 33.011 GAL 7.92 AZL 86.28 HCA 150.28 SMA 196.57 ECC .27042 INC 3.7236 V1 29.627
RP 248.63 LAP 1.85 LOP 143.31 VP 19.809 GAP -3.25 AZP 93.23 TAL 38.56 TAP 188.84 RCA 143.41 APO 249.72 V2 22.030
RC 337.366 GL 19.95 GP -21.06 ZAL 36.24 ZAP 57.50 ETS 167.51 ZAE 80.26 ETE 177.51 ZAC 67.80 ETC 285.30 LVI -1.57

PLANETOCENTRIC CONIC

C3 38.725 VHL 6.223 DLA 27.68 RAL 13.94 RAD 6650.2 VEL 12.594 PTH 7.45 VHP 2.983 DPA -13.01 RAP 25.73 ECC 1.6373
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 40 44 3870.52 -45.91 163.26 274.68 75.82 7 45 14 2870.5 -46.30 128.13
60.00 6 42 10 3866.67 -37.36 159.79 271.56 73.64 7 46 37 2866.7 -40.13 129.01
70.00 6 44 49 3858.85 -29.03 156.01 268.41 71.17 7 49 8 2858.9 -34.00 128.41
80.00 6 51 45 3837.10 -21.26 151.21 265.26 68.53 7 55 42 2837.1 -28.22 125.96
90.00 7 28 51 3717.14 -16.58 140.38 263.23 66.75 8 30 48 2717.1 -24.73 116.32
100.00 9 34 37 3311.57 -21.26 112.58 265.26 68.53 10 29 48 2311.6 -28.22 87.33
110.00 11 44 16 2905.67 -29.03 84.93 268.41 71.17 12 32 41 1905.7 -34.00 57.33

DIFFERENTIAL CORRECTIONS

TDE -.4657 TRA-4.2611 TC3-4.0646 BAU 2.2012
RDE -.1346 RRA -.5311 RC3-1.2473 FAU .35055
FDE 2.3975 FRA-3.9059 FC3-7.8369 BSP 12005
BDE .4847 BRA 4.2940 BC3 4.2517 FSP 1521

MID-COURSE EXECUTION ACCURACY

SGT 6738.0 SGR 1652.3 SG3 932.5
RRF .9299 RRF .9594 RTF .9128
SGB 6937.6 R23 .2826 R13 .9186
SG1 6912.3 SG2 592.6 THA 12.94

ORBIT DETERMINATION ACCURACY

ST 70.2 SR 10.6 S3 32.7
CRT .9412 CR8 .1080 CST -.2011
LSA 71.3 MSA 32.1 S8A 1.5
EL1 70.9 EL2 3.5 ALF 8.11

LAUNCH DATE SEP 16 1973

FLIGHT TIME 266.00

ARRIVAL DATE JUN 9 1974

HELIOCENTRIC CONIC

RL 150.39 LAL -.00 LOL 352.98 VL 33.020 GAL 7.86 AZL 86.18 HCA 151.15 SMA 196.74 ECC .27042 INC 3.8221 V1 29.627
RP 248.71 LAP 1.84 LOP 144.19 VP 19.815 GAP -3.43 AZP 93.35 TAL 38.21 TAP 189.37 RCA 143.53 APO 249.94 V2 22.023
RC 339.321 GL 20.53 GP -21.50 ZAL 36.75 ZAP 57.06 ETS 166.92 ZAE 79.41 ETE 177.06 ZAC 67.31 ETC 285.35 LVI -1.10

PLANETOCENTRIC CONIC

C3 38.664 VHL 6.218 DLA 28.31 RAL 13.94 RAD 6650.2 VEL 12.591 PTH 7.45 VHP 3.006 DPA -13.31 RAP 26.15 ECC 1.6363
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 37 20 3884.46 -45.67 164.52 275.15 74.88 7 42 5 2884.5 -46.50 129.42
60.00 6 37 16 3884.63 -37.01 161.19 271.80 72.75 7 42 1 2884.6 -40.21 130.54
70.00 6 37 9 3884.99 -28.45 157.81 268.40 70.25 7 41 54 2885.0 -33.87 130.44
80.00 6 36 40 3886.08 -20.01 154.31 264.82 67.36 7 41 34 2886.1 -27.58 129.48
88.73 6 26 55 3918.13 -11.86 152.85 261.01 64.11 7 32 13 2918.1 -21.52 129.88
100.00 9 19 40 3360.55 -20.01 115.68 264.82 67.36 10 15 41 2360.5 -27.58 90.83
110.00 11 36 35 2931.81 -28.45 86.73 268.40 70.25 12 25 27 1931.8 -33.87 59.36

DIFFERENTIAL CORRECTIONS

TDE -.4308 TRA-4.3089 TC3-4.1381 BAU 2.2386
RDE -.1072 RRA -.9487 RC3-1.2705 FAU .34347
FDE 2.4544 FRA-3.8077 FC3-7.6908 BSP 12215
BDE .4438 BRA 4.3437 BC3 4.3269 FSP 1489

MID-COURSE EXECUTION ACCURACY

SGT 6852.1 SGR 1684.1 SG3 916.3
RRF .9321 RRF .9616 RTF .9119
SGB 7056.0 R23 .2907 R13 .9178
SG1 7031.0 SG2 594.4 THA 13.00

ORBIT DETERMINATION ACCURACY

ST 70.9 SR 10.2 S3 33.4
CRT .9655 CR8 .0072 CST -.2093
LSA 72.0 MSA 32.6 S8A 1.5
EL1 71.6 EL2 2.6 ALF 7.92

LAUNCH DATE SEP 16 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 11 1974

HELIOCENTRIC CONIC

RL 150.39 LAL -.00 LOL 352.98 VL 33.029 GAL 7.79 AZL 86.07 HCA 152.03 SMA 196.90 ECC .27043 INC 3.9262 V1 29.627
RP 248.78 LAP 1.84 LOP 145.07 VP 19.822 GAP -3.62 AZP 93.47 TAL 37.86 TAP 189.89 RCA 143.65 APO 250.15 V2 22.015
RC 341.248 GL 21.13 GP -21.98 ZAL 37.27 ZAP 56.64 ETS 166.32 ZAE 78.57 ETE 178.59 ZAC 66.80 ETC 285.40 LVI -.60

PLANETOCENTRIC CONIC

C3 38.623 VHL 6.215 DLA 28.96 RAL 13.92 RAD 6650.2 VEL 12.590 PTH 7.45 VHP 3.029 DPA -13.63 RAP 26.58 ECC 1.6356
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 33 40 3899.27 -45.40 163.84 275.61 73.89 7 38 39 2899.3 -46.69 130.80
60.00 6 31 57 3903.85 -36.61 162.66 272.03 71.82 7 37 1 2903.8 -40.26 132.17
70.00 6 28 37 3913.66 -27.77 159.77 268.34 69.27 7 33 51 2913.7 -33.69 132.66
80.00 6 17 22 3949.09 -18.31 158.22 264.12 65.99 7 23 11 2949.1 -26.61 133.89
83.48 5 43 19 4058.58 -12.12 163.28 261.10 63.50 6 50 58 3058.6 -22.01 140.46
100.00 9 0 14 3423.56 -18.31 119.59 264.12 65.99 9 57 18 2423.6 -26.61 95.26
110.00 11 28 4 2960.48 -27.77 88.69 268.34 69.27 12 17 24 1960.5 -33.69 61.58

DIFFERENTIAL CORRECTIONS

TDE -.3938 TRA-4.3563 TC3-4.2060 BAU 2.2723
RDE -.0789 RRA -.5675 RC3-1.2946 FAU .33632
FDE 2.5080 FRA-3.7114 FC3-7.5386 BSP 12429
BDE .4016 BRA 4.3931 BC3 4.4007 FSP 1457

MID-COURSE EXECUTION ACCURACY

SGT 6966.5 SGR 1718.2 SG3 899.7
RRF .9343 RRF .9640 RTF .9111
SGB 7175.3 R23 .2985 R13 .9171
SG1 7150.4 SG2 596.7 THA 13.07

ORBIT DETERMINATION ACCURACY

ST 71.6 SR 10.0 S3 34.1
CRT .9831 CR8 -.1073 CST -.2195
LSA 72.8 MSA 33.1 S8A 1.4
EL1 72.3 EL2 1.8 ALF 7.80

LAUNCH DATE SEP 16 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 13 1974

HELIOCENTRIC CONIC

RL 190.39 LAL -.00 LOL 352.98 VL 33.037 GAL 7.72 AZL 85.98 HCA 152.90 SMA 197.07 ECC .27045 INC 4.0363 V1 29.827
RP 248.85 LAP 1.84 LOP 145.84 VP 19.829 GAP -3.81 AZP 93.59 TAL 37.51 TAP 190.41 RCA 143.77 APO 250.37 V2 22.009
RC 343.139 GL 21.77 GP -22.47 ZAL 37.81 ZAP 56.25 E78 165.69 ZAE 77.77 ETE 176.11 ZAC 66.25 ETC 285.46 LVI -.07

DISTANCE 555.796

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.604 VHL 6.213 DLA 29.85 RAL 13.88 RAD 8650.2 VEL 12.589 PTH 7.45 VHP 3.054 DPA -13.98 RAP 27.04 ECC 1.6353
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 29 41 3915.02 -45.09 167.23 276.08 72.85 7 34 56 2915.0 -46.87 132.28
60.00 6 28 9 3924.47 -36.16 164.23 272.22 70.84 7 31 33 2924.5 -40.30 133.92
70.00 6 19 2 3945.45 -26.99 161.91 268.21 68.22 7 24 48 2945.4 -33.43 135.11
80.00 5 45 38 4050.86 -15.38 164.36 262.72 64.09 6 53 9 3050.9 -24.74 140.87
80.71 5 21 20 4126.59 -12.39 168.59 261.19 62.85 6 30 8 3128.6 -22.51 145.82
100.00 8 28 30 3525.33 -15.38 125.72 262.72 64.09 9 27 15 2525.3 -24.74 102.24
110.00 11 18 29 2992.27 -26.99 90.83 268.21 68.22 12 8 21 1992.3 -33.43 64.03

DIFFERENTIAL CORRECTIONS

TDE -.3536 TRA-4.4030 TC3-4.2723 BAU 2.3076
RDE -.0489 RRA -.5870 RC3-1.3188 FAU .32883
FDE 2.5634 FRA-3.6131 FC3-7.3745 BSP 12652
BDE .3569 BRA 4.4420 BC3 4.4712 FSP 1425

MID-COURSE EXECUTION ACCURACY

SGT 7079.3 SGR 1753.7 SG3 882.2
RRR .9363 RRF .9660 RTF .9101
SGB 7293.3 R23 .3066 R13 .9182
SG1 7268.6 SG2 599.7 THA 13.15

ORBIT DETERMINATION ACCURACY

ST 72.4 SR 9.9 SS 34.9
CRT .9902 CR8 -.2324 CST -.2313
LSA 73.6 MSA 33.7 SSA 1.4
EL1 73.1 EL2 1.4 ALF 7.75

LAUNCH DATE SEP 16 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 15 1974

HELIOCENTRIC CONIC

RL 190.39 LAL -.00 LOL 352.98 VL 33.048 GAL 7.65 AZL 85.85 HCA 153.77 SMA 197.24 ECC .27047 INC 4.1531 V1 29.827
RP 248.92 LAP 1.83 LOP 146.82 VP 19.837 GAP -3.99 AZP 93.73 TAL 37.16 TAP 190.93 RCA 143.89 APO 250.59 V2 22.003
RC 345.001 GL 22.44 GP -23.00 ZAL 38.38 ZAP 55.89 E78 165.04 ZAE 76.98 ETE 175.61 ZAC 65.67 ETC 285.55 LVI .50

DISTANCE 559.572

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.610 VHL 6.214 DLA 30.36 RAL 13.82 RAD 8650.2 VEL 12.589 PTH 7.45 VHP 3.080 DPA -14.35 RAP 27.53 ECC 1.6354
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 25 22 3931.81 -44.74 168.70 276.53 71.77 7 30 54 2931.8 -47.05 133.86
60.00 6 19 47 3946.68 -35.65 165.89 272.39 69.81 7 25 34 2946.7 -40.30 135.81
70.00 6 8 7 3981.17 -26.06 164.27 267.98 67.10 7 14 28 2981.2 -33.09 137.84
78.46 5 4 7 4182.80 -12.67 172.77 261.28 62.18 6 13 50 3182.8 -23.03 150.06
78.46 5 4 7 4182.80 -12.67 172.77 261.28 62.18 6 13 50 3182.8 -23.03 150.06
78.46 5 4 7 4182.80 -12.67 172.77 261.28 62.18 6 13 50 3182.8 -23.03 150.06
110.00 11 7 33 3027.99 -26.06 93.19 267.98 67.10 11 58 1 2028.0 -33.09 66.76

DIFFERENTIAL CORRECTIONS

TDE -.3111 TRA-4.4498 TC3-4.3363 BAU 2.3433
RDE -.0173 RRA -.6076 RC3-1.3435 FAU .32113
FDE 2.6188 FRA-3.5133 FC3-7.2006 BSP 12867
BDE .3116 BRA 4.4911 BC3 4.5397 FSP 1393

MID-COURSE EXECUTION ACCURACY

SGT 7192.8 SGR 1791.5 SG3 884.0
RRR .9382 RRF .9679 RTF .9090
SGB 7412.5 R23 .3149 R13 .9152
SG1 7387.9 SG2 603.6 THA 13.24

ORBIT DETERMINATION ACCURACY

ST 73.2 SR 10.1 SS 35.6
CRT .9836 CR8 -.3597 CST -.2442
LSA 74.5 MSA 34.2 SSA 1.3
EL1 73.9 EL2 1.8 ALF 7.72

LAUNCH DATE SEP 16 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 17 1974

HELIOCENTRIC CONIC

RL 190.39 LAL -.00 LOL 352.98 VL 33.055 GAL 7.59 AZL 85.72 HCA 154.65 SMA 197.41 ECC .27049 INC 4.2774 V1 29.827
RP 248.97 LAP 1.83 LOP 147.69 VP 19.845 GAP -4.18 AZP 93.87 TAL 36.80 TAP 191.45 RCA 144.01 APO 250.81 V2 21.997
RC 346.831 GL 23.15 GP -23.97 ZAL 38.98 ZAP 55.56 E78 164.36 ZAE 76.23 ETE 175.09 ZAC 65.05 ETC 285.60 LVI 1.09

DISTANCE 563.349

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.644 VHL 6.216 DLA 31.11 RAL 13.74 RAD 8650.2 VEL 12.591 PTH 7.45 VHP 3.107 DPA -14.74 RAP 28.05 ECC 1.6360
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 20 39 3949.76 -44.35 170.25 276.97 70.63 7 26 29 2949.8 -47.20 135.57
60.00 6 12 47 3970.73 -35.07 167.67 272.51 68.72 7 18 58 2970.7 -40.26 137.85
70.00 5 55 25 4022.08 -24.95 166.93 267.63 65.88 7 2 27 3022.1 -32.61 140.93
78.46 4 49 19 4228.84 -12.95 176.38 261.37 61.46 5 59 48 3228.8 -23.57 153.73
78.46 4 49 19 4228.84 -12.95 176.38 261.37 61.46 5 59 48 3228.8 -23.57 153.73
78.46 4 49 19 4228.84 -12.95 176.38 261.37 61.46 5 59 48 3228.8 -23.57 153.73
110.00 10 54 51 3068.90 -24.95 95.85 267.63 65.88 11 46 0 2068.9 -32.61 89.85

DIFFERENTIAL CORRECTIONS

TDE -.2704 TRA-4.5002 TC3-4.4008 BAU 2.3815
RDE .0133 RRA -.6321 RC3-1.3715 FAU .31405
FDE 2.6354 FRA-3.4317 FC3-7.0355 BSP 13037
BDE .2707 BRA 4.5443 BC3 4.6086 FSP 1344

MID-COURSE EXECUTION ACCURACY

SGT 7312.2 SGR 1838.0 SG3 847.2
RRR .9403 RRF .9898 RTF .5886
SGB 7539.1 R23 .3217 R13 .9150
SG1 7514.6 SG2 608.2 THA 13.37

ORBIT DETERMINATION ACCURACY

ST 74.2 SR 10.5 SS 36.2
CRT .9657 CR8 -.4739 CST -.2606
LSA 75.7 MSA 34.7 SSA 1.3
EL1 74.9 EL2 2.7 ALF 7.82

LAUNCH DATE SEP 16 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 19 1974

HELIOCENTRIC CONIC

RL 190.39 LAL -.00 LOL 352.98 VL 33.064 GAL 7.52 AZL 85.59 HCA 155.52 SMA 197.58 ECC .27052 INC 4.4098 V1 29.827
RP 249.02 LAP 1.83 LOP 148.57 VP 19.854 GAP -4.38 AZP 94.01 TAL 36.45 TAP 191.97 RCA 144.13 APO 251.03 V2 21.992
RC 348.828 GL 23.90 GP -24.17 ZAL 39.57 ZAP 55.28 E79 163.66 ZAE 75.50 ETE 174.55 ZAC 64.40 ETC 285.68 LVI 1.73

DISTANCE 567.123

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 38.709 VHL 6.222 DLA 31.89 RAL 13.64 RAD 8650.2 VEL 12.595 PTH 7.45 VHP 3.137 DPA -15.16 RAP 28.59 ECC 1.6371
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 15 29 3989.01 -43.90 171.88 277.39 69.43 7 21 38 2989.0 -47.34 137.41
60.00 6 5 2 3996.91 -34.41 169.57 272.58 67.57 7 11 39 2996.9 -40.18 140.08
70.00 5 40 10 4070.44 -23.57 170.01 267.09 64.54 6 48 1 3070.4 -31.93 144.54
74.60 4 35 59 4269.83 -13.23 179.64 261.46 60.71 5 47 9 3269.8 -24.12 157.07
74.60 4 35 59 4269.83 -13.23 179.64 261.46 60.71 5 47 9 3269.8 -24.12 157.07
74.60 4 35 59 4269.83 -13.23 179.64 261.46 60.71 5 47 9 3269.8 -24.12 157.07
110.00 10 39 37 3117.25 -23.57 98.93 267.09 64.54 11 31 34 2117.3 -31.93 73.46

DIFFERENTIAL CORRECTIONS

TDE -.2178 TRA-4.5414 TC3-4.4530 BAU 2.4147
RDE .0513 RRA -.6520 RC3-1.3941 FAU .30498
FDE 2.7268 FRA-3.5102 FC3-6.8209 BSP 13330
BDE .2237 BRA 4.5879 BC3 4.6661 FSP 1331

MID-COURSE EXECUTION ACCURACY

SGT 7416.6 SGR 1874.0 SG3 825.3
RRR .9416 RRF .9711 RTF .9064
SGB 7649.7 R23 .3316 R13 .9130
SG1 7625.0 SG2 614.0 THA 13.47

ORBIT DETERMINATION ACCURACY

ST 75.0 SR 11.2 SS 37.2
CRT .9324 CR8 -.5877 CST -.2745
LSA 76.7 MSA 35.5 SSA 1.2
EL1 75.7 EL2 4.0 ALF 7.93



LAUNCH DATE SEP 16 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 21 1974

HELIOCENTRIC CONIC

DISTANCE 570.898

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 33.072 GAL 7.45 AZL 85.45 HCA 186.39 SMA 197.75 ECC .27055 INC 4.5914 V1 29.627
RP 249.07 LAP 1.82 LOP 149.44 VP 19.864 GAP -4.34 AZP 94.17 TAL 36.09 TAP 192.48 RCA 144.25 APO 251.25 V2 21.988
RC 350.392 GL 24.69 GP -24.80 ZAL 40.21 ZAP 55.02 ETS 162.93 ZAE 74.79 ETE 173.98 ZAC 63.70 ETC 285.76 LVI 2.41

PLANETOCENTRIC CONIC

C3 38.811 VHL 6.230 DLA 32.72 RAL 13.80 RAD 6650.3 VEL 12.597 PTH 7.46 VHP 3.168 DPA -15.61 RAP 29.16 ECC 1.6387
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 9 49 3989.71 -43.39 173.61 277.79 68.18 7 16 18 2989.7 -47.46 139.40
60.00 5 56 23 4025.58 -33.64 171.62 272.58 66.36 7 3 28 3025.6 -40.03 142.50
70.00 5 20 52 4130.77 -21.75 173.75 266.24 63.00 6 29 42 3130.8 -30.94 148.96
72.82 4 23 41 4307.10 -13.52 182.65 261.55 59.92 5 35 28 3307.1 -24.69 160.17
72.82 4 23 41 4307.10 -13.52 182.65 261.55 59.92 5 35 28 3307.1 -24.69 160.17
72.82 4 23 41 4307.10 -13.52 182.65 261.55 59.92 5 35 28 3307.1 -24.69 160.17
110.00 10 20 18 3177.59 -21.75 102.67 266.24 63.00 11 13 16 2177.6 -30.94 77.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1645 TRA-4.5846 TC3-4.5024 BAU 2.4494 SGT 7323.8 SGR 1917.2 SG3 803.8 ST 76.0 SR 12.1 SS 38.0
RDE .0899 RRA -.6751 RC3-1.4186 FAU .29615 RRT .9429 RRF .9723 RTF .9046 CRT .8942 CR8 -.6791 CST -.2914
FDE 2.7856 FRA-3.2000 FC3-6.6061 BSP 13598 SGB 7764.2 R23 .3407 R13 .9114 LSA 77.9 MSA 36.2 SSA 1.1
BDE .1875 BRA 4.6340 BC3 4.7206 FSP 1306 SGI 7739.4 SG2 820.6 THA 13.60 EL1 76.8 EL2 5.4 ALF 8.15

LAUNCH DATE SEP 16 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 23 1974

HELIOCENTRIC CONIC

DISTANCE 574.673

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 33.081 GAL 7.38 AZL 85.30 HCA 157.26 SMA 197.92 ECC .27058 INC 4.7031 V1 29.627
RP 249.11 LAP 1.82 LOP 150.32 VP 19.874 GAP -4.72 AZP 94.34 TAL 35.73 TAP 192.99 RCA 144.37 APO 251.47 V2 21.984
RC 352.122 GL 25.53 GP -25.48 ZAL 40.87 ZAP 54.81 ETS 162.17 ZAE 74.12 ETE 173.40 ZAC 62.96 ETC 285.85 LVI 3.13

PLANETOCENTRIC CONIC

C3 38.955 VHL 6.241 DLA 33.58 RAL 13.33 RAD 6650.3 VEL 12.603 PTH 7.46 VHP 3.201 DPA -16.09 RAP 29.77 ECC 1.6411
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 6 3 33 4012.04 -42.81 175.44 278.14 66.87 7 10 25 3012.0 -47.54 141.55
60.00 5 46 38 4057.24 -32.76 173.84 272.48 65.07 6 54 15 3057.2 -39.80 149.16
70.00 4 52 48 4217.07 -18.99 178.92 264.74 61.07 6 3 5 3217.1 -29.23 155.10
71.09 4 12 4 4341.77 -13.80 185.50 261.63 59.08 5 24 26 3341.8 -25.28 163.11
71.09 4 12 4 4341.77 -13.80 185.50 261.63 59.08 5 24 26 3341.8 -25.28 163.11
71.09 4 12 4 4341.77 -13.80 185.50 261.63 59.08 5 24 26 3341.8 -25.28 163.11
110.00 9 52 15 3263.89 -18.99 107.84 261.74 61.07 10 46 38 2263.9 -29.23 84.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1131 TRA-4.6319 TC3-4.5513 BAU 2.4871 SGT 7637.8 SGR 1967.8 SG3 783.3 ST 77.2 SR 13.3 SS 36.7
RDE .1282 RRA -.7024 RC3-1.4462 FAU .28783 RRT .9445 RRF .9735 RTF .9034 CRT .8587 CR8 -.7474 CST -.3104
FDE 2.8274 FRA-3.1045 FC3-6.3967 BSP 13803 SGB 7887.2 R23 .3485 R13 .9103 LSA 79.3 MSA 36.7 SSA 1.1
BDE .1709 BRA 4.6849 BC3 4.7756 FSP 1264 SGI 7862.1 SG2 628.2 THA 13.77 EL1 78.0 EL2 6.7 ALF 8.47

LAUNCH DATE SEP 16 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 25 1974

HELIOCENTRIC CONIC

DISTANCE 578.446

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 33.090 GAL 7.31 AZL 85.13 HCA 158.14 SMA 198.09 ECC .27062 INC 4.8662 V1 29.627
RP 249.14 LAP 1.81 LOP 151.19 VP 19.885 GAP -4.90 AZP 94.52 TAL 35.37 TAP 193.51 RCA 144.48 APO 251.70 V2 21.981
RC 353.817 GL 26.42 GP -26.21 ZAL 41.56 ZAP 54.65 ETS 161.39 ZAE 73.49 ETE 172.79 ZAC 62.17 ETC 285.96 LVI 3.91

PLANETOCENTRIC CONIC

C3 39.146 VHL 6.257 DLA 34.49 RAL 13.13 RAD 6650.4 VEL 12.610 PTH 7.47 VHP 3.237 DPA -16.61 RAP 30.41 ECC 1.6442
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 56 36 4036.25 -42.15 177.39 278.44 65.49 7 3 52 3036.2 -47.57 143.89
60.00 5 35 31 4092.58 -31.71 176.25 272.26 63.71 6 43 44 3092.6 -39.47 148.11
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95
69.39 4 0 57 4374.46 -14.09 188.23 261.71 58.20 5 13 51 3374.5 -25.90 165.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0501 TRA-4.8712 TC3-4.5856 BAU 2.5199 SGT 7737.0 SGR 2013.0 SG3 758.3 ST 76.4 SR 14.8 SS 39.7
RDE .1744 RRA -.7263 RC3-1.4662 FAU .27771 RRT .9453 RRF .9742 RTF .9004 CRT .8194 CR8 -.8066 CST -.3286
FDE 2.8962 FRA-2.9774 FC3-6.1416 BSP 14136 SGB 7994.6 R23 .3594 R13 .9077 LSA 80.8 MSA 37.5 SSA 1.0
BDE .1814 BRA 4.7273 BC3 4.8149 FSP 1252 SGI 7969.1 SG2 837.4 THA 13.91 EL1 79.3 EL2 8.4 ALF 8.87

LAUNCH DATE SEP 16 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 27 1974

HELIOCENTRIC CONIC

DISTANCE 582.221

EARTH TO MARS

RL 150.39 LAL -.00 LOL 352.98 VL 33.098 GAL 7.24 AZL 84.96 HCA 159.01 SMA 198.28 ECC .27066 INC 5.0421 V1 29.627
RP 249.17 LAP 1.80 LOP 152.06 VP 19.896 GAP -5.08 AZP 94.71 TAL 35.01 TAP 194.02 RCA 144.60 APO 251.92 V2 21.978
RC 355.478 GL 27.37 GP -26.99 ZAL 42.29 ZAP 54.52 ETS 160.57 ZAE 72.88 ETE 172.15 ZAC 61.33 ETC 286.07 LVI 4.73

PLANETOCENTRIC CONIC

C3 39.395 VHL 6.277 DLA 35.44 RAL 12.88 RAD 6650.5 VEL 12.820 PTH 7.47 VHP 3.276 DPA -17.17 RAP 31.08 ECC 1.6483
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.00 5 48 51 4062.57 -41.38 179.45 278.67 64.04 6 56 34 3062.6 -47.56 146.44
60.00 5 22 41 4132.56 -30.48 178.92 271.87 62.24 6 31 34 3132.6 -39.00 151.41
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72
67.69 3 50 10 4405.58 -14.38 190.87 261.78 57.25 5 3 36 3405.6 -26.52 168.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0032 TRA-4.7279 TC3-4.6310 BAU 2.5641 SGT 7865.0 SGR 2079.4 SG3 739.1 ST 79.9 SR 16.3 SS 40.1
RDE .2125 RRA -.7636 RC3-1.5019 FAU .27011 RRT .9472 RRF .9755 RTF .9004 CRT .7988 CR8 -.8402 CST -.3500
FDE 2.9040 FRA-2.9101 FC3-5.9359 BSP 14218 SGB 8135.2 R23 .3641 R13 .9079 LSA 82.7 MSA 37.8 SSA .9
BDE .2126 BRA 4.7891 BC3 4.8684 FSP 1178 SGI 8109.5 SG2 646.4 THA 14.15 EL1 81.0 EL2 9.7 ALF 9.41

LAUNCH DATE SEP 16 1973

FLIGHT TIME 286.00

ARRIVAL DATE JUN 29 1974

HELIOCENTRIC CONIC

RL 150.39 LAL -.00 LOL 352.98 VL 33.107 GAL 7.17 AZL 84.77 HCA 159.88 SMA 198.43 ECC .27071 INC 9.2325 V1 29.627  
 RP 249.19 LAP 1.80 LOP 152.94 VP 19.909 GAP -5.26 AZP 94.81 TAL 34.65 TAP 194.53 RCA 144.71 APO 252.14 V2 21.978  
 RC 357.105 GL 28.39 GP -27.82 ZAL 43.06 ZAP 54.45 ETS 159.72 ZAE 72.32 ETE 171.49 ZAC 60.43 ETC 286.20 LVI 5.61

DISTANCE 585.995

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 39.707 VHL 6.301 DLA 38.45 RAL 12.58 RAD 6650.6 VEL 12.632 PTH 7.48 VHP 3.318 DPA -17.77 RAP 31.79 ECC 1.6535  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 40 10 4091.37 -40.50 181.65 278.81 62.52 6 48 21 3091.4 -47.47 149.22  
 60.00 5 7 30 4178.79 -28.97 181.91 271.25 60.66 6 17 9 3178.8 -38.33 155.15  
 65.98 3 39 35 4435.57 -14.67 193.46 261.84 56.25 4 53 30 3435.6 -27.17 171.45  
 65.98 3 39 35 4435.57 -14.67 193.46 261.84 56.25 4 53 30 3435.6 -27.17 171.45  
 65.98 3 39 35 4435.57 -14.67 193.46 261.84 56.25 4 53 30 3435.6 -27.17 171.45  
 65.98 3 39 35 4435.57 -14.67 193.46 261.84 56.25 4 53 30 3435.6 -27.17 171.45  
 65.98 3 39 35 4435.57 -14.67 193.46 261.84 56.25 4 53 30 3435.6 -27.17 171.45

DIFFERENTIAL CORRECTIONS

TDE .0554 TRA-4.7762 TC3-4.6594 BAU 2.6033  
 RDE .2590 RRA -.7981 RC3-1.5297 FAU .26072  
 FDE 2.9360 FRA-2.8116 FC3-5.6844 BSP 14428  
 BDE .2648 BRA 4.8424 BC3 4.9041 F3P 1132

MID-COURSE EXECUTION ACCURACY

SGT 7977.1 SGR 2141.4 S63 715.3  
 RRT .9405 RRF .9761 RTF .8988  
 SGB 8259.5 R23 .3718 R13 .9066  
 S61 8233.3 S62 657.1 THA 14.38

ORBIT DETERMINATION ACCURACY

ST 81.5 SR 18.2 SS 40.8  
 CRT .7773 CRS -.8703 CST -.3704  
 LSA 84.6 MSA 38.3 SSA .9  
 EL1 82.7 EL2 11.3 ALF 10.02



LAUNCH DATE SEP 17 1973

FLIGHT TIME 268.00

ARRIVAL DATE JUN 12 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LQL 353.96 VL 33.030 GAL 7.99 AZL 86.14 HCA 151.49 SMA 196.79 ECC .27189 INC 3.8553 V1 29.635  
 RP 248.82 LAP 1.84 LOP 145.30 VP 19.808 GAP -3.77 AZP 93.39 TAL 38.74 TAP 190.23 RCA 143.20 APO 250.30 V2 22.012  
 RC 342.196 GL 20.48 GP -21.19 ZAL 36.33 ZAP 56.07 ETS 166.60 ZAE 77.98 ETE 176.51 ZAC 67.55 ETC 285.32 LVI -1.38

Distance 550.960 Earth to Mars

Planetary Conic: C3 39.501 VHL 6.283 DLA 28.45 RAL 14.43 RAD 6650.5 VEL 12.624 PTH 7.48 VHP 3.044 DPA -12.90 RAP 26.28 ECC 1.6501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 34 34 3893.19 -45.51 165.30 276.28 74.29 7 39 27 2893.2 -46.61 130.23  
 60.00 6 34 9 3894.32 -36.81 161.93 272.79 72.28 7 39 3 2894.3 -40.24 131.36  
 70.00 6 33 21 3896.67 -28.17 158.61 269.28 69.84 7 38 18 2896.7 -33.80 131.35  
 80.00 6 30 59 3904.14 -19.53 155.44 265.55 66.96 7 36 3 2904.1 -27.31 130.74  
 86.75 6 8 18 3977.43 -11.76 157.13 261.86 63.90 7 14 35 2977.4 -21.51 134.31  
 100.00 9 13 50 3378.61 -19.53 116.81 265.55 66.96 10 10 9 2378.6 -27.31 92.11  
 110.00 11 32 47 2943.49 -28.17 87.53 269.28 69.84 12 21 51 1943.5 -33.80 60.27

Differential Corrections: TDE -.4695 TRA-4.4538 TC3-4.1563 BAU 2.2888 SGT 6987.4 SGR 1648.0 SG3 883.5 ST 73.0 SR 10.2 SS 32.8  
 RDE -.1149 RRA -.5449 RC3-1.2288 FAU .33508 RRT .9313 RRF .9601 RTF .9079 CRT .9616 CRS .0477 CST -.1875  
 FDE 2.4165 FRA-3.6711 FC3-7.3439 BSP 12448 SGB 7179.1 R23 .2978 R13 .9135 LSA 73.9 MSA 32.2 S8A 1.5  
 BDE .4834 BRA 4.4890 BC3 4.3342 FSP 1427 SC1 7155.1 S2 586.0 THA 12.47 EL1 73.6 EL2 2.8 ALF 7.69

LAUNCH DATE SEP 17 1973

FLIGHT TIME 270.00

ARRIVAL DATE JUN 14 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LQL 353.96 VL 33.039 GAL 7.92 AZL 86.04 HCA 152.36 SMA 196.96 ECC .27190 INC 3.9603 V1 29.635  
 RP 248.88 LAP 1.84 LOP 146.38 VP 19.816 GAP -3.96 AZP 93.51 TAL 38.38 TAP 190.75 RCA 143.41 APO 250.51 V2 22.006  
 RC 344.074 GL 21.09 GP -21.66 ZAL 36.85 ZAP 55.68 ETS 166.00 ZAE 77.17 ETE 176.04 ZAC 67.03 ETC 285.37 LVI -.87

Distance 554.738 Earth to Mars

Planetary Conic: C3 39.453 VHL 6.281 DLA 29.11 RAL 14.41 RAD 6650.5 VEL 12.622 PTH 7.48 VHP 3.068 DPA -13.22 RAP 26.74 ECC 1.6493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 30 53 3908.02 -45.23 166.61 276.71 73.31 7 36 1 2908.0 -46.79 131.62  
 60.00 6 28 47 3913.61 -36.40 163.41 273.00 71.35 7 34 1 2913.6 -40.28 133.00  
 70.00 6 24 42 3923.69 -27.48 160.58 269.20 68.87 7 30 7 2925.7 -33.60 133.59  
 80.00 6 10 10 3971.41 -17.68 159.58 264.76 65.54 7 16 22 2971.4 -26.23 135.44  
 82.80 5 35 57 4081.33 -12.02 164.90 261.95 63.29 6 43 58 3081.3 -21.99 142.13  
 100.00 8 53 2 3445.88 -17.68 120.95 264.76 65.54 9 50 28 2445.9 -26.23 96.81  
 110.00 11 24 8 2972.51 -27.48 89.50 269.20 68.87 12 13 40 1972.5 -33.60 62.51

Differential Corrections: TDE -.4314 TRA-4.5026 TC3-4.2240 BAU 2.3238 SGT 7100.1 SGR 1681.3 SG3 867.0 ST 73.6 SR 9.9 SS 33.6  
 RDE -.0860 RRA -.5636 RC3-1.2522 FAU .32786 RRT .9335 RRF .9623 RTF .9068 CRT .9811 CRS -.0662 CST -.1966  
 FDE 2.4743 FRA-3.5736 FC3-7.1943 BSP 12670 SGB 7296.5 R23 .3064 R13 .9125 LSA 74.6 MSA 32.8 S8A 1.4  
 BDE .4398 BRA 4.5378 BC3 4.4057 FSP 1400 SC1 7272.7 S2 588.4 THA 12.55 EL1 74.3 EL2 1.9 ALF 7.55

LAUNCH DATE SEP 17 1973

FLIGHT TIME 272.00

ARRIVAL DATE JUN 16 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LQL 353.96 VL 33.048 GAL 7.85 AZL 85.93 HCA 153.24 SMA 197.13 ECC .27191 INC 4.0716 V1 29.635  
 RP 248.94 LAP 1.83 LOP 147.26 VP 19.824 GAP -4.14 AZP 93.64 TAL 38.03 TAP 191.26 RCA 143.53 APO 250.74 V2 22.000  
 RC 345.920 GL 21.73 GP -22.16 ZAL 37.40 ZAP 55.31 ETS 165.36 ZAE 76.38 ETE 175.56 ZAC 66.47 ETC 285.43 LVI -.33

Distance 558.517 Earth to Mars

Planetary Conic: C3 39.431 VHL 6.279 DLA 29.79 RAL 14.37 RAD 6650.5 VEL 12.622 PTH 7.47 VHP 3.093 DPA -13.56 RAP 27.22 ECC 1.6489  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 28 53 3923.79 -44.91 168.00 277.18 72.20 7 32 17 2923.8 -46.97 133.10  
 60.00 6 22 36 3934.32 -35.94 164.97 273.19 70.38 7 28 30 2934.3 -40.30 134.76  
 70.00 6 14 57 3957.90 -26.67 162.74 269.05 67.83 7 20 55 2957.9 -33.32 136.08  
 80.00 5 30 17 4099.02 -13.93 167.19 262.90 63.32 6 38 36 3099.0 -23.72 144.09  
 80.21 5 15 32 4146.16 -12.28 169.83 262.04 62.64 6 24 38 3146.2 -22.49 147.12  
 100.00 8 13 9 3573.49 -13.93 128.56 262.90 63.32 9 12 43 2573.5 -23.72 105.45  
 110.00 11 14 23 3004.72 -26.67 91.66 269.05 67.83 12 4 28 2004.7 -33.32 64.98

Differential Corrections: TDE -.4067 TRA-4.5638 TC3-4.3038 BAU 2.3677 SGT 7237.2 SGR 1730.5 SG3 857.1 ST 74.8 SR 10.1 SS 33.8  
 RDE -.0643 RRA -.5920 RC3-1.2849 FAU .32333 RRT .9366 RRF .9652 RTF .9082 CRT .9897 CRS -.1744 CST -.2149  
 FDE 2.4714 FRA-3.5392 FC3-7.0991 BSP 12879 SGB 7441.2 R23 .3106 R13 .9139 LSA 75.9 MSA 32.8 S8A 1.4  
 BDE .4117 BRA 4.6020 BC3 4.4915 FSP 1309 SC1 7417.7 S2 591.6 THA 12.71 EL1 75.4 EL2 1.4 ALF 7.60

LAUNCH DATE SEP 17 1973

FLIGHT TIME 274.00

ARRIVAL DATE JUN 18 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LQL 353.96 VL 33.056 GAL 7.79 AZL 85.81 HCA 154.11 SMA 197.31 ECC .27191 INC 4.1898 V1 29.635  
 RP 249.00 LAP 1.83 LOP 148.13 VP 19.833 GAP -4.33 AZP 93.77 TAL 37.67 TAP 191.78 RCA 143.66 APO 250.98 V2 21.995  
 RC 347.734 GL 22.40 GP -22.70 ZAL 37.97 ZAP 54.98 ETS 164.71 ZAE 75.63 ETE 175.05 ZAC 65.88 ETC 285.49 LVI .25

Distance 562.291 Earth to Mars

Planetary Conic: C3 39.430 VHL 6.279 DLA 30.51 RAL 14.31 RAD 6650.5 VEL 12.622 PTH 7.47 VHP 3.118 DPA -13.93 RAP 27.73 ECC 1.6489  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 22 31 3940.85 -44.55 169.47 277.61 71.20 7 28 12 2940.6 -47.13 134.70  
 60.00 6 16 30 3956.71 -35.41 166.64 273.34 69.35 7 22 27 2956.7 -40.29 136.66  
 70.00 6 3 47 3994.30 -25.71 165.13 268.80 66.70 7 10 21 2994.3 -32.94 138.84  
 78.04 4 59 1 4198.02 -12.56 173.85 262.13 61.96 6 8 59 3198.0 -23.01 151.19  
 78.04 4 59 1 4198.02 -12.56 173.85 262.13 61.96 6 8 59 3198.0 -23.01 151.19  
 78.04 4 59 1 4198.02 -12.56 173.85 262.13 61.96 6 8 59 3198.0 -23.01 151.19  
 110.00 11 3 13 3041.12 -25.71 94.05 268.80 66.70 11 53 54 2041.1 -32.94 67.75

Differential Corrections: TDE -.3503 TRA-4.5966 TC3-4.3537 BAU 2.3954 SGT 7327.9 SGR 1756.4 SG3 833.3 ST 75.2 SR 10.0 SS 35.0  
 RDE -.0255 RRA -.6052 RC3-1.3020 FAU .31332 RRT .9376 RRF .9663 RTF .9047 CRT .9860 CRS -.3178 CST -.2207  
 FDE 2.5767 FRA-3.3865 FC3-6.8792 BSP 13090 SGB 7535.4 R23 .3232 R13 .9107 LSA 76.3 MSA 33.9 S8A 1.3  
 BDE .3512 BRA 4.6363 BC3 4.5442 FSP 1333 SC1 7511.9 S2 595.6 THA 12.75 EL1 75.8 EL2 1.7 ALF 7.47

LAUNCH DATE SEP 17 1973

FLIGHT TIME 276.00

ARRIVAL DATE JUN 20 1974

Heliocentric Conic: RL 130.35 LAL -0.00 LOL 353.96 VL 33.069 GAL 7.72 AZL 85.68 HCA 154.98 SMA 197.48 ECC .27193 INC 4.3157 V1 29.635  
 RP 249.05 LAP 1.82 LOP 149.01 VP 19.843 GAP -4.51 AZP 93.91 TAL 37.31 TAP 192.29 RCA 143.78 APO 251.18 V2 21.990  
 RC 349.515 GL 23.11 GP -23.27 ZAL 38.56 ZAP 54.66 ETS 164.02 ZAE 74.89 ETE 174.52 ZAC 65.25 ETC 285.56 LVI .86

Distance 566.069 Earth to Mars

Planeto-centric Conic: C3 39.461 VHL 6.282 DLA 31.26 RAL 14.23 RAD 6650.5 VEL 12.623 PTH 7.48 VHP 3.146 DPA -14.32 RAP 28.26 ECC 1.6494  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 17 46 3958.67 -44.15 171.01 278.03 70.07 7 23 45 2958.7 -47.27 136.42  
 60.00 6 9 29 3980.94 -34.81 168.42 273.44 68.27 7 15 46 2980.9 -40.23 138.72  
 70.00 5 30 44 4036.16 -24.55 167.83 268.41 65.48 6 58 0 3036.2 -32.42 141.99  
 76.09 4 44 41 4242.40 -12.83 177.34 262.22 61.25 5 55 24 3242.5 -23.55 154.75  
 76.09 4 44 41 4242.40 -12.83 177.34 262.22 61.25 5 55 24 3242.5 -23.55 154.75  
 76.09 4 44 41 4242.40 -12.83 177.34 262.22 61.25 5 55 24 3242.5 -23.55 154.75  
 110.00 10 30 11 3082.98 -24.55 96.75 268.41 65.48 11 41 34 2083.0 -32.42 70.91

Differential Corrections: TDE -.3124 TRA-4.6494 TC3-4.4199 BAW 2.4353 MID-COURSE EXECUTION ACCURACY: SGT 7451.7 SGR 1803.7 SG3 818.4 ORBIT DETERMINATION ACCURACY: ST 76.2 SR 10.4 SS 35.5  
 RDE .0035 RRA -.6317 RC3-1.3516 FAU .30691 RRT .9399 RRF .9684 RTF .9047 CRT .9709 CRS -.4317 CST -.2376  
 FDE 2.6027 FRA-3.3175 FC3-6.7332 BSP 13209 SGB 7666.9 R23 .3296 R13 .9100 LSA 77.5 MSA 34.3 S8A 1.2  
 BDE .3124 BRA 4.6922 BC3 4.6161 FSP 1273 SG1 7643.4 SG2 600.3 THA 12.90 EL1 76.9 EL2 2.5 ALF 7.37

LAUNCH DATE SEP 17 1973

FLIGHT TIME 278.00

ARRIVAL DATE JUN 22 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LOL 353.96 VL 33.074 GAL 7.65 AZL 85.55 HCA 155.86 SMA 197.65 ECC .27195 INC 4.4499 V1 29.635  
 RP 249.09 LAP 1.82 LOP 149.88 VP 19.853 GAP -4.69 AZP 94.06 TAL 36.94 TAP 192.80 RCA 143.90 APO 251.40 V2 21.986  
 RC 351.261 GL 23.86 GP -23.88 ZAL 39.18 ZAP 54.41 ETS 163.32 ZAE 74.18 ETE 173.98 ZAC 64.58 ETC 285.84 LVI 1.31

Distance 569.842 Earth to Mars

Planeto-centric Conic: C3 39.523 VHL 6.287 DLA 32.05 RAL 14.13 RAD 6650.5 VEL 12.625 PTH 7.48 VHP 3.175 DPA -14.73 RAP 28.83 ECC 1.6505  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 12 33 3978.03 -43.68 172.64 278.44 68.88 7 18 51 2978.0 -47.40 138.27  
 60.00 6 1 33 4007.38 -34.13 170.32 273.49 67.13 7 8 21 3007.4 -40.13 140.96  
 70.00 5 34 57 4086.07 -23.11 170.99 267.81 64.12 6 43 3 3086.1 -31.69 145.70  
 74.25 4 31 40 4282.38 -13.11 180.52 262.30 60.49 5 43 2 3282.4 -24.10 158.02  
 74.25 4 31 40 4282.38 -13.11 180.52 262.30 60.49 5 43 2 3282.4 -24.10 158.02  
 74.25 4 31 40 4282.38 -13.11 180.52 262.30 60.49 5 43 2 3282.4 -24.10 158.02  
 110.00 10 34 24 3132.89 -23.11 99.91 267.81 64.12 11 26 37 2132.9 -31.69 74.62

Differential Corrections: TDE -.2525 TRA-4.6837 TC3-4.4637 BAW 2.4642 MID-COURSE EXECUTION ACCURACY: SGT 7544.2 SGR 1836.0 SG3 794.4 ORBIT DETERMINATION ACCURACY: ST 76.9 SR 11.0 SS 36.7  
 RDE .0451 RRA -.6484 RC3-1.3504 FAU .29688 RRT .9408 RRF .9694 RTF .9012 CRT .9352 CRS -.5592 CST -.2469  
 FDE 2.6959 FRA-3.1747 FC3-6.3026 BSP 13596 SGB 7764.4 R23 .3421 R13 .9076 LSA 78.3 MSA 35.3 S8A 1.2  
 BDE .2565 BRA 4.7283 BC3 4.6635 FSP 1285 SG1 7740.7 SG2 606.4 THA 12.98 EL1 77.6 EL2 3.8 ALF 7.61

LAUNCH DATE SEP 17 1973

FLIGHT TIME 280.00

ARRIVAL DATE JUN 24 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LOL 353.96 VL 33.083 GAL 7.58 AZL 85.41 HCA 156.73 SMA 197.82 ECC .27197 INC 4.5935 V1 28.635  
 RP 249.12 LAP 1.81 LOP 150.75 VP 19.864 GAP -4.87 AZP 94.22 TAL 36.58 TAP 193.31 RCA 144.02 APO 251.62 V2 21.982  
 RC 352.974 GL 24.66 GP -24.52 ZAL 39.82 ZAP 54.19 ETS 162.58 ZAE 73.50 ETE 173.41 ZAC 63.88 ETC 285.72 LVI 2.20

Distance 573.618 Earth to Mars

Planeto-centric Conic: C3 39.625 VHL 6.295 DLA 32.87 RAL 13.99 RAD 6650.5 VEL 12.629 PTH 7.48 VHP 3.207 DPA -15.18 RAP 29.42 ECC 1.6521  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 6 48 3998.87 -43.18 174.37 278.81 67.64 7 13 27 2998.9 -47.49 140.28  
 60.00 5 52 46 4036.38 -33.34 172.38 273.46 65.92 7 0 2 3036.4 -39.96 143.41  
 70.00 5 14 36 4149.32 -21.17 174.88 266.87 62.55 6 23 48 3149.3 -30.60 150.30  
 72.50 4 19 36 4318.86 -13.40 183.48 262.39 59.70 5 31 34 3318.9 -24.67 161.06  
 72.50 4 19 36 4318.86 -13.40 183.48 262.39 59.70 5 31 34 3318.9 -24.67 161.06  
 72.50 4 19 36 4318.86 -13.40 183.48 262.39 59.70 5 31 34 3318.9 -24.67 161.06  
 110.00 10 14 5 3196.14 -21.17 103.80 266.87 62.55 11 7 21 2196.1 -30.60 79.22

Differential Corrections: TDE -.2023 TRA-4.7294 TC3-4.3156 BAW 2.5009 MID-COURSE EXECUTION ACCURACY: SGT 7636.6 SGR 1883.2 SG3 775.3 ORBIT DETERMINATION ACCURACY: ST 77.9 SR 11.9 SS 37.4  
 RDE .0816 RRA -.6741 RC3-1.3774 FAU .28888 RRT .9425 RRF .9708 RTF .8999 CRT .8990 CRS -.6516 CST -.2666  
 FDE 2.7416 FRA-3.0803 FC3-6.3117 BSP 13817 SGB 7884.8 R23 .3504 R13 .9064 LSA 79.5 MSA 35.9 S8A 1.1  
 BDE .2181 BRA 4.7772 BC3 4.7210 FSP 1247 SG1 7860.9 SG2 613.2 THA 13.13 EL1 78.6 EL2 5.1 ALF 7.83

LAUNCH DATE SEP 17 1973

FLIGHT TIME 282.00

ARRIVAL DATE JUN 26 1974

Heliocentric Conic: RL 150.35 LAL -0.00 LOL 353.96 VL 33.092 GAL 7.51 AZL 85.25 HCA 157.60 SMA 197.99 ECC .27199 INC 4.7477 V1 29.635  
 RP 249.15 LAP 1.81 LOP 151.63 VP 19.875 GAP -5.05 AZP 94.39 TAL 36.22 TAP 193.82 RCA 144.14 APO 251.85 V2 21.979  
 RC 354.652 GL 25.51 GP -25.21 ZAL 40.49 ZAP 54.00 ETS 161.81 ZAE 72.86 ETE 172.81 ZAC 63.12 ETC 285.82 LVI 2.93

Distance 577.391 Earth to Mars

Planeto-centric Conic: C3 39.788 VHL 6.306 DLA 33.74 RAL 13.82 RAD 6650.6 VEL 12.635 PTH 7.48 VHP 3.240 DPA -15.67 RAP 30.05 ECC 1.6545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 6 0 28 4021.39 -42.56 176.20 279.15 66.33 7 7 29 3021.4 -47.56 142.48  
 60.00 5 42 50 4068.50 -32.43 174.61 273.34 64.63 6 50 30 3068.5 -39.71 146.11  
 70.00 4 43 28 4244.93 -18.07 180.55 265.13 60.51 5 54 13 3244.9 -28.61 157.03  
 70.78 4 8 8 4352.94 -13.68 186.29 262.47 58.85 5 20 41 3352.9 -25.26 163.97  
 70.78 4 8 8 4352.94 -13.68 186.29 262.47 58.85 5 20 41 3352.9 -25.26 163.97  
 70.78 4 8 8 4352.94 -13.68 186.29 262.47 58.85 5 20 41 3352.9 -25.26 163.97  
 110.00 9 42 54 3291.75 -18.07 109.47 265.13 60.51 10 37 46 2291.8 -28.61 85.95

Differential Corrections: TDE -.1401 TRA-4.7659 TC3-4.5524 BAW 2.5320 MID-COURSE EXECUTION ACCURACY: SGT 7752.4 SGR 1924.4 SG3 751.4 ORBIT DETERMINATION ACCURACY: ST 78.8 SR 13.0 SS 38.4  
 RDE .1257 RRA -.6959 RC3-1.3987 FAU .27901 RRT .9434 RRF .9715 RTF .8967 CRT .8541 CRS -.7343 CST -.2832  
 FDE 2.8158 FRA-2.9520 FC3-6.0739 BSP 14176 SGB 7987.7 R23 .3620 R13 .9035 LSA 80.6 MSA 36.9 S8A 1.0  
 BDE .1883 BRA 4.8164 BC3 4.7625 FSP 1242 SG1 7963.4 SG2 621.5 THA 13.26 EL1 79.6 EL2 6.7 ALF 8.09

LAUNCH DATE SEP 17 1973

FLIGHT TIME 284.00

ARRIVAL DATE JUN 28 1974

HELIOCENTRIC CONIC

RL 150.35 LAL -7.00 LOL 353.96 VL 33.101 GAL 7.44 AZL 85.09 MCA 198.47 SMA 198.17 ECC .27203 INC 4.9135 V1 29.658  
 RP 249.18 LAP 1.80 LOP 158.50 VP 18.888 GAP -5.22 AZP 94.57 TAL 33.86 TAP 194.33 RCA 144.26 APO 252.07 V2 21.977  
 RC 356.296 GL 26.40 RP -25.95 ZAL 41.19 ZAP 53.86 ETS 161.01 ZAE 72.24 ETE 172.19 ZAC 62.32 ETC 285.92 LVI 3.72

EARTH TO MARS

PLANETOCENTRIC CONIC

C3 39.964 VHL 8.322 DLA 34.66 RAL 13.61 RAD 6650.6 VEL 12.642 PTM 7.49 VMP 3.277 DPA -16.19 RAP 30.71 ECC 1.6577  
 LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 5 53 25 4045.81 -41.87 178.14 279.42 64.95 7 0 51 3045.8 -47.58 144.82  
 60.00 5 31 29 4104.41 -31.36 177.05 273.08 63.26 6 39 54 3104.4 -39.34 149.09  
 69.08 3 57 8 4385.16 -13.97 188.99 262.54 57.96 5 10 13 3385.2 -25.87 166.78  
 69.08 3 57 8 4385.16 -13.97 188.99 262.54 57.96 5 10 13 3385.2 -25.87 166.78  
 69.08 3 57 8 4385.16 -13.97 188.99 262.54 57.96 5 10 13 3385.2 -25.87 166.78  
 69.08 3 57 8 4385.16 -13.97 188.99 262.54 57.96 5 10 13 3385.2 -25.87 166.78  
 69.08 3 57 8 4385.16 -13.97 188.99 262.54 57.96 5 10 13 3385.2 -25.87 166.78

DIFFERENTIAL CORRECTIONS

TDE -.0987 TRA-4.8251 TC3-4.8081 BAU 2.5773  
 RDE .1601 RRA -.7326 RC3-1.4335 FAU .27224  
 PDE 2.8201 FRA-2.8955 FC3-5.8976 BSP 14207  
 BDE .1881 BRA 4.8804 BC3 4.8240 FSP 1163

MID-COURSE EXECUTION ACCURACY

SGT 7885.9 SGR 1989.3 SG3 734.7  
 RRT .9455 RRF .9730 RTF .8971  
 SGB 8132.9 R23 .3667 R13 .9041  
 SG1 8108.5 SG2 629.8 THA 13.50

ORBIT DETERMINATION ACCURACY

ST 80.3 SR 14.4 BS 38.8  
 CRT .8284 CRS -.7810 CST -.3038  
 LSA 82.4 MSA 37.1 S5A 1.0  
 EL1 81.2 EL2 8.0 ALF 8.51